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, Hydrocarbons, Dioxins, Metals, and cyanide @ P.S. / I.S. 89M

Dear Mr. Orlan:

At you request, ATC Associates Inc. (ATC) is pleased to provide you with the summary of results for the wipe and air sampling performed at P.S. / I.S. 89 M. 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 Javal
Project Manager

Reviewed by:

Andreas C. Andreou
Senior Regional Manager

P.S. / I.S. 89M – AMBIENT AREA AIR TEM, SETTLED DUST & BULK SAMPLE RESULTS					
	TEM Ambient Air Sampling (Structure / mm^2)		Settled Dust Bulk sampling for Asbestos		Bulk and Magic scotch tape sampling for asbestos (Playground and soil areas)
Date	# of Sample	Results of TEM Asbestos Analysis (structure/mm^2)	# of Sample	Results of Settled Dust Bulk Sample for Asbestos	
11/02/01			39	Trace or Non Detected	33 Bulk Samples = Trace or Non Detected 29 Scotch Magic Tape Samples = Trace or Non Detected
			6	>1% Asbestos (settled dust in soil found outside the building)	
11/05/01	25	One structure (22.24 Structure/mm^2) was found in each of the following locations: Room 502, room 402, 1st Floor corridor, and corridor adj. to room 145.			
12/11/01			6	2 samples = Trace amount of Asbestos 4 Samples = No Asbestos Fibers found	
01/11/02					11 bulk samples = Non Detected 5 Scotch Magic Tape Sample = Non Detected
01/12/02	4	No Structures Detected			
01/16/02	12	One structure (22.24 Structure/mm^2) found in one sample in the north playground and another structure (22.24 structure/mm^2) found on the 3rd floor hallway southside.			
01/17/02	12	No Structures Detected			
01/18/02	12	No Structures Detected			
01/19/02	6	No Structures Detected			
01/21/02	11	No Structures Detected			
01/22/02	16	No Structures Detected			
01/24/02	15	No Structures Detected			
01/25/02	16	One structure (22.24 Structure/mm^2) found in one sample in the cafet.			
01/26/02	16	No Structures Detected			
01/27/02	16	One structure (22.24 Structure/mm^2) found in one sample on the roof.			
01/28/02	16	No Structures Detected			
01/29/02	16	No Structures Detected			
01/30/02	16	No Structures Detected			
01/31/02	16	No Structures Detected			
02/01/02	16	No Structures Detected			
02/02/02	15	No Structures Detected			
02/03/02	16	No Structures Detected			
2/04/02	16	No Structures Detected			
2/05/02	16	No Structures Detected			
2/06/02	16	No Structures Detected			

PS/IS 89 M – RESPIRABLE PARTICULATES CONCENTRATIONS

Date	Type of sampling	No. of readings	Number of Indoor readings >40 to ≤65 µg/m³ (24 hrs average)	Number of Indoor readings >65 µg/m³ (24 hrs average)	Range of indoor respirable particulates concentration (µg/m³)	Average indoor respirable particulates concentration (µg/m³)	Range of outdoor respirable particulates concentration (µg/m³)	Average outdoor respirable particulates concentration (µg/m³)
12/15-16/02	24-hour monitoring	24	0	0	10 – 34	20	7 – 40	15
1/11-12/02	24-hour monitoring using Dust-Trak & Gravimetric samplers	4			12 and 16 using Dust Trak <6.94 and 9.03 MEM			
1/11/02	Direct Readings	61	0	0	6 – 18	9	36	
1/15/02	Direct Readings	10	3	0	30 – 60	46	80 - 82	80
1/16/02	Direct Readings	30	0	0	4 – 11	8	10 - 13	11
1/17/02	Direct Readings	50	2	0	39 – 44	21	41 - 46	43
1/18/02	Direct Readings	50	0	0	18 – 32	24	35 and 36	
1/21/02	Direct Readings	61	17	0	29 – 61	40	70 and 71	
1/22/02	Direct Readings	73	0	0	8 – 38	20	19 – 61	39
1/23/02	Direct Readings	80	0	0	8 – 17	11	12 – 20	16
1/24/02	Direct Readings	80	44	0	21 – 63	42	54 – 83	66
1/25/02	Direct Readings	80	0	0	6 – 28	13	9 – 30	18
1/25-26/02	24-hour monitoring using Dust-Trak & Gravimetric samplers	4			12 and 18 using Dust Trak 5.4 and 10 MEM			
1/28/02	Direct Readings	93	28	1	21 – 85	42	30 – 106	91 (AM) 28 (PM)
1/29/02	Direct Readings	86	20	0	25 – 49	38	38 – 91	83 (AM) 45 (PM)
1/30/02	Direct Readings	82	28	0	30 – 60 (AM) 7 – 17(PM)	44 (AM) 12 (PM)	63 – 90 (AM) 18 – 35 (PM)	73 (AM) 25 (PM)
1/30-31/02	24-hour monitoring using Gravimetric sampler	1			11.8 using a gravimetric sampler			

PS/IS 89 M – RESPIRABLE PARTICULATES CONCENTRATIONS								
Date	Type of sampling	No. of readings	Number of Indoor readings >40 to ≤65 µg/m³ (24 hrs average)	Number of Indoor readings >65 µg/m³ (24 hrs average)	Range of indoor respirable particulates concentration (µg/m³)	Average indoor respirable particulates concentration (µg/m³)	Range of outdoor respirable particulates concentration (µg/m³)	Average outdoor respirable particulates concentration (µg/m³)
1/31/02	Direct Readings	82	0	0	13 – 23 (AM) 16 – 29 (PM)	18 (AM) 21 (PM)	25 – 39 (AM) 35 – 42 (PM)	29 (AM) 38 (PM)
2/01/02	Direct Readings	82	19	0	12 – 29 (AM) 46 – 59 (PM)	23 (AM) 49 (PM)	39 – 45 (AM) 88 – 91 (PM)	41 (AM) 90 (PM)
1/31/02 – 2/1/02	24-hour monitoring using Dust-Trak & Gravimetric samplers	4			18 and 25 using Dust Trak <0.0035 and 13.9 MEM			
2/04/02	Direct Readings	80	0	0	18 – 35(AM) 9 – 22 (PM)	27 (AM) 15 (AM)	48 – 52 (AM) 24 – 31 (PM)	50 (AM) 28 (PM)
2/1-2/02	24-hour monitoring using Gravimetric sampler	1			<0.00347 using a gravimetric sampler			
2/2-3/02	24-hour monitoring using Dust-Trak & Gravimetric samplers	4			12 and 12 using Dust Trak 6.25 and 6.94 MEM			
2/05/02	Direct Readings	80	0	0	6 – 19 (AM) 6 – 13 (PM	12 (AM) 9 (PM)	13 – 28 (AM) 9 – 13 (PM)	23 (AM) 10 (PM)
2/06/02	Direct Readings	80	0	0	11 – 34 (AM) 17 – 30 (PM)	24 (AM) 23 (AM)	45 – 53 (AM) 38 – 44 (AM)	49 (AM) 42 (PM)

PUBLIC/INTERMEDIATE SCHOOL 89M														
	LEAD-IN-WIPE-DUST SAMPLE			MERCURY	PCB'S AND CYANIDE	SILICA (RESPIRABLE DUST)		FIBER GLASS	TVOC AND POLYNUCLEAR AROMATIC HYDROCARBONS (PAH)		DIOXINS SAMPLES		METALS	
Date	# of Sample	Lead Conc. On Floor (ug/ft^2)	Lead Conc. On Window Sill (ug/ft^2)	Mercury Conc. (4-samples per day) (mg/m^3)	Concentration (3 samples per day) (ug/cm2)	Range of Indoor Conc. (mg/m^3)	Range of Outdoor Conc. (mg/m^3)	Results	Indoor Readings	Outdoor Reading	Indoor Surfaces Range of Conc. (ng/m^2)	Air Plenum Conc. (ng/m^2)	Indoor Readings (mg/m^3)	Outdoor Reading (mg/m^3)
12/15/01				Non Detected at levels greater than detected in the blank.	1 PCB samples = Below Limit of Detection (0.5 ug/sample) 1 Cyanide sample = Non Detected				One Aromatic Hydrocarbon Sample: 2-Methylnaphthalene = 0.00045 mg/m^3 Naphthalene = 0.00033 mg/m3 2 TVOC Samples: Benzene = 1.9 ppb Ethylbenzene = 0.7 to 1.9 ppb Heptane = 0.9 ppb Methylene Chloride = ND Toluene = 1.3 to 10.4 ppb Xylenes = 12 ppb	Two Aromatic Hydrocarbon Sample: 2-Methylnaphthalene = 0.00028 mg/m^3 Naphthalene = 0.00029 mg/m3 OSHA PEL for PAHs = 0.2 mg/m^3 2 TVOC Samples: Benzene = 0.6 ppb Ethylbenzene = 0.4 ppb Heptane = ND Methylene Chloride = 0.9 to 2.7 ppb Toluene = 0.9 to 1.5 ppb Xylenes = ND	2 indoor air samples = 0.0000013 to 0.0000023	2 outdoor air samples = 0.00000039 to 0.00000043	Copper = 0.171 to 1.02 ug/m^3 in room 202 and cafeteria hallway	Copper = 0.223 ug/m^3 in east playground
12/20/01					10 PCBs = below reporting limits of 2 micrograms per sample				2 PAH = below the reporting limits of 5 microgram per sample		10 indoor wipe samples = 0.00 to 0.032		Detectable levels of 10 metals were found in the samples from 10 interior surfaces.	

PUBLIC/INTERMEDIATE SCHOOL 89M														
	LEAD-IN-WIPE-DUST SAMPLE			MERCURY	PCB'S AND CYANIDE	SILICA (RESPIRABLE DUST)		FIBER GLASS	TVOC AND POLYNUCLEAR AROMATIC HYDROCARBONS (PAH)		DIOXINS SAMPLES		METALS	
Date	# of Sample	Lead Conc. On Floor (ug/ft^2)	Lead Conc. On Window Sill (ug/ft^2)	Mercury Conc. (4 samples per day) (mg/m^3)	Concentration (3 samples per day) ($ug/cm2$)	Range of Indoor Conc. (mg/m^3)	Range of Outdoor Conc. (mg/m^3)	Results	Indoor Readings	Outdoor Reading	Indoor Surfaces Range of Conc. (ng/m^2)	Air Plenum Conc. (ng/m^3)	Indoor Readings (mg/m^3)	Outdoor Reading (mg/m^3)
01/03/02	20	Below guidance level	Below guidance level			2 Air Samples = Below Detection Limit	1 Sample = 0.0159 (Above detection limit)	10 samples = Non Detected	2 TVOC Samples Benzene = 0.49 and 0.51 ppb Ethylbenzene = BDL Methylene Chloride = 0.92 and 2.25 ppb Toluene = 0.61 to 0.62 ppb Xylenes = 0.28 and 0.26 ppb	1 TVOC Sample Benzene = 0.95 ppb Ethylbenzene = 0.30 ppb Methylene Chloride = BDL Toluene = 1.32 ppb Xylenes = 0.90 ppb				Al = 18.2 to 26.6 ug/ft^3 Cr = 0.229 to 0.778 ug/ft^3 Cu = 1.22 to 2.46 ug/ft^3 Fe = 5.89 to 108 ug/ft^3 Mg = 30.1 to 83.3 ug/ft^3 Mn = 1.02 to 3.75 ug/ft^3 Zn = 3.22 to 11.6 ug/ft^3
01/25/02	10	Below Guidance Level	Below Guidance Level	Non detected above detection limit.	PCBs = Below reporting limits of 2.0 ug/Sample			1 sample along South end, 2nd floor Hallway = 2% fiberglass. 4 samples = less than 1% fiberglass fibers.	Non detected above detection limit	Non detected above detection limit			Al = 1.24 (1st Flr Hallway) Cr = .089 (south playground) Bank = 0.491	
01/29/02								Non detected (3 follow up samples, after clean up).						
01/31/02	10	Below Guidance Level	Below Guidance Level					8 samples = <1% fiberglass						