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April 4, 2002

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

Re: Air Sampling for Metals
P.S. 234M
ATC Project No. 15-19125-0279

Dear Mr. Orlan:

ATC Associates, Inc. (ATC) is pleased to provide this report of air sampling for metals in airborne dust on March 19, 2002, at the referenced school. The New York City Board of Education (BOE) requested this sampling at the recommendation of Environ Corp., the consultant retained by the parents association.

Scope of Work

ATC collected four (4) samples for metals at specified locations. Samples were collected for a minimum of eight (8) hours using 37 mm mixed cellulose ester filters connected to battery-powered sampling pumps at a flow rate of 2 liters per minute. Pumps were calibrated before and after each sampling period. Two (2) samples were collected inside the building and two (2) were collected outdoors. One blank sample was also submitted. The samples were sent to PSC Analytical Services, Inc., an American Industrial Hygiene Association-accredited laboratory in Reading, PA. Analysis was performed by NIOSH Methods 7300M. Each sample was analyzed for a panel of twelve (12) metals. The metals were aluminum (Al), cadmium (Cd), chromium (Cr), cobalt (Co), copper (Cu), iron (Fe), lead (Pb), magnesium (Mg), manganese (Mn), molybdenum (Mo), nickel (Ni) and zinc (Zn). A copy of the analytical report is attached.

The sampling locations were the Main Entrance Lobby, 1st floor Hallway, the west Playground and the Roof.

Tenzin Namgyal and Wagdi Abdelshahid, Industrial Hygienists from ATC's New York City office, conducted the sampling consistent with accepted industrial hygiene practices. The results represent the conditions on the days the samples were collected.

The established regulatory values for metals are intended for industrial workplace exposures and are not generally applicable to office/school settings. There are no standards for these metals in indoor air in non-industrial situations.

Mr. Bernard P. Orlan
Air Sampling for Metals
P.S. 234 (Manhattan)

April 4, 2002

Page 2

ATC Project No. 15-19125-0279

The Environmental Protection Agency (EPA) has set a screening level for hexavalent chromium (the more toxic form) in air of 0.6 micrograms per cubic meter of air ($\mu\text{g}/\text{m}^3$), this assumes a continuous exposure for one year. These samples were analyzed for total chromium (trivalent and hexavalent).

The EPA's ambient air standard for lead (Pb) is $1.5 \mu\text{g}/\text{m}^3$ (three-month average).

Results

Chromium (Cr) was the only metal detected in all four samples and in the blank. Lead (Pb) was detected in two of the samples but not in the blank. Blank-correcting the Cr levels reduces the concentrations to below the limit of detection. The results are shown in the following table:

METALS IN AIR CONCENTRATIONS
March 19, 2002

LOCATION SAMPLE NO.	Cr ($\mu\text{g}/\text{m}^3$)*	Cr ($\mu\text{g}/\text{m}^3$) Blank-corrected	Pb ($\mu\text{g}/\text{m}^3$)
Main Lobby / M1	0.328	BDL*	BDL
1 st floor Hallway / M2	0.306	BDL	0.271
West Playground/ M3	0.656	0.099	0.270
Roof / M4	0.484	BDL	BDL
Field Blank / M5	0.537 $\mu\text{g}/\text{sample}$	--	BDL

* micrograms per cubic meter

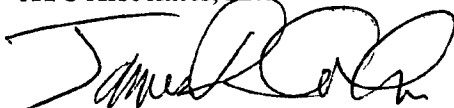
** Below Detection Limit

All of the blank-corrected chromium concentrations are **below** the EPA screening level of $0.6 \mu\text{g}/\text{m}^3$.

The concentrations of Pb are **below** EPA standard of $1.5 \mu\text{g}/\text{m}^3$ (three-month average).

ATC appreciates the opportunity to provide this indoor air quality service to the BOE. Please call me at (212) 353-8280 extension 212 if you have any questions.

Sincerely,
ATC Associates, Inc.



James R. Cohn, CIH, CSP
Regional Manager, Industrial Hygiene Division

Attachment