NYC 9/11 Public Portal Document

ATC ASSOCIATES INC.

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July 10, 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 letter report of air sampling for metals in airborne dust on June 4, 11 and 18, 2002, at the referenced school. The New York City Board of Education (BOE) requested this sampling at the recommendation of Environ Corp., a consultant retained by the parents association.

**Scope of Work**

On each day, ATC collected four (4) samples for metals at specified locations. Samples were collected for a minimum of ten (10) hours using 37 mm mixed cellulose ester filter 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. Two blanks were submitted per day. The additional blank was included to confirm the levels of any trace contaminants in the filters. The samples were sent to PSC Analytical Services, Inc., an American Industrial Hygiene Association-accredited laboratory in Reading, PA. Analysis was performed by NIOSH Method 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). Copies of the analytical laboratory reports are 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.*



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**Results**

***June 4***

The only metal present in the samples above the limits of detection was chromium (Cr). Cr was also detected in the blanks The other eleven metals were not detected.

Blank-correcting the Cr concentrations (blank average: 0.326 micrograms per filter) reduces them to below or just above the limit of detection.

***June 11***

The metals detected on this date were Cr, iron (Fe) and magnesium (Mg). Cr was detected in all four samples and the blanks. Blank-correcting the Cr concentrations of the samples (blank average 0.339 ug/filter) reduces them to below or just above the limit of detection.

Fe and Mg were detected in the samples from the Main Lobby, West Playground and the Roof. Fe concentrations ranged from 0.209 to 0.255 ug/$m^3$. Mg concentrations ranged from 1.10 to 1.30 ug/$m^3$. Fe and Mg were not found in the 1$^{st}$ floor hallway sample or in the blanks.

***June 18***

The metals detected in these samples were Cr and Fe. Only Cr was found in the blanks.

Blank-correcting the Cr concentrations (blank average: 0.342 micrograms per filter) reduces them to below the limit of detection.

Fe was detected only in the Main Lobby sample at 1.77 ug/$m^3$.

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 (ug/$m^3$), this assumes a continuous exposure for one year. These samples were analyzed for total chromium (trivalent and hexavalent). All Cr concentrations were *below* the EPA screening level.

The EPA has no standard or screening level for Fe or Mg in ambient air.

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



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