NYC 9/11 Public Portal Document

ATC ASSOCIATES INC.

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July 22, 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 May 28, 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

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). A copy of the analytical laboratory 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 day 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

The metals that were found in the samples above the limits of detection were aluminum (Al), chromium (Cr), iron (Fe) and magnesium (Mg). Chromium was detected in the blanks. The other eight metals were not detected.

Blank-correcting the Cr concentrations (blank average: 0.3215 micrograms per filter) reduces them to below or just above the limit of detection.

Iron (Fe) was detected in the sample from the Main Lobby at 2.31 micrograms per cubic meter (2.31 ug/m^3) and aluminum (Al) was detected at 1.03 ug/m^3. Magnesium (Mg) was also detected the Main Lobby sample at 1.29 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 Al, Mg or Fe 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 370 or 212 if you have any questions.

Sincerely,
ATC Associates, Inc.

Tenzin Namgyal
Industrial Hygienist

Reviewed by:

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

Attachment

NYC-WTC_000397202