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July 5, 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 Samples for Metals
P.S. 89M
ATC Project No. 15-19125-0297

Dear Mr. Orlan:

ATC Associates, Inc. (ATC) is pleased to provide this report of air sampling for metals in airborne dust conducted on June 6, 13, and 20, 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

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 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. One (1) Sample was collected inside the building and three (3) were collected outdoors. Two blank Samples were also submitted per day. 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.

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

The sampling locations were the 1st floor Hallway by the Cafeteria, Playground-north, Playground-south and the Roof.

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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SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008

Mr. Bernard P. Orian
Air Sampling for Metals
PS 89 M

July 05, 2002

Page 2

ATC Project No. 15-19125-0297

Results

June 6

Chromium (Cr), was detected in all four Samples and in the blanks. Blank-correcting the Cr concentrations lowers them to below or just above the limit of detection.

Lead (Pb) was detected in Sample # ATC-0606-89M-M3 at a concentration of 0.299 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

June 13

Cr was detected in all four Samples and in the blanks. Blank-correcting the Cr concentrations lowers them to below or just above the limit of detection.

June 20

Cr was detected in all four samples and in the blanks. Blank-correcting the Cr concentrations lowers them to below or just above the limit of detection.

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

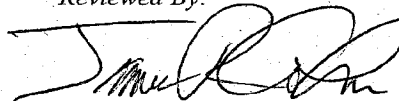
The EPA's ambient air standard for Pb is 1.5 ($\mu\text{g}/\text{m}^3$) (three-month average). All the sample results were *below* the EPA's ambient air standard for lead.

ATC appreciates the opportunity to provide this indoor air quality service to the BOE. Please call (212) 353-8280 extension 212 or extension 290 if you have any questions.

Sincerely,
ATC Associates, Inc.


Prasad Doddapaneni
Senior Project Manager

Reviewed By:



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

Attachment

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