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July 1, 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
 High School for Leadership & Public Service (M894)
 ATC Project No. 15-19125-0290**

Dear Mr. Orlan:

ATC Associates, Inc. (ATC) is pleased to provide this letter report of air sampling for metals conducted on May 3, 10, 17, 24, 31 and June 7 2002 at the referenced school. The New York City Board of Education (BOE) requested these samples to determine if acceptable air quality is being maintained.

Scope of Work

On each day, ATC collected four (4) samples for metals in air. Samples were collected for ten (10) hours. Three (3) samples were collected inside the building and one (1) was collected outdoors. Two (2) blank filters per day were also submitted. The samples were sent to PSC Analytical Services, Inc., an American Industrial Hygiene Association-accredited laboratory in Reading, PA. A copy of the analytical laboratory report is attached.

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

The locations of the samples were the 1st floor Main Lobby, 5th floor Hallway near the elevator, the 10th floor Hallway near the elevator and Roof by air intake,

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 materials in indoor air in non-industrial situations.*

CONFIDENTIAL,

CITY_21MC100_003431665

SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008

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Results

May 3

Chromium (Cr) was detected in all four samples, and both blank samples. Lead (Pb) was detected in three of the four samples (main lobby, 10th floor by elevator and on the roof) and both field blanks. Blank-correcting the Cr and Pb concentrations in the samples lowers them to below the limits of detection.

May 10

Chromium (Cr) was detected in all four samples and both blank samples. Aluminum (Al) was also detected in all four samples but not in the field blanks. Blank-correcting the Cr concentrations in the samples lowers them to below the limits of detection. The USEPA has no screening level for aluminum.

May 17

The metals that were found above the limits of detection were aluminum (Al), chromium (Cr), copper (Cu), iron (Fe), lead (Pb), magnesium (Mg), and Zinc (Zn). The other metals were not detected. The table shows the locations and concentrations at which Al, Cr, Cu, Fe, Pb, Zn, and Mg were detected. Al, Cr, Fe, and Pb were detected in the blank. Subtracting the blank concentrations from those found in the samples reduces the actual levels considerably. The blank-corrected metal concentrations are shown in the table.

METALS IN AIR CONCENTRATIONS

May 17, 2002

(Blank-corrected) (ug/m³ *)

LOCATION/ SAMPLE NO.	Aluminum	Chromium	Copper	Iron	Lead	Zinc	Magnesium
Main lobby /M1	BDL**	0.143	BDL	BDL	BDL	BDL	BDL
5 th Floor Elev Lobby/M2	BDL	0.179	BDL	-1.39	-0.0116	BDL	BDL
10thFloor Elev /M3	BDL	-0.029	BDL	-0.65	-0.0067	BDL	BDL
Roof/M4	2.26	0.580	0.646	2.45	0.4	0.781	2.36
Blank/M5 (ug/sample)	BDL	0.733	BDL	3.97	0.344	BDL	BDL
Blank/M6 (ug/sample)	1.03	0.826	BDL	6.91	0.323	BDL	BDL

* - micrograms per cubic meter of air

** Below Detection Limit

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The Environmental Protection Agency (EPA) has set a screening level for hexavalent chromium (the more toxic form) in air of 0.6 ug/m^3 , this assumes a continuous exposure for one year. The samples here were analyzed for total chromium (trivalent and hexavalent). The concentrations in the all the samples are below the EPA level.

The EPA has established an ambient air standard for lead of 1.5 ug/m^3 based on a three-month exposure. The concentrations in the all the samples are below the EPA level.

The EPA has no published screening level or guideline for aluminum, iron , copper, zinc, or magnesium.

May 24

The metals that were found above the limits of detection were chromium (Cr), lead (Pb), copper (Cu) and iron (Fe). The other metals were not detected. Chromium was the only metals detected in both field blanks. Blank-correcting the Cr concentrations in the samples lowers them to below the limits of detection .

Lead was detected in all the samples at concentrations ranging from 0.238 ug/m^3 to 0.279 ug/m^3 . The EPA has established an ambient air standard for lead of 1.5 ug/m^3 based on a three-month exposure. The concentrations in the all the samples are below the EPA level.

The EPA has no published screening level or guideline for iron and copper.

May 31 and June 7

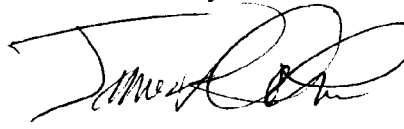
On each sampling day, chromium (Cr) was detected in all four samples and both blank samples. Blank-correcting the Cr concentrations in these samples lowers them to below the limits of detection.

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.


Arnel Javal
Senior Project Manager

Reviewed By:


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

Attachment

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CITY_21MC100_003431667

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