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January 3, 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: Wipe 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 the results of the wipe samples for metals collected on December 20, 2001, at the referenced location. The New York City Board of Education (BOE) requested these samples to evaluate possible contamination from metals in the school building according to the recommendation of Environ Corp., consultant to the parents association.

Scope of Work

ATC collected surface wipe samples from various surfaces for analysis of eleven metals.

Marianna Medinets, Environmental Technician from ATC's New York City office, collected the samples. Ten samples were collected using Palintest[®] dust wipes.

The samples, plus one blank, 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 eleven (11) metals. The metals were aluminum (Al), cadmium (Cd), chromium (Cr), cobalt (Co), copper (Cu), iron (Fe), magnesium (Mg), manganese (Mn), molybdenum (Mo), nickel (Ni) and zinc (Zn). A copy of the analytical report is provided as Attachment 1. The areas sampled were one square foot (1 ft²) with the exception of one windowsill sample (#M-03) that was 0.15 ft² (See attachment).

The sampling was performed consistent with generally accepted industrial hygiene practices. There were inherent limitations created by constraints of time, operational and work practice variability, variations in contaminant concentrations, and sampling and analytical accuracy. The results of the sampling represent conditions found on the dates the samples were collected.

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There are no established regulatory values for these metals on indoor surfaces. The New York State Department of Environmental Conservation (NYSDEC) has clean-up objectives for metals in soil but not for interior surfaces (See Attachment 2). There are no Occupational Safety and Health Administration (OSHA) standards that are applicable to this circumstance.

Wipe Sample Results

Metals were detected in all ten samples however only one sample, collected from a windowsill in Room 526 (Sample #M-03), contained measurable levels of the nine metals detected. No single sample contained the highest measured metal concentrations. Aluminum, chromium, copper, iron, magnesium and manganese were found in all samples. Molybdenum was not found in any sample above the reporting limit. Magnesium and zinc were also recovered from the blank. Metal concentrations are shown in the following table.

TABLE
METAL CONCENTRATIONS (micrograms/sample)

METAL	RANGE	NUMBER OF SAMPLES
ALUMINUM	20.5 – 345	10
CADMIUM	0.272 – 0.503	2
CHROMIUM	0.224 – 7.72	10
COBALT	0.230 – 1.04	4
COPPER	1.78 – 20.0	10
IRON	28.2 – 454	10
MAGNESIUM*	56.7 – 196	10
MANGANESE	0.931 – 10.4	10
MOLYBDENUM	BRL**	0
NICKEL	0.689 – 2.94	7
ZINC*	23.9 – 425	10

* Metal also detected in blank ** Below reporting limit

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Conclusion/Recommendation

Detectable levels of ten metals were found in the samples from ten interior surfaces. However, ATC does not believe that cleaning of the surfaces in the school is necessary.

ATC appreciates the opportunity to provide this indoor environmental service to the BOE. Please call (212) 353-8280 extension 212 or 265 if you have any questions.

Sincerely,
ATC Associates, Inc.



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

Attachment

ATTACHMENT 1
ANALYTICAL REPORT
METALS