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June 18, 2002

Mr. Bernard P. Orlan
 Director, Environmental Health & Safety
 New York City Board of Education
 28-11 Queens Plaza North
 Long Island City, NY 11101-4008

Re: Air Sampling for Silica
P. S. 234M
ATC Project No. 15-19125-0279

Dear Mr. Orlan:

ATC Associates Inc. (ATC) is pleased to provide this report of the results of air monitoring for silica-containing dust conducted on April 23 and 30, 2002, at the referenced school. The New York City Board of Education (BOE) requested this monitoring at the recommendation of Environ Corp., the consultant to the parents association.

Scope of Work

On each day, ATC collected a total of seven (7) samples (and one blank) for respirable dust using pre-weighed 37mm PVC filters connected to size-selective cyclones to remove the larger (non-respirable) particles prior to deposition on the filters. All of the samples were collected indoors. The samples were sent to PSC Analytical Services, Inc., an American Industrial Hygiene Association accredited laboratory in Reading, PA. Analysis for silica was performed by x-ray diffraction according to OSHA Method 142. Copies of the analytical laboratory reports are attached.

Tenzin Namgyal and Wagdi Abdelshahid, Industrial Hygienists of ATC's New York City office, collected the samples consistent with generally accepted industrial hygiene practices. As with all such sampling, there were inherent limitations created by constraints of time, operational and work practice variability, variations in air contaminant concentrations and sampling and analytical accuracy. The results of the sampling represent conditions found on the dates the samples were collected.

Samples were collected in the following locations: 1st floor Hallway, Cafeteria, Gymnasium, Auditorium, Room 315 (South), Room 323 (South) and Room 316 (facing East).

Mr. Bernard P. Orlan
Air Sampling for Silica
P.S. 234M

June 18, 2002
Page 2

ATC Project No. 15-19125-0279

Results

On both days, silica was detected in one of the seven samples as follows:

Sample #ATC-0423-234M-S5 (Room 315): 0.0172 mg/m³
Sample #ATC-0430-234M-S3 (Cafeteria): 0.0118 mg/m³

The Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) is the only regulatory standard for silica exposure, however it is intended for occupational exposure in settings such as foundries, sandblasting, rock drilling, etc. The Environmental Protection Agency (EPA) does not have an ambient-air quality standard or guideline for silica.

The OSHA PEL for silica-containing dust is based on the percent of quartz (SiO₂) found in the dust, the higher the percentage of quartz, the lower the PEL. The formula for calculating the PEL is found in 29 CFR 1910.1000, Table Z-3. The formula is:

$$\frac{10\text{mg/m}^3}{\% \text{SiO}_2 + 2}$$

The PELs for the silica in these samples are shown in the table:

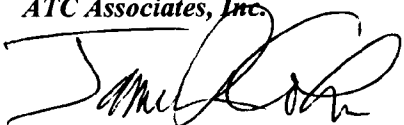
OSHA PELs for SILICA DETECTED

Date/Location/ Sample No.	Silica Content (ug/sample)	Silica Content (%)	Silica Concentration mg/m ³	OSHA PEL (calculated) mg/m ³
April 23 Room 315 S5	14.0	<28	0.0172	0.333
April 30 Cafeteria S3	12.0	<24	0.0118	0.385

The silica concentrations detected are well *below* the calculated OSHA PELs.

It is our pleasure to provide these indoor air consultative services to the New York City Board of Education. If you have any questions about this report, please contact me at (212) 353-8280, extension 212.

Sincerely,
ATC Associates, Inc.



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

Attachment