NYC 9/11 Public Portal Document

ATC ASSOCIATES INC.

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April 24, 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 March 20, 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

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. A copy of the analytical report is 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 date the samples were collected.

Results

Samples were obtained in the following locations: 1st floor Hallway, Cafeteria, Gymnasium, Auditorium, Room 211 (South), Room 219 (South) and Room 216 (East).

Silica was detected in three of the seven samples as follows:

Sample #S1 ATC-0326-234M(1st floor hallway) - 0.0127 mg/m^3
Sample #S2 ATC-0326-234M (Cafeteria) - 0.0157 mg/m^3
Sample #S5 ATC-0326-234M (Room 211-South) - 0.0136 mg/m^3

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The 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 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 (SiO_2) 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:

$$\frac{10 mg/m^3}{\%SiO_2 + 2}$$

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

OSHA PELs for SILICA DETECTED
March 26, 2002

Location & Sample No.	Silica Content (ug/sample)	Silica Content (%)	Silica Concentration mg/m³	[illegible]
1st Floor Hall S1	13.0	26	0.0127	0.357
Cafeteria S2	16	32	0.0157	0.294
Room 211 S5	11	22	0.0135	0.417

The silica concentrations detected are all well below the 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