NYC 9/11 Public Portal Document

ATC ASSOCIATES INC.

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March 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 Silica
Stuyvesant High School
ATC Project No. 15-19125-0246

Dear Mr. Orlan:

ATC Associates, Inc. (ATC) is pleased to provide this letter report of air sampling for silica-containing dust conducted on February 6, 2002, at the referenced school. The New York City Board of Education (BOE) requested this sampling at the recommendation of H. A. Bader, a consultant to the parents' association.

Scope of Work

ATC collected twelve (12) samples on February 6, 2002 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. One (1) outdoor sample and eleven (11) indoor samples were collected per day. The samples, plus a blank, were sent to PSC Analytical Services, Inc., an American Industrial Hygiene Association accredited laboratory in Reading, PA. Analysis was performed by x-ray diffraction according to OSHA Method 142. A copy of the analytical report is attached.

Wagdi Abdelshahid and Tenzin Namgyal, Industrial Hygienists from ATC's New York City office, conducted the sampling. The results represent conditions on the day the samples were collected.

Results

Silica was detected above the limit of detection in one of the samples. Sample ATC- 0206-STUY-S3, collected in the pool area, contained 0.0135 milligrams of silica per cubic meter of air (mg/m^3). The Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (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:

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

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The amount of quartz in this sample was ≤22%, therefore the PEL for this dust would be:

$$\frac{10 mg/m^3}{22 + 2} = 0.417 \text{ mg/m}^3$$

The silica concentration in this sample was 3.2% of the calculated PEL.

The OSHA 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 for silica.

Silica was not detected above the analytical limit of detection in any of the remaining samples collected on this date.

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

Sincerely,
ATC Associates, Inc.

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

Attachment

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