



104 East 25th Street
New York, New York 10010
www.atc-enviro.com
212.353.8280
Fax 212.353.8306

January 10, 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: Wipe Samples for Dioxins
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 polychlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs) collected on December 20, 2001, at the referenced location. The New York City Board of Education (BOE) requested these samples to evaluate possible contamination in the school building per the recommendation of Environ Corp., consultant to the parents association..

SCOPE OF WORK

Wagdi Abdelshahid, Industrial Hygienist of ATC's New York City office, collected the samples on all three days.

The samples were collected using gauze pads and hexane as a solvent. The pads and solvent were provided and samples were analyzed by Pace Analytical Services, Inc. (Pace) of Minneapolis, MN, a laboratory experienced in dioxin analysis. The analysis was performed by modified EPA Method 8290 using combined capillary column gas chromatography/high resolution mass spectrometry.

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.

SUBSTANCE DESCRIPTION

"Dioxins" or "dioxin" is a name used for a group of chlorinated multi-ringed organic compounds that includes polychlorinated dibenzo dioxins (PCDDs) and polychlorinated dibenzo furans (PCDFs). They are related to polychlorinated biphenyls (PCBs). PCDDs and PCDFs are not produced commercially except for research purposes. They occur as trace level by-products of combustion and industrial chemical processes.

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Combustion of PCB-containing oils, such as during an electrical transformer fire, is known to produce dioxins. Burning of some plastics may also produce dioxins. Dioxins are toxic and are considered to be carcinogenic.

The Environmental Protection Agency (EPA) or the Occupational Safety and Health Administration (OSHA) has not established a standard for dioxin on surfaces. The EPA has a residential clean-up goal of 1 part per billion (ppb).

The New York State Department of Environmental Conservation (NYSDEC) has set 0.0006 parts per million (ppm) as the allowable concentration of dioxin in soil.

WIPE SAMPLING RESULTS

ATC submitted ten (10) wipe samples for PCDDs/PCDFs (plus one blank) to Pace for analysis. A copy of the laboratory report is provided in Attachment 1. Samples were taken from areas specified by the parents association consultant. The sample area was one square meter (m²). The sample locations and the areas are shown in the table as well as the results

Each sample was analyzed for sixteen (16) PCDD/PCDF isomers. The results for each isomer were then converted to 2, 3, 7, 8 -tetrachloro-dibenzo-p-dioxin (2, 3, 7, 8-TCDD) equivalents by multiplying by an established equivalency factor (See Attachment). This provides a single value (in nanograms) for the analytical results for each sample.

DIOXIN WIPE SAMPLE RESULTS (2, 3, 7, 8 TCDD EQUIVALENTS)

LOCATION/SAMPLE NUMBER	DIOXIN CONCENTRATION (ng/m²)
Room 501-Table/DX1	0.0038
Library 517-Table/DX2	0.00070
Room 526-Floor/DX3	0.0014
Gymnasium-Floor/DX4	0.0013
Room 310-Floor/DX5	0.00085
2nd Floor Hallway/DX6	0.0018
Auditorium-Floor/DX7	0.0038
Cafeteria-Floor/DX8	0.0011
Main entrance lobby/DX9	0.032
Room 228/ DX10	0.0016
Field Blank/DX11	0.00

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DISCUSSION

The concentrations on indoor surfaces ranged from 0.00 to 0.032 nanograms per square meter (ng/m^2). No standard has been established for dioxin on indoor surfaces. The NYSDEC acceptable soil concentration is 0.0006 parts per million (ppm) or 0.6 ppb. The EPA residential clean-up goal is 1ppb. The levels found in these samples would appear to be below both these levels.

It is not possible to determine when the 2, 3, 7, 8 - TCDD equivalents detected in these samples were deposited. Dioxin samples were not collected from these locations prior to December 20th.

It is our pleasure to provide these indoor environmental services to the NYC Board of Education. If you have any questions about this report, please call (212) 353-8280, extension 212.

Sincerely,
ATC ASSOCIATES INC.



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

Attachment

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