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May 10, 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 Hydrocarbons  
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 hydrocarbon compounds conducted on April 3, 17, and 24, 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**

On each day, ATC collected three (3) samples for hydrocarbon compounds (HC) at specified locations. Samples were collected for a minimum of seven (7) hours using activated coconut shell charcoal tubes connected to battery-powered sampling pumps at a flow rate of 0.2 liters per minute. Pumps were calibrated before and after each sampling period. Two (2) samples were collected inside the building and one (1) was collected on the roof. One blank tube was also submitted per day. The samples were sent to PSC Analytical Services, Inc., an American Industrial Hygiene Association-accredited laboratory in Reading, PA. Analysis was performed by capillary gas chromatography/flame ionization detection (OSHA Method 7).

Each sample was analyzed for a panel of sixteen (16) specific HC compounds. These compounds were: pentane, acetone, methylene chloride, hexane, chloroform, methyl chloroform, benzene, 1,2-dichloroethane, trichloroethylene, toluene, perchloroethylene (tetrachloroethylene), chlorobenzene, ethylbenzene, styrene, cumene and xylenes. In addition, two non-identified peaks, total other A- hydrocarbons and total other B-hydrocarbons, were reported. The A-hydrocarbons are those, such as gasoline or light alcohols, with boiling points less than that of benzene (176°F). The B-hydrocarbons are those, such as mineral spirits or petroleum naphtha, with boiling points greater than that of benzene. A copy of the analytical report is attached.

Tenzin Namgyal and Wagdi Abdelshahid, Industrial Hygienists, from ATC's New York City office, collected the samples consistent with accepted industrial hygiene practices. The results represent conditions on the days the samples were collected.

The sampling locations were the 1<sup>st</sup> floor lobby, 2<sup>nd</sup> floor bridge entrance lobby and the roof.

Mr. Bernard P. Orlan  
 Air Sampling for Hydrocarbons  
 Stuyvesant High School  
**RESULTS**

May 10, 2002  
 Page 2  
 ATC Project No. 15-19125-0246

April 17 and 24

None of the hydrocarbons in the analyte panel were present above the limits of detection.

April 3

Three of the hydrocarbons in the analyte panel were detected in the samples. These samples were Total A Hydrocarbons, acetone and hexane. Acetone was detected in the 1<sup>st</sup> floor lobby, on the roof and in the blank. Total A Hydrocarbons, acetone, and hexane were detected on the roof and in the field blank. The concentrations are shown in the table.

**HYDROCARBONS DETECTED**  
**April 3, 2002**

| LOCATION<br>SAMPLE NO.              | Total A<br>Hydrocarbons<br>(ppm) | ACETONE<br>(ppm) | HEXANE<br>(ppm) |
|-------------------------------------|----------------------------------|------------------|-----------------|
| 1 <sup>st</sup> Floor Lobby<br>VOC1 | BDL                              | 0.15             | BDL             |
| Bridge Entrance<br>Lobby VOC2       | BDL                              | BDL              | BDL             |
| Roof<br>VOC3                        | 0.086                            | 0.56             | 0.083           |
| Blank<br>VOC4                       | 23 ug/sample                     | 68 ug/sample     | 23 ug/sample    |
| OSHA Permissible<br>Exposure Limit  | 50                               | 1000             | 500             |

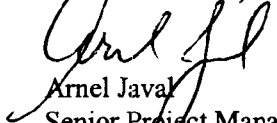
\* Below Detection Limit

The A-hydrocarbons are those, such as gasoline or light alcohols, with boiling points less than that of benzene (176°F). The source in and around the school is unknown. Acetone is a common solvent in a variety of industrial processes and is the principal component nail polish remover. Hexane is another common solvent and is used in the school by ATC to collect wipe samples for PCBs and dioxin.

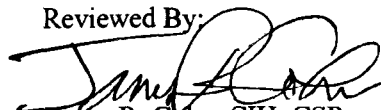
There are no ambient air standards for these hydrocarbons and the levels detected here are far below the occupational standards for these compounds (see Table).

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

Sincerely,  
 ATC Associates, Inc.

  
 Arnel Javal  
 Senior Project Manager

Reviewed By:

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

Attachment