Quarterly Monitoring Results Springfield Street Schools Springfield Street Providence, Rhode Island

Marin

June 7, 2000 Second Quarter December 1, 1999 to March 1, 2000

Prepared For:

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June 7, 2000

Mr. Mal A. Salvadore Sondler Salvadore and Associates 400 Reservoir Avenue Providence, Rhode Island 02907

Re: Second Quarter

Quarterly Monitoring Results

Springfield Street Schools Providence, Rhode Island

Dear Mr. Salvadore:

ATC has completed the second round of quarterly monitoring for the Springfield Street Schools located in Providence, Rhode Island. The monitoring was performed subject to the Long-Term Operation and Maintenance Plan and Site Contingency Plan (May 9, 1999). The Long-Term Operation and Maintenance Plan and Site Contingency Plan is part of the Remedial Action Work Plan dated April 2, 1999, revised May 3, 1999 and May 9, 1999, and approved by the Rhode Island Department on Environmental Management (RIDEM) on June 4, 1999.

The following monitoring processes were performed at the Springfield Street Schools: Soil Cover Monitoring, Sub Slab Ventilation System Monitoring, Soil Gas Monitoring, Groundwater Quality Monitoring, Indoor Air Quality Monitoring, and Methane Monitoring.

## Soil Cover Monitoring

During construction an orange snow fence was lain as an indicator barrier. At least two feet of soil was spread over the orange snow fence to complete the cover. If the cover erodes or someone digs through the cover, the indicator barrier beneath the topsoil would become visible. Soil cover monitoring was performed to evaluate areas on-site for evidence of erosion or digging to the extent that the orange fence indicator barrier has been exposed. The indicator fence was not observed to be exposed during the course of the second quarter of monitoring.

### Sub-Slab Ventilation System Monitoring

Monitoring of the Sub-Slab Ventilation System entailed checking all gauges, valves, and sensors; testing and evaluating the blowers; and checking and draining (if required) the moisture separators. One sample of influent and effluent gas was evaluated for the presence of methane, carbon monoxide, carbon dioxide, hydrogen sulfide, and volatile organic compounds. With the exception of volatile organic compounds these constituents were not identified during the monitoring. Refer to Table 1 for the volatile organic compound results.

#### Soil Gas Monitoring

Thirty-eight soil gas monitoring wells were installed on-site. All wells were inspected for damage. All wells were sampled using an air pump and portable monitoring equipment. Approximately 300 liters of air (approximately 50 wel volumes) was extracted from each well prior to sampling. The air was monitored for oxygen, hydrogen sulfide, carbon monoxide, carbon dioxide, methane, and Volatile Organic Compounds. Refer to Table 2.

#### Groundwater Quality Monitoring

Groundwater sampling did not occur during this quarter. All five monitoring wells planned for installation as part of the operation and maintenance program will be installed in the northern part of the site. This portion of the site was under construction at the time of the first quarter sampling and the ground was too wet to bring a drill rig onto the site to complete the drilling.

#### Indoor Air Quality Monitoring

ATC check the methane monitors installed within the Elementary School. The monitors were operating at the time of our visits. The monitors within the building have not detected methane. The Middle School was under construction during the second quarter. ATC used direct read instruments to monitor the middle school for the presence of hydrogen sulfide, carbon monoxide and methane on a periodic basis. Hydrogen sulfide, carbon monoxide, and methane were not detected at any concentration during the course of the quarter.

If you have any questions regarding this letter please contact the undersigned.

Sincerely,

ATC Associates Inc.

Adam Sullivan Project Manger

Table 1

# Vapor Phase Effluent Results Springfield Street Elementary and Middle Schools Sub-Slab Ventilation Systems Volatile Organic Compounds Second Quarter 2000

Constituent	Elementary School	Middle School System No.1
Dichlorodifluoromethane	4.5	4.2
1,2-Dichlorotetrafluoroethane	6.1	16
Chloroethane	34	36
Trichlorofluoromethane	0.83	<0.5
Methylene Chloride	0.79	4.3
Toluene	0.60	1.3
Methane	<0.5%	<0.5%

- Middle School System No.2 was not fully operational at the time of the sampling.
  This system will be sampled during the third quarter.
- Analytical results are reported in parts per billion by volume
   Samples collected on February 2, 2000.

