



Springfield St. Schools  
NEW GW tests.

# Facsimile Transmittal

To: Jeff Crawford From: Adam Sullivan  
 Fax: (401) 277-3813 Date: 4/7/99  
 Phone: 272-2797 Pages: 3  
 Re: Response letter (Addendum) cc:

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Notes: Please Call w/any questions you may have.

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**ENVIRONMENTAL TESTING \* ASBESTOS CONSULTING**  
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April 6, 1999

Mr. Jeffrey Crawford  
Principal Environmental Scientist  
Office of Waste Management  
Rhode Island Department of Environmental Management  
235 Promenade Street  
Providence, Rhode Island 02908-5767

**Re: *Site Investigation Report Addendum  
Springfield Street Lots  
Providence, Rhode Island***

Dear Mr. Crawford:

ATC Associates Inc. (ATC) presents this addendum to the Site Investigation Report for the Springfield Avenue Lots located between Springfield Avenue, Killingly Avenue, and Hartford Avenue in Providence, Rhode Island. The City of Providence plans to construct two schools at this property. This addendum has been prepared, in part, in response to the Rhode Island Department of Environmental Management's comment letter regarding ATC's Site Investigation Report.

Rhode Island Department of Environmental Management's comments, followed by ATC's response to the comments are listed below:

- 1. *Introduction - Please explain the Performing Party's (the City of Providence) capability to comply with Rule 7.04 Development of Remedial Alternatives, Item D.***

A Performing Party's ability to carry out the proposed remedy is based on two factors. The first is that the performing party owns or has possession of the property. The second factor is that the performing party financially has the ability to carry out the remedy. The City of Providence has the ability to satisfy each of these conditions. The Providence Redevelopment Authority will condemn the property in the near future. The necessary City Council approvals are in place and a court hearing will proceed to vest title in the lots in the City of Providence. Additionally, the City will sell bonds amounting to \$40 million for the construction of the school buildings and the remediation at the site.

*Site Investigation Report, Addendum**April 6, 1999**Page 2*

2. *The OWM requests that ATC collect groundwater samples from some of the wells located within the proposed schools footprints for laboratory analysis for VOC's. The results will assist the Office in reassuring the general public that no groundwater contamination is present beneath the proposed school sites, which may be a threat to human health.*

On April 1, 1999, ATC collected seven groundwater samples from monitoring points installed by Mykrowaters, Inc. The groundwater monitoring points sampled are located within the footprints of the two buildings and were selected based on discussions with the Rhode Island Department of Environmental Protection. The results of the sampling are summarized below:

Constituent	GW-4	GW-5	GW-8	GW-12	GW-16	GW-18	GW-21	GB Groundwater Quality Objective
Benzene	ND	ND	ND	ND	ND	ND	0.0008	0.14
Chlorobenzene	ND	ND	ND	0.0016	ND	ND	0.0019	3.2
1,4 Dichlorobenzene	ND	ND	ND	0.0017	ND	ND	0.0020	No Standard
MTBE	0.0139	0.0223	ND	0.0091	ND	ND	0.0069	5.0
Naphthalene	ND	ND	ND	0.0025	ND	ND	ND	No Standard
1,2,4 trimethylbenzene	ND	ND	ND	0.0018	ND	ND	ND	No Standard

The results of the additional groundwater sampling are consistent with the groundwater sampling results from the Site Investigation with the following exceptions:

- Benzene was detected at less than 1 microgram per liter ( $\mu\text{g/l}$ ) in one groundwater sample collected from the northern portion of the property. Chlorobenzene, dichlorobenzene (1,4), and methyl tertiary butyl ether (MTBE) were also detected in this sample. The concentrations of these constituents are marginally above method reporting limits and are not in excess of the GB Groundwater Quality criteria.
- GW-12, which is located approximately 150 feet to the west of GW-21 contained similar constituents at similar concentrations.
- Trace concentrations of MTBE were detected in GW-4 and GW-5.

3. *Page 12, Background Determination - For clarity, this section does not comply with the requirements in the Remediation Regulations for determining background concentrations at a site. In order to address existing site contaminants as potential background concentrations, ATC would have to collect (20) additional soil samples from unimpacted areas of the whole site, conduct laboratory analysis and then determine what average concentration is in relation to the applicable exposure criteria.*

The soil samples collected in the southern portion of the site were collected to assess surficial soil that has not been impacted by fill. The results of the analysis indicate concentrations of lead, arsenic, and total petroleum hydrocarbons at concentrations exceeding the Method 1 Residential Direct Exposure Criteria. The sampling was not necessarily intended to establish background concentrations, but rather to evaluate the potential for leaving this portion of the site uncovered.

**Site Investigation Report, Addendum****April 6, 1999****Page 3**

Since the residential direct exposure criteria are exceeded, a soil cover will be placed over the entire non-building areas of the site.

4. *Page 19, Alternative 3 – Please indicate the fate of the fill material surrounding the elementary school footprint and whether this material would require a gas collection system, gas monitoring wells along the perimeter of the site or at a minimum, sensor alarms beneath the floor to detect methane concentrations which may be migrating from the surroundings.*

The remediation plan for the site does not provide for the removal of fill material located to the north, east, and west of the proposed elementary school. Therefore, ATC has recommended and specified that the soil gas collection system will be installed in these areas to prevent gas migration in the elementary school. In addition to periodic monitoring within the building, ATC also proposes to install monitors within the building.

5. *Page 19, Alternative 3 – The Department will require a comprehensive description in the Remedial Action Work Plan for the design of the soil gas collection system under the middle schools, the location of the gas collection monitoring wells network and the proposed location of all sensor alarms in the school buildings. Also required will be the frequency of testing these wells to indicate gas exceedance of the acceptable limit (i.e. at the beginning methane readings must be taken weekly at these wells) after establishing sufficient data these wells may be monitored on a quarterly basis.*

It is anticipated that the gas collection system will need to be monitored closely during the initial start up phase. This would include measurements of certain indicator parameters such as methane.

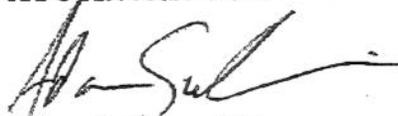
6. *Page 19, Alternative 3 – The City of Providence is reminded that the proposed cover for those areas of the site which will not be located beneath the building footprints will require a minimum cover of two feet of clean soil and/or a combination geotextile layer with a minimum of one foot of clean soil. Either scenario will require a final cover of 2 – 2-inch perpendicular lifts for asphalt areas or loam and seed in the proposed grass areas and an ELUR.*

The method of cover described is included in the Remedial Action Work Plan.

If you have any question please feel free to contact me at 401-274-3955.

Sincerely,

**ATC Associates Inc.**



Adam Sullivan, P.E.  
Project Engineer