

ALAN R. SEPE

Director



VINCENT A. CIANCI, JR.

Mayor

DEPARTMENT OF PUBLIC PROPERTY

March 22, 1999

Mr. Greg S. Fine, P.E.,
Supervising Engineer
Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02908-5767

Re: Site Excavation at Springfield Avenue
Providence, Rhode Island

Dear Mr. Fine:

The City of Providence presents this letter to outline steps to mitigate the excavation of material from the southern portion of the proposed school site located to the west of Springfield Avenue. Based on initial investigations, a significant portion of this southern area was not impacted by the landfilling operations that have affected the balance of the site. The unaffected area is characterized as a sand and gravel deposit. The area surrounding the deposit, however, was filled. To the south of the unaffected area the ground surface appears to be native material and no direct evidence of landfilling was identified in this area.

ATC Associates Inc. collected soil samples from test pits that were excavated within and outside of the unaffected area. The attached figure identifies the locations of the test pits that were excavated in the southern area of the site. Sample locations ATC-2, ATC-4, ATC-5 and ATC-6 were collected within the unaffected areas. With the exception of sample ATC-5, these samples were collected to the south of the exposed sand and gravel deposit. The results of the laboratory analysis corresponding to these samples are attached.

During the on-site borrow operation, approximately 2,000 to 3,000 cubic yards of fill material were excavated to expose underlying sand and gravel. Certain materials were removed from the fill (tires, metallic debris, etc.) and stockpiled on polyethylene sheets. The balance of the fill material was used to fill in a hole created by the sand and gravel excavation located along the western perimeter of the southern area of the site.

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Springfield Avenue Excavation

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To mitigate the potential impacts of this operation the City of Providence proposes the following:

1. Any solid waste that has been discovered to be backfilled on site will be removed and stockpiled pending off site disposal.
2. Fill material located within the Elementary School footprint will be excavated and managed in accordance with Rhode Island Solid Waste Regulations and the Remediation Plan currently under development.

As you are aware, ATC is performing soil gas and groundwater sampling throughout the site area. We are receiving data from an on-site gas chromatograph and will confirm these results through laboratory analysis. We will submit a Site Investigation report for your review and comment early next week. A remediation plan will follow shortly thereafter.

The City of Providence is committed to rectifying any inadvertent excavation of fill material found in the southern portion of the site. Prior to implementing any of the steps outlined above, the City will consult with the solid waste management group and representatives from your office to ensure that all environmental regulations are complied with. We understand that your review and approval of the Remediation Plan is critical in this evaluation. If you have any questions please contact me at 421-7740 ext 300.

Sincerely,



Alan R. Sepe
Director
Department of Public Property

Table
Soil Analytical Results
Test Pit Sampling

*Volatile Organic Compounds, Total Petroleum Hydrocarbons,
 RCRA 8 Metals, Polychlorinated Biphenyls*

Analytes	TP-1	TP-3	TP-4	RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT METHOD 1 SOIL OBJECTIVES ¹	
				Direct Exposure Criteria ²	GB Leachability Criteria ³
Volatile Organic Compounds	ND	ND	ND	Analyte Specific	Analyte Specific
Polychlorinated Biphenyls	0.191	0.305	0.840	10	10
Total Petroleum Hydrocarbons	1,700	315	117	500 or 1000	2,500
RCRA 8 Metals					
Arsenic	2.46	8.23	8.27	1.7	No Standard
Barium	138	117	212	5,500	No Standard
Cadmium	2.01	2.52	3.66	39	No Standard
Chromium	38	134	33	390	No Standard
Lead	205	362	739	150	No Standard
Mercury	0.21	1.65	0.28	23	No Standard
Selenium	<1.16	0.69	1.02	390	No Standard
Silver	<2.23	<1.15	2.04	200	No Standard

¹ State of Rhode Island and Providence Plantations, Department of Environmental Management, Division of Site Remediation, Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases, March 31, 1993, (as amended August 1996).
² The Residential Direct Exposure Criteria applies to vadose zone soil.
³ The site is located in a GB Groundwater Classification Area

Analytes	ATC-7	ATC-8	ATC-9	ATC-10	ATC-11	ATC-11 GO	RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT METHOD 1 SOIL OBJECTIVES ⁹	
							Direct Exposure Criteria ¹⁰	GB Leachability Criteria ¹¹
Volatile Organic Compounds								
Ethyl Benzene	0.005	ND	ND	ND	ND	ND	27	1.6
xylene	0.017	ND ¹²	ND	ND	ND	ND	110	No Standard
Isopropylbenzene	0.005	ND	ND	ND	ND	ND	27	No Standard
p-isopropyltoluene	0.006	ND	ND	ND	ND	ND	No Standard	No Standard
Propylbenzene	0.010	ND	ND	ND	ND	ND	No Standard	No Standard
Sec-butylbenzene	0.009	ND	ND	ND	ND	ND	No Standard	No Standard
1,2,4 Trimethylbenzene	0.037	ND	ND	ND	0.016	0.004	No Standard	No Standard
1,3,5 Trimethylbenzene	0.020	ND	ND	ND	ND	ND	No Standard	No Standard
Butylbenzene	0.007	ND	ND	ND	ND	ND	No Standard	No Standard
Napthalene	ND	ND	ND	ND	ND	0.004	No Standard	No Standard
Polychlorinated Biphenyls	0.334	0.128	0.59	1.44	ND	ND	10	10
Total Petroleum Hydrocarbons	320 ¹³	24	61	86	11	17	500 or 1000	2,500
RCRA 8 Metals								
Arsenic	9.9	6.3	8.3	10.5	5.8	10.1	1.7	No Standard
Barium	92.2	85.0	206	85	44.1	129	5,500	No Standard
Cadmium	1.49	1.70	2.79	1.39	0.18	0.64	39	No Standard
Chromium	40.8	9.65	30	19.6	3.39	10.9	390	No Standard
Lead	258	163	594	848	95.6	256	150	No Standard
Mercury	0.267	0.293	0.315	0.171	0.095	0.099	23	No Standard
Selenium	10	ND	7.7	14.2	ND	6.4	390	No Standard
Silver	4	ND	2.4	ND	ND	ND	200	No Standard

⁹ State of Rhode Island and Providence Plantations, Department of Environmental Management, Division of Site Remediation, Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases, March 31, 1993, (as amended August 1996).

¹⁰ The Residential Direct Exposure Criteria applies to vadose zone soil.

¹¹ The site is located in a GB Groundwater Classification Area

¹² ND Denotes not detected

¹³ Bold face type denotes an exceedence of the Residential Direct Exposure Criterion

Analytes	RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT METHOD 1 SOIL OBJECTIVES ⁴						GB Leachability Criteria ⁶
	ATC-1	ATC-2	ATC-3	ATC-4	ATC-5	ATC-6	
Volatile Organic Compounds							
m-xylene	ND ⁷	ND	ND	ND	ND	ND	No Standard
Isopropylbenzene	ND	ND	ND	ND	ND	ND	No Standard
p-isopropyltoluene	ND	ND	ND	ND	ND	ND	No Standard
Propylbenzene	ND	ND	ND	ND	ND	ND	No Standard
Sec-butylbenzene	ND	ND	ND	ND	ND	ND	No Standard
1,2,4 Trimethylbenzene	0.006	ND	ND	ND	ND	ND	No Standard
1,3,5 Trimethylbenzene	ND	ND	ND	ND	ND	ND	No Standard
Butylbenzene	ND	ND	ND	ND	ND	ND	No Standard
Polychlorinated Biphenyls	ND	ND	0.234	ND	ND	ND	10
Total Petroleum Hydrocarbons	1,050⁸	724	339	284	179	147	500 or 1000
RCRA 8 Metals							2,500
Arsenic	30.6	ND	7.5	ND	5.9	ND	No Standard
Barium	102	14.1	34.6	13.2	21.3	18.3	No Standard
Cadmium	2.8	ND	0.38	ND	0.12	0.05	No Standard
Chromium	28	2.39	9.58	2.18	7.42	5.02	No Standard
Lead	877	5.3	291	4.5	44.8	7.5	No Standard
Mercury	0.227	ND	0.167	ND	0.070	ND	No Standard
Selenium	ND	ND	ND	ND	ND	ND	No Standard
Silver	ND	ND	ND	ND	ND	ND	No Standard

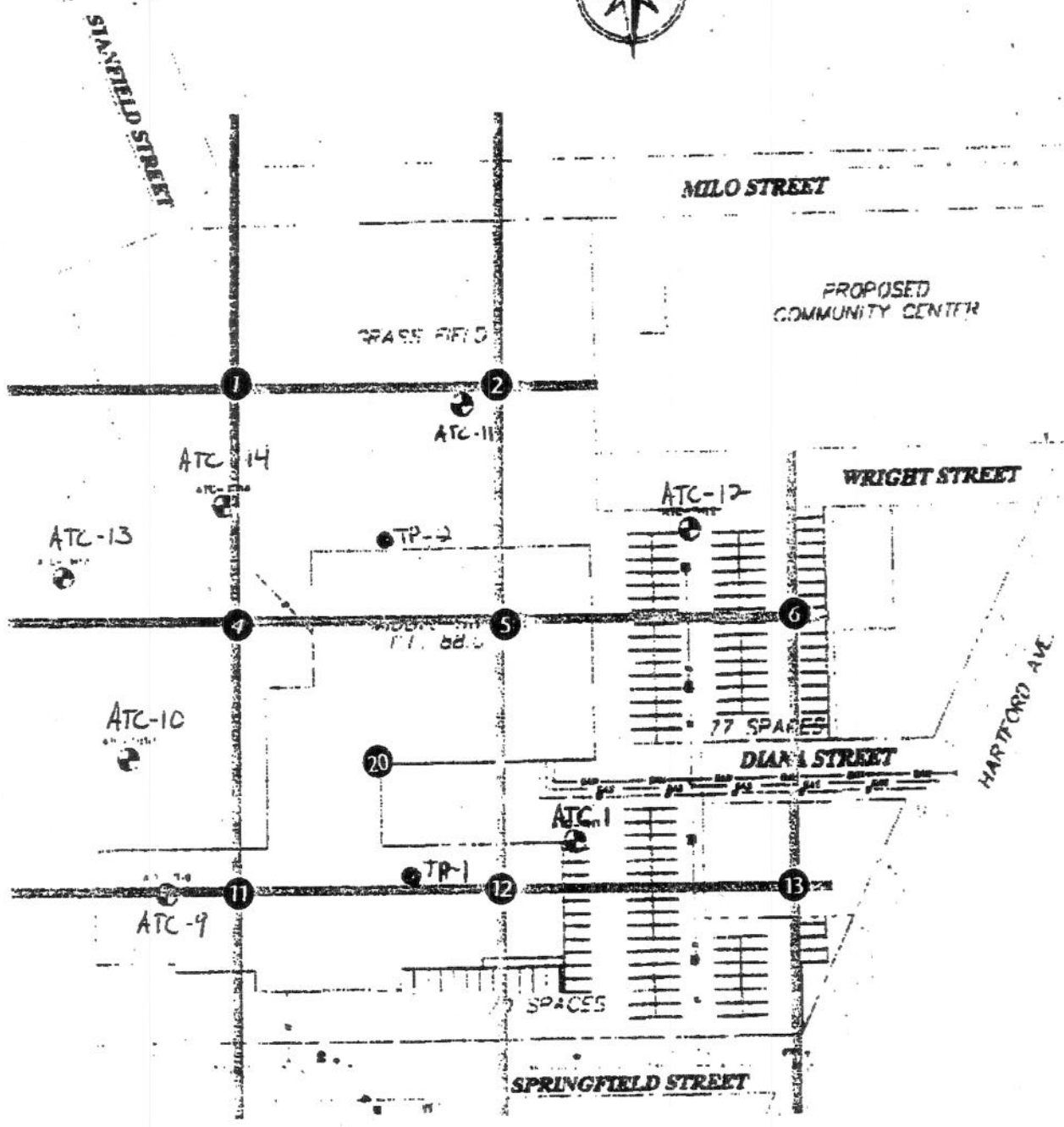
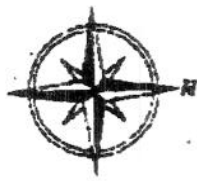
⁴ State of Rhode Island and Providence Plantations, Department of Environmental Management, Division of Site Remediation, Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases, March 31, 1993, (as amended August 1996).

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1" = 100'
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