



LS 28109

PN: 09111.09

March 27, 1995

Mr. Dan Russell
Rhode Island Department of Environmental Management
Division of Waste Management - UST Section
291 Promenade Street
Providence, Rhode Island 02908-5767



Subject: Underground Storage Tanks
333 Adelaide Avenue, Providence

Dear Mr. Russell:

This letter presents the findings of ABB Environmental Services, Inc.'s (ABB-ES) investigation of the two underground storage tanks (USTs) located behind Building N on the 333 Adelaide Avenue property in Providence, Rhode Island. As you are aware, the tanks were scheduled to be excavated on February 27, 1995 under a closure permit granted by Rhode Island Department of Environmental Management (RIDEM) UST Section. However, prior to commencing tank removal activities, ABB-ES undertook exploratory excavation to determine tank size, orientation and contents.

Results of Tank Investigation

On February 24, 1995, ABB-ES personnel and its subcontractor, Franklin Environmental Services, Inc. (Franklin) were on site to excavate soil surrounding the tanks to expose the tops of the tanks and manways. Results of this investigation showed that there are two USTs located behind (north of) Building N (see attached figure). The tanks are located side by side, with the long axis of the two tanks oriented north/south. An unknown length of the tanks appears to extend beneath the building. Each tank is approximately 30 feet long and 8 feet in diameter with an estimated capacity of approximately 15,000 gallons.

During excavation activities, the excavated soils were field screened with a portable photoionization detector (PID) for volatile organic compounds. PID readings were non-detectable.

No access ports were observed on the excavated portions of the tanks. However, a manway providing access to the eastern tank (Tank 1) was observed inside Building N. This manway had a pump and piping, and one of the pipes leads to an aboveground steel storage tank. An access port to Tank 2 was not found, either within the building or along the excavated top of the tank.

The manway on the eastern tank was opened and the tank appeared to be entirely full of water. No sheen was observed on the water surface. PID readings taken in the manway were non-detectable. A sample of the water collected for headspace analysis was also non-detectable. A sample of the water was collected for analysis of VOCs by EPA Method 8240 at a Rhode Island certified laboratory. No VOC's were detected in this aqueous sample. Laboratory analytical reports are attached.

ABB Environmental Services, Inc.

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A site-wide Remedial Investigation is currently being undertaken, and a groundwater table map has been developed for the property. The USTs are located above the water table indicating that the tanks are not submerged in groundwater, and that the material housed in the tanks was not the result of groundwater infiltration. Recently, the basement of Building N has flooded due to pipe breaks, and a leaking roof and floor boards. This water may have entered the tanks through gaps in piping or the manway. If oil had been originally contained in the tanks, the water in the basement would have forced oil out of the tank. However, no oil or staining was observed on the basement floor, the manway or the piping.

No vent or fill pipes were identified in the vicinity of the tanks or Building N, offering additional evidence that these tanks were not used for oil storage. Furthermore, Building N did not accommodate a furnace or a boiler.

Upon completion of the tank investigation activities, the excavation around the tanks was backfilled and the site restored to previous conditions. RIDEM was verbally notified of our findings and tank closure activities planned for February 27, 1995 were canceled.

Conclusions

Based on the information obtained, ABB-ES concludes that the tanks were likely used for water storage for firefighting purposes, and not for the storage of fuel oil or hazardous materials. Since the USTs located behind Building N do not contain petroleum products or hazardous materials, they are not regulated under RIDEM regulations (DEM-DWM-UST05-93, Section 5.03). Because they are not used for fuel or hazardous material storage, and because they extend under the building, we do not propose to remove or close the tanks at this time.

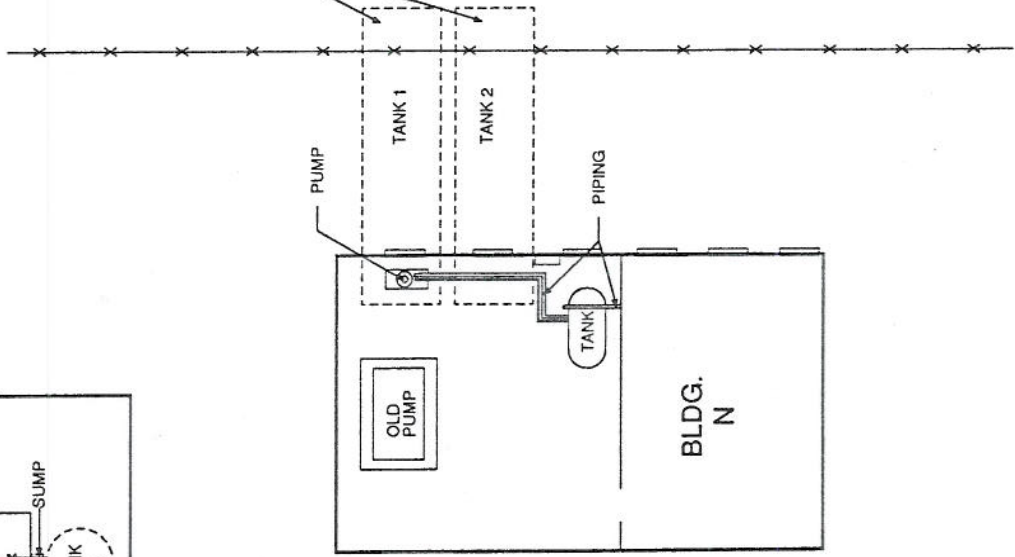
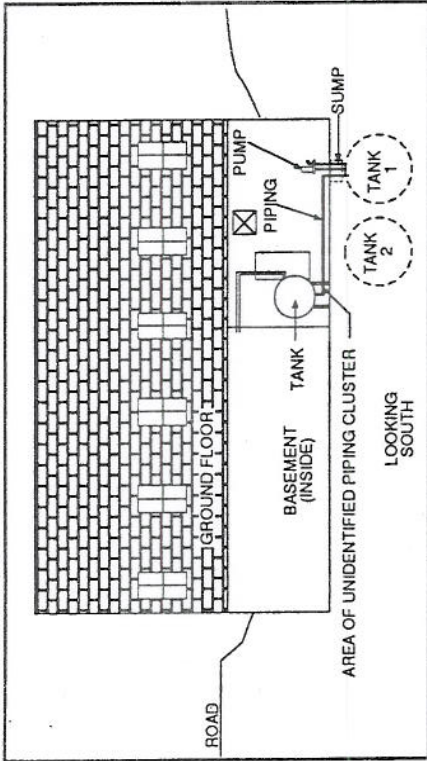
Sincerely,

ABB ENVIRONMENTAL SERVICES, INC.

Kathleen Donovan
Scientist

Ellen G. Cool, Ph.D.
Regional Project Director

cc: R. Brayley, Textron, Inc.
J. Palmieri, City of Providence, Department of Planning
J. Teverow, Esq.
G. Benik, McGovern, Noel, & Benik, Esq.
M. Dennen, RIDEM



APPROXIMATE LOCATION OF USTs

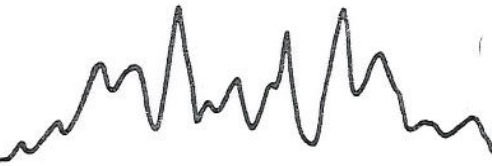
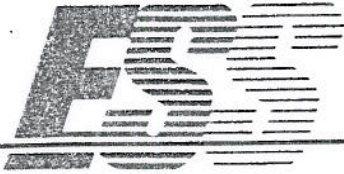
GZA-6



SCALE FEET

LOCATION OF BUILDING N USTs
GORHAM MANUFACTURING FACILITY
PROVIDENCE, RHODE ISLAND

BLDG. K-1



In Response To The Future

March 9, 1995

Ms. Ellen Cool
ABB Environmental Services
Corporate Place 128 Bldg. 3
107 Audubon Road
Wakefield, MA 01880

Dear Ms. Cool:

Enclosed is the data report of laboratory test results for the analyses of the samples which were received at ESS on February 24, 1995 as part of your Gorham/Textron project number 09111-09.

This letter authorizes the release of your analytical results and should be considered a part of this report. This report should not be copied except in full without the approval of the laboratory.

The Project Invoice for this data report is being forwarded to your Accounts Payable Department. If you have any questions please feel free to call.

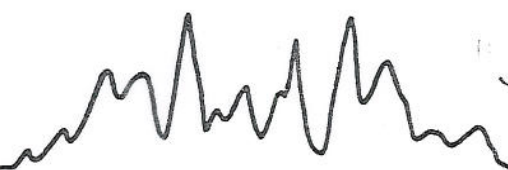
Sincerely,

A handwritten signature in black ink, appearing to read 'Dave Dickinson'. The signature is written in a cursive style with a large initial 'D'.

Dave Dickinson
Laboratory Director

Enclosure





CERTIFICATE OF ANALYSIS

In Response To The Future

VOLATILE ORGANICS Method 8240

Client: ABB Environmental Services

Client Project ID: Gorham/Textron

ESS Project ID: 950858

Client Sample ID: Gorham/Textron 2/24

ESS Sample ID: 950858-01

Date Sampled: 2/24/95

Dilution Factor: 1x

Date Analyzed: 3/8/95

Units: ug/L

Parameter	Result	MRL
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
Acetone	ND	50
Carbon Disulfide	ND	5
Methylene Chloride	ND	5
Methyl tert-Butyl Ether	ND	10
Trans-1,2-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
Cis-1,2-Dichloroethene	ND	5
Methyl Ethyl Ketone	ND	50
Chloroform	ND	5
1,1,1-Trichloroethane	ND	5
Carbon Tetrachloride	ND	5
Benzene	ND	5
1,2-Dichloroethane	ND	5
Trichloroethene	ND	5
1,2-Dichloropropane	ND	5
Bromodichloromethane	ND	5
Cis-1,3-Dichloropropene	ND	5
Methyl Isobutyl Ketone	ND	50
Toluene	ND	5
Trans-1,3-Dichloropropene	ND	5
1,1,2-Trichloroethane	ND	5
Tetrachloroethene	ND	5
2-Hexanone	ND	50
Dibromochloromethane	ND	5
Chlorobenzene	ND	5
Ethylbenzene	ND	5
Xylenes (Total)	ND	10
Styrene	ND	5
Bromoform	ND	5
1,1,2,2-Tetrachloroethane	ND	5
Dichlorobenzene (Total)	ND	10

ND = Not Detected above Method Reporting Limit (MRL)

Approved by: *[Signature]*

Date: 3/9/95

Environmental Science Services

532 Atwells Avenue, Providence, Rhode Island 02909 (401) 421-0398 Fax. (401) 421-5731



QUALITY SYSTEM
REGISTRATION



QUALITY CONTROL SECTION



CERTIFICATE OF ANALYSIS

In Response To The Future

VOA AQUEOUS SURROGATE RECOVERY

Client: ABB Environmental Services

Client

Project ID: Gorham/Textron

Date Sample Analyzed: 3/8/95

ESS

Project ID: 950858

SAMPLE ID	1,2 DICHLOROETHANE-D4 (76-114%)*	TOLUENE-D8 (86-110%)*	BFB (86-115%)*
V0308B1	77%	97%	97%
950858-01	77	96	95

* Acceptance criteria

Approved by: *J. Hill*

Date: 3/9/95

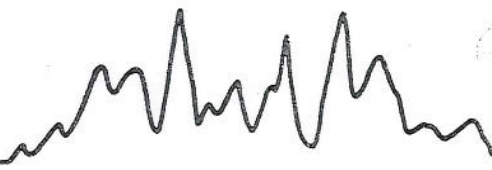
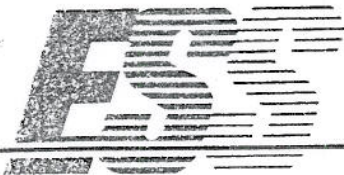
Environmental Science Services

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QUALITY SYSTEM
REGISTRATION





CERTIFICATE OF ANALYSIS

In Response To The Future

VOLATILE ORGANICS Method 8240

Client: ABB Environmental Services

Client Project ID: Gorham\Textron

Client Sample ID: Method Blank

Date Sampled: N/A

Date Analyzed: 3/8/95

ESS Project ID: 950858

ESS Sample ID: V0308B1

Dilution Factor: 1x

Units: ug/L

Parameter	Result	MRL
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
Acetone	ND	50
Carbon Disulfide	ND	5
Methylene Chloride	ND	5
Methyl tert-Butyl Ether	ND	10
Trans-1,2-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
Cis-1,2-Dichloroethene	ND	5
Methyl Ethyl Ketone	ND	50
Chloroform	ND	5
1,1,1-Trichloroethane	ND	5
Carbon Tetrachloride	ND	5
Benzene	ND	5
1,2-Dichloroethane	ND	5
Trichloroethene	ND	5
1,2-Dichloropropane	ND	5
Bromodichloromethane	ND	5
Cis-1,3-Dichloropropene	ND	5
Methyl Isobutyl Ketone	ND	50
Toluene	ND	5
Trans-1,3-Dichloropropene	ND	5
1,1,2-Trichloroethane	ND	5
Tetrachloroethene	ND	5
2-Hexanone	ND	50
Dibromochloromethane	ND	5
Chlorobenzene	ND	5
Ethylbenzene	ND	5
Xylenes (Total)	ND	10
Styrene	ND	5
Bromoform	ND	5
1,1,2,2-Tetrachloroethane	ND	5
Dichlorobenzene (Total)	ND	10

N/A = Not Applicable

ND = Not Detected above Method Reporting Limit (MRL)

Approved by: *JM Hle*

Date: 3/9/95

Environmental Science Services

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QUALITY SYSTEM
REGISTRATION

