

Prepared For:
Mr. Peter Lee
Young Investments, LLC
477 Concord Avenue
Cambridge, MA 02139

September 25, 2012

UST Closure Assessment

315-323 Broadway
Somerville, MA
IES Project # 2012-07-1072

Prepared By:
IES, Inc.
7 Kimball Lane – Building A
Lynnfield, MA 01940
617-623-8880





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September 25, 2012

Mr. Peter Lee
Young Investments, LLC
477 Concord Avenue
Cambridge, MA 02139

Re: UST Closure Assessment
315-321 Broadway
Somerville, MA

Dear Mr. Lee,

At your request IES Inc. was present to observe and document the excavation and removal of a 1,000-gallon gasoline (UST) from the above referenced site, which was performed on September 11, 2012 by Tanks-A-Lot of Everett, MA. These activities were performed pursuant to the testing requirements detailed in the DEP's "Underground Storage Tank Closure Assessment Manual" dated April 9, 1996 (DEP Policy #WSC-402-96), and satisfies the applicable Massachusetts Board of Fire Prevention Regulations [527 CMR 9.07(k)(4)].

A. INTRODUCTION

The subject site consists of two, contiguous, parcels of land located at 315-321 Broadway and 18 Temple Street in the City of Somerville, Massachusetts. The subject site is occupied by a two-story, brick commercial building, which was constructed in 1924. The site building is currently occupied by several retail/commercial tenants on the first floor and offices on the second floor. Current occupants of the site building include a hair salon, a beauty and barber shop supply store, a nail salon, an insurance agency, and a cellular telephone business. The site building is currently heated with natural gas and is serviced by municipal water and sewer.

According to Sanborn Atlases, in the past, the site was formerly occupied by several structures, which contained stores, dwellings, barns, an "auto repair facility", a "branch library", and garages utilized for automobile storage. In addition, the 1933-1950 Sanborn Atlas depicts a gasoline UST on the easterly portion of the subject site.

The site is located in a mixed commercial and residential section of Somerville. The site is abutted to the north and northeast by dwellings located on Temple Street and Langmaid Avenue; to the east by Temple Street; to the south by Broadway; and to the west by Langmaid Avenue. The area further

east of the site, across Temple Street, is occupied by a pharmacy (Rite Aid) at 299 Broadway; “M. James Coiffeurs” at 9 Temple Street; and a liquor store (Winter Hill Liquor Market) at 313 Broadway. The area further south of the site, across Broadway, is occupied by a U.S. Post Office located at 320 Broadway; a multi-tenant commercial building at 310-318 Broadway; and a cellular telephone store (Metro PCS) at 328 Broadway. Current occupants of the adjoining building at 310-318 Broadway include a bakery (Winter Hill Bakery); a pizza shop (Mama Lisa’s Pizzeria); a discount store (Broadway Dollar); a food store (Shivalic Food and Spices); and a hair salon.

A Ground Penetrating Radar (GPR) Survey was performed at the site on July 23, 2012, which identified the presence of an anomaly indicative of a UST in the immediate vicinity of the gasoline UST depicted on the Sanborn Atlas. In order to determine if the anomaly identified in the GPR survey was an underground storage tank, IES was present at the site on August 26, 2012 to observe exploratory excavation activities in the area identified as the location of the suspect UST. This excavation confirmed that a steel UST was present on the easterly portion of the site.

B. UST CLOSURE ASSESSMENT

A Commonwealth of Massachusetts Department of Fire Services “Application and Permit” for the tank removal was obtained from the Somerville Fire Department on September 11, 2012, which indicated that the dimensions of the tank were “4x12” and the tank was “empty”. The permit indicated the tank was to be disposed of at Minicello Bros. in Everett, MA. However, it is noted that IES was not provided with a copy of the tank disposal receipt. A copy of the “Application and Permit” is included in **Attachment “B”** of this report.

IES, Inc. was present to observe the Underground Storage Tank (UST) Closure Program that was performed at the above referenced site on September 11, 2012 by Tanks-A-Lot of Everett, MA. This program was performed pursuant to the requirements detailed in the DEP’s “Underground Storage Tank Closure Assessment Manual” dated April 9, 1996 (DEP Policy #WSC-402-96); and satisfies the applicable Massachusetts Board of Fire Prevention Regulations [527 CMR 9.07(k)(4)].

This UST Closure Assessment included the excavation and removal of a 1,000-gallon underground tank, which was located immediately to the west of the sidewalk on Temple Street, in the paved parking lot behind the site building. The tank was mostly empty, with the exception of some sludge in the bottom. The total amount of sludge removed from the tank was approximately 25-30 gallons. The odor noted during the tank removal program indicated that kerosene rather than gasoline may have been the last material stored in the tank.

A permit for the tank removal was obtained from the Somerville Fire Department, and Lieutenant MacLaughlan of the Somerville Fire Department was present to observe the tank removal.

The 1,000-gallon UST at the site was exposed on September 11, 2012 at which time approximately 25-30 gallons of sludge in the tank was manually removed and placed into a 55-gallon drum. The

UST was subsequently cleaned and removed from the excavation on September 11, 2012 by Tanks-A-Lot.

The tank was observed to be in fair to good condition, with one small hole noted near the top of the tank, and some rusting noted throughout the tank (see Photographs in **Attachment "A"**). Prior to the removal of the tank, a soil sample was obtained from the area in the immediate vicinity of the fill pipe. Upon the removal of the tank, a total of five other soil samples were obtained from the base (5-6 feet deep) of the four walls and from the center of the excavation. The samples were obtained pursuant to the requirements detailed in the DEP's "Underground Storage Tank Closure Assessment Manual" dated April 9, 1996 (DEP Policy #WSC-402-96).

The soil samples were placed in clean glass jars, and immediately screened in the field for the presence of Volatile Organic Compounds (VOC's) utilizing a MiniRae Photoionization Meter (PID) calibrated to a Isobutylene standard utilizing a correction factor for Benzene of 0.53. The results of this screening did not reveal the presence of any headspace VOC's above background (0.0 ppm) in any of the samples tested. In addition, no oil staining was observed on the soil remaining in the excavation, and no petroleum odor was noted in the excavation.

The results of the soil samples screening program performed at the site as part of the UST removal is shown in the following Table 1:

Table 1
Summary of Screening Results

Sample ID	Sample Location	Depth (feet)	VOC's (ppm)
SS-1	Base of northern sidewall	5-6	0.0
SS-2	Base of eastern sidewall	5-6	0.0
SS-3	Base of southern sidewall	5-6	0.0
SS-4	Base of western sidewall	5-6	0.0
SS-5	Center of UST excavation	6	0.0
SS-6	Above fill pipe	4	0.0
Notes: Screening parameters are as follows: 1. MiniRAE PID 2. @ 10.2 Electron Volts 3. Span Calibrated for Benzene 4. Background at 0.0 ppm			

Due to the absence of any elevated headspace readings, the analytical testing of these soil samples was not considered essential. However, in order to confirm the absence of a release, IES submitted one composite soil sample utilizing equal amounts of soil from all 5 post UST removal soil samples to Con-Test Analytical Laboratories, Inc. of East Longmeadow, MA for testing for Total Petroleum

Hydrocarbons (TPH) via EPA method 8015 with “Fingerprint Analysis”. This testing parameter was selected in order to address the potential for the storage of both gasoline and kerosene in the UST, and to determine what was the last substance stored in the tank.

The results of this testing revealed “sample contamination consists of heavy residual hydrocarbons similar to asphalt. Chromatogram also shows the presence of PAHs”. These results did not indicate the presence of any gasoline or kerosene contamination in the soil and the PAHs are attributable to the asphalt. Therefore, a reportable release to the composite soil sample obtained from the tank grave was not identified during this investigation. Laboratory reports and the chain-of-custody and laboratory certifications are included at the end of this report in **Attachment “C”**.

Based on 310 CMR 40.0361(a)(1), the soil at the subject site is classified as Reporting Category RCS-1 due to the fact that it is located “within 500 feet of a residential dwelling”.

C. DEP NOTIFICATION

Based on the absence of VOC’s above the 72-Hour reporting threshold (100 ppm) in the soil samples collected from the UST closure program; as well as the fact that no contaminants were detected in the composite soil sample, a reportable release has not been identified at the site. As a result, DEP notification is not required.

D. MANAGEMENT OF CONTAMINATED SOIL/GROUNDWATER

No contaminated soil or groundwater was encountered during the UST closure program, and therefore, the management of contaminated soil and/or groundwater was not required at this time.

E. CONCLUSIONS

A 1,000-gallon gasoline UST was excavated removed from the site on September 11, 2012. The tank appeared to be in fair to good condition, with one small hole noted near the top, and rusting noted throughout the tank. Headspace screening of soil samples obtained from the tank grave did not reveal the presence of any elevated levels of VOC’s above background concentrations (0.0 ppm). In addition, laboratory analysis of one composite soil sample obtained from the tank grave revealed “sample contamination consists of heavy residual hydrocarbons similar to asphalt. Chromatogram also shows the presence of PAHs”. These results did not indicate the presence of any gasoline or kerosene contamination in the soil and the PAHs are attributable to the asphalt. Therefore, a reportable release to the composite soil sample obtained from the tank grave was not identified during this investigation.

Based on the contents of this report, the interpretation of the data above, and the interpretation of the

remainder of the information detailed in this report, the subject site is not considered to exhibit a release, pursuant to 310 CMR 40.0317(a), and therefore DEP Notification is not required at this time. Finally, it is the opinion of IES, Inc. that no further action with regard to the UST is required. If you have any questions regarding this matter, please do not hesitate to contact our office.

Respectfully submitted,
IES, Inc.



Kerry Asetta
Vice President

Reviewed by:



Daniel Jaffe
President

ATTACHMENT “A”

PHOTOGRAPHS









ATTACHMENT “B”

TANK REMOVAL DOCUMENTS

Fire Department retains original application and issues duplicate as Permit.
FP 292A (Revised 4/97)

Commonwealth of Massachusetts

Department of Fire Services - Office of the State Fire Marshall

Application and Permit

For storage tank removal and transportation to approved tank disposal yard in accordance with the provisions of M.G.L. Chapter 148, Section 38A, 527 CMR 9.00, application is hereby made by:

Tank Owner	
Tank Owner Name (please print) <u>Salvatore Trunzo</u> <i>[Signature]</i>	
Address <u>315-323 Broadway</u> <i>[Signature]</i>	
Street	City State Zip
Removal Contractor	
Company Name <u>TANKS-A-LOT</u>	
Co. or Individual <u>HOVON ENV.</u>	
Address <u>110 SCHOOL ST. EVERETT, MA 02149</u>	
Address <u>IES ENV.</u>	
Signature <i>[Signature]</i>	
Signature <i>[Signature]</i>	
Phone # (cell) <u>617-666-0177</u>	
IFCI * Certified LSP # <input checked="" type="checkbox"/>	
Tank Information	
Tank Location <u>315-323 Broadway</u> <i>[Signature]</i>	
Street Address	City
Tank Capacity (gallons) <u>1500</u>	Substance last Stored <u>#1</u>
Tank Dimensions (diameter and length) <u>4X12</u>	
Remarks <u>EMPTY.</u>	
Disposal Information	
Firm Transporting Waste <u>SAME</u> State Lic. # <u>MAV000019924</u>	
Hazardous Waste Manifest <u>061807551013R</u> E.P.A. # <u>MAC300005625</u>	
Approved Tank Disposal Yard <u>Minicello Bros.</u> Tank Yard # <u>6173897213</u>	
Type of Inert Gas _____ Tank Yard Address <u>2 PEXTER ST, EVERETT, MA 02149</u>	

Approvals

City or Town SOMERVILLE FDID# 17274 Permit# 12/0T/619
Date of Issue 9/11/12 Date of Expiration 9/12/12
Dig Safe approval # 20123605326 Dig Safe # 1-800-322-4844
Signature of Officer granting Permit LT R. MacLaughlin

Call 617-343-3447 between 9:00 to 9:30 Mon, Weds, and Fri for appointment
After removal(s) ("Consumptive Use" fuel oil tanks exempted) send form FP 290R signed by Local Fire Dep. To UST Regulatory Compliance Unit, Department of Fire Services, P.O. Box 1025, State Road, Stow, MA 01775
* International Fire Code Institute.

ATTACHMENT “C”

LABORATORY REPORTS

September 19, 2012

Kerry Asetta
IES - Massachusetts
7 Kimball Lane, Building A
Lynnfield, MA 01940

Project Location: Broadway, Somerville
Client Job Number:
Project Number: [none]
Laboratory Work Order Number: 12I0354

Enclosed are results of analyses for samples received by the laboratory on September 12, 2012. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



James M. Georgantas
Project Manager

IES - Massachusetts
7 Kimball Lane, Building A
Lynnfield, MA 01940
ATTN: Kerry Asetta

REPORT DATE: 9/19/2012

PURCHASE ORDER NUMBER:

PROJECT NUMBER: [none]

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 1210354

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Broadway, Somerville

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SS-1	1210354-01	Soil		SM 2540G SW-846 8015C	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8015C

Qualifications:

Sample contamination consists of heavy residual hydrocarbons similar to asphalt. Chromatogram also shows the presence of PAHs.

Analyte & Samples(s) Qualified:

Asphalt

12I0354-01[SS-1]

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Michael A. Erickson
Laboratory Director

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Broadway, Somerville

Sample Description:

Work Order: 1210354

Date Received: 9/12/2012

Field Sample #: SS-1

Sampled: 9/11/2012 12:00

Sample ID: 1210354-01

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Asphalt	180	93	mg/Kg dry	10	O-26	SW-846 8015C	9/17/12	9/19/12 10:52	SCS
Surrogates	% Recovery		Recovery Limits		Flag				
o-Terphenyl	103		40-140			9/19/12 10:52			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Broadway, Somerville

Sample Description:

Work Order: 1210354

Date Received: 9/12/2012

Sampled: 9/11/2012 12:00

Field Sample #: SS-1

Sample ID: 1210354-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.6		% Wt	1		SM 2540G	9/18/12	9/19/12 15:20	WAL

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
12I0354-01 [SS-1]	B059003	09/18/12

Prep Method: SW-846 3546-SW-846 8015C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
12I0354-01 [SS-1]	B058939	30.3	1.00	09/17/12

QUALITY CONTROL
Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B058939 - SW-846 3546
Blank (B058939-BLK1)

Prepared: 09/17/12 Analyzed: 09/18/12

Asphalt	ND	8.3	mg/Kg wet							
Surrogate: o-Terphenyl	2.84		mg/Kg wet	3.33		85.3	40-140			

LCS (B058939-BS1)

Prepared: 09/17/12 Analyzed: 09/18/12

Fuel Oil #2	26.8	8.3	mg/Kg wet	33.3		80.3	40-140			
Surrogate: o-Terphenyl	2.66		mg/Kg wet	3.33		79.9	40-140			

LCS Dup (B058939-BSD1)

Prepared: 09/17/12 Analyzed: 09/18/12

Fuel Oil #2	23.5	8.3	mg/Kg wet	33.3		70.5	40-140	13.0	25	
Surrogate: o-Terphenyl	2.62		mg/Kg wet	3.33		78.5	40-140			

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
O-26	Sample contamination consists of heavy residual hydrocarbons similar to asphalt. Chromatogram also shows the presence of PAHs.

CERTIFICATIONS**Certified Analyses included in this Report****Analyte****Certifications****No certified Analyses included in this Report**

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2013
CT	Connecticut Department of Public Health	PH-0567	09/30/2013
NY	New York State Department of Health	10899 NELAP	04/1/2013
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2013
RI	Rhode Island Department of Health	LAO00112	12/30/2012
NC	North Carolina Div. of Water Quality	652	12/31/2012
NJ	New Jersey DEP	MA007 NELAP	06/30/2013
FL	Florida Department of Health	E871027 NELAP	06/30/2013
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2013
WA	State of Washington Department of Ecology	C2065	02/23/2013
ME	State of Maine	2011028	06/9/2013
VA	Commonwealth of Virginia	1381	12/14/2012



Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com
www.contestlabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

Page 1 of 1

Company Name: IES, Inc.

Telephone: 617-623-8880

Address: 7 Kimball Lane

Project #

Lynnfield, MA 01940

Client PO#

Attention: Kerry Asetta

DATA DELIVERY (check all that apply)
☐ FAX ☒ EMAIL ☐ WEBSITE

Project Location: Broadway, Somerville

Fax #
cbuchanan@iesinc-environmental.com

Sampled By: KA

Email:

Project Proposal Provided? (for billing purposes)
☐ yes ☐ no proposal date

Collection

Beginning Date/Time

Ending Date/Time

Format:
☒ PDF ☐ EXCEL ☐ GIS
☐ OTHER

☐ "Enhanced Data Package"

Con-Test Lab ID
(Laboratory use only)

Client Sample ID / Description

Composite

Grab

*Matrix Code

TPH 8015 Fingerprint

✓

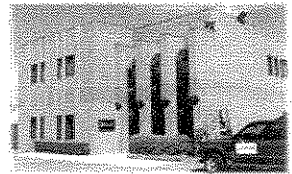
SS-1

9/11/12 12:00PM

X

S

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.contestlabs.com



Sample Receipt Checklist

CLIENT NAME: IES RECEIVED BY: WF DATE: 9/14/12

1) Was the chain(s) of custody relinquished and signed? Yes No No CoC Included

2) Does the chain agree with the samples?

If not, explain:

3) Are all the samples in good condition?

If not, explain:

4) How were the samples received:

On Ice ☒ Direct from Sampling ☐ Ambient ☐ In Cooler(s) ☒

Were the samples received in Temperature Compliance of (2-6°C)? Yes No N/A

Temperature °C by Temp blank _____ Temperature °C by Temp gun 4.4

5) Are there Dissolved samples for the lab to filter?

Yes No

Who was notified _____ Date _____ Time _____

6) Are there any RUSH or SHORT HOLDING TIME samples?

Yes No

Who was notified _____ Date _____ Time _____

7) Location where samples are stored:



Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: _____

8) Do all samples have the proper Acid pH: Yes No N/A

9) Do all samples have the proper Base pH: Yes No N/A

10) Was the PC notified of any discrepancies with the CoC vs the samples: Yes No N/A

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		8 oz amber/clear jar	
500 mL Amber		4 oz amber/clear jar	
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic		Air Cassette	
500 mL Plastic		Hg/Hopcalite Tube	
250 mL plastic		Plastic Bag / Ziploc	
40 mL Vial - type listed below		PM 2.5 / PM 10	
Colisure / bacteria bottle		PUF Cartridge	
Dissolved Oxygen bottle		SOC Kit	
Encore		TO-17 Tubes	
Flashpoint bottle		Non-ConTest Container	
Perchlorate Kit		Other glass jar	<u>1</u>
Other		Other	

Laboratory Comments:

40 mL vials: # HCl _____ # Methanol _____

Doc# 277 # Bisulfate _____ # DI Water _____

Rev. 3 May 2012 # Thiosulfate _____ Unpreserved _____

Time and Date Frozen: