

# **REMEDIAL INVESTIGATION WORK PLAN**

**TO BE CONDUCTED AT:**

**2586 & 2608 Coney Island Avenue  
Brooklyn, New York 11235**

**NYSDEC Spill Number 06-04377**

**PREPARED FOR:**

**Unicorp National Development  
7505 West Sand Lake Road  
Orlando, FL 32819**

**PREPARED BY:**

**Galli Engineering, P.C.  
734 Walt Whitman Road, Suite 402A  
Melville, NY 11747**

**August 2008  
Revised: October 2008**

\_\_\_\_\_  
Richard D. Galli, P.E.

\_\_\_\_\_  
Date

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## **1.0 INTRODUCTION**

Galli Engineering, P.C. has prepared this Remedial Investigation Work Plan (RIWP) on behalf of Unicorp National Development, Inc. its successors and/or assigns for the property located at 2586 & 2608 Coney Island Avenue, Brooklyn, New York 11235, herein identified as the "Subject Property". The New York State Department of Environmental Conservation (NYSDEC) has reopened Spill Case Number # 06-04377 associated with subject property.

### **1.1 Purpose**

The purpose of this RIWP is to describe methods which will be used to investigate the environmental quality of the subject property. This RIWP will provide the NYSDEC with the requested environmental sampling documentation required to assist in the investigation of potentially contaminated soils and existing contaminated groundwater conditions associated with the above-referenced property.

The RIWP will address the requirements of the NYSDEC Spills Unit, who have requested that a RIWP be developed to investigate the subject property.

## **2.0 BACKGROUND**

The subject property is currently a cleared/vacant parcel of land. Mr. Gene Flotteron is the owner of the subject property. Historically, the property occupied an automotive shop, lumber storage yard and a hardware store. The automotive shop was located in the northern portion of the property situated on the corner of Coney Island Avenue and Avenue W. The lumber storage yard was located in the center of the subject property. A hardware store (Flotteron Hardware Store) was located in the southeastern portion of the property along Coney Island Avenue and Lancaster Avenue.

The automotive shop utilized four hydraulic lifts and a 200-gallon waste oil underground storage tank (UST). The lumber storage yard contained a 550-gallon gasoline UST. This tank was connected to an aboveground pump supplying trucks with fuel. The lumber yard showroom contained a 275-gallon #2 heating oil above ground storage tank (AST) located in the basement of the building.

All USTs and ASTs are depicted on the Site Sampling Plan located in Appendix A.

A spill was reported to the NYSDEC Spill Hotline by the Clayton Group on July 19, 2006. Clayton Group identified a sheen on groundwater while sampling a temporary well point as part of their due diligence investigation at the subject property. The groundwater samples collected during these previous studies have revealed contamination by volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs). This contamination is from an unknown source and was assigned NYSDEC Spill Number #06-04377. The NYSDEC Spill Record further notes that additional groundwater samples were taken by the Clayton Group and sent out for laboratory analysis. However, these results were never submitted by the Clayton Group and therefore the presence or absence of additional soil and/or groundwater contamination at the subject property was never confirmed with the NYSDEC. Despite this lack of information, the NYSDEC closed spill # 06-04377 on November 1, 2006. A copy of the NYSDEC Spill Report Form is located in Appendix B.

New investigative work described herein will be performed to determine if the soils and groundwater at the subject property have been adversely impacted by the former uses of the property and also to delineate the extent of contamination if found. The scope of work will include installing soil borings and temporary monitoring wells for soil and groundwater sampling purposes.

A Limited Subsurface Investigation dated September 7, 2006; was performed by Clayton Group Services, Inc. and is enclosed in Appendix C.

The subject property is being redeveloped as a Walgreen's.

## **2.1 Historical Summary of Environmental Investigations**

The following is a historical review of on-site activities:

7/2006 – Clayton Group performed a Limited Subsurface Investigation on July 19, 2006.

“Clayton Group Services conclusions included:

- Samples of soils were found to be above the NYSDEC Recommended Soil Cleanup Objective (RSCO) for Semi Volatile Organic Compounds in SB-1 and SB-2.
- Pesticide contaminants were found to be above the RSCO in SB-2.
- Contaminants in groundwater were detected above the NYSDEC Part 703 Groundwater Quality Standards for Methyl Tertiary Butyl Ether (MTBE) at the subject property.”
- Clayton Group Services, Inc. calls in a spill to the NYSDEC Spill Hotline on July 19, 2006 at 12:01 p.m. Spill # 06-04377 is assigned to the subject property. NYSDEC requests field notes and a copy of the soil and groundwater sampling report.

8/2006 – Clayton Group performed a Phase I Environmental Site Assessment (ESA) on the subject property, dated August 9, 2006. “Recognized environmental conditions (RECs) were identified in the Phase I ESA as being:

- Current and Former On-site In-Ground Hydraulic Lifts
- Former Underground Storage Tanks (USTs)/Gasoline Pump
- Current Used Oil UST
- Current and Historical Use as a Automobile Repair/Service Shop/Garage

9/2006 - A Limited Subsurface Investigation dated September 7, 2006; was performed by Clayton Group Services, Inc. The Limited Subsurface Investigation indicated environmental impacts from the onsite current and former in-ground hydraulic lifts and auto services operations near the northern side of the garage building. Soil impacts appear to be associated with the UST discovered near the northwestern most lift and corner of the garage building. MTBE was found at elevated concentrations near the northwest corner of the garage building.

11/2006 - NYSDEC closes spill # 06-04377, apparently without justification. No reports were ever sent to the NYSDEC documenting Clayton Group Limited Subsurface Investigation.

1/2008 - Unicorp National Development, Inc. and Mr. Gene Flotteron enter into a land lease deal to build a Walgreen's. Unicorp hires Petrocelli Contracting as the General Contractor. Petrocelli hired B&A Demolition and Removal as a sub-contractor to demolish all structures on the subject property. The subject property contained 4 hydraulic lifts, one 200-gallon waste oil UST, one 275-gallon #2 heating oil AST and one 550-gallon gasoline UST. Additionally, three 55-gallon drums of used oil were located on the subject property.

2/2008 - Unicorp hires Galli Engineering, P.C. to removal all subsurface structures at the subject property. Galli schedules a field visit to view its scope of services. Galli meets with Petrocelli and is informed that all ASTs and USTs have been removed by B&A Demolition and Removal except for the 550-gallon gasoline UST and three 55-gallon drums. Galli in conjunction with Tyree Brothers and 95, Inc. performs the necessary remedial cleanup procedures for the UST and drums. Galli collects representative end point samples around and beneath the UST. Galli also collected groundwater samples to ensure the subject property is clean. Additionally, Galli dug three trenches along the northern portion of the subject property to ensure the subsurface structures identified in the Clayton Group report had actually been removed by B&A Demolition and Removal.

3/2008 - Galli Engineering, P.C. submits a remedial closure report to Unicorp National Development, Inc. revealing groundwater contamination in the northern portion of the subject property. Mr. Gene Flotteron is concerned with the groundwater contamination and contacts the NYSDEC for more information.

7/2008 - NYSDEC reopens spill case # 06-04377. NYSDEC requests that Galli submit a copy of their Remedial Closure Report. NYSDEC reviews Galli's remedial closure report and responds in an email stating comments, questions and requirements.

8/2008 - Galli Engineering, P.C. submits a response to comments, questions, and requirements along with this Remedial Investigation Work Plan to characterize and delineate petroleum related impacts at the subject property.

9/2008 - Galli Engineering, P.C. received eight comments from the NYSDEC on the Remedial Investigation Work Plan submitted in 8/2008. These comments have been addressed and are incorporated into the scope of work explained below.

### **3.0 SCOPE OF WORK**

The scope of work developed for the subject property was based on previous field investigations and comments received from Mr. Mark Tibbe of the NYSDEC Region 2 Spill Office. The scope of work developed for this Remedial Investigation Work Plan is as follows:

- Three soil borings will be installed on the subject property to determine the extent of soil contamination. The soil borings will be installed in accordance with the NYSDEC DER-10.
- PID sampling will be performed every four feet. All borings will be continued at least 5 feet into the saturated zone.
- Soil samples will be collected at the groundwater interface and the interval that exhibits the greatest PID reading above or below the groundwater interface.
- A minimum of three soil samples will be collected but up to six may be collected dependant on if the greatest extent of contamination is equivalent to the soils at the groundwater interface zone.
- All three soil boring locations will be developed into temporary monitoring wells.
- Monitoring wells will contain 10' of riser and 10' of screen measuring two inches in diameter with flush mount caps.
- Development of the three temporary groundwater monitoring wells. Each well will be developed in accordance with NYSDEC DER-10 protocols. Well development will continue until the water is < 50 NTU.
- Post development of wells, Galli will collect three groundwater samples for subsequent VOC, SVOC and Priority Pollutant Metals (filtered and unfiltered) analysis;
- Prepare a Remedial Investigation Report describing environmental conditions, field activities, evaluation of findings, and recommendations.



## **4.0 SOIL BORINGS AND GROUNDWATER MONITORING WELLS**

### **4.1 Geoprobe Boring Machine**

The *Geoprobe* is a mechanized, vehicle mounted soil probe system that can apply both static force and hydraulically powered percussion blows for tool placement with static forces up to 3,000 pounds combined with percussion hammers of eight horsepower continuous output. Recovery of sufficiently large sample volumes will be accomplished with a probe-driven sampler. The probe-driven sampler consists of a hollow probe, which is opened via a mechanical mechanism at the selected sampling depth in the soil profile to allow soil to enter as it is advanced. Discrete samples will be secured at the desired depths and be contained within a non-reactive plastic sleeve that lines the hollow probe for subsequent inspection and analysis. Samples will be obtained using a 4-foot long macro core sampler.

### **4.2 Soil Sample Locations**

Soil boring GSB-1 through GSB-3 will be installed along the northern section of the subject property as depicted on the Site Sampling Plan, Appendix A.

Any changes to the location of soil borings will be discussed and agreed upon between representatives of Galli Engineering, P.C. and NYSDEC, and duly noted in the subsequent report.

### **4.3 Installation of Temporary Groundwater Monitoring Wells**

Galli Engineering personnel will use the existing soil boring locations by extending the *Geoprobe* into groundwater and installing temporary monitoring wells. A *Geoprobe* equipped with well casings and/or well pre-packs will be used for the installation of three temporary groundwater monitoring wells. Monitoring wells will be installed with 10' of riser and 10' of screen, measuring two inches in diameter with flush mount caps.

The installation of MW-1 will be located at the approximate location of the former 200-gallon waste oil UST. MW-2 will be located at the former adjacent hydraulic lift to the

east (approximately 50' away). MW-3 will be located at the former hydraulic lift located to the south (approximately 70' away) forming a triangle to determine on-site groundwater flow direction. These locations have been chosen based on the presence of floating product and elevated levels of MTBE identified in previous studies.

Exact locations will be determined in the field based on previous conditions and later surveyed for exact locations and elevations. Monitoring well locations are depicted in Appendix A, "Site Sampling Plan". These locations were chosen to determine if former subsurface structures have impacted the groundwater on-site, and to determine if any contaminant plume may be present on the site.

The groundwater samples collected during earlier studies (Clayton Group, Inc. and Galli Engineering, P.C.) revealed contamination of VOCs, SVOCs and Priority Pollutant Metals in GW-1 and elevated levels of MTBE in GW-2 and TMW-1 through TMW-3. Previous locations of temporary well points are depicted in Appendix A, "Previous Sampling Locations". There is concern that the groundwater flow could carry contaminants down-gradient and off-site.

The following chart depicts the proposed new corresponding soil and groundwater sample locations with representative sample IDs.

<b>Soil Boring Locations*</b>	<b>Soil Sample Number</b>
Boring GSB-1	SS-1 & SS-1A**
Boring GSB-2	SS-2 & SS-2A**
Boring GSB-3	SS-3 & SS-3A**
<b>Monitoring Well Locations*</b>	<b>Liquid Sample Number</b>
MW-1	GW-1
MW-2	GW-2
MW-3	GW-3

\* See attached Site Sampling Plan, Appendix A for Soil Boring and Groundwater Monitoring Well Locations.

\*\* SS-1A, SS-2A and SS-3A may not be collected if the greatest extent of contamination is equivalent to the soils at the groundwater interface zone.

## **5.0 SAMPLING PROGRAM**

The New York State Department of Environmental Conservation Spill Unit will be notified at least 48 hours in advance of the sampling date so that arrangements can be made for a NYSDEC representative to be present to witness sampling activities and split samples, if desired.

### **5.1 Soil Sampling and Analysis**

Galli Engineering personnel will collect soil samples from each of the soil borings using a *Geoprobe*. The soil samples will be collected at four-foot intervals for field screening with a broadband photoionization detector (PID). Soil samples will be collected at the groundwater interface and the interval that exhibits the highest PID measurement above or below the groundwater interface for laboratory analysis. A minimum of three soil samples will be collected but up to six may be collected dependant on if the greatest extent of contamination is equivalent to the soils at the groundwater interface zone. Soil boring logs will be noted and written in permanent log books. Soil samples will be collected using a single-use environmental grade disposable plastic sleeve inserted into the *Geoprobe* soil sampler. Galli personnel will use environmental grade sterile single use plastic scoops to collect soils from the plastic sleeve and place them into clean Ziploc bags. Each bag will be labeled with the designated soil sample number and the collection depth, and then allowed to equilibrate. The headspace of each of the soil samples will then be screened for the presence of volatile organic vapors using a PID. The PID will be zero calibrated prior to screening soil samples at the subject property. After completion of each soil boring, the location of the boring will be noted and measured against some fixed reference point. This will identify the exact location of each boring later in time.

Soil samples GSB-1 through GSB-3 will be analyzed for the presence of VOCs, SVOCs, and Priority Pollutant metals. Galli Engineering, P.C. will follow generally accepted industry practices and NYSDEC DER-10 protocols and guidelines and submit the samples to a NYSDOH ELAP-Certified Laboratory for analysis. Proper personnel protection equipment (PPE) will be used during sampling collection

## **5.2 Groundwater Sampling and Analysis**

One week after installation, wells will be developed by utilizing a whale pump. Post development (one week), the wells will be purged utilizing a bladder pump subsequent to sampling until the water turbidity is less than 50 NTU. An experienced geologist from Galli Engineering, P.C., will be present to monitor all field activities and to take photographs. Each groundwater monitoring point will be gauged for depth to liquid. Water quality parameters (pH, specific conductivity, turbidity, dissolved oxygen, temperature and salinity) will be measured and recorded using a Horiba U-10 water quality meter prior to purging, during purging, and prior to sampling. Field logs will be prepared for all sampling activities.

Groundwater samples from GW-1 through GW-3 will be analyzed for the presence of VOCs, SVOCs and Priority Pollutant Metals (filtered and unfiltered) according to US EPA Method 8260, 8270 and series 7000 respectively to determine potential on-site contamination. Galli Engineering, P.C. will follow generally accepted industry practices and NYSDEC DER-10 protocols and guidelines and submit the samples to a NYSDOH ELAP-Certified Laboratory for analysis.

## **5.3 Soil and Groundwater Sample Procedure**

Each jar will be labeled with designated sample identification, date and time of collection, and the requested laboratory analyses. Each soil sample jar will be packed in a secure cooler with ice. The samples will then be logged on a chain of custody document by sampling personnel, and will remain in the custody of Galli Engineering, P.C. until transport of the samples to a NYSDOH ELAP-Certified laboratory via hand delivery by Galli Engineering, P.C. representative.

Sample collection will be performed and carefully monitored by an on-site geologist or environmental scientist, who will monitor for any visible evidence of contaminants and noticeable odors.

#### **5.4 Sample Characterization**

A visual inspection of all material recovered during the performance of the material sampling will be made to identify any gross signs of contamination and to classify the materials. Where soil is encountered, classifications will be made in accordance with the Unified Soil Classification System. Soil color classifications will be made in accordance with the Munsell Classification System.

All visual inspections will be noted in the field logs. Photographs will be taken of discolored materials and changes in material consistency. Any soil and/or water samples exhibiting odors or sheens will be noted.

#### **5.5 Evaluation of Soil Analytical Laboratory Results**

The analytical results of the soil samples collected as part of this investigation will be evaluated based on the methodologies published by the U.S. Environmental Protection Agency. Test results will be analyzed and assessed in accordance with the New York State Department of Environmental Conservation (NYSDEC) in the Technical and Administrative Guidance Memorandum (TAGM) #4046, *"Determination of Soil Cleanup Objectives and Cleanup Levels"*

#### **5.6 Evaluation of Groundwater Analytical Laboratory Results**

The analytical results of the groundwater samples collected as part of this investigation will be evaluated based on the methodologies published by the U.S. Environmental Protection Agency. Test results will be analyzed and assessed in accordance with the 6 NYCRR Chapter X, Part 703 "Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations" and TOGS 1.1.1.

## **6.0 QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC)**

The sampling QA/QC protocol is in accordance with the United States Environmental Protection Agency's (USEPA) accepted sampling procedures for hazardous waste streams (Municipal Research Laboratory, 1980, Sampling and Analysis Procedures for Hazardous Material Waste Streams, Environmental Protection Agency, Cincinnati, Ohio, EPA-600/280-018) and ASTM Material Sampling Procedures.

### **6.1 SAMPLE PERSONNEL**

Sampling technicians will possess a minimum of a BA Degree in the Earth and Space Sciences or a BS Degree in Engineering. Sampling technicians will have a minimum of one-year experience in environmental fieldwork.

### **6.2 SAMPLING EQUIPMENT**

*Prior to arrival on site and after each sample acquisition, any non-disposable sampling equipment will be decontaminated as follows:*

- Washed by brushing with detergent solution (Alconox/Liquinox) and hot potable water
- Rinsed with distilled water
- Rinse with dilute (1%) nitric acid or dilute (1%) hydrochloric acid (for stainless steel)
- Distilled water rinse
- Methanol rinse
- Final rinse with distilled water
- Air dry and wrap in clean unused aluminum foil (shiny side out)
- Mixing of soil samples for composites will be conducted using dedicated plastic spatulas.
- Dedicated sampling equipment will be used for this sampling event and thrown out after use.

### **6.3 SAMPLE ACQUISITION**

All sample vessels will be "level A" certified decontaminated containers supplied by a New York State Department of Health Certified Laboratory. Containers will be of appropriate volume and type according to the analysis to be performed. Those samples to be analyzed for volatile organic compounds will be placed in containers with Teflon lined caps.

Those samples requiring preservation to maintain their integrity will be placed in vessels containing the appropriate chemical preservative as prepared by the laboratory. After acquisition, samples will be cooled to 4°C.

The number and type of containers and required preservatives are listed in Appendix D.

Samples will be analyzed by a NYSDOH ELAP-CERTIFIED Laboratory.

### **6.4 SAMPLE DOCUMENTATION**

To establish proper control, the following sample identification and chain of custody procedures will be followed.

#### **6.4.1 SAMPLE IDENTIFICATION**

Sample identification will be executed by use of a sample tag, logbook, and manifest. Said documentation will provide the following information:

- Project Name
- Sample Field Number
- Sample Preservation
- Requested Analysis
- Date Sample Was Secured From Source
- Time Sample Was Secured From Source
- Person Who Secured Sample From Source

#### **6.4.2 CHAIN-OF-CUSTODY PROCEDURES**

Sample possession will be traceable from the time the samples are to be collected until they are received by the testing laboratory. A sample will be considered under custody if:

It is in a person's possession,  
It was in a person's view, after being in possession,  
It was in locked storage, under a person's control; or  
It is in a designated area.

When transferring custody, the individuals relinquishing and receiving the samples will sign, date, and note the time on the Chain-of-Custody Form.

#### **6.4.3 LABORATORY - CUSTODY PROCEDURES**

A designated sample custodian will accept custody of the shipped samples and will verify that the information on the sample tags matches that on the Chain-of-Custody Records. Pertinent information as to shipment, pick-up, courier, etc. will be entered in the "Remarks" section. The custodian will then enter the sample tag data into a bound logbook, which will be arranged by project code and station number.

The laboratory custodian will use the sample tag number, or assign a unique laboratory number to each sample tag, and ensure that all samples will be transferred to the proper analyst or stored in the appropriate source area.

The custodian will distribute samples to the appropriate analysts. Laboratory personnel will be responsible for the care and custody of samples, from the time they are received, until the sample is exhausted or returned to the custodian.

All identifying data sheets and laboratory records will be retained as part of the permanent documentation. Samples that are received by the laboratory will be retained until after analysis and quality assurance checks are completed.



## 7.0 SITE SPECIFIC PERSONNEL

Principal In Charge    Richard D. Galli, P.E.    (631) 271-9292  
Galli Engineering, P.C.  
734 Walt Whitman Road  
Suite 402A  
Melville, NY 11747

**Project Manager:** Ken Brooks, P.E. (631) 271-9292  
Galli Engineering, P.C.  
734 Walt Whitman Road  
Suite 402A  
Melville, NY 11747

**Client Contact:** Roman Gorfinkel (917) 345-5050  
Unicorp National Development  
7505 West Sand Lake Road  
Orlando, FL 32819

Field Geologists: Marc Califano (631) 271-9292  
Galli Engineering, P.C.  
734 Walt Whitman Road  
Suite 402A  
Melville, NY 11747

**Scott Davidow** (631) 271-9292  
**Galli Engineering, P.C.**  
**734 Walt Whitman Road**  
**Suite 402A**  
**Melville, NY 11747**

Subcontractor: Laurel Environmental Associates (631) 673-0612  
52 Elm Street, Suite 4  
Huntington, NY 11743

## **8.0 REPORTING**

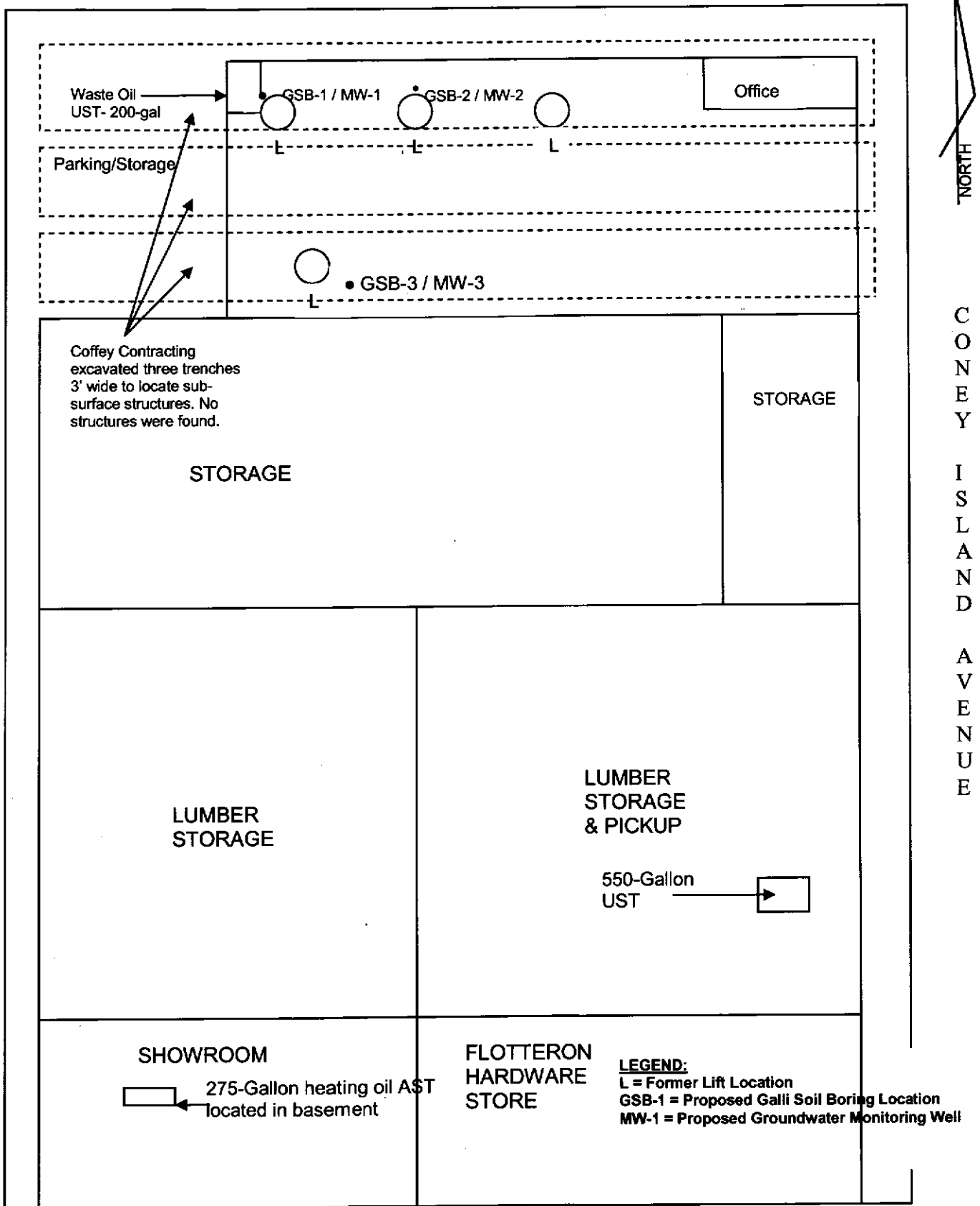
After receipt of the analytical results, a Remedial Investigation Report will be prepared stating the findings. This report will be submitted to the NYSDEC and client. The report will include a Site Sampling Plan, a copy of the analytical data and appropriate recommendations to remediate the and/or close out the spill associated with the subject property. Galli Engineering, P.C. will require approximately 20-days to complete this work.

**APPENDIX A**

**SITE SAMPLING PLAN  
&  
PREVIOUS SAMPLING LOCATION PLAN**

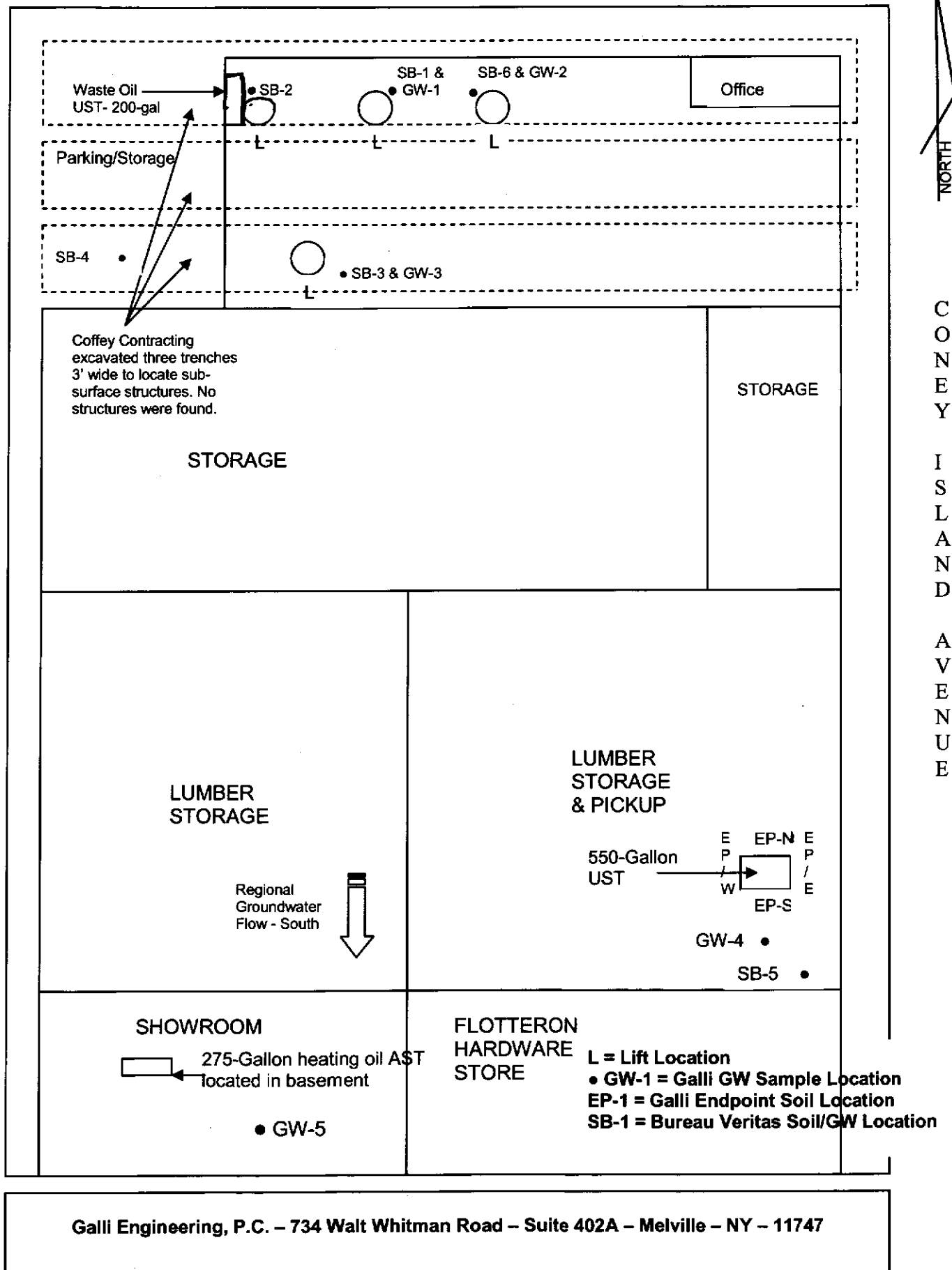
**REMEDIAL INVESTIGATION WORK PLAN – SITE SAMPLING PLAN**  
**2586 & 2608 Coney Island Avenue, Brooklyn, NY 11235 - NYSDEC Spill No. 06-04377**

AVENUE W



**PREVIOUS SAMPLE LOCATIONS**  
**2586 & 2608 Coney Island Avenue, Brooklyn, NY 11235 - NYSDEC Spill No. 0604377**

AVENUE W



**APPENDIX B**

**NYSDEC SPILL REPORT FORM**

**NYSDEC SPILL REPORT FORM**

DEC REGION: 2	SPILL NUMBER: 0604377
SPILL NAME: COMMERCIA PROPERTY	DEC LEAD: KSTANG
SPILL DATE: 07/19/2006	SPILL TIME: 12:00 pm
CALL RECEIVED DATE: 07/19/2006	RECEIVED TIME: 12:00 pm

**SPILL LOCATION**

PLACE: COMMERCIA PROPERTY	COUNTY: Kings
STREET: 2586 CONEY ISLAND AVE	TOWN/CITY: New York City
	COMMUNITY: BROOKLYN
CONTACT: GENE FLOTTERON	CONTACT PHONE: (917) 880-0128 CELL

CONT. FACTOR: Other	SPILL REPORTED BY: Other
FACILITY TYPE: Commercial/Industrial	WATERBODY:

**CALLER REMARKS:**

WHILE DOING A DUE DILIGENCE AT LOCATION FOUND A SHEEN ON GROUNDWATER IN A TEMP WELL POINT

MATERIAL	CLASS	SPILLED	RECOVERED	RESOURCES AFFECTED
Waste Oil/Used Oil	Petroleum		0 G	GW,

**POTENTIAL SPILLERS**

COMPANY	ADDRESS	CONTACT
COMMERCIA PROPERTY	2586 CONEY ISLAND AVE BROOKLYN NY	GENE FLOTTERON
		(917) 880-0128 CELL

Tank No.	Tank Size	Material	Cause	Source	Test Method	Leak Rate	Gross Failure
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**DEC REMARKS:**

Sangesland spoke to John Stanline of Clayton Group (environmental firm)  
 Sangesland requested written confirmation that the spill was associated with a longterm groundwater problem and NOT a surface spill.  
 Mr. Stanline forwarded a copy of the field notes which confirms the free phase contamination was found in a GW sample taken at the site. The water samples from this well were sent out for lab testing. Results of this testing will be forwarded to the potential purchaser for the site. If DEC would like to see these results, they will need to contact current owner (Gene Flotteron) directly at 917-880-0128.

Another option for DEC Remediation would be to hold off taking any action on this site until the owner wants to move forward with the sale. By that time the various consultants should have completed their work and all the proper documents needed should be available to close out the case.

11/1/06 - Clayton Group did not submit any report for soil and/or GW sampling results. No evidence of a actual release that has impacted the groundwater or soil. Spill closed. - KST

**PIN****T & A****COST CENTER**

Created On: 07/19/2006

Date Printed: 2/22/2008

Last Updated: 11/01/2006

# NYSDEC SPILL REPORT FORM

DEC REGION: 2

SPILL NUMBER: 0604377

SPILL NAME: COMMERCIA PROPERTY

DEC LEAD: KSTANG

CLASS: C4

CLOSE DATE: 11/01/2006

MEETS STANDARDS: False

reated On: 07/19/2006

ate Printed: 2/22/2008

Last Updated: 11/01/2006



**APPENDIX C**

**CLAYTON GROUP SERVICES, INC  
LIMITED SUBSURFACE INVESTIGATION**

## **Limited Subsurface Investigation**

**Proposed Walgreen Store #10441**  
SWC of Coney Island Avenue and Avenue W  
Brooklyn, New York

Clayton Project No. 99006-006632  
SEPTEMBER 7, 2006

*Prepared for:*

Mr. John Genovese  
UNICORP NATIONAL DEVELOPMENT  
7 Jennings Meadow  
Cold Springs Harbor, New York 11724

*Prepared by:*

CLAYTON GROUP SERVICES, INC.  
A Bureau Veritas Company  
160 Fieldcrest Avenue  
Edison, New Jersey 08837



September 7, 2006

Mr. John Genovese  
UNICORP NATIONAL DEVELOPMENT  
7 Jennings Meadow  
Cold Springs Harbor, New York 11724

Clayton Project No. 99006-006632

**Subject:** **Limited Subsurface Investigation**  
Proposed Walgreen Store #10441  
SWC of Coney Island Avenue and Avenue W  
Brooklyn, New York

Dear Mr. Genovese:

Attached is the Clayton Group Services, Inc., a Bureau Veritas company, (Clayton) report for the above-referenced property.

**This report is certified to Walgreen Co.**

If you have questions or comments, please contact the Chicago Regional office at (630) 795-3200.

Sincerely,  
**Clayton Group Services, Inc.**  
*A Bureau Veritas Company*

for

John A. Stangline  
Project Manager  
New York Regional Office

David Matz  
Project Manager  
Chicago Regional Office

for

William S. Munoz  
Manager  
New York Regional Office

**Clayton Group Services, Inc.**

*A Bureau Veritas Company*  
3140 Finley Road  
Downers Grove, IL 60515

Main: (630) 795-3200  
Fax: (630) 795-1130  
[www.us.bureauveritas.com](http://www.us.bureauveritas.com)



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## EXECUTIVE SUMMARY

Unicorp National Development retained Clayton Group Services, Inc. to conduct a Limited Subsurface Investigation (SI) at the proposed Walgreen Store #10441 located at the southwest corner of Coney Island Avenue and Avenue W in Brooklyn, New York (the "subject property") in accordance with Clayton's proposal 0711.06.1194, dated July 6, 2006.

**This report is certified to Walgreen Co.**

The Limited SI scope of work was developed based on a review of the Phase I Environmental Site Assessment (ESA) that was conducted at the subject property by Clayton (Project Number 99006-006632, dated August 9, 2006). The purpose of the scope of work was to evaluate the *recognized environmental conditions* (RECs) that were identified in the Phase I ESA. A list of the RECs is provided below:

- **Current and Former On-site In-Ground Hydraulic Lifts**
- **Former Underground Storage Tanks (USTs)/Gasoline Pump**
- **Current Used Oil UST**
- **Current and Historical Use as an Automobile Repair/Service Shop/Garage**

The scope of work consisted of the collection of soil and groundwater samples from six (6) soil borings drilled on the subject property. The following conclusions and recommendations were based on the observations and data from Clayton's Limited SI of the subject property:

- Based upon the results of this Limited SI, minor indications of environmental impact from the on-site current and former in-ground hydraulic lifts and auto service operations were evident in soil sample SB-1 near the northern side of the garage building. In addition, laboratory analytical method detection limits for benzo(a)anthracene and benzo(b)fluoranthene exceeded the TAGM recommended soil cleanup criteria, indicating that these compounds may be present above the criteria. The lifts should be removed from the ground when taken out-of-service and additional inspection / evaluation of the soils immediately adjacent to the lift bodies conducted.
- Pentachlorophenol, a pesticide historically used for wood pier and piling preservative was detected above soil cleanup objectives in soil samples SB-1 and SB-2 near the northwest corner of the garage building. This compound may be a relic of former building construction / foundation or historic property use. Remedial activities should be conducted of the soils in the northwest corner of the garage building
- Soil impacts exhibited in soil sample SB-2 and to some extent in SB-1 appear to be associated with the used oil UST discovered near the northwestern most lift and corner of the garage building. The UST should be removed and necessary remedial actions taken of impacted soils.
- MTBE a recently used gasoline additive, tetrachloroethene, and other organic compounds have impacted groundwater beneath the subject property. The concentrations of MTBE, tetrachloroethene and other organic compounds in the groundwater are highest near the UST discovered near the northwest corner of the garage building. The UST cannot be conclusively determined to be the source of the impacts based upon this Limited SI. The UST should be removed, its contents characterized for disposal and evaluation as a source of impacts, and post excavation soil sampling conducted in accordance with applicable regulations. A groundwater sampling and monitoring program should be implemented to characterize the groundwater impacts and potential offsite sources.



## 1.0 INTRODUCTION/BACKGROUND

Unicorp National Development retained Clayton Group Services, Inc. to conduct a Limited Subsurface Investigation (SI) at proposed Walgreen Store Number 10441, located at the southwest corner of Coney Island Avenue and Avenue W in Brooklyn, New York (the "subject property") in accordance with Clayton's proposal 0711.06.1194, dated July 6, 2006. A site location map is provided as Figure 1.

The Limited SI scope of work was developed based on a review of the Phase I Environmental Site Assessment (ESA) that was conducted at the subject property by Clayton (Project Number 99006-006632, dated August 9, 2006). The purpose of the scope of work was to evaluate the *recognized environmental conditions* (RECs) that were identified in the Phase I ESA. A list of the RECs is provided below:

- **Current and Former On-site In-Ground Hydraulic Lifts**
- **Former Underground Storage Tanks (USTs)/Gasoline Pump**
- **Current Used Oil UST**
- **Current and Historical Use as an Automobile Repair/Service Shop/Garage**

## 2.0 SCOPE OF WORK

The scope of work consisted of a targeted geophysical survey and the collection of soil and groundwater samples from five soil borings drilled on the subject property. A sixth soil boring was added to the scope of work upon discovery of an additional historical in-ground lift location. Clayton conducted a preliminary walkthrough of the subject property with owner / occupants prior to commencing soil boring activities. The purpose of the walkthrough was to review boring locations for known subsurface structures / private utilities and arrange site logistics for continued operations and drilling vehicle access.

### 2.1 Geophysical Survey

Clayton Group Services retained Enviroprobe Services, Inc. of Westmont, New Jersey to perform a geophysical survey of the subject property. The purpose of the geophysical investigation was to survey the subject property for subsurface anomalies in the area of current and former in-ground hydraulic lifts located in the auto garage and the former UST located in the lumber storage area. The geophysical survey was also performed in the vicinity of proposed soil boring locations to ensure utility clearance. On July 19, 2006, personnel of Enviroprobe Services and Mr. John A. Stangline, Clayton Project Manager, mobilized to the subject property. An electromagnetic (EM), analog magnetic and ground penetrating radar (GPR) geophysical survey was conducted of the targeted areas of the subject property.

### 2.2 Soil Borings

On July 19, 2006, Clayton advanced six (6) soil borings on the subject property. Prior to fieldwork, utilities were cleared through the New York City - Long Island "One-Call" utility locating service. The soil borings were completed using the subcontracted services of Enviroprobe Services hydraulic-push technology (Geoprobe®). Each boring location was backfilled with drill cuttings and bentonite chips and patched with a concrete after completion. A summary of the soil boring locations is provided in the following table.



IDENTIFIED REC	SOIL BORINGS
On-site Current and Former Hydraulic Lifts and Historical Use of Solvents	SB-1 through SB-4 and SB-6
Onsite Former UST	SB-5

Soil boring number 6 (SB-6) was added during fieldwork to investigate an additional former in-ground hydraulic lift location identified during the Limited SI preliminary site walkthrough. The boring locations are shown on Figure 2. Drilling and sampling equipment was decontaminated, prior to and after each boring and between each sampling interval, using a detergent and distilled water wash followed by a distilled water rinse. In addition, a new disposable acetate macro-core sampler liner was used for each sampling interval.

### 2.3 Sample Collection

The borings were continuously sampled and advanced to a depth of 12 feet below ground surface (the top of the groundwater table).

#### 2.3.1 Soil Sample Collection

The soil samples were screened in the field using a photoionization detector (PID) equipped with a 10.2 electron volt (eV) probe. The PID, calibrated to an isobutylene standard, measures total concentrations of organic vapors. The PID cannot identify or quantify specific components. Soil samples collected were typically split into two portions; one portion was placed in a sealed plastic bag for headspace analysis with the PID and geologic classification, and the other portion was placed into a clean laboratory-provided jar for potential laboratory chemical analysis. A Clayton geologist used the Unified Soil Classification System to describe and classify the soil samples. The soil sample descriptions and the field screening results were recorded on boring logs (see Appendix A).

Based on field screening results, visual observations, and the type of REC being investigated, one soil sample was collected from each soil boring for laboratory analysis. The sample was biased toward the interval most likely to be impacted based upon field observations. Appropriate decontamination procedures were followed during sample collection and proper chain of custody procedures were employed. The soil samples were placed into clean laboratory-provided jars and stored in a cooler with ice.

#### 2.3.2 Groundwater Sample Collection

Groundwater samples were collected upon completion of soil sampling at each of the six soil boring. Temporary wells consisting of one-inch-diameter PVC screens and riser were placed into the open boreholes. New plastic tubing was lowered into the temporary wells, and the wells were developed to clear flow using a low flow peristaltic pump. The groundwater samples were collected via the peristaltic pump and placed into clean laboratory-provided jars and stored in a cooler with ice.

### 2.4 Analysis of Samples

The soil and groundwater samples collected for laboratory analyses were submitted to the Clayton Group Services laboratory in Novi, Michigan and analyzed in accordance with United States Environmental Protection Agency (USEPA) Methods for the parameters summarized in the following table.



IDENTIFIED RECORD	PROPOSED SOIL BORINGS	PROPOSED ANALYSES
On-site Current and Former Hydraulic Lifts, On-site Auto Service Operations and On-site Used Oil UST	SB-1 through SB-4 and SB-6	5 Soil Samples – VOCs +10 including MTBE, TBA; BNs + 15; PCBs 5 Groundwater Samples – VOCs +10 including MTBE, TBA; BNs + 15 1 Groundwater Sample - PCBs
Former UST	SB-5	1 Soil Sample – VOCs +10 including MTBE, TBA; BNs + 15 1 Groundwater Sample - VOCs +10 including MTBE, TBA; BNs + 15

VOCs + 10 including MTBE, TBA: Volatile Organic Compounds plus by ten tentatively identified compounds (TICs) with a forward library search including methyl tertiary butyl ether (MTBE) and tertiary butyl alcohol (TBA) by United States Environmental Protection Agency (USEPA) Method 8260B  
BNs + 15: Base Neutrals plus fifteen TICs by USEPA Method 8270C  
PCBs – Polychlorinated biphenyls by USEPA method 8082

### 3.0 FINDINGS

#### 3.1 Geophysical Survey

The EM, magnetic, and ground penetrating radar (GPR) surveys detected a previously unknown underground storage tank (UST) located within the northwest corner of the auto garage, adjacent to the wall and partially obscured by several 55-gallon waste oil drums. Based upon oil staining on the concrete floor nearby and the presence of waste oils in drums above the UST, the UST appears to have been used most recently for waste oil storage. No additional anomalies were detected and proposed soil boring locations were clear of subsurface utilities.

The complete Geophysical Survey Report prepared by Enviroprobe Services, has not been received by Clayton to the date of this report and will be forwarded to Unicorp National Corporation upon receipt.

#### 3.2 Site Geology & Field Observations

Based on the soil borings drilled at the subject property by Clayton, the subject property soils include up to 4.0 feet of silty sands overlying at least 8.0 feet of gravelly sands. Depth to shallow groundwater was recorded at 11.8 to 12.0 feet below finished ground surface within the gravelly sands. Copies of soil boring logs are presented in Appendix A.

A slight petroleum odor and elevated PID readings were recorded for soils of the 10.5 to 12.0 foot depths of soil boring SB-2 located within the northwest corner of the garage building. The groundwater sample obtained from soil boring SB-2 exhibited a slight petroleum sheen. Elevated PID readings were also detected in soils of the 11.5 to 12.0-depth interval of soil boring SB-1. The New York State Department of Environmental Conservation (NYSDEC) requires notification of petroleum release from any source under the Navigation Law Article 12; 17 NYCRR 32.3 and 32.4 no later than two hours after discovery of the discharge. Clayton informed the property owner, Mr. Gene Flotteron via cellular telephone number (971) 880-0128 of the requirement to notify the DEC. Mr. Flotteron requested that Clayton perform the notification. The NYSDEC spills hotline was contacted by Clayton within the two-hour timeframe and the location of the groundwater sheen and property address was provided. Spill number 0604377 was assigned to the release.





### 3.3 Analytical Results

The analytical results from the soil samples were compared to the Recommended Soil Cleanup Objectives of the NYSDEC Technical and Administrative Guidance Memoranda (TAGM) 4046, Determination of Soil Cleanup Objectives and Cleanup Levels. The analytical results from the groundwater samples were compared to the groundwater quality standards of the NYSDEC Technical and Operational Guidance (TOGS) Series 1.1.1, Ambient Water Quality Standards and Guidance Values. The soil analytical results are summarized in Table 1 and the groundwater analytical results are summarized in Table 2. Copies of the laboratory reports for the soil and groundwater samples are provided in Appendix B.

It should be noted that the laboratory analytical method detection limits for soil samples SB-3 through SB-6 were reported above TAGM recommended soil cleanup objectives for benzo(a)anthracene and benzo(b)fluoranthene.

#### 3.3.1 On-site Current and Former In-Ground Hydraulic Lifts/Auto Service Operations/Used Oil UST (SB-1 to SB-4, SB-6)

Soil borings SB-1 through SB-4 and SB-6 were targeted toward current and historic in-ground hydraulic lifts and automobile service operations. Soil boring SB-2 was also located adjacent to an UST identified during the Limited SI field activities.

Soil samples of soil borings SB-3 and SB-6 did not exhibit volatile or semi-volatile organic compounds above laboratory detection limits; however, the detection limits for semi-volatile compounds were elevated above TAGM recommended soil cleanup objectives for benzo(a) anthracene and benzo(a)pyrene. Semi-volatile TICs were detected in soil sample SB-3 at concentrations of 1,100 micrograms per kilogram (ug/kg). PCBs were not detected above laboratory detection limits in any of the soil samples obtained near the historic and current lifts and automobile service operations.

Soil sample SB-1 exhibited detectable concentrations of the volatile compounds n and sec-butyl benzene, tetrachloroethene, and 1,2,4 trimethylbenzene below TAGM recommended soil cleanup objectives. Total volatile organic TIC concentrations detected in SB-1 of 24,300 ug/kg exceeded the TAGM recommended soil cleanup objective of 10,000 ug/kg. Soil sample SB-1 exhibited detectable concentrations of semi-volatile compounds benzo(a)anthracene, bis (2-ethylhexyl) phthalate, and di-n-butyl phthalate below TAGM objectives; however, pentachlorophenol was detected at 2,500 ug/kg above the TAGM objective of 1,000 ug/kg. Detection limits for benzo (k)fluoranthene, benzo(a) pyrene and benzo(b) fluoranthene of <2,700 ug/kg and chrysene of <540 ug/kg exceeded TAGM recommended soil cleanup objectives.

Soil sample SB-2 exhibited estimated concentrations of volatile compounds n-butyl benzene, ethylbenzene, and n-propylbenzene, and ten semi-volatile compounds below TAGM objectives. Volatile organic compounds detected in SB-2 and below TAGM objectives included naphthalene, toluene, 1,2,4 trimethylbenzene, and 1,3,5 trimethylbenzene. Semi-volatile compounds detected in sample SB-2 and below TAGM objectives included bis(2-ethylhexyl) phthalate and butyl benzyl phthalate. Volatile organic compounds detected above TAGM objectives included tetrachloroethene at 2,500 ug/kg (TAGM 1,400 ug/kg), total xylenes of 3,300 ug/kg (TAGM 1,200 ug/kg), total volatile compounds of 16,110 ug/kg (TAGM 10,000 ug/kg) and total volatile TICs of 28,340 ug/kg (TAGM 10,000 ug/kg). Benzo(a) pyrene was reported at an estimated concentration of 810 ug/kg above the TAGM objective of 61 ug/kg. Pentachlorophenol was reported to be not detected to a detection limit of 4,300 ug/kg, well above the TAGM objective of 1,000 ug/kg. Total semi-volatile compounds detected were 19,340 ug/kg and total semi-volatile TICs were 81,900 ug/kg, below the TAGM objective of 500,000 ug/kg.

Soil boring SB-4 was targeted toward historic areas of solvent use onsite. Soil sample SB-4 exhibited no detectable concentrations of volatile or semi-volatile compounds or PCBs above laboratory



detection limits. However, tetrachloroethene was detected in soil samples SB-1 (440 ug/kg) and SB-2 (2,500 ug/kg) nearby to the northeast of SB-4.

Groundwater samples collected from soil borings SB-1 through SB-3 and SB-6 exhibited detectable concentrations of volatile and semi-volatile organic compounds. Groundwater sample SB-1 GW exhibited estimated concentrations of chloromethane, 2-methylnaphthalene, phenanthrene, and bis(2-ethylhexyl)phthalate below NYSDEC groundwater quality standards. SB-1 GW exhibited tetrachloroethene of 1.3 ug/L, below the groundwater quality standard of 5.0 ug/L, and MTBE of 130 ug/kg above the groundwater quality standard of 10 ug/L.

Groundwater sample SB-2 GW exhibited estimated concentrations of 2-butanone (a VOC), and the SVOCs anthracene, phenanthrene, bis(2-ethylhexyl)phthalate, butyl benzyl phthalate, di-n-butyl phthalate, n-nitrosodiphenylamine, and benzoic acid below NYSDEC groundwater quality standards. Estimated concentrations of volatile compounds including 4-methyl-2-pentanone at 290 ug/L and naphthalene at 36 ug/L exceeded the groundwater quality standards of 50 ug/L and 10 ug/L respectively. Concentrations of VOCs benzene (71 ug/L), ethylbenzene (31 ug/L), MTBE (1,400 ug/L), tetrachloroethene (87 ug/L), 1,2,4 trimethylbenzene (47 ug/L), and total xylenes (110 ug/L) exceeded groundwater quality standards in sample SB-2 GW. Semi-volatile compounds including 2-methylnaphthalene (5.8 ug/L), 2,4-dimethyl phenol, 2 methyl phenol (21 ug/L), 4-methyl phenol (21 ug/L) and phenol (9.0 ug/L) exceeded groundwater quality standards. Total semi-volatile TICs were reported at 494 ug/L in SB-2 GW.

Groundwater sample SB-3 GW exhibited a concentration of 650 ug/L MTBE. The laboratory detection limit for several other volatile organic compounds exceeded groundwater quality standards due to interference by detected compounds. Estimated concentrations of semi-volatile compounds including bis(2-ethylhexyl)phthalate, di-n-butyl phthalate, and n-nitrosodiphenylamine were reported below groundwater quality standards. Total semi-volatile TICs were reported at 758.8 ug/L in SB-3 GW. No SVOCs were detected in sample SB-3 GW above NYSDEC groundwater quality standards.

Tetrachloroethene was detected in the ground water sample SB-4 GW obtained from the area of historical solvent use at a concentration of 40 ug/L above the NYSDEC groundwater quality standard of 5 ug/L. Tetrachloroethene was also detected in groundwater samples SB-1 GW at 1.3 ug/L and SB-2 GW at 87 ug/L. Phenol and phenolic compounds were also detected in groundwater sample SB-2 GW including 2,4-dimethyl phenol, 2- and 4- methyl phenol and phenol above NYSDEC groundwater quality standards.

Groundwater sample SB-4 GW also exhibited 130 ug/L MTBE, above the groundwater quality standard of 10 ug/L, and estimated total xylenes of 3.9 ug/L, below the groundwater quality standard of 5.0 ug/L. PCBs were not detected above laboratory detection limits in groundwater sample SB-4 GW.

Groundwater sample SB-6 GW exhibited a concentration of 230 ug/L MTBE and the laboratory detection limit for several other volatile organic compounds exceeded groundwater quality standards due to interference by detected compounds. Estimated concentrations of semi-volatile compounds including 2-methylnaphthalene and bis(2-ethylhexyl)phthalate were reported below groundwater quality standards. Total semi-volatile TICs were reported at 11 ug/L in SB-6 GW. No SVOCs were detected in sample SB-6 GW above NYSDEC groundwater quality standards.



### 3.3.2 Historical On-Site UST (SB-5)

Soil boring SB-5 was located in the area of the historical on-site UST in the lumber storage and drive-through pickup area. No volatile or semi-volatile organic compounds or PCBs were detected in soil sample SB-5; however laboratory detection limits for benzo(a)anthracene and benzo(a)pyrene exceeded the TAGM cleanup objective.

Groundwater sample SB-5 GW exhibited an MTBE concentration of 180 ug/L, exceeding the NYSDEC groundwater quality criteria of 10 ug/L. Bis(2-ethylhexyl)phthalate was reported at an estimated concentration of 3.6 ug/L in groundwater sample SB-5 GW below the groundwater quality standard of 5 ug/L. A concentration of 40 ug/L was reported for total semi-volatile compound TICs, for which there is no NYSDEC groundwater quality standard.

## 4.0 CONCLUSIONS & RECOMMENDATIONS

The following conclusions were based on the observations and data from Clayton's Limited SI of the subject property:

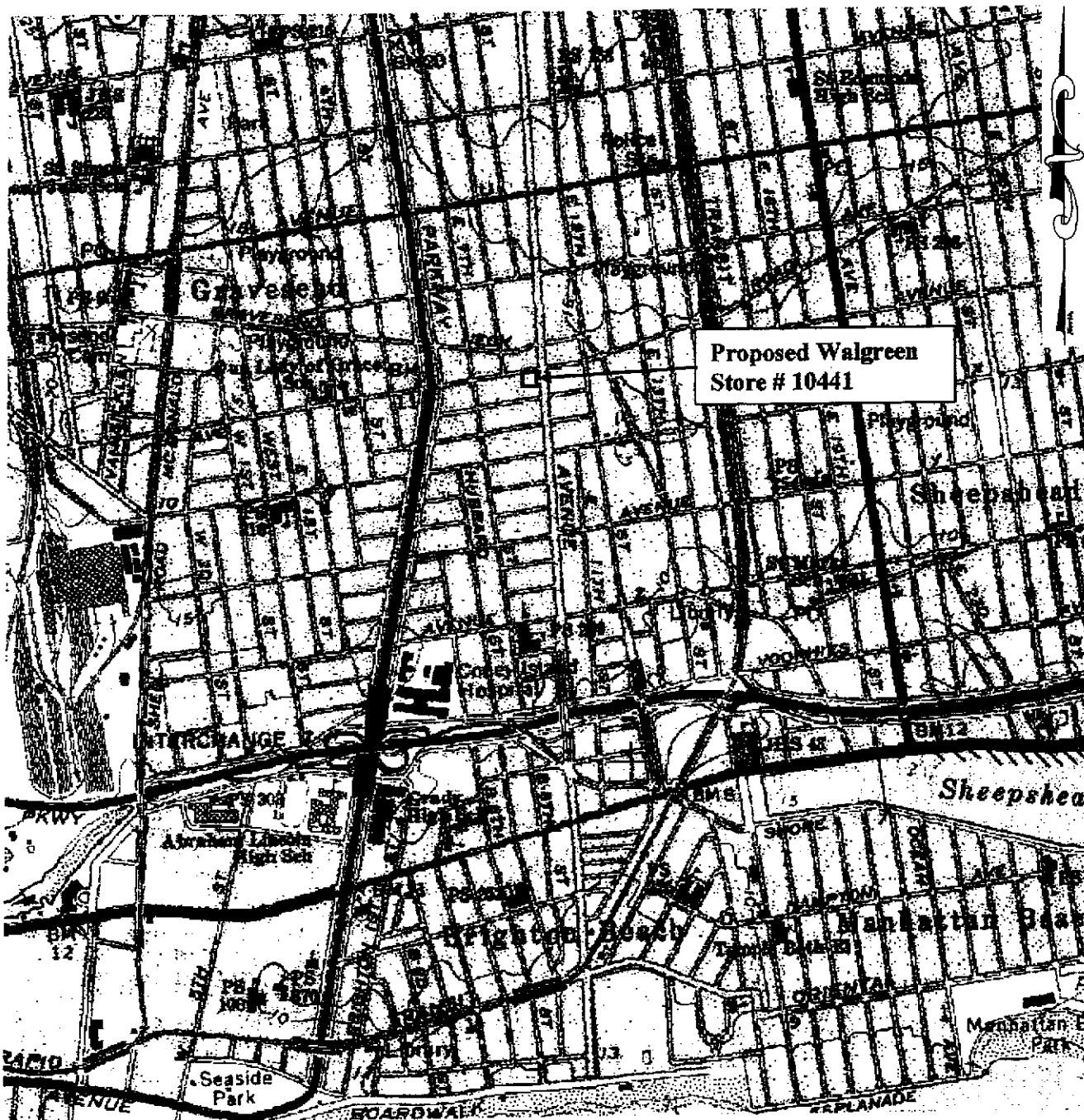
- Based upon the results of this Limited SI, minor indications of environmental impact from the on-site current and former in-ground hydraulic lifts and auto service operations were evident in soil sample SB-1 near the northern side of the garage building. In addition, laboratory analytical method detection limits for benzo(a)anthracene and benzo(b)fluoranthene exceeded the TAGM recommended soil cleanup criteria, indicating that these compounds may be present above the criteria. The lifts should be removed from the ground when taken out-of-service and additional inspection / evaluation of the soils immediately adjacent to the lift bodies conducted.
- Pentachlorophenol, a pesticide historically used for wood pier and piling preservative was detected above soil cleanup objectives in soil samples SB-1 and SB-2 near the northwest corner of the garage building. This compound may be a relic of former building construction / foundation or historic property use. Remedial activities should be conducted of the soils in the northwest corner of the garage building
- Soil impacts exhibited in soil sample SB-2 and to some extent in SB-1 appear to be associated with the UST discovered near the northwestern most lift and corner of the garage building. The UST should be removed and necessary remedial actions taken of impacted soils.
- MTBE a recently used gasoline additive, tetrachloroethene, and other organic compounds have impacted groundwater beneath the subject property. The concentrations of MTBE, tetrachloroethene and other organic compounds in the groundwater are highest near the UST discovered near the northwest corner of the garage building. The UST cannot be conclusively determined to be the source of the impacts based upon this Limited SI. The UST should be removed, its contents characterized for disposal and evaluation as a source of impacts, and post excavation soil sampling conducted in accordance with applicable regulations. A groundwater sampling and monitoring program should be implemented to characterize the groundwater impacts and potential offsite sources.

Limited Subsurface Investigation  
Proposed Walgreen Store #10441



SWC of Coney Island Ave and Avenue W  
Brooklyn, New York

## FIGURES



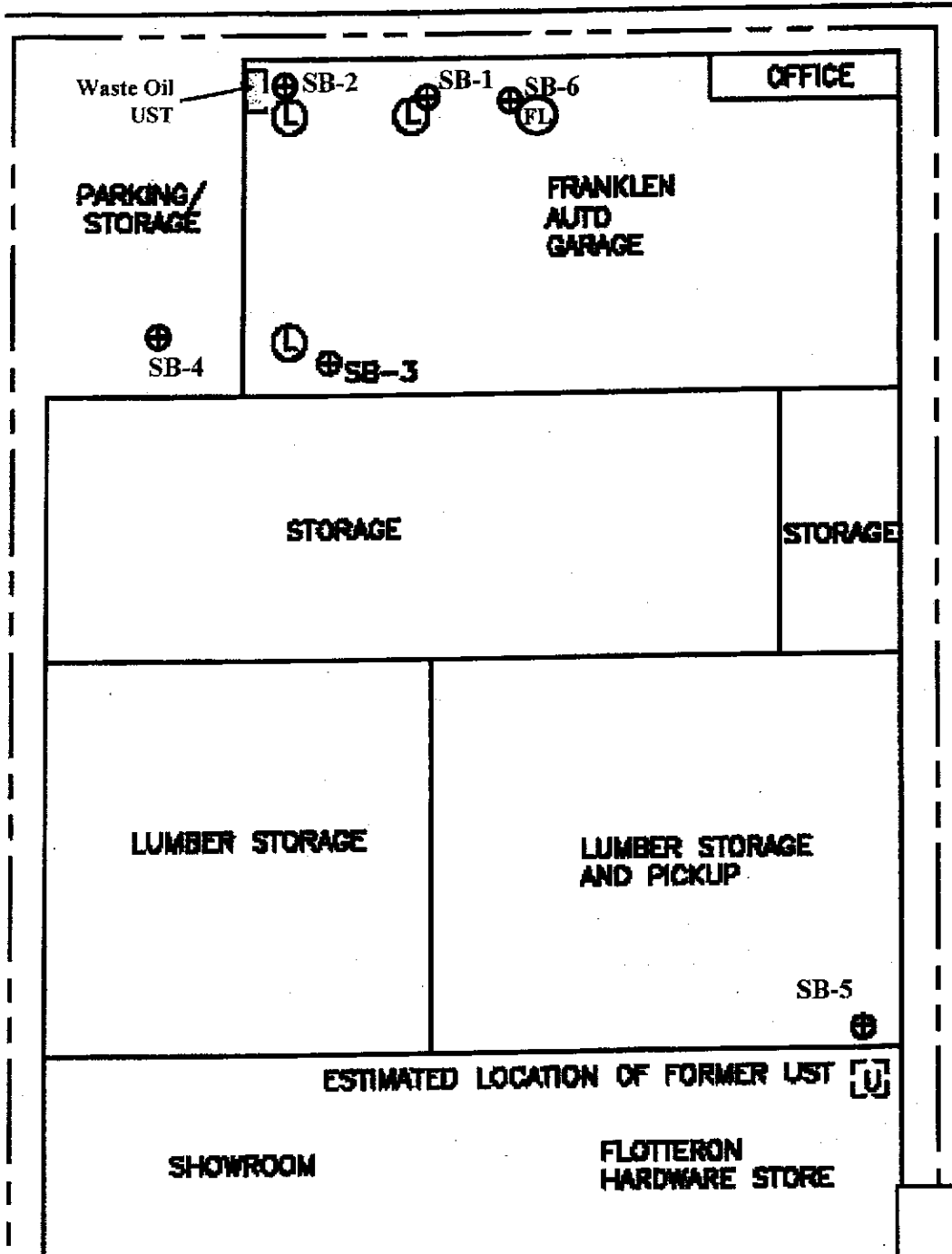
Scale:  $\frac{1}{4}$ " = 100'  $\frac{1}{2}$ " = 200'  $\frac{3}{4}$ " = 300'  $1$ " = 400'  $1\frac{1}{4}$ " = 500'  $1\frac{1}{2}$ " = 600'



**BUREAU  
VERITAS**

Project No. 99006-006632.00.003	Client <b>UNICORP NATIONAL DEVELOPMENT</b> 7 Jennings Meadow Cold Springs Harbor, New York 11724	Location <b>Proposed Walgreen Store #10441</b> SWC Coney Island Ave and Ave W Brooklyn, New York	Title <b>Site Location Map</b>	Figure <b>1</b>
Drawn By: JAS	Date: 08/22/06			
Reviewed By: MJG	Date: 08/22/06			

AVENUE W



CONY ISLAND AVENUE

- ⊕ FL Former Lift Location
- ⊕ L Lift Location
- ⊕ Soil Boring Location

Scale :  
1 inch = 70 feet



**BUREAU  
VERITAS**

Project No. 99006-006632.00.003	Client UNICORP NATIONAL DEVELOPMENT 7 Jennings Meadow Cold Springs Harbor, New York 11724	Location Proposed Walgreen Store #10441 SWC Coney Island Ave and Ave W Brooklyn, New York	Title Soil Boring Locations	Figure 2
Drawn By: JAS Reviewed By: MJG	Date: 08/22/06 Date: 08/22/06			

## APPENDIX D

### SAMPLING CONTAINERS, PRESERVATION AND HOLDING TIMES

PARAMETER	MATRIX	CONTAINER	PRESERVATION	HOLDING TIMES
Volatiles	Soil & Water	2 ounce glass jar with TFE lined septum cap.  40 ml. VOA vial w/TFE lined septum cap	4°C	7 Days
Semi-Volatiles	Soil & Water	4 ounce glass jar wide-mouth w/TFE lined septum cap  1 liter amber glass jar	4°C	5 days until extraction, 40 days from extraction until analysis (1)
PP Metals	Soil & Water	4 ounce glass jar wide-mouth w/TFE lined septum cap  250 ml Polyethylene bottle with perservative	4°C	Hg 28 days All other metals 6 months

(1) Technical Times (time from sample collection until sample analysis) will be used to audit results. Holding Times will be calculated using Verified Time of Sample Receipt (VTSR) at the lab.

## **APPENDIX E**

### **REMEDIAL INVESTIGATION SCHEDULE**



Unicorp National Development, Inc.  
 2586-2602 Coney Island Avenue  
 Brooklyn, New York 11235

NYSDEC Spill # 06-04377

## Remedial Investigation Schedule

Task #	Description	Day 1	Day 2	Day 7	Day 10	Day 15	Day 25	Day 30
	Preparation and Submission of a Remedial Investigation Work Plan							
	Approval by Mr. Mark Tibbe of the NYSDEC							
1	Installation of Borings and Temporary Groundwater Monitoring Wells							
2	Collection of Soil Samples from Geoprobe Borings							
3	Survey of Monitoring Wells							
4	Development of Monitoring Wells							
5	Results of Soil Samples Received from Laboratory							
6	Purge and Sampling of Groundwater Monitoring Wells							
7	Results of Groundwater Samples Received from laboratory							
8	Preparation and Submission of a Remedial Investigation Report							