SAMPLE PHASE II
SUBSURFACE INVESTIGATION

INDUSTRIAL PROPERTY
123 ABC STREET
ANYTOWN, NEW YORK

PREPARED FOR:

ANONYMOUS CLIENT
345 ABC STREET
ANYTOWN, NEW YORK 11111

PREPARED BY:

LAUREL ENVIRONMENTAL ASSOCIATES, LTD.
53 WEST HILLS ROAD
HUNTINGTON STATION, NEW YORK 11746

MONTH 00, 2010
***LEA* PROJECT #10-000**

LAUREL ENVIRONMENTAL ASSOCIATES, LTD.
ENVIRONMENTAL CERTIFICATION

***LEA* Project No.:** **10-000.0**

Report: Sample Phase II Subsurface Investigation

Field Work Dates: Month 00 through Month 00, 2010

Report Date: Month 00, 2010

Site: 123 ABC Street, Any Town, New York 11111
Bounded on three sides by ABC Street, ABC Avenue and Any Street

Weather Conditions: 25 to 35°F, Overcast

Client: Mr. Client

Report Prepared By:

Brendan C. Moran
Environmental Scientist

Carla M. Sullivan, QA/QC
Senior Geologist, VP

ENVIRONMENTAL PROFESSIONAL CERTIFICATION:
I declare that, to the best of my professional knowledge and belief, we meet the definition of *Environmental Professional* as defined in § 312.10 of 40 Code of Federal Regulations (CFR) 312.

The Environmental Professional who directed this project has the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Scott A. Yanuck
Principal Hydrogeologist

Date

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REPORT SPECIFICATIONS

This report contains (26) pages of text.

Copies and circulation of this report are as follows:

Two (2) bound and one (1) electronic copy to Client, Mr. Client

One (1) bound and one (1) electronic copy to New York State Department of Conservation (NYSDEC), Mr. State Engineer

One (1) electronic copy to Lending Institution, Mr. Loan Officer

One (1) electronic copy to RP Consultant, Mr. Environmental Engineer

One (1) bound and one (1) electronic copy in the confidential client file at ***Laurel Environmental Associates, Ltd. (LEA)***

This report is prepared for the exclusive use of the principal noted above and is considered private and confidential. ***LEA*** shall not release this report or any of the findings of this report to any person or agency except with the authorization of the named principals.

1.0 INTRODUCTION

Laurel Environmental Associates, Ltd. (LEA) was retained by Mr. Client, on behalf of Lending Institution, to conduct a Phase II Subsurface Investigation of the industrial property located at 123 ABC Street, Any Town, New York (please see Figure 1.0, Site Location). The purpose of this investigation was to check the level of contamination in underlying soils and groundwater at the subject property.

Site Ownership:	Anonymous	
Date of Ownership:	1997	
Nassau County Tax Number:	Section:	00
	Block:	00
	Lots:	0-00, 00-00
Zoning:	Industrial	
Physical Location:	Latitude 00° 00' 00.00" North, Longitude 00° 00' 00.00" West	

1.1 SITE HISTORY

According to the Phase I Environmental Site Assessment (ESA) completed at the subject site by ***LEA*** on November 25, 2009, the following was established:

1. The subject property maintains a 1½ -story concrete block and steel framed industrial "L" shaped building with a two-story brick office space. The entire building has a footprint of approximately 55,000 square feet and sits on a rectangular-shaped parcel approximately 78,000 square feet in area. Current operations include an anonymous uses. Past occupation by Responsible Party, and the listing as an Inactive Hazardous Waste Site, presents a significant recognized environmental condition to the subject property.

2. As mentioned, the subject site is listed as an Inactive Hazardous Waste Disposal (IHWD) site; Anonymous, ID #111111 with confirmed groundwater and soil contamination from Tetrachloroethylene (same as Perchloroethylene, PCE or PERC), Chromium, Lead and Toluene. The selected remedy for this contamination was in-situ oxidation using hydrogen peroxide injections. Treatment began in December 2001 and is listed as on-going; however the most recent groundwater data obtained by ***LEA*** is from 2004.

3. The subject property is listed twice as a RCRA Hazardous Waste Generator. The first, Anonymous, ID #NYD11111 is listed as producing Spent Halogenated Solvents, Tetrachloroethylene, Chromium and wastes that exhibit the characteristic of ignitability between 1984 and 2005. The second, Anonymous, ID #NYR111111 is listed as producing Lead, Selenium, Spent Non-Halogenated Solvents and Methyl Ethyl Ketone from 2006 until February 2009. For a complete listing of waste generated, please refer to the Phase I ESA.

4. The subject building is currently occupied by 1) Anonymous, for anonymous uses; 2) Anonymous, for anonymous uses; 3) Anonymous, for anonymous uses; 4) Anonymous, for anonymous uses; 5) Anonymous, for anonymous uses; and 6) Anonymous, for anonymous uses.

5. According to the Any Town Building Department, sanitary waste has been handled by the municipal sewer system since 1980. Prior to connection, sanitary waste was handled by three (3) on-site sanitary systems. The respective systems were located on the northeast, northwest and southwest portions of the subject property. Based upon historical usage of the subject property, the former sanitary systems have presented and may continue to present a recognized environmental condition at the subject site.

6. One (1) floor drain was noted at the base of the stairs leading to the partial basement. Additionally, one (1) sealed floor drain in the same basement was reported by X&X Consultant of Any Town, New York. In addition to the floor drain observed by ***LEA,*** previous environmental studies and surveys indicate the presence of additional floor drains located throughout the subject building. Given the past history of contamination at the subject property, the locations and status of these drains should be determined. X&X Environmental conducted sampling of the drains in 1993, where sediments from four (4) floor drains were submitted for VOC analysis. Laboratory analysis confirmed VOCs are present at elevated levels within the four (4) drainage structures ranging from 1,420,000 parts per billion (ppb) to 1,270 ppb of Tetrachloroethene. Based on the review of provided records, ***LEA*** assumes these structures have not been remediated, which presents a significant recognized environmental condition.

7. Smith and Jones are the only tenants that utilize and maintain chemicals other than typical housekeeping and janitorial supplies. According to Mr. Client, ABC Environmental, a designated hazardous waste hauler, removes waste oil and other hazardous liquids associated with the Anonymous. Smith maintains a rear room located on the west side of the subject building designated for chemical storage. ***LEA*** observed four (4) 25-pound bags of sodium bi-carbonate, twenty-three (23) five-gallon buckets of "super shock", an agent used to kill bacteria and germs in a pool, four (4) fifty-pound bags of calcium chloride, and two (2) 5-gallon buckets of acid solution used to clean pools. These products were stored in a separate room and should present no environmental threat to the subject property.

8. One (1) set of fill and vent pipes was observed on the northwest side of the property. The pipes lead to an inactive underground storage tank (UST) suspected to be 1,100-gallons in capacity. Note: the fill-pipe-cap was missing during ***LEA's*** on-site investigation, which can allow, rain water to infiltrate the tank, displacing remaining oil and cause it to overflow into the surrounding soils. Further investigation as to the status of this tank is recommended. Based on the size of the building and estimated size of the UST, additional fuel oil tanks are likely present. According to records from the Town of Anywhere, there had been an oil-fired heating system installed on the southwest corner of the building in 1953 and another system installed on the southeast corner in 1956, indicating at least two additional tanks are most likely present in this area. There was no discussion or investigation of any USTs other than the aforementioned fuel oil UST in previous environmental studies made available to ***LEA***.

9. There is one (1) pad-mounted transformer located on the west side of the subject property. No significant staining was observed on the concrete slab that supports the transformer, which is owned and operated by LIPA and according to their operating engineers, is not PCB containing. The building is illuminated with fluorescent and incandescent lighting. The light ballasts may contain PCBs given the building's age.

10. Non-friable suspect asbestos containing materials were noted as 12" x 12" flooring tiles located throughout the north and southwest office areas, found in fair-good condition and roofing materials. Friable suspect asbestos containing materials were noted as 12" x 12" and 2' x 4' drop ceiling tiles, located throughout the two-story office and the southwest office area, found to be in good condition.

11. Due to the age of the building, lead-based paint may be present within the subject building. Painted surfaces were in fair-good condition at the time of the site inspection.

12. There is one (1) closed NYSDEC listed spill located at the subject property. Catalogued under "Anonymous", Spill #111111 was activated on Month 00, 2000, when a 1,000-gallon failed a tightness test. The vent line was replaced and the tank passed follow-up testing, and the spill was closed on Month 00, 2000. Due to the closed status nature of this spill it should present no recognized environmental threat to the subject property. It is unknown what tank the spill refers to.

13. No active drinking water wells were noted at the subject site or at any of the adjoining sites during the site inspection, although it remains possible that private wells exist. The subject building, as well as the buildings in the vicinity of the subject site, are served with municipal water from the Local Public Water District. Groundwater is not utilized for any purpose at the subject site. A total of fifteen (15) monitoring well covers were observed by ***LEA*** during the on-site inspection. The majority of the well covers were observed to be in the vicinity of the former sanitary leaching pool located on the northwest side of the property.

1.2 SAMPLING PLAN

A sampling and analysis program was developed to evaluate the level of undiscovered and/or residual contamination in soil and groundwater at the subject property.

Conduct a thorough Geophysical Survey of the subject property, including Ground Penetrating Radar (GPR) to determine the size and configuration of the inactive fuel oil underground storage tank (UST) to the northwest of the subject building and to identify potential USTs, drainage structures and/or anomalies at the subject property.

Collect groundwater samples from all pre-existing on-site and selected pre-existing off-site monitoring wells. Select ten (10) wells to be sample based upon location and regional groundwater flow direction. Of the ten (10) monitoring wells, four (4) are anticipated to be cluster wells (doubles and triples), making a total of eighteen (18) groundwater samples to be collected. Submit samples for laboratory analysis using United Stated Environmental Protection Agency (USEPA) Method 8260 to test for volatile organic compounds (VOCs). Compare sample results to New York State Department of Environmental Conservation (NYSDEC) Ambient Water Quality Standards and Guidance Values Maximum Allowable Concentrations (MACs).

Using a Geoprobe® or stainless steel hand auger, collect sediment samples from each of the six (6) former/active floor drains located throughout the partial basement and ground level of the subject building. Submit samples for laboratory analysis using USEPA Method 8260 to test for VOCs. Compare sample results to NYSDEC Technical Administrative Guidance Memorandum (TAGM) #4046 Recommended Soil Cleanup Objectives (RSCOs).

Using a Geoprobe®, conduct three (3) continuous soil borings to at least fifteen feet below grade in close proximity to the northwest fuel oil UST, former Perchloroethylene (same as Tetrachloroethylene, PCE or PERC) 550-gallon exterior tank (assumed UST) located on the west side of the building, and any anomalies as discovered during the Geophysical Survey. Based upon field screening with a Photoionization Detector (PID) and visual and olfactory methods, submit one (1) sample for laboratory analysis from each location. Samples from suspect and known UST areas will be analyzed using USEPA Methods 8021 and 8270 (NYSDEC STARS List) to test for VOCs and semi-volatile organic compounds (SVOCs), respectively. Samples from the former PERC UST area will be analyzed for Method 8260. Compare sample results to NYSDEC TAGM #4046 RSCOs.

Collect a sediment sample from the on-site leaching pool in the northeast parking area. Submit a sample for laboratory analysis using USEPA Method 8260 to test for VOCs. Compare sample results to NYSDEC TAGM #4046 RSCOs.

Soil and groundwater sample volumes will be placed into appropriate laboratory containers, stored on ice and delivered via laboratory courier to York Analytical Laboratories, Inc., of Stratford, Connecticut for laboratory analysis.

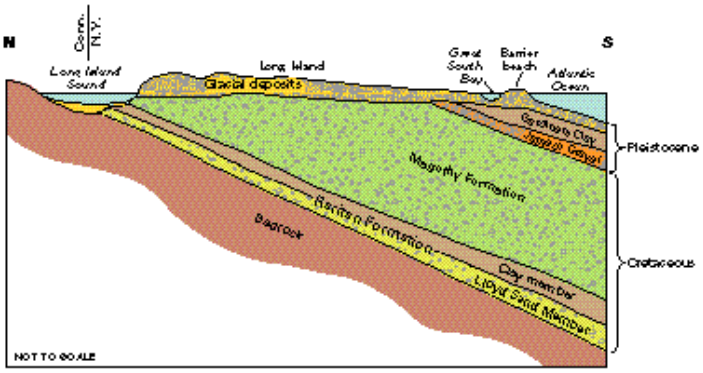
The following tasks were completed by ***LEA*** at the subject property:

1. Contacted the New York City and Long Island One Call Center to request a public utility mark-out.
2. Conducted a thorough Geophysical Survey of the subject property, including GPR.
3. Utilized a model 6610DT Geoprobe® to conduct continuous soil borings from twelve (12) exterior locations at the subject site from zero to a maximum of twenty (20) feet below grade.
4. Utilized a stainless steel hand auger to collect soil samples from two (2) interior basement floor drains.
5. Utilized a model 6610DT Geoprobe® to conduct continuous soil borings from zero to a maximum of ten (10) feet below grade at four (4) interior former floor drains depicted on a X&X Consultant Site Plan from 1997.
6. Utilized down hole well pumps to purge and collect samples from thirty-one- (31) monitoring wells at the subject property.
7. Utilized a stainless steel hand auger to collect soil/sludge samples from bottom lying sediments within the northeast leaching pool.
8. Field screened all soil samples using a PID equipped with a 10.6 eV lamp and visual and olfactory methods.
9. Submitted select samples to York Analytical Laboratories, Inc. for analysis.
10. Reviewed results and prepared a report of findings.

All sampling equipment not considered disposable was decontaminated using *Alconox,* a laboratory grade detergent, and rinsed with water before and after each use to ensure that cross-contamination of samples was eliminated. Boring locations were determined by and limited to accessibility and proximity to subsurface utilities and overhead obstructions.

2.0 SITE HYDROGEOLOGY

Nassau County, New York is located in the Atlantic Coastal Plain physiographic province that is characterized by low hills of unconsolidated sands, gravel and silt. According to Franke (1972), regionally, the near-surface sediments consist of the Upper Glacial deposits that are characterized by southward sloping deposits of sand, gravel and silt. The Upper Glacial deposits have a maximum thickness of 600 feet. They are underlain by the Magothy, Raritan and Lloyd Formations. The Gardeners clay and the Jameco gravel separate the Upper Glacial deposits and the Magothy Formation along the southwest portion of Long Island. Due to less surfacial contamination and higher well yields, the Magothy aquifer is the main supply for drinking and industrial water. Consequently, the USEPA has identified it as a Sole Source Aquifer. The subject site is in the Upper Glacial aquifer. Pump test data suggests hydraulic conductivity between the Magothy and Upper Glacial aquifers. However, discontinuous clay lenses may prevent this interaction in some areas.



Modified from Franke, O.L., and McClymonds, N.E., 1972, Summary of the hydrologic situation on Long Island, New York, as a guide to water-management alternatives: U.S. Geological Survey Professional Paper 627–F, 59 p.

Figure 63. Coastal Plain sediments, which are of Cretaceous and Pleistocene ages, underlie glacial deposits on Long Island as shown by this idealized section of eastern Queens County. The Magothy Formation and the Lloyd Sand Member of the Raritan Formation form productive aquifers.

According to groundwater contour maps provided by the NCDH and the NYSDEC, Topographic Quadrangles provided by the USGS, and previous work performed by our company in the area, the subject site has an average elevation of approximately 120 feet above mean sea level. Groundwater was gauged at approximately 48 feet below grade in the monitoring wells. Prior groundwater investigations conducted at the Anonymous Area have found that groundwater flows generally towards the southwest.

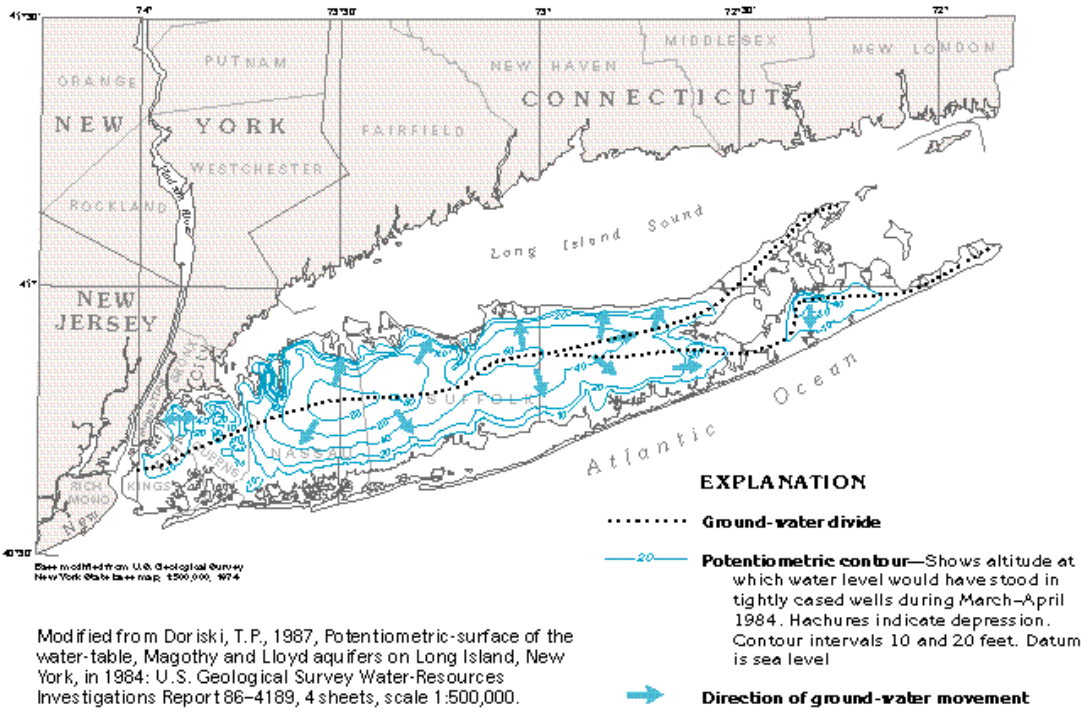


Figure 72. The potentiometric surface of the upper glacial aquifer slopes gently to the north and south from a central high, except in the western part of the island where ground-water withdrawals have lowered the water table and created cones of depression.

2.1 GROUNDWATER USE

No active drinking water wells were noted at the subject site or at any of the adjoining sites during the site inspection, although it remains possible that private wells exist. The subject building, as well as the buildings in the vicinity of the subject site, are served with municipal water from the Any Town Water District. Groundwater is not utilized for any purpose at the subject site.

3.0 GEOPHYSICAL SURVEY

On February 2, 2010, ***LEA*** Environmental Technician, Stephen Bitetto conducted a survey of the subject property to determine the configuration of the inactive fuel oil UST and to locate potential USTs, drainage structures, public and private utilities and subsurface anomalies.

A GSSI model SIR-3000 with a 400 MHz antenna GPR system was used for the survey and consisted of a control unit, control cable and a transducer. The GPR control unit transmits a trigger pulse at a normal repetition rate of 50 KHz. The pulse is then sent to the transmitter electronics in the transducer (antenna) via the control cable where the trigger pulses are transformed into bipolar pulses with higher amplitudes. The transformed pulse will vary in shape and frequency according to the transducer used. The GSSI system is capable of transmitting electromagnetic energy into the subsurface of the earth in the frequency range of 16 MHz to 2000 MHz. In the subsurface, reflections of the pulse occur at boundaries where there is a dielectric contrast (void, steel, soil type). The reflected portion of the signal travels back to the antenna and the control unit and is subsequently shown on the display of the computers color video monitor for interpolation.

A qualified technician specified a coordinate system on the planimetric surface to locate any subsurface dielectric anomalies on the premises. The operator used known knowledge of the subsurface soil composition to calibrate the SIR-3000 system to site-specific conditions. Factor settings such as range, gain, number of gain points, and scans per unit, are modified to yield the most accurate data to describe the subsurface conditions.

Upon finding a dielectric anomaly a more specific coordinate system was designed over the area to determine its size, shape and orientation. The data collected during the survey was reviewed by the operator and compared against past experience, technical judgment and prior site knowledge to classify the anomalies. In addition, a Schonstedt GA 92XT magnetometer was utilized in the survey.

The presence of the inactive northwest fuel oil UST was confirmed. Based upon the apparent dimensions (12’ length and 7’ diameter), the tank is approximately 2,000-gallons in capacity. The tank contained 6” of product.

An inactive UST was discovered in the northeast corner parking lot. This area had initially been obscured from view during our Phase I ESA site reconnaissance. Furthermore, the tank was not discussed in any prior environmental investigation reviewed by ***LEA***. A direct fill pipe was identified, though the associated vent has been removed. The survey determined the tank is approximately 550-gallon in capacity (7’ length and 4’ diameter). The tank contained 12” of product. Based upon gasoline odors within the fill pipe, the tank appears to have stored the same. The tank is not properly vented and confined gasoline vapors present an explosion hazard. Please refer to Appendix A for photographs.

An anomaly indicative of a 2,000-gallon UST was discovered along the west grassy area, south of the grated transformer vault access. There was no previous record of a UST in this area, though a heating system had been positioned nearby, within the building and it is possible that a fuel oil or other UST is present.

Anomalies were found off the southeast and southwest corners of the building. The southwest corner anomaly did not display a GPR image typical to an UST or drainage system, while the southeast anomaly may indicate a drainage structure.

The area of the solid-covered leaching pool in the northeast corner parking lot was not entirely accessible during the Geophysical Survey. However, the structure appears to handle stormwater roof runoff. The leaching pool is in the area of a former septic tank depicted on a 1997 Site Plan by X&X Consultant. No indication of a former sanitary system was found during the survey. Sampling of bottom lying sediments is discussed herein. Please refer to Figure 2.0, Site Sketch & Sample Location Map.

4.0 SOIL SAMPLING AND ANALYSIS

4.1 INACTIVE PETROLEUM UNDERGROUND STORAGE TANKS

On February 3, 2010, ***LEA*** staff conducted soil borings in close proximity to the suspect inactive gasoline UST and the inactive fuel oil UST. Using a model 6610DT Geoprobe®, continuous soil borings were advanced in five (5) foot intervals from zero to a maximum of twenty (20) feet below grade at boring locations designated SB-1 through SB-5. Please refer to Figure 2.0, Site Sketch & Sample Location Map, for boring locations and Appendix E for soil boring logs.

Field screening of the soil borings did not indicate elevated PID readings, visual or olfactory signs of petroleum or other contamination. Samples were collected for laboratory analysis from ten (10) to fifteen (15) feet below grade at boring locations SB-2 and SB-3.

Sample volumes were placed into appropriate laboratory containers, stored on ice and delivered via laboratory courier to York Analytical Laboratories, Inc. for laboratory analysis using USEPA Methods 8021 and 8270 STARS to test for VOCs and SVOCs.

Laboratory analysis of the samples showed the following:

- Very minor concentrations (4.0 ppb in SB-2 and 2.2 ppb in SB-3) of the VOC Naphthalene were detected in each sample. However, the compound was detected in the laboratory method blank and its presence may be a result of laboratory sample contamination. Otherwise, no VOCs or SVOCs were detected.
- The results confirm field observations and it does not appear that either UST has release detectable quantities of product as of the sampling date. However, measureable product remains in both tanks and the threat of a release remains possible.

Please refer to Figure 2.1, Soil VOC Analytical Results. Laboratory results can be found in Appendix B and the NYSDEC TAGM #4046 RSCOs can be found in Appendix C.

4.2 FORMER PERCHLOROETHYLENE UNDERGROUND STORAGE TANK

Based upon a February 1997 Site Plan prepared by X&X Consultant, a 500-gallon Perchloroethylene (same as Tetrachloroethylene; also known as PCE and PERC) UST was removed from the northwest grassy area of the subject property. Please refer to Figure 2.0, Site Sketch & Sample Location Map, Area E and Appendix E for soil boring logs.

On February 4, 2010, ***LEA*** staff conducted soil borings in the former PERC UST area. Using a track-mounted 6610DT Geoprobe®, continuous soil borings were advanced in five foot intervals from zero to twenty feet below grade at locations designated SB-11 and SB-12.

Field screening of the soil borings did not indicate elevated PID readings, visual or olfactory signs of PERC or other contamination. A sample was collected for laboratory analysis from ten (10) to fifteen (15) feet below grade at the boring location SB-11.

Sample volumes were placed into appropriate laboratory containers, stored on ice and delivered via laboratory courier to York Analytical Laboratories, Inc. for laboratory analysis using USEPA Method 8260 to test for VOCs.

Laboratory analysis of the sample showed the following:

- A very minor concentration (12.6 ppb) of the VOC Methylene Chloride was detected in the sample. However, the compound was detected in the laboratory method blank and its presence may be a result of laboratory sample contamination. Otherwise, no PERC or other VOCs were detected.
- The results confirm field observations and it does not appear that the UST had released detectable quantities of product prior to removal.

Please refer to Figure 2.1, Soil VOC Analytical Results. Laboratory results can be found in Appendix B and the NYSDEC TAGM #4046 RSCOs can be found in Appendix C.

4.3 SUSPECT UNDERGROUND STORAGE TANK AND OTHER ANOMALIES

On February 3, 2010, ***LEA*** staff conducted soil borings in close proximity to a GPR-indicated UST in the west grassy area of the subject property and in close proximity to two (2) anomalies identified in the southern parking area. Using a model 6610DT Geoprobe®, continuous soil borings were advanced in five (5) foot intervals from zero to a maximum of twenty (20) feet below grade at boring locations designated SB-6, SB-7, SB-8 and SB-9. Please refer to Figure 2.0, Site Sketch & Sample Location Map, for boring locations and Appendix E for soil boring logs.

Field screening of the soil borings did not indicate elevated PID readings, visual or olfactory signs of petroleum or other contamination. A sample was collected for laboratory analysis from ten (10) to fifteen (15) feet below grade at the boring location SB-6. Samples from the remaining borings were not collected based upon the absence of obvious contamination.

Sample volumes were placed into appropriate laboratory containers, stored on ice and delivered via laboratory courier to York Analytical Laboratories, Inc. for laboratory analysis using USEPA Methods 8021 and 8270 STARS to test for VOCs and SVOCs.

Laboratory analysis of the sample showed the following:

- A very minor concentration (2.4 ppb) of the VOC Naphthalene was detected in the sample. However, the compound was detected in the laboratory method blank and its presence may be a result of laboratory sample contamination. Otherwise, no VOCs or SVOCs were detected.
- The results confirm field observations and it does not appear that the suspect UST has lead to contamination of surrounding soils as of the sampling date.

Please refer to Figure 2.1, Soil VOC Analytical Results. Laboratory results can be found in Appendix B and the NYSDEC TAGM #4046 RSCOs can be found in Appendix C.

4.4 ACTIVE AND FORMER FLOOR DRAINS

On February 3 and 4, 2010, ***LEA*** staff conducted soil sampling of one existing floor drain. Additionally samples were collected in the vicinity of five (5) 1997 Site Plan-depicted former floor drains. Using a stainless steel hand auger, a representative sample was collected from bottom lying sediments within the active partial basement floor drain designated FD-5. The concrete slab was penetrated to sample in area of the former basement floor drain, designated FD-6. The remaining former drains were sampled using a model 6610DT Geoprobe®. The concrete slab was penetrated and continuous soil borings were advanced in five (5) foot intervals from zero to ten (10) feet below grade at boring locations designated FD-1, FD-2, FD-3 and FD-4.

Furthermore, the automotive school active floor drain was investigated and found to discharge via copper plumbing to a plastic drum in the partial basement below. Drum contents are then discharged by a sump-type pump to the nearby asphalt parking lot immediately outside the basement. Collected liquids exhibited an oily sheen, though no surface staining was evident in the area of the drum. Please refer to Appendix A for photographs. To determine if the final discharge point had been significant impacted, a continuous soil boring was advanced from zero to ten (10) feet below grade at the location designated SB-10. Please refer to Figure 2.0, Site Sketch & Sample Location Map, for boring and drain locations and Appendix E for soil boring logs

Field screening of the floor drain and discharge point soil borings did not indicate elevated PID readings, visual or olfactory signs of petroleum or other contamination. Samples were collected from zero to two (2) feet below grade in FD-5, four (4) to five (5) feet below grade at FD-6 and from five (5) to ten (10) feet below grade at FD-1, FD-2, FD-3 and FD-4. Based upon the absence of obvious soil contamination, a sample was not submitted from SB-10.

Sample volumes were placed into appropriate laboratory containers, stored on ice and delivered via laboratory courier to York Analytical Laboratories, Inc. for laboratory analysis using USEPA Method 8260 to test for VOCs.

Laboratory analysis of the samples showed the following:

- Very minor concentrations (6.93 ppb to 13.2 ppb) of the VOC Methylene Chloride were detected in each sample. However, the compound was detected in the laboratory method blank and its presence may be a result of laboratory sample contamination.
- It appears that the active and former floor drains were properly remediated (if necessary) and do not require further investigation.

Please refer to Figure 2.1, Soil VOC Analytical Results. Laboratory results can be found in Appendix B and the NYSDEC TAGM #4046 RSCOs can be found in Appendix C.

4.5 NORTHEAST PARKING AREA LEACHING POOL

On February 4, 2010, ***LEA*** staff conducted sampling of the leaching pool in the northeast parking area. The structure is in the vicinity of a former septic tank depicted on an X&X Consultant Site Plan from 2002. However, no indication of a former septic system was found and it is likely that some or all of the components have been removed or abandoned. It is likely that the leaching pool handles roof runoff, though this could not be confirmed as the area was not entirely accessible during the Geophysical Survey.

Using a stainless steel hand auger, a representative sample was collected from the first two (2) feet of bottom lying sediments within the structure designated LP-1. Please refer to Figure 2.0, Site Sketch & Sample Location Map and Appendix E for soil boring logs.

Field screening of the materials showed dark sediments and sands, with minor-moderate sludge levels. No significant or unusual odors were evident from the samples and no elevated PID readings were registered.

Sample volumes were placed into appropriate laboratory containers, stored on ice and delivered via laboratory courier to York Analytical Laboratories, Inc. for laboratory analysis using USEPA Method 8260 to test for VOCs.

Laboratory analysis of the sample showed the following:

- Minor concentrations of the VOCs p-Isopropyltoluene (at 5.65 ppb), Methylene Chloride (at 39.4 ppb and also found in the sample blank) and Tetrachloroethylene (at 56.5 ppb and the same as Perchloroethylene) were detected in each sample. However, concentrations of the latter two (2) compounds are well below their respective NYSDEC TAGM #4046 RSCOs and do not warrant further investigation or remediation. There is no RSCO for p-Isopropyltoluene.

Please refer to Figure 2.1, Soil VOC Analytical Results. Laboratory results can be found in Appendix B and the NYSDEC TAGM #4046 RSCOs can be found in Appendix C.

5.0 GROUNDWATER SAMPLING AND ANALYSIS

On February 2 and 3, 2009, ***LEA*** staff collected groundwater samples from thirty-one (31) existing on and off-site monitoring wells. The majority of the samples were collected from the primary area of historic contamination along the northwest corner of the property. Please refer to Figure 2.0, Site Sketch & Sample Location Map.

Prior to sampling, the volume of water within each well casing was calculated by measuring the depth of each well, the static water level and diameter of casing. Each well was then purged of at least three (3) well volumes with a decontaminated down hole well pump and non-reactive polyethylene tubing. Purge water was disposed of on-site. Upon purging, samples were collected directly from the tubing.

Sample volumes were placed into appropriate laboratory containers, stored on ice and delivered via laboratory courier to York Analytical Laboratories, Inc., of Stratford, Connecticut. Based on the well locations and depth in the vertical dimension of the well screens, eighteen (18) samples were selected for analysis. Samples were analyzed using USEPA Method 8260 to test for VOCs.

Laboratory analysis of the samples found the following:

1. VOC concentrations in the northwest corner of the property have shown a moderate rebound from the 2004 sampling event conducted by X&X Consultant. For example, PCE concentrations from MW-4 (within former sanitary leaching pool) spiked from 24 ppb in 2004 to 158 ppb in the recent sampling event. Similarly, the down-gradient well MW-14 spiked from 13 ppb to 247 ppb.
2. Overall, PCE and TCE concentrations from hydraulically up and down-gradient wells generally show a slight increase in concentrations from the 2004 sampling event.

Please refer to Table I for tabulated results and Figure 2.2, Groundwater VOC Analytical Results. Analytical results can be found in Appendix B and the NYSDEC Ambient Water Quality Standards and Guidance Values are located in Appendix D.

6.0 INQUIRY INTO INDOOR AIR QUALITY

It is ***LEA's*** understanding that the NYSDOH conducted indoor air sampling within the subject building shortly after our field activities on Month 00, 2010. Sampling was conducted in connection with the subject site's status as a Class 2 Inactive Hazardous Waste Disposal Site. ***LEA*** wishes to review sampling data, however, according to Mr. Anonymous of the NYSDEC, the results will not be available for until mid-March.

Based upon review of the results and discussion with the NYDOH and NYSDEC, an appropriate plan of action should be formulated. This may include additional sampling events and/or installation of a soil vapor mitigation system.

7.0 QUALITY ASSURANCE AND QUALITY CONTROL PROCEDURES (QA/QC)

The following 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, Office of Emergency and Remedial Response, Cincinnati, Ohio. EPA-600/280-018] and American Society of Testing and Material's (ASTM's) Sampling Procedures.

7.1 SAMPLING PERSONNEL

The activities associated with the survey, sampling and analysis plan were performed by or under the auspices of a USEPA Office of Emergency and Remedial Response, Certified Sampler for Hazardous Materials. The sample staff (samplers) possessed a minimum of a B.A. Degree in the Earth, Environmental, or Biological Sciences or a B.S. Degree in Engineering. Samplers had a minimum of one (1) year experience in environmental/geological field work. Additionally, all samplers had received mandatory forty-hour Occupational Safety and Health Administration (OSHA) training on working with potentially hazardous materials and appropriate Hazard Communication Program and "Right-To-Know" training.

7.2 SAMPLING EQUIPMENT

Separate QA/QC measures were implemented for each of the instruments used in the performance of the SAP.

7.2.1 Hand Auger and Geoprobe®

Prior to arrival on the subject property and between sample locations, the auger and extension rods were decontaminated by washing them with a detergent (Alconox) and potable water solution and rinsing them with distilled water. Upon completion, each soil boring was backfilled with unsampled materials and clean sand. An asphalt or concrete patch was then applied to match the existing surroundings.

7.2.2 Photo Ionization Detector

Calibration of the Photoionization Detector (PID) was conducted prior to sampling using a span gas of known concentration. The PID was a *RAE Systems MiniRae 2000,* photo ionization detection meter equipped with a 10.6 eV bulb.

7.2.3 Sample Vessels

All sample vessels were "Level A" certified decontaminated containers supplied by a New York State Certified Commercial Laboratory. Samples analyzed for hydrocarbons were placed in containers with Teflon lined caps. All samples were preserved by cooling them to a temperature of approximately four degrees Celsius.

7.3 SAMPLE DOCUMENTATION

A sample represents physical evidence. An essential part of liability reduction is the proper control of gathered evidence. To establish proper control, the following sample identification and chain-of custody procedures were followed.

7.3.1 Sample Identification

Sample identification was executed by use of a sample tag, log book and chain-of-custody form. Said documentation provided the following information: 1) the project code; 2) the sample laboratory number; 3) the sample preservation; 4) instrument used for source sample grabs; 5) the composite medium used for source sample grabs; 6) the date the sample was secured from the source media; 7) the time the sample was secured from the source media; and 8) the person who secured the sample from the source media.

7.3.2 Chain-of-Custody Procedures

Due to the evidential nature of samples, possession was traceable from the time the samples were collected until they were received by the testing laboratory. A sample was considered under custody if it: was in a person's possession; it was in a person's view, after being in possession; if it was in a person's possession and they locked it up; or, it was in a designated secure area. When transferring custody, the individuals relinquishing and receiving the samples signed, dated and noted the time on the Chain-of-Custody Form.

7.3.3 Laboratory-Custody Procedures

A designated sample custodian accepted custody of the shipped samples and verified that the information on the sample tags matched that on the Chain-of-Custody Records. Pertinent information as to shipment, pick-up, courier, etc., were entered in the "remarks" section. The custodian entered the sample tag data into a bound logbook. The laboratory custodian used the sample tag number, or assigned a unique laboratory number to each sample tag, and assured that all samples were transferred to the proper analyst or stored in the appropriate source area. The laboratory custodian distributed samples to the appropriate analysts. Laboratory personnel were responsible for the care and custody of samples, from the time they were received, until the sample was exhausted or returned to the sample custodian. All identifying data sheets and laboratory records were retained as part of the permanent documentation. Samples received by the laboratory were retained until after analysis and quality assurance checks were completed.

8.0 CONCLUSIONS

Based on the completion of this Phase II Subsurface Investigation, ***Laurel Environmental Associates, Ltd.*** has the following conclusions and recommendations:

Geophysical Survey:

The presence of the inactive northwest fuel oil UST was confirmed and the estimated capacity is 2,000-gallons. The tank currently contains 6" of product.

An inactive gasoline UST was discovered in the northeast corner parking lot and the estimated capacity is 550-gallons. The tank currently contains 12" of product. This area had initially been obscured from view during our Phase I ESA site reconnaissance. Furthermore, the tank was not discussed in any prior environmental investigation reviewed by ***LEA***. A direct fill pipe was identified, though the associated vent has been removed. The tank is not properly vented and confined gasoline vapors present an explosion hazard. Please refer to Appendix A for photographs.

An anomaly indicative of a 2,000-gallon UST was discovered along the west grassy area, south of the grated transformer vault access. There was no previous record of a UST in this area, though a heating system had been positioned nearby, within the building and it is possible that a fuel oil or other UST is present.

Anomalies were found off the southeast and southwest corners of the building. The southwest corner anomaly did not display a GPR image typical to an UST or drainage system, while the southeast anomaly may indicate a drainage structure.

The area of the solid-covered leaching pool in the northeast corner parking lot was not entirely accessible during the Geophysical Survey. However, the structure appears to handle stormwater roof runoff. The leaching pool is in the area of a former septic tank depicted on a 1997 Site Plan by X&X Consultant. No indication of a former sanitary system was found during the survey. Sampling of bottom lying sediments is discussed below.

Inactive Fuel Oil and Gasoline USTs:

Laboratory analysis of samples from soil borings conducted at each respective tank area did not detect the elevated presence of petroleum constituents. The results confirm field observations and it does not appear that either UST has release detectable quantities of product as of the sampling date. However, measureable product remains in both tanks and the threat of a release remains possible. Additionally, the gasoline UST is not properly vented and an explosion hazard exists as discussed above.

Former Perchloroethylene (PERC) UST:

Laboratory analysis of a sample from soil borings conducted in the former tank area did not detect PERC or any other VOCs. The results confirm field observations and it does not appear that the UST had released detectable quantities of product prior to removal. No further investigation of the former tank and area is warranted at this time.

Suspect UST:

Laboratory analysis of a sample from the suspect tank area did not detect elevated levels of any VOCs. The results confirm field observations and it does not appear that the suspect UST has lead to contamination of surrounding soils as of the sampling date.

Active and Former Floor Drains:

Laboratory analysis of samples from soil borings conducted at the active and former floor drain locations did not detect the elevated presence of VOCs, indicating the structures were properly remediated, if necessary. The results also confirm field observations that no obvious contamination was present in the sampled areas.

Northeast Parking Area Leaching Pool:

It is likely that the leaching pool handles roof runoff, though this could not be confirmed as the area was not entirely accessible during the Geophysical Survey.

Minor concentrations of the VOCs p-Isopropyltoluene (at 5.65 ppb), Methylene Chloride (at 39.4 ppb and also found in the sample blank) and Tetrachloroethylene (at 56.5 ppb and the same as Perchloroethylene) were detected in each sample. However, concentrations of the latter two (2) compounds are well below their respective NYSDEC TAGM #4046 RSCOs and do not warrant further investigation or remediation. There is no RSCO for p-Isopropyltoluene.

Given the above laboratory results, no further investigation of the structure is warranted at this time.

On-Site Groundwater:

Samples were collected from thirty-one (31) on and off-site monitoring wells. The majority of samples were collected from the primary area of residual contamination, in the northwest corner of the property. Eighteen (18) of the samples were selected for laboratory analysis based upon their respective well depths and locations.

Laboratory analysis found that concentrations in the northwest corner of the property have rebounded from the 2004 sampling event conducted by X&X Consultant. For example, PCE concentrations from MW-4 (within former sanitary leaching pool) spiked from 24 ppb in 2004 to 158 ppb in the recent sampling event. Similarly, the down-gradient well MW-14 spiked from 13 ppb to 247 ppb.

Overall, PCE and TCE concentrations from hydraulically up and down-gradient wells generally show a slight increase in concentrations from the 2004 sampling event.

Indoor Air Quality:

It is ***LEAs*** understanding that the NYSDOH conducted indoor air sampling within the subject building shortly after our field activities. Sampling was conducted in connection with the subject site's status as a Class 2 Inactive Hazardous Waste Disposal Site. ***LEA*** wishes to review sampling data, however, the data will not be available until mid-March.

Based upon review of the results and discussion with the NYDOH and NYSDEC, an appropriate plan of action should be formulated. This may include additional sampling events and/or installation of a mitigation system.

9.0 RECOMMENDATIONS

Inactive Fuel Oil and Gasoline USTs:

The tanks should be registered, pumped, cleaned and removed from the premises in accordance with state and county regulations.

Suspect UST:

It would be prudent to conduct a test pit in the area to determine the potential presence of a tank. If a storage tank or other structure is found, it should be removed as described above or appropriately addressed.

Active and Former Floor Drains:

The active floor drain FD-5 should be sealed with concrete to eliminate the potential for future discharges of effluent. In addition, the ground-level automotive school floor drain should be sealed with concrete. Collected liquids in the basement should be properly disposed of at an approved facility. Discharges to the adjoining parking area must immediately stop.

Groundwater and Current Facility Status:

This report will be forwarded to Mr. Anonymous of the NYSDEC for review and comment. Due to the relatively low levels of PCE remaining within the on-site groundwater comparative to the original levels, the NYSDEC may consider commencing the process of delisting the site from the IHWD registry by downgrading the status of the subject site from Class 2 site to a Class 4. A request to delist the site should be submitted upon receiving positive comments on this report from the NYSDEC.

DISCLAIMER FOR PHASE II ENVIRONMENTAL SITE ASSESSMENT

The observations described in this report were made under the conditions stated therein. The conclusions presented in the report were based solely upon the services described therein, and not on scientific tasks or procedures beyond the scope of described services or the time and budgetary constraints imposed by the Client.

In preparing this report, Laurel Environmental Associates, Ltd. may have relied on certain information provided by state and local officials and other parties referenced therein, and on information contained in the files of state and/or local agencies available to Laurel Environmental Associates, Ltd. at the time of the subject property assessment. Although there may have been some degree of overlap in the information provided by these various sources, Laurel Environmental Associates, Ltd. did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this subject property assessment.

Observations were made of the subject property and of structures on the subject property as indicated within the report. Where access to portions of the subject property or to structures on the subject property was unavailable or limited, Laurel Environmental Associates, Ltd. renders no opinion as to the presence of non-hazardous or hazardous materials, or to the presence of indirect evidence relating to non-hazardous or hazardous materials, in that portion of the subject property or structure. In addition, Laurel Environmental Associates, Ltd. renders no opinion as to the presence of hazardous materials, or the presence of indirect evidence relating to hazardous materials, where direct observation of the interior walls, floor, or ceiling of a structure on a subject property was obstructed by objects or coverings on or over these surfaces.

Laurel Environmental Associates, Ltd. did not perform testing or analyses to determine the presence or concentration of asbestos at the subject property or in the environment of the subject property under the scope of the services performed. The conclusions and recommendations contained in this report are based in part, where noted, upon the data obtained from a limited number of soil samples obtained from widely spaced subsurface explorations. The nature and extent of variations between these explorations may not become evident until further exploration. If variations or other latent conditions then appear evident, it will be necessary to reevaluate the conclusions and recommendations of this report.

Any water level readings made in test pits, borings, and/or observation wells were made at the times and under the conditions stated in the report. However, it must be noted that fluctuations in the level of groundwater may occur due to variations in rainfall and other factors different from those prevailing at the time measurements were made.

Except as noted within the text of the report, no qualitative laboratory testing was performed as part of the subject property assessment. Where an outside laboratory has conducted such analyses, Laurel Environmental Associates, Ltd. has relied upon the data provided, and has not conducted an independent evaluation of the reliability of the data.

The conclusions and recommendations contained in this report are based in part, where noted, upon various types of chemical data and are contingent upon their validity. The data have been reviewed and interpretations were made in the report. As indicated within the report, some of the data may be preliminary "screening" level data, and should be confirmed with quantitative analyses if more specific information is necessary. Moreover, it should be noted that variations in the types and concentrations of contaminants and variations in their flow paths may occur due to seasonal water table fluctuations, past disposal practices, the passage of time, and other factors. Should additional chemical data become available in the future, the data should be reviewed, and the conclusions and recommendations presented herein modified accordingly.

Chemical analyses have been performed for specific constituents during the course of this subject property assessment, as described in the text. However, it should be noted that additional chemical constituents not searched for during the current study might be present in soil and/or groundwater at the subject property.