



SAMPLE PHASE I
ENVIRONMENTAL
SITE ASSESSMENT

MAJOR OIL FACILITY
123 ABC STREET
ANY TOWN, NEW YORK

PREPARED FOR:

MR. CLIENT
345 ABC STREET
ANY TOWN, NEW YORK

PREPARED BY:

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

MONTH 00, 2010
LEA PROJECT #10-000



Photograph for example purposes only

123 ABC Street, Any Town, New York

**LAUREL ENVIRONMENTAL ASSOCIATES, LTD.
ENVIRONMENTAL CERTIFICATION**

LEA Project No. 10-000

Report: Phase I Environmental Site Assessment Report, ASTM E1527 - 05

Inspection Date: Month 00, 2010

Report Date: Month 00, 2010

Site: 123 ABC Street, Any Town, New York 11111-1111
Located at the southwest corner of the intersection of ABC and DEF Streets

Weather Conditions: 72°F, Sunny

Client: Client, on behalf of Lending Institution

Report Prepared By:

Carla M. Sullivan
VP, Senior Geologist

Brendan C. Moran, QA/QC
Environmental Scientist

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

Date

EXECUTIVE SUMMARY, FINDINGS

On-site:

1. The subject property had been an active #2 fuel oil storage facility for over 65 years with a total of six large capacity aboveground fuel oil tanks. As such, the property had conducted storage, transfer, shipping and receiving of home heating oil. Smaller underground storage tanks containing diesel and gasoline for staff vehicles were also in use. According to the City of Any Town, there are no records regarding the site as it pre-dates building codes instituted in 1919.
2. Housekeeping was noted to be fair throughout the majority of the buildings and property. Historical staining of unpaved surfaces was observed throughout the property and on concrete surfaces of the pump house.
3. The subject property supports landscaped areas around the building, and extensive weeded areas throughout the rest of the property. Stressed vegetation was observed in the area of the former aboveground storage tanks (ASTs).
4. According to maps provided by the NYSDEC and visual inspection by *LEA*, the subject site is within a tidal wetlands area of the estuary known as Any Town Creek which borders the subject property on the south and eastern sides.
5. According to the City of Any Town, sanitary waste has been serviced via municipal sewer since the early 1970's. The former sanitary system is assumed to be located along the east side of the building. It is unknown if the system was properly closed as per NCDH code. Due to the historical usage of the site, the former sanitary system represents a recognized environmental condition.
6. Due to the general southern slope of the property, storm water is handled by overland flow and natural drainage into subsurface soils and the Any Town Creek. No drywells were observed during our site reconnaissance.
7. There is one interior drain located in the repair/storage section of the building. The final discharge point of this drain is unknown but assumed to be directly to soil. Due to the historical usage of the site, the floor drain represents a recognized environmental condition.
8. Current chemical storage was observed as nine 5-gallon containers of Aer-o-foam® for the fire suppression system within the building. Other chemicals stored and used during active operations are assumed to be motor oils, waste oils, degreasers and solvents for truck and machinery repair and typical housekeeping supplies. Previous chemical storage and hazardous material usage presents a significant recognized environmental condition to the subject property.
9. According to documents supplied by the client, Mr. Client, the subject building had maintained at least six #2 fuel oil ASTs: one 680K (present but inactive) and formerly; two 220K, one 120K and two 20K gallons in capacity. Remnants, mainly the base, of one of the 220K's remain at the site. There is one 1,000-gallon AST outfitted as an oil/water separator associated with one 550-gallon waste oil AST. Previous underground storage tanks included a fuel oil tank for the building and a gasoline tank for company vehicles. The building is currently heated by a 275-gallon fuel oil AST located in the repair garage.

10. The subject property is listed as a Major Oil Storage Facility and as a Petroleum Bulk Storage Facility under Acme Fuel Co., ID#1-1111 and #OL111111, respectively, with five ASTs ranging in capacity from 20,000 to 220,000-gallons that were installed between 1940 and 1945 and have since been removed. There is one temporarily out of service 620,568-gallon AST installed in 1945 that remains on the premises and one 275-gallon diesel used for heating oil. There are records regarding the removal (unknown date) of one 550-gallon fuel oil UST with an installation date of 1957. The historical maintenance of large ASTs presents a significant recognized environmental condition for the subject property.
11. The subject property is listed as a Wastewater Discharge site under Anonymous Fuel Oil Corp., ID# NY11111, is considered a minor industrial active discharge facility permitted since 1988. Overland flow is discharged to a sump pump system and associated oil/water separator located on the east side of the property that fronts along Any Town Creek.
12. There are no active-status NYSDEC listed spills or leaking USTs at the subject property. There is one (1) closed-status NYSDEC listed spill. Named Acme Fuel Co., Spill #1111111 was activated on September 16, 1989 when floating product was discovered in an on-site monitoring well. Reportedly, the property owner was advised at the time to bail the well weekly and maintain a log of product recovered. No further information is provided for this spill. However, the spill was closed on October 18, 1990. The potential magnitude of this historic spill presents a recognized environmental condition at the subject property.
13. There are four NYSDEC installed monitoring wells located at the subject property, three of them are constructed as stand-pipes and are located along the perimeter that abuts Any Town Creek. The fourth is flush mounted and in the parking lot, north of the tank field. According to Mr. Client, the NYSDEC and a private consultant had encountered floating product in the majority of wells. The wells are reportedly sampled on an annual basis, and given the history of the subject property, it is assumed that groundwater contamination is present and extensive.
14. Due to the age of the building, lead-based paint is most likely present within the areas of subject building not made available for inspection.
15. No friable or non-friable suspect asbestos containing materials were noted other than roofing materials. However, the apartment and office portion of the building was not made available for inspection and these materials may be present.
16. An estimate of environmental liabilities associated with properties owned by Acme Fuel Co., Inc. completed by Anonymous Consultant (X&X) and dated January 2007 was made available to **LEA** for review. According to the letter report, Anonymous Consultant's objective was to determine the cost to remediate said properties using technologies currently available for the time frame of 1986 and 2001. Using RACER software, a Windows based environmental remediation/corrective action cost estimating system, which includes costs associated with all aspects and phases of environmental remediation projects such as; investigation study, design, construction, operations and maintenance, long-term monitoring and closure. X&X determined that the environmental liabilities associated with the subject property ranged from a low \$4.2MM to a high of \$5.5MM for 2001. Base on the historical aspect of the subject property, **LEA** concurs with X&X findings.

Off-site:

1. There are two NPL listed sites located within a one mile radius of the subject site. Though the sites are located hydraulically down-gradient, radioactive materials were found in Any Town Creek along the southern property boundary. These NPL sites present a significant recognized environmental condition to the subject site.
2. There are four CERCLIS listed sites located within a ½ mile radius of the subject site. Crown Dykman, and LI Tungsten Corp., Mattiace Chemicals and Edmos Corp. are discussed in Section 4.2. These sites are located along Any Town Creek, and due to the relative close proximity, type of contamination and resources affected, all pose a significant recognized environmental condition at the subject property.
3. There are seven listed IHWD sites within a one (1) mile radius of the subject site. Due to the type of contamination, locations, and resources affected, all but one (Ronhill Cleaners) pose a significant recognized environmental condition to the subject property.
4. There are four Solid Waste Facilities located within a ½ mile radius of the subject site. Due to the type of facility, none should pose a recognized environmental condition to the subject property.
5. There are seven active NYSDEC listed spills and three (3) active NYSDEC listed leaking USTs located within a ½ mile radius of the subject property. Due to the locations, magnitude of spill and/or resource affected, none of the spills should present a recognized environmental condition at the subject property.
6. There are no adjoining properties listed on the CBS, MOS or PBS database, but there are significant CBS facilities, specifically Anonymous Site, located hydraulically up-gradient from the subject site and other facilities within the industrial area along Any Town Creek.
7. There are three properties within a one (1) mile radius of the subject site listed as a RCRA TSD or a CORRACTs site. Mattiace Petrochemicals, Edmos Corp., and Fabric Leather Corp., are all located along Any Town Creek and are listed as large quantity generators with high priority of corrective actions. Due to the status, locations, and type of wastes generated, all three sites pose a significant recognized environmental condition to the subject property.
8. There is one site listed as TRI Facility within a ¼ mile radius of the subject site. Konica Minolta Graphic Imaging, is on the database with extensive discharge of effluent of gases, including Methanol, Silver, Ammonia, etc. in amounts ranging from 60 to 32,000 pounds from 1987 to 2001. Due to the close proximity of this CBS, it does present a recognized environmental condition at the subject property.
9. There are five Brownfields site located within a one mile radius of the subject property. Due to either the location or the delisted status, none should pose a recognized environmental condition at the subject property.
10. There are two sites located within a 1/8 mile radius listed as a Civil & Administrative Enforcement Docket site. Anonymous Sites are both listed with several violations and associated penalties.

Based on the findings of this investigation, *Laurel Environmental Associates, Ltd.* has discovered the following recognized environmental conditions at the subject property, 123 ABC Street, Any Town, New York.

<u><i>Recognized Environmental Conditions</i></u>	<u><i>Potential Impacts</i></u>
• Discharge of effluent into former sanitary system	High Risk
• Discharge of effluent into interior floor drain	High Risk
• Possible unregistered underground storage tanks	High Risk
• Potential leaking underground storage tanks	High Risk
• Potential soil contamination around tank farm	High Risk
• Potential groundwater contamination from historical usage	High Risk
• Potential off-site groundwater contamination from on-site usage	High Risk
• Potential off-site groundwater contamination	High Risk
• Potential soil/gas vapors entering the building	High Risk

EXECUTIVE SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Based on the information developed and provided as part of this site assessment, *LEA* has reached the following conclusions and recommendations regarding recognized areas of environmental concern:

1. Conduct a thorough ground penetrating radar (GPR), magnetic and pipe locating survey of the subject property and building to determine whether USTs are present and locate all interior pits and interior and exterior drainage structures.
2. Using a Geoprobe®, conduct continuous soil borings throughout the property and any anomalies depicted by GPR and all underground storage tanks. Submit samples for laboratory analysis using Methods 8260 and 8270 for volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs), respectively and 8 RCRA heavy metals.
3. Using a Geoprobe®, conduct at least twelve groundwater samples from locations throughout the property and existing monitoring wells to determine if historical occupancy has affected the subject property. Wells should be surveyed to confirm groundwater flow direction and outfitted with data-loggers to log tidal fluctuations. Submit samples for laboratory analysis using Methods 8260 and 8270 for volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs), respectively and 8 RCRA heavy metals, filtered and unfiltered.
4. Suspect lead-based paint, friable and non-friable ACMs must be properly addressed should any renovations be planned. Develop an O & M Plan to properly address materials that could pose a risk to the building occupants or maintenance workers.

ESTIMATED COSTS:

Phase II Subsurface Investigation to address the afore-mentioned items:
\$00,000

Dismantling of the remaining ASTs, underground piping and pump station:
\$00,000

Remedial corrective action and closure of UIC structures:
\$00,000

Installation of sub-slab depressurization system can be installed to protect inhabitants from the
contaminates of concern
\$00,000

Remedial corrective action of premises if contaminants are found in underlying soils and groundwater.
Significant potential for impact to Any Town Creek:
\$000,000

As of each tax status date, 1/2/03(2004/05), 1/2/04(2005/06), 1/2/05(2006/07), 1/2/06(2007/08),
1/2/07(2008/09), 1/2/08(2009/10) and 1/2/09(2010/11), the condition of the subject property for
purposes of this report was essentially the same, and as a consequence, the costs to investigate and
remediate the existing environmental contamination would vary very little from year to year.

TABLE OF CONTENTS

EXECUTIVE SUMMARY, FINDINGS	4
EXECUTIVE SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	7
ESTIMATED COSTS:	8
LIST OF FIGURES	11
LIST OF APPENDICES	11
REPORT SPECIFICATIONS	12
1.0 INTRODUCTION	13
1.1 ASTM STANDARD PRACTICE E-1527-05	13
1.1.1 PURPOSE	13
1.1.2 DEFINITION OF RECOGNIZED ENVIRONMENTAL CONDITIONS	13
1.2 SCOPE OF WORK	14
1.3 CONFLICT CERTIFICATION	15
1.4 VIABILITY OF PHASE I ESA	15
1.5 SIGNIFICANT ASSUMPTIONS	15
1.6 USER RELIANCE	15
2.0 SITE DESCRIPTION	16
2.1 BUILDING & PROPERTY INSPECTION	16
2.1.1 GENERAL HOUSEKEEPING PRACTICES	16
2.1.2 VEGETATION	16
2.1.3 SEPTIC SYSTEMS, STORM WATER DRAINAGE AND FLOOR DRAINS	17
2.2 WETLANDS	17
2.3 CURRENT SITE OPERATIONS	17
2.4 PAST SITE OPERATIONS	17
2.5 CHEMICAL USE AND STORAGE	18
2.6 DRUM STORAGE	18
2.7 UNDERGROUND & ABOVEGROUND STORAGE TANKS	18
2.8 PCBs IN ELECTRICAL TRANSFORMERS AND FLUORESCENT LIGHTING BALLASTS	18
2.9 FRIABLE AND NON-FRIABLE SUSPECT ASBESTOS CONTAINING MATERIALS	19
2.10 SUSPECT LEAD-BASED PAINT	19
2.11 RADON	20
2.12 ELECTROMAGNETIC FIELDS	20
2.13 NEIGHBORING PROPERTIES	21
3.0 SYNOPSIS OF PREVIOUS ENVIRONMENTAL STUDIES	21
4.0 REVIEW REGULATORY AGENCY RECORDS AND DOCUMENTS	22
4.1 USEPA NPL & CERCLA SITES	22
4.2 NYSDEC INACTIVE HAZARDOUS WASTE DISPOSAL SITES	23
4.3 HAZARDOUS SUBSTANCE WASTE DISPOSAL SITES	24
4.4 STATE LANDFILLS AND SOLID WASTE FACILITIES	24
4.5 NYSDEC SPILL & LEAKING UST FILE	25
4.6 NYSDEC REGISTERED CHEMICAL BULK STORAGE & MAJOR OIL STORAGE & PETROLEUM BULK STORAGE FACILITIES	26
4.7 RCRA GENERATORS, TRANSFER, STORAGE AND DISPOSAL (TSD) SITES AND CORRACTs SITES	26
4.8 USEPA EMERGENCY RESPONSE NOTIFICATION SYSTEM (ERNS)	27
4.9 USEPA TOXIC RELEASE INVENTORY (TRI) SITES	27
4.10 BROWNFIELDS SITES	28
4.11 NYS AIR DISCHARGE SITES	28
4.12 CIVIL & ADMINISTRATIVE ENFORCEMENT DOCKET FACILITIES	29
4.13 WASTEWATER DISCHARGE	29
4.14 NCDH AND NCFM FOIL REQUESTS	29
5.0 SITE HISTORY	30

5.1	SANBORN HISTORICAL MAPS REVIEW	31
6.0	SITE HYDROGEOLOGY.....	32
6.1	GROUNDWATER USE	33
7.0	SUMMARY OF FINDINGS FROM RECONNAISSANCE AND RESEARCH.....	34
8.0	CONCLUSIONS AND RECOMMENDATIONS.....	38
9.0	LIMITATIONS.....	40
10.0	TERMS AND CONDITIONS.....	41
10.1	SPECIAL TERMS AND CONDITIONS	41
10.2	LIMITATIONS AND EXCEPTIONS OF ASSESSMENT	41
10.3	LIMITING CONDITIONS AND METHODOLOGY USED.....	41
11.0	REFERENCES	42
12.0	DEFINITIONS.....	43
12.1	ADDITIONAL DEFINITIONS – SPECIFIC TO ESA	48
12.2	ACRONYMS	51

LIST OF FIGURES

- 1.0 Site Location
- 2.0 Site Sketch
- 3.0 Aerial Photograph
- 4.0 Historical Topographic Maps 1900
- 5.0 Historical Topographic Maps 1918

LIST OF APPENDICES

Site Photographs	Appendix A
Client Supplied Documents	Appendix B
Regulatory Agency Records	Appendix C
- NCDH FOIL Request	
- NCFM FOIL Request	
- NYSDEC FOIL Request	
Nassau County Department of Assessment Records	Appendix D
Toxics Targeting, Inc. Environmental Report	Appendix E
- Computerized Report from USEPA, NYSDEC and Local Databases	
Sanborn Historical Maps	Appendix F
ASTM Questionnaire.....	Appendix G
Personnel Qualifications.....	Appendix H
Anonymous Consultant Report.....	Appendix I

REPORT SPECIFICATIONS

This report contains (51) pages of text.

Copies and circulation of this report are as follows:

- (2) Bound and one (1) unbound copy to Lending Institution, Mr. Loan Officer
- (2) Copies 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.

The accuracy of presenting the findings of this environmental audit was considered of paramount importance during the formulation of this report. However, the report's accuracy is limited to the information available from interviews, records and plans released by the property owner or his representatives and the respective regulatory agencies, their attorneys and information officers whose interest in issues presented herein is unknown to *LEA*.

1.0 INTRODUCTION

Laurel Environmental Associates, Ltd. (LEA) was retained by Client to conduct a Phase I Environmental Site Assessment of the industrial property located at 123 ABC Street, Any Town, New York (please see Figure 1.0, Site Location).

Nassau County Tax Number:	Section:	00
	Block:	00
	Lot:	000
Zoning:	Manufacturing	
Latitude: 00.00000	Longitude: -00.00000	

The purpose of this Phase I Environmental Site Assessment is to determine if any type of recognized environmental condition exists within the property in question. Recognized environmental conditions (RECs) would include, but not be limited to, hazardous/toxic wastes or raw chemicals stored, dumped or spilled on the site; underground storage of hazardous materials; friable asbestos in building materials/structures; and identification of potential off-site sources of hazardous waste contamination such as industrial facilities adjoining the subject site.

1.1 ASTM STANDARD PRACTICE E-1527-05

1.1.1 Purpose

The purpose of this practice, as well as Practice E 1528, is to define good commercial and customary practice in the United States of America for conducting an *environmental site assessment* of a parcel of *commercial real estate* with respect to the range of contaminants within the scope of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and *petroleum products*. As such, this practice is intended to permit a *user* to satisfy one of the requirements to qualify for the *innocent landowner defense* to CERCLA liability: that is, the practices that constitute “all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice” as defined in 42 USC § 9601(35)(B). An evaluation of *business environmental risk* associated with a parcel of commercial real estate may necessitate investigation beyond that identified in this practice.

1.1.2 Definition of Recognized Environmental Conditions

In defining a standard of good commercial and customary practice for conducting an *environmental site assessment* of a parcel of *property*, the goal of the processes established by this practice is to identify *recognized environmental conditions*. The term *recognized environmental conditions* means the presence or likely presence of any *hazardous substances* or *petroleum products* on a *property* under conditions that indicate an existing release, a past release, or a material threat of a release of any *hazardous substances* or *petroleum products* into structures on the *property* or into the ground, ground water, or surface water of the *property*. The term includes *hazardous substances* or *petroleum products* even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* are not *recognized environmental conditions*.

It is not generally within the scope of this report to perform intrusive or aggressive testing of suspect materials observed at the site. Materials will be identified as environmentally suspect; however, a representative sampling procedure is required to fully assess the occurrence of the following materials: electrical devices containing PCBs; the presence of radon gas, lead-based paint and friable asbestos containing materials.

1.2 SCOPE OF WORK

To complete the Environmental Site Assessment, the following tasks were performed in conformance with American Society for Testing and Material (ASTM) Standard Practice for Environmental Site Assessments, E-1527-05:

1. A detailed walk-through inspection of the site or representative areas of the site.
2. An interview with facility management concerning past and present operations conducted at the subject site.
3. The presences of suspect asbestos containing material (ACM) in existing buildings were noted.
4. The presences of suspect lead-based paints in existing building were noted.
5. A review of village, town, or city building department, fire marshal, and/or tax assessors' office records to identify past owners, possible uses of the property, and construction details.
6. A review of state and federal regulatory agency documents concerning the location of known hazardous waste sites within the proximity of the subject property.
7. A review of files/documents maintained by state and local regulatory agencies to investigate potential environmental hazards associated with the subject site when such information exists.
8. Major sources of electromagnetic fields were identified.
9. Identification of surrounding property use.
10. A review of Sanborn historical maps from 1908 to 1972.
11. A review of an aerial photograph from 2007.
12. A review of a historical topographical map from 1900 and 1918.
13. Determination of depth to groundwater and direction of groundwater flow beneath the subject site.
14. List recommendations for further study, as required (added to standard ASTM scope of work).

Findings and Conclusions, presented in Sections 7.0 and 8.0 (pages 34 through 38), are based on the careful consideration of the results of the above research. Any recommendations made are formulated with respect to maintaining or protecting the collateral value of the property and providing protection from toxic tort lawsuits.

Business Environmental Risk, a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice. Consideration of business environmental risk issues may involve addressing one or more non-scope considerations, some of which are identified below.

Non-scope considerations; there may be environmental issues or conditions at a property that parties may wish to assess in connection with commercial real estate that are outside the scope of this practice (the non-scope considerations). As noted by the legal analysis in Appendix X1 of this practice, some substances may be present on a property but are not included in CERCLA's definition of hazardous substances (42 USC § 9601(14)) or do not otherwise present potential CERCLA liability. In any case, they are beyond the scope of this practice. Following are several non-scope considerations that entities may want to assess in connection with commercial real estate. No implication is intended as to the relative importance of inquiry into such non-scope considerations, and this list of non-scope considerations is not intended to be all-inclusive, but can be completed upon request:

- 1) Lead in drinking water,
- 2) Regulatory compliance,
- 3) Cultural and historical resources,
- 4) Industrial hygiene,
- 5) Health and safety,
- 6) Ecological resources,
- 7) Endangered species,
- 8) Indoor air quality, and

1.3 CONFLICT CERTIFICATION

Laurel Environmental Associates, Ltd. has no present or contemplated future ownership interest or financial interest in the real estate that is the subject of this Environmental Assessment Report. *Laurel Environmental Associates, Ltd.* has no personal interest with respect to the subject matter of the Environmental Site Assessment or the parties involved and *Laurel Environmental Associates, Ltd.* has no relationship with the property or the owners thereof which would prevent an independent analysis of the environmental or other conditions of the property.

1.4 VIABILITY OF PHASE I ESA

An updated Phase I ESA should be performed if it appears that the property transaction will not close by the Phase I ESA Report Viability Date. Pursuant to Section 4.6 of ASTM 1527-05, Phase I ESAs are considered viable for 180 days. In calculating the Report Viability Date, *LEA* used the date that was the earliest of the following four tasks: the interview of those present owners identified in Section 10 of ASTM 1527-05, the government record review, and the visual inspection of the subject property and adjoining properties.

1.5 SIGNIFICANT ASSUMPTIONS

Information regarding the Property was reasonably ascertainable and therefore, no significant assumptions have been made, unless otherwise noted in a specific section of this report.

1.6 USER RELIANCE

This report was prepared solely for the use of the Client, and is not intended for use by third parties. Unauthorized third parties shall indemnify and hold *LEA* harmless against any liability for any loss arising out of, or related to, reliance by any third party on any work performed hereunder, or the contents of this report.

2.0 SITE DESCRIPTION

Carla Sullivan, a *LEA* Senior Geologist and site inspector completed the inspection of the subject site on Month 00, 2010. The inspection was conducted with the assistance of Mr. Client, a representative of the owner of the subject site. The property was walked through and any indication of an environmental hazard noted. Operations conducted at the subject site were observed and photographs were taken of the subject site and associated structures, please see Appendix A.

2.1 BUILDING & PROPERTY INSPECTION

The subject site with an approximate footprint of 36,000 square feet is comprised of a major fuel oil storage facility since at least the early 1940's. As such, the property maintains a repair garage and office building with a footprint of 1,600 square feet with an attached residential apartment. The fuel oil tank farm, including former and current aboveground storage tanks also maintained a pump house, and a waterfront transfer station for delivery via barges. The subject property slopes to the south and fronts along ABC and DEF Streets. The subject site is covered with the building, an out of service 680,000 gallon (680K) AST, a pump house, asphalt paved parking area, concrete pavement beneath the pump house and grassy/weeded areas. The subject site is located along an estuary known as Any Town Creek in an industrial area of the City of Any Town, New York.

The building is currently used for storage purposes, foam fire suppression systems, offices and a residential apartment. The apartment was used by staff for the purposes of providing 24-hour security of the facility and as such, maintains living areas, kitchen and bathrooms. The lower yard near the terminal is leased for truck and heavy equipment storage.

The building is serviced with public water from the City of Any Town and with electricity from LIPA. The building is heated by an oil-fired heating system.

2.1.1 GENERAL HOUSEKEEPING PRACTICES

Housekeeping was noted to be fair throughout the majority of the buildings and property. Historical staining of unpaved surfaces was observed throughout the property and on concrete surfaces of the pump house.

2.1.2 VEGETATION

The subject property supports landscaped areas around the building, and extensive weeded areas throughout the rest of the property. Stressed vegetation was observed in the area of the former ASTs.

2.1.3 SEPTIC SYSTEMS, STORM WATER DRAINAGE AND FLOOR DRAINS

According to the City of Any Town, sanitary waste has been serviced via municipal sewer since the early 1970's. The former sanitary system is assumed to be located along the east side of the building. It is unknown if the system was properly closed as per NCDH code. Due to the historical usage of the site, the former sanitary system represents a recognized environmental condition.

Due to the general southern slope of the property, storm water is handled by overland flow and natural drainage into subsurface soils and the Any Town Creek. No drywells were observed during our site reconnaissance.

There is one interior drain located in the repair/storage section of the building. The final discharge point of this drain is unknown but assumed to be directly to soil. Due to the historical usage of the site, the floor drain represents a recognized environmental condition.

2.2 WETLANDS

According to maps provided by the NYSDEC and visual inspection by *LEA* the subject site is within a tidal wetlands area of the estuary known as Any Town Creek which borders the subject property on the south and eastern sides.

2.3 CURRENT SITE OPERATIONS

The subject property is not currently an active oil storage facility and all equipment has been taken off-line. Operations conducted at the site are comprised of a two bedroom apartment within the building and leased heavy trucking storage.

2.4 PAST SITE OPERATIONS

The subject property had been an active #2 fuel oil storage facility for over 65 years with a total of six large capacity aboveground fuel oil tanks. As such, the property had conducted storage, transfer, shipping and receiving of home heating oil. Smaller underground storage tanks containing diesel and gasoline for staff vehicles were also in use. According to the City of Any Town, there are no records regarding the site as it pre-dates building codes instituted in 1919.

2.5 CHEMICAL USE AND STORAGE

Current chemical storage was observed as nine 5-gallon containers of Aer-o-foam® for the fire suppression system within the building. Other chemicals stored and used during active operations are assumed to be motor oils, waste oils, degreasers and solvents for truck and machinery repair and typical housekeeping supplies. Previous chemical storage and hazardous material usage presents a significant recognized environmental condition to the subject property.

2.6 DRUM STORAGE

No drum storage was noted during the site inspection. However, former drum storage is assumed based on occupation as an oil terminal.

2.7 UNDERGROUND & ABOVEGROUND STORAGE TANKS

The site was inspected for tank fills, vent pipes, and other signs of buried tanks. According to documents supplied by the client, Mr. Client, the subject building had maintained at least six #2 fuel oil aboveground storage tanks: one 680K (present but inactive) and formerly; two 220K, one 120K and two 20K gallons in capacity. Remnants, mainly the base, of one of the 220K's remain at the site. There is one 1,000-gallon AST outfitted as an oil/water separator associated with one 550-gallon waste oil AST. Previous underground storage tanks (USTs) included a fuel oil tank for the building and a gasoline tank for company vehicles. The building is currently heated by a 275-gallon fuel oil AST located in the repair garage. Additional tanks may have been installed over the course of the last 70 years.

2.8 PCBs IN ELECTRICAL TRANSFORMERS AND FLUORESCENT LIGHTING BALLASTS

There are three types of transformers defined in the Poly-Chlorinated Biphenyls (PCBs) regulations:

- ◆ PCB Transformer: Any transformer containing 500 parts per million (ppm) PCBs or greater.
- ◆ Non-PCB Transformer: Any transformer containing less than 50 ppm PCBs.
- ◆ PCB-Contaminated Transformer: Any transformer containing 50-499 ppm PCBs. These transformers are not subject to parts of the regulations, such as marking requirements, and if drained of liquid, to the disposal requirements. Any liquid drained from these transformers must be stored and disposed of in accordance with the regulations.

Transformers often contain dielectric liquid for the primary purpose of increasing resistance of the unit to arcing and acting as a heat transfer media, helping to cool the coils. The majority of transformers are filled with mineral oil, but a small percentage of these liquid-filled transformers contain PCB Askarel coolant liquid. The term "Askarel" is a generic term used for a group of nonflammable synthetic chlorinated hydrocarbons. All types of Askarels sold prior to 1979 contained 60 to 100 percent PCBs. Askarel transformers were manufactured in a variety of sizes, i.e. 3 to 3,000 gallons of PCB liquid, and are generally used in hazardous locations where flammability is of concern. PCB transformers are no longer produced because of the EPA ban on the manufacture of new equipment containing PCBs.

There are no pad or pole-mounted transformers located at the subject property. The building is illuminated with fluorescent and incandescent lighting. The light ballasts may contain PCBs given the building's age.

Prior to the banning of PCB manufacture in 1976, the compounds were used in small amounts during the manufacture of fluorescent light ballasts. According to EPA regulations, light ballasts containing less than three (3) pounds of PCB are exempt from special hazardous waste transportation and disposal and may be disposed of as municipal wastes, however, removal is not required by law. To determine if the light ballasts contain PCBs, the light fixtures would have to be dismantled, the make and model number obtained, and the manufacturer contacted. If the lighting is to remain, maintenance personnel should be advised of the possibility that the ballasts may contain PCBs. Workers should exercise caution when handling the ballasts, taking care not to cause leaks. Protective gloves and clothing should be worn when handling ballasts.

2.9 FRIABLE AND NON-FRIABLE SUSPECT ASBESTOS CONTAINING MATERIALS

The USEPA designated material with more than 1% asbestos as an asbestos containing material (ACM). Where asbestos material is determined to be "Friable" (capable of being crushed by hand pressure and having a high potential to release airborne fibers), it is the recommendation of the EPA that strong response action be taken. Such actions may take the form of removal, encapsulating, repair, enclosure or an operations and maintenance program. The response action is dependent on the severity and nature of the individual problem.

No friable or non-friable suspect asbestos containing materials were noted other than roofing materials. However, the apartment and office portion of the building was not made available for inspection and these materials may be present.

2.10 SUSPECT LEAD-BASED PAINT

Due to the age of the building, lead-based paint is most likely present within the areas of subject building not made available for inspection.

2.11 RADON

Radon is a heavy colorless, odorless, radioactive gas formed by the radioactive decay of radium. Radon is associated with specific geologic formations that contain granite, uranium minerals, certain shales and phosphate related minerals. Radon, being a gas, can migrate to and accumulate in confined spaces such as building basements. Continued exposure to radon gas has been associated with increased lung cancer risk and possible genetic damage.

The USEPA has set a maximum action level of 4 picocuries per liter (pCi/l) in air. At concentrations above this level, the USEPA recommends remedial measures to lower the concentrations.

According to monitoring data completed by NYS Department of Health, Bureau of Radiation Protection, the City of Any Town has an average indoor radon concentration of 1.7 pCi/l. Given this information, radon is not considered a significant environmental concern within the subject site.

2.12 ELECTROMAGNETIC FIELDS

Although there are currently no regulations concerning the proximity of residential structures to major sources of electromagnetic fields (EMFs) such as overhead high tension wires, high levels of EMFs are unresolved public health issues. Some recent studies have linked the presence of elevated EMFs to increased risk of certain cancers and other illnesses. Although studies are ongoing and no definitive conclusions have been reached, the existing evidence indicates that potential health risk may exist for individual who are exposed to these fields. In any case, the general perception of a risk associated with major sources of EMFs can reduce the marketability and value of real estate.

2.13 NEIGHBORING PROPERTIES

The properties surrounding the subject site are industrial, commercial and residential in nature. Property usage directly adjoining or nearby is as follows:

<u>North of the subject site:</u>	<u>Current Usage</u>	<u>Recent Prior Usage</u>
• ABC Street, adjoining	Roadway	Roadway
• Anonymous	Industrial	Industrial
• Anonymous	Residential	Residential
<u>South of the subject site:</u>		
• Any Town Creek, adjoining	Estuary	Estuary
• Industrial Properties	Industrial	Industrial
<u>East of the subject site:</u>		
• Any Town Creek, adjoining	Estuary	Estuary
• DEC Street	Roadway	Roadway
• Industrial Properties	Industrial	Industrial
<u>West of the subject site:</u>		
• Anonymous	Industrial	Industrial
• Anonymous	Cement Plant/Industrial	Cement Plant/Industrial

Due to the mixed nature of usage at the surrounding properties, they may have the potential to present a recognized environmental condition at the subject property. None of the adjoining properties are currently associated with any State or Federal Superfund List, NYSDEC or USEPA listed active spills.

3.0 SYNOPSIS OF PREVIOUS ENVIRONMENTAL STUDIES

An estimate of environmental liabilities associated with properties owned by Acme Fuel Co., Inc. completed by Anonymous Consultant (X&X) and dated January 2007 was made available to **LEA** for review. According to the letter report, Anonymous Consultant's objective was to determine the cost to remediate said properties using technologies currently available for the time frame of 1986 and 2001. Using RACER software, a Windows based environmental remediation/corrective action cost estimating system, which includes costs associated with all aspects and phases of environmental remediation projects such as; investigation study, design, construction, operations and maintenance, long-term monitoring and closure. X&X determined that the environmental liabilities associated with the subject property ranged from a low \$4.2MM to a high of \$5.5MM for 2001. Base on the historical aspect of the subject property, **LEA** concurs with X&X findings.

4.0 REVIEW REGULATORY AGENCY RECORDS AND DOCUMENTS

To determine if the subject site was listed, known, or suspected of being a hazardous waste site, federal and state listings/documents were reviewed. In addition, a Freedom of Information Letter (FOIL) was sent to the Nassau County Department of Health (NCDH), the Nassau County Fire Marshal (NCFM) and the New York State Department of Environmental Conservation (NYSDEC) requesting a review of any records that may have been maintained by the agencies concerning the subject site.

The records search was conducted by *Toxics Targeting, Inc.*, meeting the specific requirements of ASTM Standard Practice for Environmental Site Assessments, E-1527-05, including those associated with governmental databases, search distances and data currency.

4.1 USEPA NPL & CERCLA SITES

The United States Environmental Protection Agency (USEPA) maintains a database of unmanaged and/or forsaken hazardous waste sites. The database is known as the National Priority List (NPL). Sites included in this list are given priority by the USEPA for remedial action under the federal Superfund Program. A particular site will be included on the NPL if it equals or exceeds an established "hazard classification system" score, or it was designated as a particular state's top environmental priority site. A site is classified as an NPL site if all of the following criteria are satisfied:

1. The U.S. Department of Health & Human Services issues a health advisory recommending that people be evacuated from the site to avoid exposure.
2. The EPA determines that the site was a potentially significant environmental hazard.
3. The EPA determines that site remediation was more cost-effective than removal.

A review of the latest edition of the NPL, found that the subject site is not on the NPL list. There are two NPL listed sites located within a one (1) mile radius of the subject site. Though the sites are located hydraulically down-gradient, radioactive materials were found in Any Town Creek along the southern property boundary. These NPL sites present a significant recognized environmental condition to the subject site.

A summary of each NPL site is as follows:

LI Tungsten Corp., ID# NYD986882660 0000 feet hydraulically down-gradient

- Confirmed soil and groundwater contamination of heavy metals and radioactive materials

Mattiace PetroChemicals ID# NYD000512459 0000 feet hydraulically down-gradient

- Confirmed soil and groundwater contamination of volatile organic compounds

The USEPA Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 was designed to allow the federal government to directly address any potential release of hazardous waste that may endanger public health or welfare; in order to "provide for liability, compensation, clean-up, and emergency response for hazardous substances released into the environment and clean-up of inactive hazardous waste disposal sites.

Examination of the CERCLA database indicates that the subject site is not listed in the CERCLA database. There are four (4) CERCLIS listed sites located within a ½ mile radius of the subject site. Crown Dykman, and LI Tungsten Corp., Mattiace Chemicals and Edmos Corp. are discussed in Section 4.2 below. These sites are located along Any Town Creek, and due to the relative close proximity, type of contamination and resources affected all pose a significant recognized environmental condition at the subject property.

4.2 NYSDEC INACTIVE HAZARDOUS WASTE DISPOSAL SITES

The NYSDEC publishes a report entitled "Inactive Hazardous Waste Disposal Sites in New York State" (IHWD), which lists all properties that have been found to contain, or are suspected of containing, significant amounts of hazardous or toxic contamination in one form or another.

A review of the annual report, quarterly updates, and reports from 1992 to 2008 indicates that the subject site is not listed as being an IHWD site. There are seven (7) listed IHWD sites within a one (1) mile radius of the subject site. Due to the type of contamination, locations, and resources affected, all but one (Ronhill Cleaners) pose a significant recognized environmental condition to the subject property.

A synopsis of the up-gradient IHWD site is as follows:

- | | | |
|---|-------------------|--|
| ◆Powers Chemco | ID #130028 | 0000 feet hydraulically up-gradient |
| <ul style="list-style-type: none"> • Post remedial monitoring is now in progress. | | |
| ◆Crown Dykman | ID #130054 | 0000 feet hydraulically down-gradient |
| <ul style="list-style-type: none"> • Confirmed soil and groundwater contamination, remedial corrective action order signed | | |
| ◆LI Tungsten | ID #130046 | 0000 feet hydraulically down-gradient |
| <ul style="list-style-type: none"> • Remedial corrective action of radioactive ores and wastes has been completed | | |
| ◆Edmos Corp. | ID #130036 | 0000 feet hydraulically down-gradient |
| <ul style="list-style-type: none"> • Site has been investigated and delisted | | |
| ◆Captain's Cove | ID #130032 | 0000 feet hydraulically down-gradient |
| <ul style="list-style-type: none"> • Confirmed soil and groundwater contamination, remedial corrective action in progress | | |
| ◆K-Any Town | ID #130089 | 0000 feet hydraulically down-gradient |
| <ul style="list-style-type: none"> • Confirmed soil and groundwater contamination, remedial corrective action in progress with deed restrictions | | |
| ◆Ronhill Cleaners | ID #130071 | 0000 feet hydraulically side-gradient |
| <ul style="list-style-type: none"> • Confirmed soil, groundwater and soil/gas contamination, remedial corrective action in progress | | |

4.3 HAZARDOUS SUBSTANCE WASTE DISPOSAL SITES

The NYSDEC Hazardous Substance Waste Disposal Sites (HSWDS) database was reviewed to determine if the subject property or any property located within a one (1) mile radius of the subject site is listed as a HSWDS. This database lists properties that are currently under study by the NYSDEC Division of Hazardous Waste Remediation.

After a thorough investigation, it was determined that the subject site is not listed as a HSWDS. There are no listed HSWD sites located with a one (1) mile radius of the subject property.

4.4 STATE LANDFILLS AND SOLID WASTE FACILITIES

A NYS database of solid waste facilities, including, but not limited to, landfills, incinerators, transfer stations and recycling centers.

The database of NYS landfills identified no such facilities located within a ½ mile radius of the subject site. There are four Solid Waste Facilities located within a ½ mile radius of the subject site, due to the type of facility, none should pose a recognized environmental condition to the subject property.

A synopsis of each facility is as follows:

- *A-1 Carting* *Large Transfer Station* *696 feet hydraulically side-gradient*
- *Rason Asphalt** *C&D Processing Facility* *1,027 feet hydraulically side-gradient*
- *Unknown* *Solid Waste Incinerator* *2,082 feet hydraulically side-gradient*
- *Waste Management Large Transfer Station* *2,082 feet hydraulically side-gradient*

*Rason Asphalt may be mistakenly plotted by Toxics Targeting

4.5 NYSDEC SPILL & LEAKING UST FILE

The New York State Department of Environmental Conservation (NYSDEC) Spill File was investigated for records of spills and leaking USTs within a ½ mile radius of the subject site. A summary is presented in the table below:

NYSDEC Active Spills & Leaking USTs

Any Town, New York, within a ½ mile radius of the subject property

NYSDEC Spill #	Type	Spill Name	Address	Distance (feet)/ Direction from Site
0806452	Spill to groundwater	66 Basil Hill Road	66 Basil Hill Road	663/up
0100675	Spill to groundwater	Any Town Creek	Basil Hill Road	743/side
0204859	Spill to groundwater	Mobil Gas	43 Any Town Avenue	786/side
0205711	Spill to soil	Franco Residence	14 Basil Hill Road	880/up
9603574	Leaking UST/spill to groundwater	Former Metro S/S	74 Any Town Avenue	920/side
9209888	Leaking UST/spill to groundwater	Hawkins Oil	Cedar Point Road	1,342/up
0502269	Leaking UST/spill to groundwater	Any Town DPW	Cheshire Avenue	2,083/up
0100419	Spill to soil	Unknown	63 Basil Hill Road	734/down
0902170	Spill to sewer, traffic accident	Mobil S/S	43 Any Town Avenue	786/side
0100986	Spill to soil	Lara Residence	60 Coles Street	2,568/down

Direction noted is in relation to the hydraulic gradient of the groundwater flow.

There are no active-status NYSDEC listed spills or leaking USTs at the subject property. There is one (1) closed-status NYSDEC listed spill. Named Acme Fuel Co., Spill #1111111 was activated on September 16, 1989 when floating product was discovered in an on-site monitoring well. Reportedly, the property owner was advised at the time to bail the well weekly and maintain a log of product recovered. No further information is provided for this spill. However, the spill was closed on October 18, 1990. The potential magnitude of this historic spill presents a recognized environmental condition at the subject property.

There are seven (7) active NYSDEC listed spills located within a ½ mile radius of the subject property. Due to the locations, magnitude of spill and/or resource affected, none of the spills should present a recognized environmental condition at the subject property.

There are three (3) active NYSDEC listed leaking USTs located within a ½ mile radius of the subject property. Due to the locations, magnitude of spill and/or resource affected, none of the leaking USTs should present a recognized environmental condition at the subject property.

4.6 NYSDEC REGISTERED CHEMICAL BULK STORAGE & MAJOR OIL STORAGE & PETROLEUM BULK STORAGE FACILITIES

The NYSDEC publishes a listing of all registered CBS, MOS and PBS Facilities in New York State. This listing was investigated to determine whether the subject property or any adjoining properties are listed as such facilities.

The subject property is listed as a Major Oil Storage Facility and as a Petroleum Bulk Storage Facility under Acme Fuel Co., ID#1-1111 and #OL1111111, respectively, with five ASTs ranging in capacity from 20,000 to 220,000-gallons that were installed between 1940 and 1945 and have since been removed. There is one temporarily out of service 620,568-gallon AST installed in 1945 that remains on the premises and one 275-gallon diesel used for heating oil. There are records regarding the removal (unknown date) of one 550-gallon fuel oil UST with an installation date of 1957. The historical maintenance of large ASTs presents a significant recognized environmental condition for the subject property.. There are no adjoining properties listed on the CBS, MOS or PBS database, but there are significant CBS facilities, specifically Konica Minolta Graphic Imaging, located hydraulically up-gradient from the subject site and other facilities within the industrial area along Any Town Creek.

4.7 RCRA GENERATORS, TRANSFER, STORAGE AND DISPOSAL (TSD) SITES AND CORRACTS SITES

The NYS listing of RCRA Generators was reviewed to determine whether the subject property or any adjoining properties are listed as State Facilities.

After a thorough investigation, it was determined that neither subject property nor any adjoining property is listed as a RCRA Generator.

The USEPA listing of RCRA TSD and RCRA Facilities with Corrective Actions (CORRACTs) was reviewed to determine whether the subject property or properties within a one (1) mile radius are listed as state or federal facilities.

After a thorough investigation, it was determined that the subject property is not listed as a RCRA TSD or a CORRACTs site. There are three properties within a one (1) mile radius of the subject site listed as a RCRA TSD or a CORRACTs site. Anonymous Sites, are all located along Any Town Creek and are listed as large quantity generators with high priority of corrective actions. Due to the status, locations, and type of wastes generated, all three sites pose a significant recognized environmental condition to the subject property.

4.8 USEPA EMERGENCY RESPONSE NOTIFICATION SYSTEM (ERNS)

The USEPA maintains a database of all spills to which the agency has responded. This database was investigated to determine the presence of an emergency response at the subject site.

After an investigation according to street address, it was determined that the subject site is not listed on the ERNS database.

4.9 USEPA TOXIC RELEASE INVENTORY (TRI) SITES

Section (§) 313 of the Emergency Planning and Community Right-to-Know Act (also known as the Title III) of the Superfund Amendments and Reauthorization Act (SARA) of 1986 (Public Law 99-499) requires the EPA to establish an inventory of toxic chemical emissions from certain facilities. The reporting requirement applies to owners and operators of facilities that have 10 or more full-time employees that are in Standard Industrial Classification (SIC) codes 20 through 39 (i.e., manufacturing facilities) and that manufacture, import, process, or otherwise use a listed toxic chemical in excess of specified threshold quantities. Inclusion in the list does not necessarily indicate that there has been a release of a toxic material to the environment at the site, only that listed chemicals have been used.

After a thorough investigation, it was determined that the subject property is not listed as a TRI Facility. There is one (1) site listed as TRI Facility within a ¼ mile radius of the subject site. Konica Minolta Graphic Imaging, is on the database with extensive discharge of effluent of gases, including Methanol, Silver, Ammonia, etc. in amounts ranging from 60 to 32,000 pounds from 1987 to 2001. Due to the close proximity of this CBS, it does present a recognized environmental condition at the subject property.

4.10 BROWNFIELDS SITES

The New York State Brownfield Programs were developed for sites that are abandoned, idled or under-used industrial and/or commercial sites where expansion or redevelopment is complicated by real or perceived environmental contamination. Programs include the Brownfield Cleanup Program (BCP), the Voluntary Cleanup Program (VCP) and the Environmental Restoration Program (ERP).

After a thorough investigation, it was determined that the subject property is not listed as a Brownfields site. There are five Brownfields site located within a one (1) mile radius of the subject property. Due to either the location or the delisted status, none should pose a recognized environmental condition at the subject property.

Bon-Fide Redi-Mix ID #B00028 0000 feet hydraulically down-gradient

- Historical contamination, deleted from database

A-1 Carting ID # B00110 0000 feet hydraulically side-gradient

- Deleted from database

Hawkins Oil ID #B00029 0000 feet hydraulically down-gradient

- Deleted from database

Hapsky Marine Salvage ID #B00030 0000 feet hydraulically down-gradient

- Deleted from database

Hapsky ID #E130152 0000 feet hydraulically down-gradient

- Confirmed soil contamination from heavy metals and semi-volatile organic compounds

4.11 NYS AIR DISCHARGE SITES

The U.S. Environmental Protection Agency (EPA) AIRS database lists information on each air emission facility and indicates the type of air pollutant emission. Compliance information is also provided on each pollutant as well as the facility itself.

After a thorough investigation, it was determined that the subject property is not listed as an Air Discharge site. There are no sites listed as an Air Discharge Facility within a ¼ mile radius of the subject site.

4.12 CIVIL & ADMINISTRATIVE ENFORCEMENT DOCKET FACILITIES

This database is the U.S. EPA's system for tracking administrative and judiciary cases filed on behalf of the agency by the Department of Justice.

After a thorough investigation, it was determined that the subject property is not listed as a Civil & Administrative Enforcement Docket site. There are two sites located within a 1/8 mile radius listed as a Civil & Administrative Enforcement Docket site. Konica Imaging, ID# NYD002056679 and LI Tungsten, ID# NYD057729964, are both listed with several violations and associated penalties.

4.13 WASTEWATER DISCHARGE

The subject property is listed as a Wastewater Discharge site under Acme Fuel Oil Corp., ID# NY11111, is considered a minor industrial active discharge facility permitted since 1988. Overland flow is discharged to a sump pump system and associated oil/water separator located on the east side of the property that fronts along Any Town Creek.

4.14 NCDH AND NCFM FOIL REQUESTS

On Month 00, 2010, *LEA* mailed a FOIL to the NCDH, NCFM and NYSDEC requesting to review any records maintained by the agencies concerning the subject site.

As of October 20, 2009, *LEA* has not yet received a response from any of the agencies whether records are maintained regarding the subject property. *LEA* will forward documents pertaining to the environmental condition pertinent to the subject property in the form of an addendum to Mr. Client.

5.0 SITE HISTORY

According to the a representative of the City of Any Town Building Department, there are no building records, permits, plans, applications or surveys on file with the agency. It was suggested that the property and its improvements pre-dated building codes that were instituted in 1919.

1940

To 1945 Installations of six large ASTs and associated pumping mechanisms for the waterfront transfer station and pump house were completed at the subject property.

Circa 2001 The NYSDEC installed four on-site monitoring wells located along the boundaries of the subject property, three of which are bounded by Any Town Creek. According to Mr. Client, the DEC and a private consultant had encountered floating product in the majority of wells. The wells are reportedly sampled on an annual basis, and given the history of the subject property, it is assumed that groundwater contamination is present and extensive.

2009 The subject is no longer a functioning oil terminal. The one remaining AST of over 620K-gallons in capacity has been taken off line and is out of service.

Listings in the City of Any Town Building Department Records:

1945

2010

Acme Fuel Oil Co.

The subject property has been utilized as a major oil terminal for over 65 years, therefore past usage of the subject site presents a recognized environmental condition at the subject property.

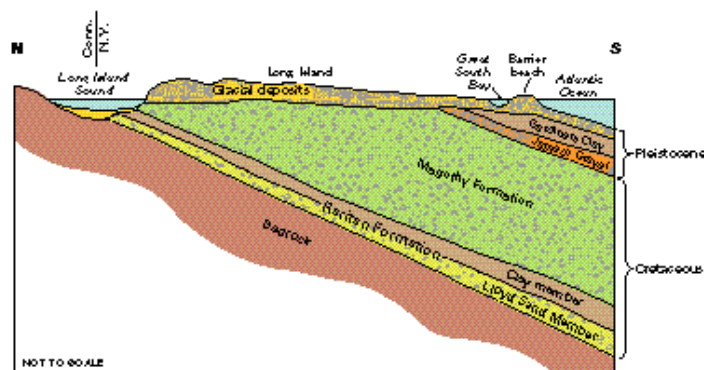
5.1 SANBORN HISTORICAL MAPS REVIEW

Sanborn Fire Insurance Maps are an additional source of historical use information available for most developed areas. The maps were used for insurance purposes, and indicate structures by name, type of construction, property usage and address. *LEA* contracted Environmental Database Resources (EDR) to conduct a search for available Sanborn Fire Insurance Maps that include the subject property and surrounding areas. According to Sanborn Historical Maps reviewed from 1908, 1915, 1925, 1931, 1947, and 1972, past uses of the subject site and surrounding properties are as follows:

Date	Subject Site	Surrounding Properties
1908 1915 1925	The subject site is depicted as being occupied by Any Town Coal and Lumber Co. with as many as eleven lumber sheds and coal bins.	North: Anonymous Road, large currying buildings for wet and dry process, metaling buildings, etc. South: Any Town Creek East: Anonymous Lake West: Machine shop, large unnamed factory, later noted as LILCO
1931	The lumber sheds are labeled as 'vacant'.	North: Anonymous Road, Chemco Photo Products, Ribbon/Carbon Mfg. South: Any Town Creek East: Anonymous Lake West: LILCO Substation
1947	The subject site is occupied by Acme Fuel Co. with four ASTs, a loading shed and small office building.	North: Anonymous Road, Chemco Photo Products, Ribbon/Carbon Mfg., restaurant South: Any Town Creek East: Charles Street, Lower Glen Lake West: LILCO Substation
1972	The subject site is occupied by Acme Fuel Co. with six ASTs, a larger loading shed and small office building	Barlow Anonymous Road, Chemco Phot Products, Ribbon/Carbon Mfg., restaurant South: Any Town Creek East: Anonymous Street, Anonymous Lake West: Concrete Mixing

6.0 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 ranging from approximately 27 feet above mean sea level (MSL). Groundwater is calculated to range from approximately five feet below grade at the subject site and flowing in a southerly direction, towards Any Town Creek.

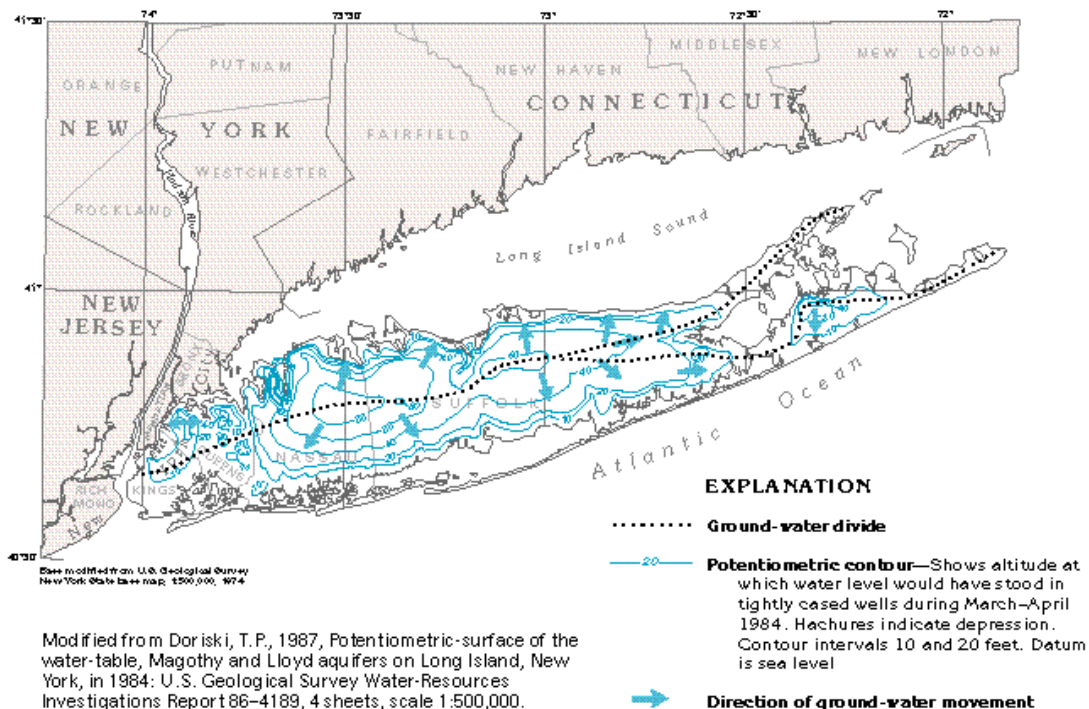


Figure 72. The potentiometric surface of the upper glacial aquifer slopes gently to the north and south from a central high, except in the western part of the island where ground-water withdrawals have lowered the water table and created cones of depression.

6.1 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, is served with municipal water from the City of Any Town. Groundwater is not utilized for any purpose at the subject site. There are four DEC installed monitoring wells located at the subject property, three of them are constructed as stand-pipes and are located along the perimeter that abuts Any Town Creek. The fourth is flush mounted and in the parking lot, north of the tank field.

7.0 SUMMARY OF FINDINGS FROM RECONNAISSANCE AND RESEARCH.

Based on the completion of the Phase I Environmental Site Assessment, *Laurel Environmental Associates, Ltd.* has come to the following conclusions:

- The subject site with an approximate footprint of 36,000 square feet is comprised of a major fuel oil storage facility since at least the early 1940's. As such, the property maintains a repair garage and office building with a footprint of 1,600 square feet with an attached residential apartment. The fuel oil tank farm, including former and current aboveground storage tanks also maintained a pump house, and a waterfront transfer station for delivery via barges. The subject property slopes to the south and fronts along ABC and DEF Streets. The subject site is covered with the building, an out of service 680,000 gallon (680K) AST, a pump house, asphalt paved parking area, concrete pavement beneath the pump house and grassy/weeded areas. The subject site is located along an estuary known as Any Town Creek in an industrial area of the City of Any Town, New York.
- The building is serviced with public water from the City of Any Town and with electricity from LIPA. The building is heated by an oil-fired heating system.
- Housekeeping was noted to be fair throughout the majority of the buildings and property. Historical staining of unpaved surfaces was observed throughout the property and on concrete surfaces of the pump house.
- The subject property supports landscaped areas around the building, and extensive weeded areas throughout the rest of the property. Stressed vegetation was observed in the area of the former ASTs.
- According to the City of Any Town, sanitary waste has been serviced via municipal sewer since the early 1970's. The former sanitary system is assumed to be located along the east side of the building. It is unknown if the system was properly closed as per NCDH code. Due to the historical usage of the site, the former sanitary system represents a recognized environmental condition.
- Due to the general southern slope of the property, storm water is handled by overland flow and natural drainage into subsurface soils and the Any Town Creek. No drywells were observed during our site reconnaissance.
- There is one interior drain located in the repair/storage section of the building. The final discharge point of this drain is unknown but assumed to be directly to soil. Due to the historical usage of the site, the floor drain represents a recognized environmental condition.
- According to maps provided by the NYSDEC and visual inspection by *LEA* the subject site is within a tidal wetlands area of the estuary known as Any Town Creek which borders the subject property on the south and eastern sides.
- The subject property is not currently an active oil storage facility and all equipment has been taken off-line. Operations conducted at the site are comprised of a two bedroom apartment within the building and leased heavy trucking storage.
- The subject property had been an active #2 fuel oil storage facility for over 65 years with a total of six large capacity aboveground fuel oil tanks. As such, the property had conducted storage, transfer, shipping and receiving of home heating oil. Smaller underground storage tanks containing

diesel and gasoline for staff vehicles were also in use. According to the City of Any Town, there are no records regarding the site as it pre-dates building codes instituted in 1919.

- Current chemical storage was observed as nine 5-gallon containers of Aer-o-foam® for the fire suppression system within the building. Other chemicals stored and used during active operations are assumed to be motor oils, waste oils, degreasers and solvents for truck and machinery repair and typical housekeeping supplies. Previous chemical storage and hazardous material usage presents a significant recognized environmental condition to the subject property.
- No drum storage was noted during the site inspection. However, former drum storage is assumed based on occupation as an oil terminal.
- According to documents supplied by the client, Mr. Client, the subject building had maintained at least six #2 fuel oil aboveground storage tanks: one 680K (present but inactive) and formerly; two 220K, one 120K and two 20K gallons in capacity. Remnants, mainly the base, of one of the 220K's remain at the site. There is one 1,000-gallon AST outfitted as an oil/water separator associated with one 550-gallon waste oil AST. Previous underground storage tanks (USTs) included a fuel oil tank for the building and a gasoline tank for company vehicles. The building is currently heated by a 275-gallon fuel oil AST located in the repair garage. Additional tanks may have been installed over the course of the last 70 years.
- There are no pad or pole-mounted transformers located at the subject property. The building is illuminated with fluorescent and incandescent lighting. The light ballasts may contain PCBs given the building's age.
- No friable or non-friable suspect asbestos containing materials were noted other than roofing materials. However, the apartment and office portion of the building was not made available for inspection and these materials may be present.
- Due to the age of the building, lead-based paint is most likely present within the areas of subject building not made available for inspection.
- According to monitoring data completed by NYS Department of Health, Bureau of Radiation Protection, the City of Any Town has an average indoor radon concentration of 1.7 pCi/l. Given this information, radon is not considered a significant environmental concern within the subject site.
- Due to the mixed nature of usage at the surrounding properties, they may have the potential to present a recognized environmental condition at the subject property. None of the adjoining properties are currently associated with any State or Federal Superfund List, NYSDEC or USEPA listed active spills.
- An estimate of environmental liabilities associated with properties owned by Acme Fuel Co., Inc. completed by Anonymous Consultant (X&X) and dated January 2007 was made available to **LEA** for review. According to the letter report, Anonymous Consultant's objective was to determine the cost to remediate said properties using technologies currently available for the time frame of 1986 and 2001. Using RACER software, a Windows based environmental remediation/corrective action cost estimating system, which includes costs associated with all aspects and phases of environmental remediation projects such as; investigation study, design, construction, operations and maintenance, long-term monitoring and closure. X&X determined that the environmental liabilities associated with the subject property ranged from a low \$4.2MM to a high of \$5.5MM for 2001. Base on the historical aspect of the subject property, **LEA** concurs with X&X findings.

- A review of the latest edition of the NPL, found that the subject site is not on the NPL list. There are two NPL listed sites located within a one (1) mile radius of the subject site. Though the sites are located hydraulically down-gradient, radioactive materials were found in Any Town Creek along the southern property boundary. These NPL sites present a significant recognized environmental condition to the subject site.
- Examination of the CERCLA database indicates that the subject site is not listed in the CERCLA database. There are four (4) CERCLIS listed sites located within a ½ mile radius of the subject site. Crown Dykman, and LI Tingsten Corp., Mattiace Chemicals and Edmos Corp. are discussed in Section 4.2 below. These sites are located along Any Town Creek, and due to the relative close proximity, type of contamination and resources affected all pose a significant recognized environmental condition at the subject property.
- A review of the annual report, quarterly updates, and reports from 1992 to 2008 indicates that the subject site is not listed as being an IHWD site. There are seven (7) listed IHWD sites within a one (1) mile radius of the subject site. Due to the type of contamination, locations, and resources affected, all but one (Ronhill Cleaners) pose a significant recognized environmental condition to the subject property.
- After a thorough investigation, it was determined that the subject site is not listed as a HSWDS. There are no listed HSWD sites located with a one (1) mile radius of the subject property.
- The database of NYS landfills identified no such facilities located within a ½ mile radius of the subject site. There are four Solid Waste Facilities located within a ½ mile radius of the subject site, due to the type of facility, none should pose a recognized environmental condition to the subject property.
- There are no active-status NYSDEC listed spills or leaking USTs at the subject property. There is one (1) closed-status NYSDEC listed spill. Named Acme Fuel Co., Spill #1111111 was activated on September 16, 1989 when floating product was discovered in an on-site monitoring well. Reportedly, the property owner was advised at the time to bail the well weekly and maintain a log of product recovered. No further information is provided for this spill. However, the spill was closed on October 18, 1990. The potential magnitude of this historic spill presents a recognized environmental condition at the subject property.
- There are seven (7) active NYSDEC listed spills located within a ½ mile radius of the subject property. Due to the locations, magnitude of spill and/or resource affected, none of the spills should present a recognized environmental condition at the subject property.
- There are three (3) active NYSDEC listed leaking USTs located within a ½ mile radius of the subject property. Due to the locations, magnitude of spill and/or resource affected, none of the leaking USTs should present a recognized environmental condition at the subject property.
- The subject property is listed as a Major Oil Storage Facility and as a Petroleum Bulk Storage Facility under Acme Fuel Co., ID#1-1111 and #OL1111111, respectively, with five ASTs ranging in capacity from 20,000 to 220,000-gallons that were installed between 1940 and 1945 and have since been removed. There is one temporarily out of service 620,568-gallon AST installed in 1945 that remains on the premises and one 275-gallon diesel used for heating oil. There are records regarding the removal (unknown date) of one 550-gallon fuel oil UST with an installation date of 1957. The historical maintenance of large ASTs presents a significant recognized environmental condition for the subject property.. There are no adjoining properties listed on the CBS, MOS or PBS database, but there are significant CBS facilities, specifically Konica Minolta Graphic

Imaging, located hydraulically up-gradient from the subject site and other facilities within the industrial area along Any Town Creek.

- After a thorough investigation, it was determined that neither subject property nor any adjoining property is listed as a RCRA Generator.
- After a thorough investigation, it was determined that the subject property is not listed as a RCRA TSD or a CORRACTs site. There are three properties within a one (1) mile radius of the subject site listed as a RCRA TSD or a CORRACTs site. Anonymous Sites, are all located along Any Town Creek and are listed as large quantity generators with high priority of corrective actions. Due to the status, locations, and type of wastes generated, all three sites pose a significant recognized environmental condition to the subject property.
- After an investigation according to street address, it was determined that the subject site is not listed on the ERNS database.
- After a thorough investigation, it was determined that the subject property is not listed as a TRI Facility. There is one (1) site listed as TRI Facility within a ¼ mile radius of the subject site. Konica Minolta Graphic Imaging, is on the database with extensive discharge of effluent of gases, including Methanol, Silver, Ammonia, etc. in amounts ranging from 60 to 32,000 pounds from 1987 to 2001. Due to the close proximity of this CBS, it does present a recognized environmental condition at the subject property.
- As of October 20, 2009, **LEA** has not yet received a response from any of the agencies whether records are maintained regarding the subject property. **LEA** will forward documents pertaining to the environmental condition pertinent to the subject property in the form of an addendum to Mr. Client.
- The subject property has been utilized as a major oil terminal for over 65 years, therefore past usage of the subject site presents a recognized environmental condition at the subject property.
- 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 ranging from approximately 27 feet above mean sea level (MSL). Groundwater is calculated to range from approximately five feet foot below grade at the subject site and flowing in a southerly direction, towards Any Town Creek.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the information developed and provided as part of this site assessment *LEA* has reached the following conclusions and recommendations regarding recognized areas of environmental concern at the subject property, 123 ABC Street, Any Town, New York:

<u>Recognized Environmental Conditions</u>	<u>Potential Impacts</u>
• Discharge of effluent into former sanitary system	High Risk
• Discharge of effluent into interior floor drain	High Risk
• Possible unregistered underground storage tanks	High Risk
• Potential leaking underground storage tanks	High Risk
• Potential soil contamination around tank farm	High Risk
• Potential groundwater contamination from historical usage	High Risk
• Potential off-site groundwater contamination from on-site usage	High Risk
• Potential off-site groundwater contamination	High Risk
• Potential soil/gas vapors entering the building	High Risk

Based on the information developed and provided as part of this site assessment *LEA* has reached the following conclusions and recommendations regarding recognized areas of environmental concern:

1. Conduct a thorough ground penetrating radar (GPR) and magnetic and pipe locating survey of the subject property and building to determine whether USTs are present and locate all interior pits and interior and exterior drainage structures.
2. Using a Geoprobe®, conduct continuous soil borings throughout the interior and exterior of the building, focusing on interior pits, trench drains, anomalies depicted by GPR and all underground storage tanks. Submit samples for laboratory analysis using Methods 8260 and 8270 for volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs), respectively and 8 RCRA heavy metals.
3. Using a Geoprobe®, conduct at least six groundwater samples from locations throughout the property to determine if historical occupancy has affected the subject property. Submit samples for laboratory analysis using Methods 8260 and 8270 for volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs), respectively and 8 RCRA heavy metals, filtered and unfiltered.
4. Using a stainless steel hand auger, collect soil/sludge samples from each drywell at the subject site. Submit a sample from each for laboratory analysis using USEPA Underground Injection Control (UIC) parameters to test for VOCs, SVOCs and eight (8) Resource Conservation and Recovery Action (RCRA).
5. The potential presence of contamination in underlying soil vapor may present a *high risk* recognized environmental condition at the subject property. Sampling of indoor and sub-slab soil vapor to determine whether mitigation of potentially contaminated soil vapors is necessary.

6. Suspect lead-based paint, friable and non-friable ACMs must be properly addressed should any renovations be planned. Develop an O & M Plan to properly address materials that could pose a risk to the building occupants or maintenance workers.
7. ACMs must be removed by a licensed abatement contractor and proper abatement and monitoring should be completed.
8. Fluorescent light bulbs were observed in the subject building. If the lighting is to remain, maintenance personnel should be advised of the possibility that the ballasts may contain PCBs and bulbs may contain mercury. Workers should exercise caution when handling the ballasts, taking care not to cause leaks. Protective gloves and clothing should be worn when handling ballasts. Proper disposal of ballasts and bulbs should be carried out.

Opinion of Impacts

The environmental professionals who have conducted the site visit and reviewed the results of the data collection effort have concluded that the aforementioned are “recognized environmental conditions”. The recognized environmental conditions have been quantified based on a range of qualitative impacts on the soil, water or air resources or structures on the subject property.

As per our contractual agreement, *LEA* has provided recommendations for further study above. It is up to the user of this report, based on his risk tolerance, fiduciary responsibility or the applicable law, to determine the extent of further inquiry.

9.0 LIMITATIONS

The purpose of this investigation was to identify potential sources of contamination at the property, and to satisfy all appropriate inquiry standards set forth in Section 9601 (35)(b) of CERCLA. The findings and conclusions set forth in this report are based upon information that was available to **LEA** during the inspection of the property and after review of selected records and documents. If new information becomes available concerning the property after this date, or if the property is used in a manner other than that which is identified in this report, the findings and conclusions contained herein may have to be modified. Additionally, while this investigation was performed in accordance with good commercial and customary practice and generally accepted protocols within the consulting industry, **LEA** cannot guarantee that the property is completely free of hazardous substances or other materials or conditions that could subject Anonymous Client to potential liability. The presence or absence of any such condition can only be confirmed through the collection and analysis of air, soil and/or groundwater samples, which was beyond the scope of this investigation.

Limiting Conditions:

The preceding Environmental Site Assessment is subject to the following conditions and to such other conditions and limiting conditions as are set forth in the report.

1. **Laurel Environmental Associates, Ltd.** assumes no responsibility for hidden or latent conditions or misrepresentation by the property owner, his representatives, public information officials or any authority consulted in connection with the compilation of this report.
2. This report is prepared for the sole and explicit purpose of assessing the potential liability with respect to the suspected presence of hazardous materials that may pose a potential health or environmental threat and for evaluating collateral risk associated with the same. This report is not intended to have any direct bearing on the value of the property.
3. The Environmental Site Assessment and the Environmental Site Assessment Report are for the sole use of the Principal Parties. No disclosure or reproduction shall be made of the preceding report without the prior written consent of **Laurel Environmental Associates, Ltd.**
4. **Laurel Environmental Associates, Ltd.** or any representative of **Laurel Environmental Associates, Ltd.** is not required to give testimony with reference to the opinions expressed herein without prior written arrangement.

10.0 TERMS AND CONDITIONS

The purpose of this Phase I Environmental Site Assessment (ESA) was to identify, to the extent feasible pursuant to the processes described herein to recognize environmental conditions, which are significant adverse environmental concerns, in connection with the subject property. This practice is intended to permit the user to satisfy one of the requirements to qualify for the innocent landowner defense to CERCLA liability: that is, to undertake “all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice.” It also is intended to assist the user in developing information about the environmental condition of the subject property. This Phase I ESA is site specific in that it relates only to the environmental assessment of the property indicated herein.

10.1 SPECIAL TERMS AND CONDITIONS

This Phase I ESA was prepared essentially in accordance with ASTM Standards on Environmental Site Assessments: Phase I Environmental Site Assessment Process as set forth in E1527-05.

10.2 LIMITATIONS AND EXCEPTIONS OF ASSESSMENT

This Phase I ESA was not intended to be in strict accordance with ASTM, be all inclusive, identify all potential concerns, or eliminate the possibility that the subject property may have environmental problems. Although *Laurel Environmental Associates, Ltd. (LEA)* has taken great care to identify such concerns or problems, it is possible that conditions un-permitted, undocumented, not observed, or otherwise concealed on the subject property could exist. Additional information which was not found or made available to *LEA* may result in a modification of the conclusions and recommendations presented.

10.3 LIMITING CONDITIONS AND METHODOLOGY USED

This Phase I ESA was prepared in a manner consistent with the level of skill ordinarily exhibited by members of the environmental auditing profession in this geographic region. No representations, expressed or implied, and no warranty or guarantee is included or intended in connection with this report. *LEA* cannot be responsible for any use, or the information contained in this report, or for any misrepresentation of the information. The information contained in this report has been obtained from publicly available sources, interviews, and from visual observations of the subject property, that may have been limited by secured areas, overgrown vegetation or by other obstructions. Although great care has been taken by *LEA* in compiling and checking the information contained in this report to ensure that it is current and accurate, *LEA* disclaims any and all liability for any errors, omissions, or inaccuracies of such information and data, whether attributable to an advertence or otherwise, and for any consequences arising there-from. It is understood that *LEA* makes no representations or warranties of any kind, including, but not limited to, the warranties of fitness for a particular purpose of merchantability, nor should any such representation or warranty be implied with the respect to customer, it is employees or agents use thereof. *LEA* shall not be liable for any special, consequential or exemplary damages resulting in whole or in part from customer use of the data. Liability on the part of *LEA* is limited to the monetary value paid for this report. This report does not constitute a legal opinion.

11.0 REFERENCES

American Society for Testing and Materials Phase I Standards, ASTM E1527 - 05. 2005

Anonymous, Interview during the site inspection, Month 2010

City of Any Town, Building Department Record Review, Month 2010

Franke, O.L., 1972. Regional Rates of Ground Water Movement on Long Island, New York: U.S. Geological Survey Prof. Paper 800-C

Nassau County Department of Health Services, FOIL, Month 2010

Nassau County Fire Marshal, FOIL, Month 2010

Sanborn Historical Map review, Month 2010

Select Phone, Version 2.4, Northeast, Info USA, Reviewed, Month 2010

Toxics Targeting, Inc. Environmental Report, Month 2010. Search of all Federal, State and local databases to meet ASTM E-1527-05 requirements

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12.0 DEFINITIONS

Abandoned Property – *property* that can be presumed to be deserted, or an intent to relinquish possession or control can be inferred from the general disrepair or lack of activity thereon such that a reasonable person could believe that there was an intent on the part of the current owner to surrender rights to the *property*.

Activity and use limitations – legal or physical restrictions or limitations on the use of, or access to, a site or facility: (1) to reduce or eliminate potential exposure to hazardous substances in the soil or ground water on the property, or (2) to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment. These legal or physical restrictions, which may include institutional and/or engineering controls, are intended to prevent adverse impacts to individuals or populations that may be exposed to hazardous substances and petroleum products in the soil or ground water on the property.

Actual knowledge – the knowledge actually possessed by an individual who is a real person, rather than an entity. Actual knowledge is to be distinguished from constructive knowledge that is knowledge imputed to an individual or entity.

Adjoining properties – any real property or properties the border of which is contiguous or partially contiguous with that of the property, or that would be contiguous or partially contiguous with that of the property but for a street, road, or other public thoroughfare separating them.

Aerial photographs – photographs taken from an aerial platform with sufficient resolution to allow identification of development and activities of areas encompassing the property. Aerial photographs are often available from government agencies or private collections unique to a local area.
See 8.3.4.1 of this practice.

All appropriate inquiry – that inquiry constituting “all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice” as defined in CERCLA, 42 USC § 9601(35) (B), that will qualify a party to a *commercial real estate* transaction for one of the threshold criteria for satisfying the LLPs to CERCLA liability (42 USC § 9601(35)(A) & (B) §9607(b) (3), §9607(q); and §9607(r)), assuming compliance with other elements of the defense.
See Appendix X1 of this practice.

Approximate minimum search distance – the area for which records must be obtained and reviewed pursuant to Section 8 subject to the limitations provided in that section. This may include areas outside the property and shall be measured from the nearest property boundary. This term is used in lieu of radius to include irregularly shaped properties.

Bona Fide prospective purchaser liability protection – (42 U.S.C. §9607(r) – a person may qualify as a bona fide prospective purchaser if, among other requirements, such person made “all appropriate inquiries into the previous ownership and uses of the facility in accordance with generally accepted good commercial and customary standards and practice.” Knowledge of contamination resulting from all appropriate inquiry would not generally preclude this liability protection. A person must make all appropriate inquiry on or before the date of purchase. The facility must have been purchased after January 11th, 2002.

See ASTM E 1527-05 Appendix X1 for the other necessary requirements that are beyond the scope of this practice.

Brownfields amendments – amendments to CERCLA pursuant to the Small Business Liability Relief and Brownfields Revitalization Act, Pub. L. No. 107-118 (2002), 42 U.S.C. §§9601 *et seq.*

Building department records – those records of the local government in which the property is located indicating permission of the local government to construct, alter, or demolish improvements on the property. Often building department records are located in the building department of a municipality or county.

See 8.3.4.7.

Commercial real estate - any real *property* except a *dwelling* or *property* with no more than four dwelling units exclusively for residential use (except that a dwelling or property with no more than four dwelling units exclusively for residential use is included in this term when it has a commercial function, as in the building of such dwelling for profit). This term includes but is not limited to undeveloped real property and real property used for industrial, retail, office, agricultural, other commercial, medical, or educational purposes; property used for residential use when it has a commercial function, as in the building of such dwellings for profit.

Commercial real estate transactions – A transfer of title to or possession of real property, except that it does not include transfer of title to or possession of real property with respect to an individual dwelling or building containing fewer than five dwelling units, nor does it include the purchase of a lot or lots to construct a dwelling for occupancy by a purchaser, but a commercial real estate transaction does include real property purchased or leased by person or entities in the business of building or developing dwelling units.

Comprehensive Environmental Response, Compensation and Liability

Information Systems (CERCLIS) – the list of sites compiled by EPA that EPA has investigated or is currently investigating for potential hazardous substance contamination for possible inclusion on the National Priorities List.

Construction debris – concrete, brick, asphalt, and other such building materials discarded in the construction of a building or other improvement to property.

Contaminated public wells – public wells used for drinking water that have been designated by a government entity as contaminated by hazardous substance (for example, chlorinated solvents), or as having water unsafe to drink without treatment.

Contiguous property owner liability protection-(42 U.S.C. §9607(q))-a person may qualify for the *contiguous property owner liability protection* if, among other requirements, such person owns real property that is contiguous to, and that is or may be contaminated by hazardous substance from other real property that is not owned by that person. Furthermore, such person conducted *all appropriate inquiry* at the time of acquisition of the property and did not know or have reason to know that the property was or could be contaminated by a *release* or threatened release from the contiguous property. The all appropriate inquiry must not result in knowledge of contamination. If it does, then such person did “know” or “had reason to know” of contamination and would not be eligible for the *contiguous property owner liability protection*.

See Appendix X1 for the other necessary requirements that are beyond the scope of this practice.

CORRACTS list – a list maintained by EPA of hazardous waste treatment, storage, or disposal facilities and other RCRA-regulated facilities (due to past interim status or storage of hazardous waste beyond 90 days) that have been notified by the U.S. Environmental Protection Agency to undertake corrective action under RCRA.

Data Failure – a failure to achieve the historical research objectives in 8.3.1 through 8.3.2.2 even after reviewing the standard historical sources in 8.3.4.1 through 8.3.4.8 that are reasonably ascertainable and likely to be useful. Data failure is one type of data gap.
See 8.3.2.3 of this practice.

Data gap – A lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information. Data gaps may result from incompleteness in any of the activities required by this practice, including, but not limited to site reconnaissance (for example, an inability to interview the key site manager, regulatory officials, etc.)
See 12.7 of this practice.

Demolition debris – concrete, brick, asphalt, and other such building materials discarded in the demolition of a building or other improvement to property.

Drum – a container (typically, but not necessarily, holding 55 gal (208 L) of liquid) that may be used to store hazardous substance or petroleum products.

Dry wells – underground areas where soil has been removed and replaced with pea gravel, coarse sand, or large rocks. Dry wells are used for drainage, to control storm runoff, for the collection of spilled liquids (intentional and non-intentional) and wastewater disposal (often illegal).

Dwelling-structure or portion thereof used for residential habitation.

Engineering controls – physical modifications to a site or facility (for example, capping, slurry walls, or point of use water treatment) to reduce or eliminate the potential for exposure to hazardous substances or petroleum products in the soil or ground water on the property.

Environmental lien – a charge, security, or encumbrance upon title to a *property* to secure the payment of a cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of *hazardous substances* or *petroleum products* upon a *property*, including (but not limited to) liens imposed pursuant to CERCLA 42 USC§ §9607(1) & 9607 (r) and similar state or local laws.

ERNS list – EPA’s emergency response notification system list of reported CERCLA hazardous substance releases or spills in quantities greater than the reportable quantity, as maintained at the National Response Center. Notification requirements for such releases or spills are codified in 40 CFR Parts 302 and 355.

Federal Registration (FR) - publication of the United State government published daily (except for federal holidays and weekends) containing all proposed and final regulations and some other activities of the federal government. When regulations become final, they are included in the Code of Federal Regulations (CFR), as well as published in the Federal Register.

Fill dirt - dirt, soil, sand, or other earth, that is obtained off-site that is used to fill holes or depressions, create mounds, or otherwise artificially change the grade or elevation of real property. It does not include material that is used in limited quantities for normal landscaping activities.

Fire insurance maps – maps produced for private fire insurance map companies that indicate uses of properties at specified dates and that encompass the property. These maps are often available at local libraries, historical societies, private resellers, or from the map companies who produces them.

Good faith – The absence of any intention to seek an unfair advantage or to defraud another party; an honest and sincere intention to fulfill one’s obligations in the conduct or transaction concerned.

Hazardous substance – A substance defined as a hazardous substance pursuant to CERCLA 42 USC§ 9601(14), as interpreted by EPA regulations and the courts: “(A) any substance designated pursuant to section 1321(b)(2)(A) of Title 33, (B) any element, compound, mixture, solution, or substance designated pursuant to section 9602 of this title, (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Resource Conservation and Recovery Act of 1976 (RCRA), as amended, (42 USC § 6921) (but not including any waste the regulation of which under RCRA (42 USC §§ 6901 *et seq.*) has been suspended by Act of Congress), (D) any toxic pollutant listed under section 1317(a) of Title 33, (E) any hazardous air pollutant listed under section 112 of the Clean Air Act (42 USC § 7412), and (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator (of EPA) has taken action pursuant to section 2606 of Title 15. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).”

Hazardous waste – any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of RCRA, as amended, (42 USC § 6921) (but not including any waste the regulation of which under RCRA (42 USC §§ 6901-6992k.) has been suspended by Act of Congress). RCRA is sometimes also identified as the Solid Waste Disposal Act. RCRA defines a hazardous waste, in 42 USC § 6903, as: “a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may- (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.”

IC/EC registries – database of institutional controls or engineering controls that may be maintained by a federal, state or local environmental agency for purposes of tracking sites that may contain residual contamination and AULs. The names for these may vary from program and state to state, and include terms such as Declaration of Environmental Use Restriction database (Arizona), list of “deed restrictions” (California), environmental real covenants list (Colorado), Brownfield’s site list (Indiana, Missouri, Pennsylvania).

Institutional controls – a legal or administrative restriction (for example, “deed restrictions”, restrictive covenants, easements or zoning) on the use of, or access to, a site or facility to (1) reduce or eliminate potential exposure to hazardous substances in the soil or ground water on the property, or (2) to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment.

Interviews – those portions of this practice that are contained in Section 10 and 11 thereof and address questions to be asked of past and present owners, operators, and occupants of the property and question to be asked of local government officials.

Landfill – a place, location, tract of land, area, or premises used for disposal of solid waste as defined by state solid waste regulations. The term is synonymous with the term *solid waste disposal site* and is also known as a garbage dump, trash dump, or similar term.

Local government agencies – those agencies of municipal or county government having jurisdiction over the property. Municipal and county government agencies include but are not limited to cities, parishes, townships and similar entities.

Local street directories – directories published by private (or sometimes government) sources that show ownership, occupancy, and/or use of sites by reference to street addresses. Often local street directories are available at libraries, or historical societies, and/or local municipal offices.

See 8.3.4.6 of this practice.

LUST sites – state lists of leaking underground storage tank sites. RCRA gives EPA and states, under cooperative agreements with EPA, authority to clean up release from UST systems or require owner and operators to do so. (42 U.S.C. §6991b).

Major occupants – those tenants, subtenants, or other persons or entities each of which uses at least 40%

Material safety data sheet (MSDS) – written or printed material concerning a hazardous substance which is prepared by chemical manufacturers, importers, and employers for hazardous chemicals pursuant to OSHA’s Hazard Communication Standard, 29 CFR §1910.1200.

National Contingency Plan (NCP) – the National Oil and Hazardous Substance Pollution Contingency Plan, found at 40 CFR Part 300 that is the EPA’s blueprint on how hazardous substances are to be cleaned up pursuant to CERCLA.

Occupants – those tenants, subtenants, or other persons or entities using the *property* or a portion of the *property*.

Owner – generally the fee owner of record of the *property*.

Petroleum exclusion – the exclusion from CERCLA liability provided in 42 USC § 9601(14), as interpreted by the courts and EPA: “The term (hazardous substance) does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).”

Petroleum products – those substances included within the meaning of the *petroleum exclusion* to CERCLA, 42 USC § 9601(14), as interpreted by the courts and EPA, that is: petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under Subparagraphs (A) through (F) of 42 USC § 9601(14), natural gas, natural gas liquids, liquefied natural gas, and synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas). (The word fraction refers to certain distillates of crude oil, including gasoline, kerosene, diesel oil, jet fuels, and fuel oil, pursuant to *Standard Definitions of Petroleum Statistics*.)

Pits, ponds, or lagoons – man-made or natural depressions in a ground surface that are likely to hold liquids or sludge containing *hazardous substances* or *petroleum products*. The likelihood of such liquids or sludge being present is determined by evidence of factors associated with the pit, pond, or lagoon, including, but not limited to, discolored water, distressed vegetation, or the presence of an obvious wastewater discharge.

Property – the real property that is the subject of the *environmental site assessment* described in this practice. Real property includes buildings and other fixtures and improvements located on the property and affixed to the land.

RCRA TSD Facilities – those facilities on which treatment, storage, and/or disposal of hazardous wastes take place, as defined and regulated by RCRA.

Solvent - a chemical compound that is capable of dissolving another substance and may itself be a *hazardous substance*, used in a number of manufacturing/industrial processes including but not limited to the manufacture of paints and coatings for industrial and household purposes, equipment clean-up, and surface degreasing in metal fabricating industries.

Sump – a pit, cistern, cesspool, or similar receptacle where liquids drain, collect, or are stored.

TSD facility – treatment, storage, or disposal facility (see RCRA TSD facilities).

Underground storage tanks (UST) – any tank, including underground piping connected to the tank, that is or has been used to contain *hazardous substances* or *petroleum products* and the volume of which is 10% or more beneath the surface of the ground.

Wastewater – water that (1) is or has been used in an industrial or manufacturing process, (2) conveys or has conveyed sewage, or (3) is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant. Wastewater does not include water originating on or passing through or adjacent to a site, such as storm water flows, that has not been used in industrial or manufacturing processes, has not been combined with sewage, or is not directly related to manufacturing, processing, or raw materials storage areas at an industrial plant.

12.1 ADDITIONAL DEFINITIONS – SPECIFIC TO ESA

Actual knowledge – the knowledge actually possessed by an individual who is a real person, rather than an entity. Actual knowledge is to be distinguished from constructive knowledge that is knowledge imputed to an individual or entity.

Adjoining properties – any real property or properties the border of which is contiguous or partially contiguous with that of the property, or that would be contiguous or partially contiguous with that of the property but for a street, road, or other public thoroughfare separating them.

All appropriate inquiry – that inquiry constituting “all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice” as defined in CERCLA, 42 USC § 9601(35) (B), that will qualify a party to a *commercial real estate* transaction for one of the threshold criteria for satisfying the LLPs to CERCLA liability (42 USC § 9601(35)(A) & (B) §9607(b) (3), §9607(q); and §9607(r)), assuming compliance with other elements of the defense. See ASTM E 1527-05 Appendix X1.4.

Business environmental risk – a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice. Consideration of *business environmental risk* issues may involve addressing one or more non-scope considerations, some of which are identified in Section 13.

Due diligence – the process of inquiring into the environmental characteristics of a parcel of *commercial real estate* or other conditions, usually in connection with a commercial real estate transaction. The degree and kind of due diligence vary for different properties and differing purposes.

Environmental compliance audit – the investigative process to determine if the operations of an existing facility are in compliance with applicable environmental laws and regulations. This term should not be used to describe Practice E 1528 or 1527, although an environmental compliance audit may include an *environmental site assessment* or, if prior audits are available, may be part of an environmental site assessment.

Environmental professional – (1) a person who possesses sufficient specific education, training and experience necessary to exercise professional judgment to develop opinions and conclusions regarding conditions indicative of releases or threatened releases (see §312.1(c)), on, at, in, or to a property, sufficient to meet the objectives and performance factors in §312.20(e) and (f). (2) Such a person must: (i) hold a current Professional Engineer’s or Professional Geologist’s license or registration from a state, tribe, or US territory (or the Commonwealth of Puerto Rico) and have the equivalent of three (3) years of fulltime relevant experience; or (ii) be licensed or certified by the federal government, a state, tribe, or US territory (or the Commonwealth of Puerto Rico) to perform environmental inquiries as defined in §312.21 and have the equivalent of three (3) years of full-time relevant experience; or (iii) have a Baccalaureate or higher degree from an accredited institution of higher education in a discipline of engineering or science and the equivalent of five (5) years of full-time relevant experience; or (iv) have the equivalent of ten (10) years of full-time relevant experience. The person may be an independent contractor or an employee of the *user*.

Environmental site assessment (ESA) – the process by which a person or entity seeks to determine if a particular parcel of real *property* (including improvements) is subject to *recognized environmental conditions*. At the option of the user, an environmental site assessment may include more inquiry than that which constitutes *all appropriate inquiry* or, if the user is not concerned about qualifying for the LLPs, less inquiry than that constituting *all appropriate inquiry*. An environmental site assessment is different from an *environmental compliance audit*.

Historical recognized environmental condition – environmental condition which in the past would have been considered a *recognized environmental condition*, but which may or may not be considered a *recognized environmental condition* currently. The final decision rests with the *environmental professional* and will be influenced by the current impact of the *historical recognized environmental condition* on the property. If a past release of any hazardous substances or petroleum products has occurred in connection with the property and has been remediated, with such remediation accepted by the responsible regulatory agency (for example, as evidenced by the issuance of a no further action letter or equivalent), this condition shall be considered an *historical recognized environmental condition* and included in the findings section of the Phase I *Environmental Site Assessment* report. The *environmental professional* shall provide an opinion of the current impact on the property of this *historical recognized environmental condition* in the opinion section of the report. If this *historical recognized environmental condition* is determined to be a *recognized environmental condition* at the time the Phase I *Environmental Site Assessment* is conducted, the condition shall be identified as such and listed in the conclusions section of the report.

Innocent landowner defense – (42 USC § 9601(35) and § 9607(b) (3)). A person may qualify as one of three types of innocent landowners: (i) a person who “did not know and had no reason to know” that contamination existed on the property at the time the purchaser acquired the property; (ii) a government entity which acquired the property by escheat, or through any other involuntary transfer or acquisition, or through the exercise of eminent domain authority by purchase or condemnation; and (iii) a person who “acquired the facility by inheritance or bequest.” To qualify for the first type of innocent landowner LLP, such person must have made all appropriate inquiry on or before the date of purchase. Furthermore, the all appropriate inquiry must not have resulted in knowledge of the contamination. If it does, then such person did “know” or “had reason to know” of contamination and would not be eligible for the innocent landowner defense. See ASTM E 1527-05 Appendix X1.

Key site manager – the person identified by the *owner* or *operator* of a *property* as having good knowledge of the uses and physical characteristics of the property.

Landowner Liability Protections (LLPs) – landowner liability protections under CERCLA; these protections include the bona fide prospective purchaser liability protection, contiguous property owner liability protection, and innocent landowner defense from CERCLA liability, See 42 USC § 9601(35)(A), 9601(40), 9607(b), 9607(q), 9607 (r).

Material threat – a physically observable or obvious threat which is reasonably likely to lead to a release that, in the opinion of the *environmental professional*, is threatening and might result in impact to public health of the environment. An example might include an aboveground storage tank that contains a hazardous substance and which shows evidence of damage. The damage would represent a material threat if it is deemed serious enough that it may cause or contribute to tank integrity failure with a release of contents to the environment.

Obvious – that which is plain or evident; a condition or fact that could not be ignored or overlooked by a reasonable observer while visually or physically observing the *property*.

Other historical sources – any source or sources other than those designated in 7.3.4.1 through 7.3.4.8 that are credible to a reasonable person and that identify past uses of the property. The term includes, but is not limited to: miscellaneous maps, newspaper archives, internet sites, community organizations, local libraries, historical societies, current owners or occupants of neighboring properties, and records in the files and/or personal knowledge of the *property owner* and/or *occupants*. See ASTM E 1527-05 Sections 3.2.58 and 8.3.4.8.

Practically reviewable – information that is *practically reviewable* means that the information is provided by the source in a manner and in a form that, upon examination, yields information relevant to the *property* without the need for extraordinary analysis or irrelevant data. The form of the information shall be such that the user can review the records for a limited geographic area. Records that cannot be feasibly retrieved by reference to the location of the *property* or a geographic area in which the *property* is located are not generally *practically reviewable*. Most databases of public records are *practically reviewable* if they can be obtained from the source agency by the county, city, zip code, or other geographic area of the facilities listed in the record system. Records that are sorted, filed, organized, or maintained by the source agency only chronologically are not generally practically reviewable. Listings in publicly available records which do not have adequate address information to be located geographically are not generally considered practically reviewable. For large databases with numerous facility records (such as RCRA hazardous waste generators and registered underground storage tanks), the records are not *practically reviewable* unless they can be obtained from the source agency in the smaller geographic area of zip codes. Even when information is provided by zip code for some large databases, it is common for an unmanageable number of sites to be identified within a given zip code. In these cases, it is not necessary to review the impact of all of the sites that are likely to be listed in any given zip code because that information would not be *practically reviewable*. In other words, when so much data is generated that it cannot be feasibly reviewed for its impact on the *property*, it is not *practically reviewable*.

Publicly available – information that is publicly available means that the source of the information allows access to the information by anyone upon request.

Reasonably ascertainable – for purposes of both Practice E 1527 and 1528, information that is (1) *publicly available*, (2) obtainable from its source within reasonable time and cost constraints, and (3) *practically reviewable*.

Recognized environmental conditions – the presence or likely presence of any *hazardous substances* or *petroleum products* on a *property* under conditions that indicate an existing release, a past release, or a material threat of a release of any *hazardous substances* or *petroleum products* into structures on the *property* or into the ground, ground water, or surface water of the *property*. The term includes *hazardous substances* or *petroleum products* even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* are not *recognized environmental conditions*.

User – the party seeking to use Practices E 1527 or E 1528 to complete an *environmental site assessment* of the *property*. A user may include, without limitation, a potential purchaser of *property*, a potential tenant of property, an *owner of property*, a lender, or a property manager.

Visually and/or physically observed – during a *site visit* pursuant to this practice, this term generally means observations made by vision while walking through a *property* and the structures located on it and observations made by the sense of smell, particularly observations of noxious or foul odors. The term “walking through” is not meant to imply that disabled persons who cannot physically walk may not conduct a *site visit*; they may do so by the means at their disposal for moving through the *property* and the structures located in it.

12.2 ACRONYMS

AULs – Activity and Use Limitations

CERCLA-Comprehensive Environmental Response, Compensation and Liability Act of 1980 (as amended, 42 USC § 9601 *et seq.*).

CERCLIS-Comprehensive Environmental Response, Compensation and Liability Information System (maintained by EPA).

CFR-Code of Federal Regulations.

CORRACTS-facilities subject to Corrective Action under RCRA.

ECs – Engineering Controls

EPA-United States Environmental Protection Agency.

EPCRA-Emergency Planning and Community Right to Know Act ((also known as SARA Title III), 42 USC § 11001 *et seq.*).

ERNS-emergency response notification system.

ESA-environmental site assessment (different than an *environmental audit*; see 3.3.13).

FOIA-U.S. Freedom of Information Act (5 USC 552 *et seq.*).

FR-Federal Register.

ICs – Institutional Controls

LLPs – Landowner Liability Protections under the Brownfields Amendments

LUST-leaking underground storage tank.

MSDS-material safety data sheet.

NCP-National Contingency Plan.

NFRAP-former CERCLIS sites where no further remedial action is planned under CERCLA.

NPDES-national pollutant discharge elimination system.

NPL-national priorities list.

PCBs-polychlorinated biphenyls.

PRP-potentially responsible party (pursuant to CERCLA 42 USC § 9607(a)).

RCRA-Resource Conservation and Recovery Act (as amended, 42 USC § 6901 *et seq.*).

SARA-Superfund Amendments and Reauthorization Act of 1986 (amendment to CERCLA).