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## report



## Phase I Environmental Site Assessment

Ryan Park  
10 Raymond Street  
Norwalk, Connecticut

October 2015

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## EXECUTIVE SUMMARY

Weston & Sampson Engineers, Inc. (Weston & Sampson) was contracted on behalf of the City of Norwalk Redevelopment Agency (NRA) to perform a Phase I Environmental Site Assessment (ESA) of the municipal property located at 10 Raymond Street in the City of Norwalk, Connecticut ("Site"). The ESA was performed in accordance with ASTM Standard E1527-13, and to meet EPA's All Appropriate Inquiry (AAI) requirements. The NRA is having the Phase I ESA performed in connection with the potential future improvements to the property.

The 2.19-acre Site is located southwest of the Raymond Street and Day Street intersection in an "Industrial" zone of Norwalk, Connecticut. The property is municipally-owned and utilized as a public park known as Ryan Park. The park consists of a basketball court, baseball field, children's play area and associated paved parking. The Site and surrounding area has a lengthy history that dates back to at least 1884. Historic maps indicate that the Site and surrounding area consisted of mud flats or marsh land associated with the nearby Norwalk Harbor until it was filled and subsequently developed sometime prior to 1884. The most notable historic Site occupants include a hat manufacturer(s), fur dress manufacturer, machine shop, rubber manufacturer, junk yard and chemical company. By 1991 all of the former on Site buildings were demolished and the current park developed. Surrounding properties historically comprised of similar land usage included industrial buildings to the north across Raymond Street, east across Day Street and abutting the Site to the south and included brass and iron foundries, hat manufactures and a junk yard. By the 1950s the majority of the large industrial buildings to the north, east and south were demolished and residential and/or commercial development became more prominent.

The Site was not identified on any of the environmental databases. Additionally, no local or state records were available for the Site. The environmental database report did identify two properties with leaking underground storage tanks (USTs) and one registered UST property northwest and potentially upgradient of the Site. Based on the historic industrial and commercial use of the Site combined with the potential for releases from off-Site upgradient properties the potential for a vapor encroachment condition (VEC) has been identified for the Site.

Based on the findings of our assessment, Weston & Sampson has identified the following Recognized Environmental Condition (REC) in conjunction with the Site:

- The presence of fill in Site from an unknown source;
- The extensive historic commercial and industrial use of the Site with various historic occupants of environmental concern;
- The potential for off-Site impacts from upgradient properties; and
- The potential presence of a vapor encroachment condition (VEC).

## 1.0 INTRODUCTION

Weston & Sampson, on behalf of the NRA, has prepared this Phase I Environmental Site Assessment (ESA) Report for the municipal property located at 10 Raymond Street in Norwalk, Connecticut (“Site”). The Site is municipally owned and located within a mixed commercial/residential development area. The NRA is considering making potential improvements to the property.

The ESA was performed in accordance with ASTM Standard Practice E 1527-13, and EPA’s All Appropriate Inquiry (AAI) standard. The ESA included environmental database searches; review of local, state, and federal regulatory agency records; and a reconnaissance of the Site and vicinity. This report is subject to the Limitations described in Section 1.6.

### 1.1. Site Ownership and Location

#### 10 Raymond Street – Norwalk, Connecticut

Latitude/Longitude:	41° 5’ 41.64" North 73° 25’ 03.72" West
UTM Coordinates:	Zone 18 632,888.7 meters Easting 4,550,286.0 meters Northing
Elevation:	At sea level
Site Owner:	City of Norwalk
Site Occupants:	Ryan Park – recreational park
Site Location:	10 Raymond Street, Norwalk, Connecticut
County:	Fairfield
Parcel ID:	Map 2, Block 62, Lot 3
Size:	2.19 acre

The Site consists of a single, 2.19-acre parcel of land located southwest of the Raymond Street and Day Street intersection in the City of Norwalk, Connecticut. A paved parking lot accessed via a curb cut of Raymond Street provides access to the Site.

A Locus Map and a Site plan detailing current Site conditions are provided as **Figures 1 and 2**.

### 1.2. Purpose

The Phase I ESA was performed to assess the Site with respect to the potential presence of hazardous substances, including those within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. §9601) and petroleum products.

The objective of the Phase I ESA is to identify recognized environmental conditions (RECs) in connection with the Site at the time of the Site evaluation. The term “recognized environmental condition” referenced in E1527-13, refers to “the presence or likely presence of any hazardous substance or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under

conditions that pose a material threat of a future release to the environment.” The ASTM definition does not include, “de minimis” conditions, which generally do not present a threat to human health or the environment and would not be the subject of an enforcement action if brought to the attention of the appropriate governmental agencies. Therefore, de minimis conditions are not considered RECs. The term “historic recognized environmental condition” (HREC) referenced in E1527-13, refers to “a past release of any hazardous substances or petroleum that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority without subjecting the property to any required controls”.

### 1.3. Scope of Services

This ESA was conducted utilizing a standard of good commercial and customary practice that is consistent with E 1527-13. Any significant scope-of-work additions, deletions or deviations to E 1527-13 are noted below or in the corresponding sections of this report. A copy of the scope of services contract agreement between Weston & Sampson and the NRA (specifying the work to be performed for this Phase I ESA) and responsibilities of the report user are included in **Appendix A** of this report.

### 1.4. Non – ASTM Scope Considerations

The scope of work completed for this assessment did not include any non-ASTM scope considerations.

### 1.5. User Reliance

This report may be distributed and relied upon by the NRA and their successors and assigns. Reliance on the information and conclusions in this report by any other person or entity is not authorized without the written consent of the NRA and Weston & Sampson, Inc.

### 1.6. Deviations

Except for the limitations and exceptions discussed in Section 1.7, this Phase I ESA complies with ASTM Standard E1527-13.

### 1.7. Limitations

This report was prepared exclusively for the NRA. Information provided by Weston & Sampson in this report is based solely on the information reported in this document. Future investigations and/or information that was not available to Weston & Sampson at the time of the investigation may result in a modification of the findings stated in this report.

If additional information becomes available concerning this Site (or neighboring properties that could directly impact the Site in the future) this information should be made available to Weston & Sampson for review so that, if necessary, conclusions presented in the report may be modified. The conclusions of this report are based on conditions observed at Site by Weston & Sampson personnel at the time of the investigation, information provided by EDR and the NRA, and information provided by Federal, state, and local agencies. This report has been prepared in accordance with generally accepted engineering and geological practices. No other warranty, express or implied, is made.

### 1.8. User Provided Information

A User Questionnaire was provided to the NRA. The information requested in the User Questionnaire is intended to assist in gathering evidence to identify RECs at the Site. A copy of

the completed User Questionnaire is included as **Appendix B**. The following is a summary of the completed User Questionnaire.

1.8.1. User Provided Records/Documents

No documents pertaining to the Site were provided by the NRA.

1.8.2. Environmental Liens

It is unknown if there are any environmental cleanup liens against the Site that are filed or recorded under Federal, tribal, state, or local law.

1.8.3. Activity and Use Limitations

It is unknown if any Activity and Use Limitation (AUL) are implemented at the Site.

1.8.4. Specialized Knowledge

The NRA reported they have no specialized knowledge of RECs, historical recognized environmental conditions (HRECs), or other potential environmental concerns in connection with the Site or nearby properties.

1.8.5. Commonly Known or Reasonable Ascertainable Information

The NRA does not have any commonly known or reasonably ascertainable information about the Site that would be indicative of any releases or threatened releases of petroleum products or hazardous substances.

1.8.6. Valuation Reduction for Environmental Issues

The NRA has indicated that the property is not being purchased.

1.8.7. Degree of Obviousness of Contamination

The NRA has reported no obvious indicators that point to the presence or likely presence of hazardous substances or petroleum products at the Site.

1.8.8. Reason for Performing Phase I ESA

The NRA indicated that the Phase I ESA is being performed in support of the potential improvements to the property.

## 2.0 DATA SOURCES

### 2.1 Electronic Database Search

A review of “standard” environmental databases as specified by ASTM Standard E 1527-13 and maintained by federal, state, and tribal offices was completed through Environmental Data Resources, Inc. (EDR) of Milford, Connecticut. The databases were searched for properties with reported environmental conditions located within approximate minimum search distances as specified by ASTM Standard E 1527-13. The databases use geocoded information to identify the coordinates of the properties or to check the street addresses of practically reviewable non-geocoded “orphan” properties located within the same zip code. The detailed database report, including mapping of results and limitations of the search criteria, are contained in **Appendix C**. Database acronyms that are not explicitly defined in this discussion are also included. The EDR report identifies the name of all of the databases that were searched, the date information was last updated by EDR, and the date information was last updated by the original source.

It should be noted that plotted locations of listed sites are not always accurate. With regard to listings that are determined or suspected to be inaccurate, based on information from other sources such as direct observation or consultation with individuals familiar with the property, Weston & Sampson uses the best available data when evaluating the location of listed orphan sites.

The table below summarizes if the Site is listed in the databases reviewed. A detailed evaluation of the database information and results of the Site specific regulatory file review(s) is included in Section 3.3 of this report.

The table below also summarizes the number of off-site properties reported for each database. Each of the property records identified in the databases were reviewed to determine the potential to impact the Site. In general, releases with sources that are proximate to, and hydraulically upgradient of the Site, have the greatest potential to impact the Site. Weston & Sampson reviewed the location of each property and potential contaminant in the database report. For the purpose of this Phase I ESA, if the database listing location meets one or more of the following conditions:

- hydrogeologically isolated from the Site (e.g. across a river),
- at such distance from the Site that migration of contaminants to the Site is unlikely, or
- groundwater flow from the property is away from the Site,

it will be excluded from further consideration because any releases of hazardous substances or petroleum are not likely to impact the Site. In addition, the magnitude of the release, contaminant type, and current regulatory status of the off-site source is also considered.

The table below summarizes the number of database properties/records which have been deemed unlikely to impact the Site for the reasons above. The remaining properties were evaluated in more detail to determine if they pose a threat to the Site. A detailed evaluation of the database results, regulatory file reviews (if performed) and the potential impact of these properties on the Site is included in Section 4.3 of this report.

## 2.2 Federal and State Records – EDR Standard Environmental Records Database

The table below summarizes the databases searched by EDR. A copy of the EDR report is included in **Appendix C**. The Site was not identified on the standard databases searched by EDR, however, it was identified on the manifest database. Specific off site properties identified within the database report are further evaluated in the table below.

<b>SUMMARY OF EDR'S FEDERAL/STATE REGULATORY DATABASE SEARCH FINDINGS</b>						
Regulatory Database (Approximate Minimum Search Distance)	Site Listed	Off-Site listings Within Search Distance	Off-Site Listings Not Requiring Additional Review			Off-Site listings requiring additional review
			Hydrogeologic Isolation	Distance	Down gradient	
NPL/delisted NPL (1.0 mile)	No	0	0	0	0	0
CERCLIS/CERCLIS NFRAP (0.5 mile)	No	2	0	0	2	0
RCRA CORRACTS (1.0 mile)	No	1	0	0	1	0
RCRA TSD (0.5 mile)	No	0	0	0	0	0
Federal RCRA Generator Sites (property & adjoining)	No	0	0	0	0	0
Engineering & Institutional Control Registries (property & adjoining)	No	0	0	0	0	0
Federal ERNS list (property)	No	--	--	--	--	--
State Hazardous Waste Sites/ Equivalent NPL/CERCLIS Sites (0.5 mile)	No	7	0	1	6	0
State Landfill & Solid Waste Disposal Sites (0.5 mile)	No	0	0	0	0	0
State Leaking Storage Tank Sites (0.5 mile)	No	16	0	2	12	2
State Registered Storage Tank Sites (property & adjoining)	No	6	0	0	5	1
State Engineering & Institutional Control Registries (property & adjoining)	No	0	0	0	0	0
State Voluntary Cleanup Sites (0.5 mile)	No	1	0	0	1	0
State Brownfields Sites (0.5 mile)	No	4	0	2	2	0
State Spills (property)	No	--	--	--	--	--
CT Property Transfer (property)	No	--	--	--	--	--

### 2.3 State Records – Connecticut Department of Energy and Environmental Protection (CTDEEP)

The Site or adjoining properties were not identified on any of the environmental databases; however, based on the extensive historic industrial use of the Site and surrounding properties, Weston & Sampson conducted a CTDEEP file review on September 17, 2015.

The CTDEEP public file room did not possess any file information for the Site or adjoining properties.

### 2.4 Orphan Sites

The EDR database report identified 12 orphan site listings. Orphan sites are those sites that could not be accurately mapped or geocoded due to inadequate location information. Orphan listings provided by EDR were cross referenced with state and local files to confirm addressing. Weston & Sampson attempted to locate orphan sites via vehicular reconnaissance and interviews with personnel familiar with the area. Based on this research, Weston & Sampson did not identify any of the listed orphan sites as being likely to adversely impact the environmental conditions at the Site.

### 2.5 Historic Records Review

The objective of consulting historical sources is to develop a history of the previous uses of the property in order to help identify the likelihood of past uses which may have led to RECs in connection with the Site. Historical use information was obtained from a variety of sources as summarized below.

<b>SUMMARY OF HISTORICAL RECORDS SOURCES REVIEWED</b>	
<b>SOURCE</b>	<b>LOCATION</b>
Historic Sanborn Fire Insurance Maps	Appendix D
Historic Topographic Maps	Appendix E
Historic Aerial Photographs	Appendix F
City Directory	Appendix G
Other Historical Sources (Town records)	Appendix H

### 2.6 Physical Site Setting

This section presents a description of the sources reviewed during the development of the environmental setting pertaining to the Site and regional features including topography, groundwater, and geology. The table below summarizes the physical setting sources included in this report.

SUMMARY OF PHYSICAL SITE SETTING SOURCES	
SOURCE	LOCATION
United States Geological Survey (USGS) Quadrangle topographic maps	Appendix E
Bedrock Geology Map	Section 3.1
Surficial Geology Map	Section 3.1
GW Classification Map	Section 3.1

### 2.7 Interviews

The purpose of the interview is to obtain information identifying possible RECs in connection with the Site. A concerted effort was made to interview those knowledgeable about the Site. Weston & Sampson conducted research and interviews with the report user, the Site owner, and specific municipal officials that may have insight on the potential use, storage, or release of hazardous substances or USTs at the Site or adjoining properties. A summary of interview sources and location of the documentation of the interview and questionnaire results is included below.

SUMMARY OF INTERVIEW SOURCES	
SOURCE / INTERVIEWEE	LOCATION
Report User / NRA; Susan Sweitzer and Tim Carney	Appendix I
Current Key Site Manager / NRA; Tim Carney	Appendix I
Past Owner	N/A

### 2.8 Site Reconnaissance

On September 14, 2015, Laura Yellen of Weston & Sampson performed a visual reconnaissance of the Site by walking the accessible areas of the Site and by viewing the Site from surrounding properties. The purpose of the Site reconnaissance was to observe current conditions and assess, based on visual observations, if there was evidence of RECs (i.e., release(s) of oil and/or hazardous substances (OHM) to the surface or subsurface) at the Site or its surrounding areas. Ms. Susan Sweitzer and Mr. Tim Carney of the NRA accompanied Weston & Sampson during the Site visit. A log of photographs taken on the day of the reconnaissance is included in **Appendix J**.

### 2.9 Qualifications of Environmental Professional Staff

Ms. Laura Yellen inspected the Site, collected data and prepared the report. Ms. Yellen has over 13 years of environmental assessment and remediation experience, and qualifies as an Environmental Professional.

Mr. Jeffrey Willson, provided a technical review. Mr. Willson qualifies as an environmental professional and is a Licensed Environmental Professional (LEP) in Connecticut with over 20 years of environmental experience conducting ESAs and remedial actions in CT.

Copies of professional resumes for each staff member listed above are included in **Appendix K**.

#### 2.10 References

A list of documents referenced in the development of this report is included in **Appendix L**.

### 3.0 SITE CONDITIONS AND USE HISTORY

This section presents a descriptive summary of the use, history, and environmental setting pertaining to the Site, regional features including topography, groundwater, geology and field observations based upon the information gathered from the data sources listed in Section 2.

#### 3.1 Current Conditions and Use of the Site

##### *General Site Description*

The 2.19-acre Site is located southwest of the Raymond Street and Day Street intersection in an “Industrial” zone of Norwalk, Connecticut. The Site is utilized as a public park known as Ryan Park, and it contains a basketball court, baseball field, children’s play area and associated paved parking.

##### *Physical Setting*

Based on a CTDEEP Water Quality Classifications map, the Site is located in a GB groundwater classification area. A GB groundwater classification means that ground water is not suitable for consumption without treatment. Local groundwater flow direction was inferred from a review of the USGS topographic map, observations during the Site visit, and data provided by EDR. It is anticipated that groundwater at the Site likely flows to the east-southeast, towards Norwalk Harbor.

The Site and surrounding area are generally flat. Information documenting the bedrock geology of the Site was obtained from the “Bedrock Geological Map of Connecticut,” (Rodgers, 1985). The Site is located within the Trap Falls formation, gray to silvery, partly rusty-weathering, medium-grained schist. Bedrock outcrops were not observed on Site. According to the “Surficial Substances Map of Connecticut,” (1992), the surficial geology underlying the Site consist of mixtures of sand and gravel within individual layers and as alternating layers and artificial fill including earth materials and manmade materials.

##### *Observations*

The eastern portion of the Site consists of a baseball field. Chain link fencing was observed along the length of the eastern property boundary. A basketball court is located near the north-central property boundary while the southwest corner of the park consists of a children’s play area. Paved parking is located along the western portion of the Site parcel. No structures were observed on Site, other than a small shed near the basketball court which is reportedly utilized for the storage of park maintenance supplies. Evidence of USTs or ASTs was not observed.

#### 3.2 Past Use History

Based on information gathered from the review of historical data sources, municipal records, and interview information referenced in Section 2 of this report, the Site and surrounding area historically consisted of mud flats or marsh land associated with the Norwalk Harbor. Filling and subsequent development of the Site and surrounding area occurred sometime prior to 1884. Although there is a discrepancy with the historic 1893 topographic map depicting the Site as mud flats or marsh land, the surficial geology of the Site and surrounding area is consistent with the presence of artificial fill. Based on historic mapping, the Site was formerly utilized for various mixed use purposes including residential, commercial and industrial, and it was comprised of

numerous parcels of land with addresses ranging from 10 to 22 Raymond Street and 37 to 41 Day Street. Most notably, the northeast corner of the Site was historically utilized as a hat manufacturer consisting of several piecemealed buildings that occupied the Site from circa 1884 to sometime prior to 1922. Hat manufacturing operations identified on historic Sanborn maps included packing, curling, trimming, coloring, blocking, dyeing, planking and finishing. By 1922 a fur dress manufacturer took occupancy of the former hat manufacturing buildings (22 Raymond Street) and converted a portion of one of the buildings into a machine shop. By 1950 all of the industrial buildings, with the exception of the machine shop, at the northeast corner of the Site were demolished. New buildings, north and east of the machine shop building, were constructed in 1968 and utilized by the Norwalk Foam & Shoe Store up until circa 1978. Historic mapping indicates that the northern building was utilized as a warehouse for equipment storage and the eastern building was utilized as office space and for rubber storage.

The northwest corner of the Site was historically developed with several dwellings fronting Raymond Street. Over the years, select dwellings were converted into storefronts or office space and the majority were razed by the late 1950s. The remaining structures at the northwest corner of the Site as well as within the central region of the Site, referred to as 10 and 20 Raymond Street on historic mapping, appear to be associated with a former junk yard (Alexander Iron & Metal Company) on Site from circa the early 1960s to the mid-1970s.

A new building located near the east-central boundary of the Site and referred to as 37 Day Street was first depicted circa 1950 as occupied by a store. By the early 1960s, the building address of changed to 39 Day Street and the building occupant identified as Miller-Stephenson Chemical Company and by Floman's Inc. in the late 1960s to early 1970s. Expansion of this building in a westerly direction is first evident in the early 1970s. A historic 1973 Sanborn depicts the Site occupant of this building as a "Salad Oil Manufacturer".

The southeast corner of the Site has historically consisted of a dwelling constructed sometime prior 1884 and an automotive garage constructed circa 1950. By 1985 all of the Site buildings were demolished with the exception of the series of former industrial buildings at the northeast corner of the Site which were subsequently demolished by 1991. The existing basketball court appears to have been installed sometime prior to 1985 and the development of the Site into the existing park occurred shortly thereafter. By the mid-1990s the Site is depicted in its current configuration including the paved parking area to the west, a basketball court to the north, a children's play area to the southwest and baseball field occupying the eastern portion of the Site.

Weston & Sampson has made inquiries with Norwalk Building Department and Planning and Zoning departments to see if file information exists for the Site; however, we have not yet received a response back about our inquiries from these departments before this report was completed. Should additional information of environmental significance be provided subsequent to the completion of this report, an addendum letter will be provided summarizing this information. The Norwalk Fire Marshal's Office did not possess any records for the Site.

### 3.3 Database Listing Discussion

The Site was not identified on any of the environmental databases.

Based on the available information, the Site does not appear to meet the definition of an "Establishment" as defined under the Connecticut Transfer Act (CTA; Connecticut General Statutes Sections 22a-134 through 22a-134e).

## 4.0 OFF-SITE PROPERTY CONDITIONS AND USE HISTORY

This section presents a descriptive summary of the use, history, and environmental setting pertaining to off-site properties, regional features including topography, groundwater, and geology and field observations based upon the information gathered from the data sources listed in Section 2.

### 4.1 Current Use of Adjoining Properties

Various commercial and residential buildings surround the Site in all directions including:

**North:** Residences, St. Paul's Church of God (7 Raymond Street) and L&L Ever Green (Nursery; 19 Day Street).

**East:** Washington Village Apartment complex.

**West:** Mt Zion Baptist Church (8 Raymond Street) and South Norwalk Community Center (96 South Main Street)

**South:** Mixed commercial and residential properties.

In general, no adverse environmental observations, visual evidence of petroleum products or hazardous substances were identified on the adjoining properties.

### 4.2 Past Use History

Based on information gathered from the review of historical data sources and results from interviews referenced in Section 2 of this report, off-site properties in the vicinity of the Site consisted of mud flats or marsh land associated with the Norwalk Harbor, and development of these areas was first noted sometime prior to 1884. Surrounding properties also consisted of a mix of residential, commercial and industrial land use. Most notably, the B.S. Taylor Manufacturing Company (a brass foundry) historically occupied the land north/northeast of the Site across Raymond Street in the late 1800s and was demolished by 1895. The land was briefly utilized as a junkyard from the early 1990s to circa 1922. Another large industrial complex referred to as the Lockwood Manufacturing Company (an iron foundry) was located east of the Site across Day Street from the late 1800s until it was demolished and replaced with the current apartment complex in the early 1940s. Other surrounding properties of environmental concern include the former occupants of the southern abutting property (43 Day Street) including the Raymond & Comstocks Hat Factory (circa 1884 through the early 1900s), Norwalk Steam Laundry (circa 1912 through the 1960s) and H&W Model Machine Company (early 1970s). Historic mapping does not depict any USTs on any of the adjoining parcel; however, the word "oil" is depicted adjacent to the one of the southern abutting buildings on the 1922 Sanborn map.

According to records on file with the City of Norwalk Health Department, a leaking UST was reported on the Norwalk Housing Authority property located east of the Site at the corner of Raymond Street and Day Street. Further information regarding this release was not available.

Remediation records were found for the former Galvis Automotive site (present day Norwalk Police Station property). Groundwater monitoring reports completed in 2012 and 2013 were found, and the reports allude to documented groundwater contamination with select volatile organic compounds (VOCs) and metals (lead and mercury). Documentation of an Environmental Land Use Restriction (ELUR) was also found on file. The ELUR covers the entire site, site contaminants covered on the ELUR include metals (arsenic, lead and mercury) and

petroleum hydrocarbons, and there also is an Engineered Control (i.e. a geomembrane liner) for a small portion of the parcel.

#### 4.3 Database Listing Discussion

The databases reviewed, as detailed in Section 2, revealed three off-site listings located within the approximate minimum search distance requiring the need for further review and evaluation. Galvis Automotive, at 69 South Main Street (currently the Norwalk Police Station property) and Acropolis Auto Body at 9 Monroe Street were both identified on the leaking UST database. The database report provides very little information about these LUST listings except for a comment that all USTs excluding a 275 gallon UST had been removed from the Galvis Automotive site in 1985, that all 4,000-gallon gasoline USTs and a 55-gallon No. 2 fuel oil UST were removed from the Acropolis Auto Body site in June 1995, and that groundwater was documented as flowing from the west-southwest to the east-southeast at these properties. The database report lists the LUST incident status as “pending” for Galvis Automotive site and “clean up initiated” for Acropolis Auto Body site.

Saint Joseph’s School located at 10 Chestnut Street was identified on the registered UST database. According to the database listing, this property utilizes a single, bare steel, 6,000-gallon heating oil UST which was installed in 1962.

#### 4.4 Vapor Encroachment Screening

In 2010, ASTM International issued its revised Standard E2600-10 entitled “Standard Guide for Vapor Encroachment (VE) Screening on Property Involved in Real Estate Transactions.” This standard guide has been adopted into the ASTM 1527-13 Phase I Environmental Site Assessment Standard. The purpose of the VE standard is to define good commercial and customary practice for real estate transactions in the United States for conducting a screening assessment directed solely at the likelihood for vapors to migrate onto a site and creating a vapor encroachment condition (VEC). Whether or not encroaching vapors result in a vapor intrusion problem requires further investigation that is beyond the scope of the standard.

A VEC is defined as the presence or likely presence of chemicals of concern (COC) in the subsurface of the Site caused by the release of vapors from contaminated soil or groundwater on or near the Site. An area of concern (AOC) as defined in E2600-10 is measured 0.33-miles from the Site for known or suspected contaminated sites with volatile organic compounds (VOCs) or semi-VOCs, and 0.1-mile from the Site for known or suspected petroleum hydrocarbon releases. The AOC may be reduced if the groundwater flow direction is known relative to the Site. Critical distances are taken into account for contaminated groundwater plumes in any direction for COCs including petroleum LNAPL accumulating above the water table at a distance of 100 feet from the edge of the plume to the Site, and 30 feet for dissolved volatile petroleum hydrocarbons.

Using the information evaluated in the Sections above, Weston & Sampson has performed a Vapor Encroachment Screening in accordance with the scope of work and limitations of ASTM Standard Practice E 2600-10 for the Site utilizing the EDR VEC application.

Based on this VEC assessment, there is a potential that a VEC exists at the Site. The perceived groundwater flow trends inferred from surrounding topographic conditions, presence of historic gasoline service stations on upgradient properties, documented release of petroleum from the aforementioned LUST sites, and the documented historic industrial use by a hat manufacturer, a foam rubber manufacturer, a junk yard, and a chemical company are all supporting lines of evidence that there is a potential for the presence of VEC at the Site.

## 5.0 DATA GAPS

All AAI reports must include an identification of “significant” data gaps (as defined in § 312.20 of the AAI final rule and § 12.7 of ASTM E1527-13), if any, in the information collected for the inquiry. Significant data gaps include missing or unattainable information that affects the ability of the environmental professional to identify conditions indicative of releases or threatened releases of hazardous substances, and as applicable, pollutants and contaminants, petroleum or petroleum products, or controlled substances, on, at, in or to the subject property. The documentation of data gaps must include information regarding the significance of these data gaps.

A data failure was encountered during historic use source review related to the “5 year interval” including the lack of Sanborn maps. This does not represent a significant data gap, as the historic sources available and information gleaned from interviews clearly indicate continuity of Site development and use.

No other data gaps, as defined by ASTM Practice E 1527-13, were noted during the Site reconnaissance and records review that would significantly affect the ability of Weston & Sampson to identify recognized environmental conditions in connection with the Site.

## 6.0 FINDINGS AND OPINIONS

Based on the information compiled in this Phase I ESA, Weston & Sampson offers the following pertinent findings and opinions for the site:

- Historic mapping and surficial geology maps indicate that the Site and surrounding area consisted of mud flats or marsh land associated with the nearby Norwalk Harbor. The Site and surrounding area were filled by 1884 and subsequently developed. The source and quality of the fill beneath the Site is unknown. **Based on our experience with fill from an unknown source, it is our opinion that the presence of fill on Site can lead to potential impacts to environmental Site media, and therefore is considered a REC.**
- Historic resources and interview documentation revealed an extensive Site history dating back to 1884 when the Site was first observed as developed. Historically, the Site consisted of several parcels of land known by various addresses along Raymond Street and Day Street and consisted of mixed residential, commercial and industrial land usage. Of the variety of Site occupants the following have been identified as posing environmental concern based on use:
  - Hat Manufacturer (circa 1884 to early 1920s); manufacturing operations likely utilized various hazardous and/or petroleum products and potentially generated hazardous and/or petroleum waste.
  - Fur Dress Manufacturer (circa 1922 to 1950); manufacturing operations likely utilized various hazardous and/or petroleum products and potentially generated hazardous and/or petroleum waste.
  - Machine Shop (circa 1922 to 1958); machine shops typically utilize a variety of petroleum products and solvents. Waste oils and spent solvents were likely generated.
  - Rubber Manufacturer (circa 1968 to 1978) manufacturing operations likely utilized various hazardous and/or petroleum products and potentially generated hazardous and/or petroleum waste.
  - Junk Yard (circa early 1960s to mid-1970s); common waste products encountered at these facilities include fuels, waste oils, used solvents, tires and/or rubber sealing agents, asbestos insulation, oil sludges, old battery casings, and compressed gas cylinders. Fuel, oil and solvent contaminated soils and groundwater may be present due to poor housekeeping, repetitive small spills, leaking bulk storage tanks and contaminated run-off from waste piles.
  - Chemical Company (circa early 1960s to early 1970s); it is unknown if the previous chemical company produced chemicals or sold chemicals. Internet research revealed that the company (Miller-Stephenson Chemical Company) provides a variety of chemical products including solvent cleaners, various lubricants, release agents and coatings.

**Based on the likelihood of these former Site occupants utilizing hazardous and/or petroleum products and possible waste generation, it is our opinion that these uses potentially lead to impacts to environmental Site media and therefore is considered a REC.**

- Several off-site upgradient parcels of environmental significance were noted. Galvis Automotive at 69 South Main Street (currently the Norwalk Police Station property at 1

Monroe Street) and Acropolis Auto Body at 9 Monroe Street were identified on the leaking UST database. The database references the removal of various tanks at these properties, and the case statuses of both sites are listed as “pending” or “cleanup initiated”. CTDEEP records for the Galvis Automotive site have revealed groundwater impacts and the presence of an ELUR across the property, and an engineered control in a small area on the property. Both the Galvis Automotive site and the Acropolis Auto Body site provide potential for a VEC at the Site. The Saint Joseph’s School site is also mentioned for its upgradient position to the subject Site and because it is registered for using a bare steel UST that was installed in 1962 which is beyond its useful life expectancy. **Based on the perceived groundwater flow inferred from surrounding topographic conditions, and documented presence of groundwater impacts, it is Weston & Sampson’s opinion that these upgradient, off-site properties have the potential to impact environmental Site media, and therefore is considered a REC.**

- Based on potential on-Site source releases and off-Site releases from upgradient properties a VEC has been identified and is considered a REC.

## 7.0 CONCLUSIONS

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM 1527-13 of 10 Raymond Street, Norwalk, Connecticut. Any exceptions to, or deletions from, this practice are described in Section 1.6 of this report.

This assessment has revealed no evidence of recognized environmental conditions in connection with the *property* except for the following:

- The presence of fill in Site from an unknown source;
- The extensive historic commercial and industrial use of the Site with various historic occupants of environmental concern;
- The potential for off-Site impacts from upgradient properties.
- The potential presence of a VEC.

## 8.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONAL

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312 and we have 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.

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