

**PHASE I ENVIRONMENTAL
SITE ASSESSMENT
NORTH SQUARE PROPERTIES
0 AND 39 CHERRY AVENUE,
177 AND 215 CHERRY STREET
WATERBURY, CONNECTICUT**

Prepared For:

City of Waterbury
Waterbury Development Corporation
and
New Opportunities for Waterbury

June 2010

Funded by:

EPA Brownfields Assessment Grant # BF96111001
To the City of Waterbury

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**PHASE I ENVIRONMENTAL
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0 AND 39 CHERRY AVENUE, 177 AND 215 CHERRY STREET
WATERBURY, CONNECTICUT**

1.0 EXECUTIVE SUMMARY

A Phase I Environmental Site Assessment (ESA) has been completed for the above-referenced properties, herein referred to as the Subject Property. The purpose of this Phase I ESA was to investigate and identify land uses that may have the potential to impact environmental conditions at the Subject Property. The work included an inspection of the property, a search of environmental databases, inquiries to the owner and state and municipal agencies, identification of physical conditions at the property, evaluation of the assembled information, and preparation of this report.

The Subject Property was developed with its current configuration during the late 1800's and early 1900's as part of a larger factory complex used for watch and clock manufacturing. The Subject Property was used primarily for watch and clock manufacturing between approximately 1895 and 1945, and later uses included manufacturing of metal products, tools, plastics, and production of leather goods, clothing and neckties. The Subject Property is located within an urban area surrounded by a mix of commercial, high density residential and formerly industrial land uses.

The assessment has revealed evidence of the historical use and storage of hazardous materials and petroleum products on the Subject Property which present a material threat of release. In addition, several offsite properties have been identified that may have the potential to affect the environmental status of the Subject Property. This assessment has revealed evidence of recognized environmental conditions in connection with the Subject Property. Further investigations to assess the environmental quality of the Subject Property are recommended.

2.0 INTRODUCTION

This Phase I ESA was funded by EPA Brownfield Assessment Grant # BF96111001 to the City of Waterbury. Leggette, Brashears & Graham, Inc. (LBG) has completed a Phase I ESA for the properties located at 0 and 39 Cherry Avenue and 177 and 215 Cherry Street, Waterbury,

Connecticut (figure 1). This Phase I ESA was conducted in conformance with the American Society for Testing Materials (ASTM) Standard E 1527-05, “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment”, and the State of Connecticut Department of Environmental Protection (CTDEP) “Site Characterization Guidance Document dated September 2007”.

2.1 Purpose

The purpose of this Phase I ESA was to investigate and identify current and past uses of the Subject Property and practices that may have led to situations referred to as recognized environmental conditions (REC), a term often used interchangeably with the term “areas of concern” (AOC). REC is defined as the 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 such substances or products into structures on the property or into the ground, groundwater, or surface water at the property. The term is not intended to include de minimis conditions that generally do not present a material risk of harm and that generally would not be the subject of an enforcement action.

2.2 Detailed Scope-of-Services

The scope of work included: a site inspection, identification of the current land uses on the Subject Property and adjacent properties; a search of federal and state regulatory databases; a review of aerial photographs, topographic maps, city directories and Sanborn fire insurance maps; and inquiries of persons knowledgeable of the property and local agencies, including the Fire Marshal and health department. Consideration of future land uses or situations on either the Subject Property or adjacent properties were outside the scope of work. Assessment of hazardous building materials and the potential risks to human health from such materials were also outside the scope of this investigation.

2.3 Significant Assumptions

Based on the topography of the Subject Property and surrounding area, and the position of the subject property relative to surface water, the general direction of groundwater flow is assumed to be

from northeast to southwest across the Subject Property. Additionally, information provided by others is assumed to be fair and accurate, especially when not able to be corroborated by other sources.

2.4 User Reliance

The following users may rely on this Phase I ESA: The City of Waterbury, Waterbury Development Corporation and New Opportunities for Waterbury.

3.0 SITE DESCRIPTION

3.1 Location and Legal Description

The Subject Property consists of four parcels of land located on the north side of Cherry Avenue and on the south and west sides of Cherry Street in Waterbury, Connecticut (figure 1). According to the City of Waterbury Tax Assessor's records, the four parcels are designated as follows:

Property Address	Assessor Map/Block/Lot Number	Acreage	Zoning Classification
0 Cherry Avenue	0255-0167-0131	0.21	RH
39 Cherry Avenue	0225-0167-0125	0.65	RH
177 Cherry Street	0255-0167-0130	0.28	RH
215 Cherry Street	0225-0167-0126	0.36	RH

Note: RH = Multi-family Residential Zone

The total acreage of the Subject Property according to the Tax Assessor's records is 1.5 acres. The approximate center of the Subject Property is defined by the coordinates 41 degrees, 33 minutes and 29.2 seconds north latitude and 73 degrees, 2 minutes and 3.1 seconds west longitude. Copies of the tax map and tax cards for the parcels comprising the Subject Property are attached as Appendix I.

3.2 Site and Vicinity General Characteristics

The Subject Property consists of four developed parcels of land totaling approximately 1.5 acres, located in the eastern portion of one city block bordered by North Elm Street, Cherry Avenue and Cherry Street in Waterbury, Connecticut (figure 1). The Subject Property is approximately rectangular in shape, with the long axis oriented approximately north-south. The subject property is improved with 6 large industrial-type buildings and one, two-story office-type

building. The Subject Property is part of a larger former-factory complex that includes parcels located adjacent to the west, east and south, and buildings located to the east, west and north of the Subject Property directly abutting site buildings. Approximately 85 percent of the acreage of the Subject Property is occupied by the buildings, and remaining areas consist of paved/gravel/unpaved parking areas, driveways and alleyways that provide access to the buildings and loading dock areas. Vehicular access to the Subject Property is provided via several shared driveways accessible from Cherry Avenue and Cherry Street.

The Subject Property is served by municipal water for potable water supply and fire suppression, and municipal sanitary sewer for sanitary waste disposal, both provided by the City of Waterbury. Electricity for the Subject Property is provided by Connecticut Light & Power (CL&P), however, according to the site contacts, all utilities to the Subject Property have been shut off or disconnected. According to the Tax Assessor's records, the buildings on the Subject Property are heated by forced air and steam heat. There are at least two fuel-oil storage tanks associated with inactive boilers on the subject property, and the source of heat is presumed to be fuel-oil. According to Yankee Gas Co., there are two inactive natural gas accounts associated with the Subject Property.

Storm-water runoff is collected in catch basins along the edges of Cherry Avenue and Cherry Street that are part of the municipal storm sewer system. In addition, the buildings on the Subject Property appear to have internal roof gutters that discharge directly to the ground surface. Storm-water runoff from the ground surface on the Subject Property is also collected in numerous drywell-type catch basins located around the property and on adjacent parcels.

The general vicinity of the subject property consists of a mix of residential, commercial and industrial development. The adjacent buildings to the west of the Subject Property consist of former factory buildings converted to offices and apartments. Adjacent land use to the east of the Subject Property consists of a light manufacturing company, several vacant properties, a commercial building occupied by a church, multi-family residential buildings and a multi-story automobile tire sales garage. Adjacent land use to the north of the subject property consists of a vacant commercial/residential structure that abuts the 215 Cherry Street parcel, a CL&P electrical transmission substation that abuts the 39 Cherry Avenue parcel, a car-repair and towing company, a parking lot and commercial properties. There is a large stone and mortar retaining wall located at the rear of the properties on the north side of Cherry Street, which is thought to form the boundary of an

impoundment associated with industrial properties located further to the north. This impoundment receives waste water discharges from nearby industry and is thought to discharge to Great Brook. Land use adjacent to the south of the subject property consists of two vacant multi-story factory buildings, a parking lot and several vacant warehouse-type structures.

3.3 Current Use of Property

The Subject Property is currently unoccupied.

3.4 Description of Structures, Roads & Other Improvements at the Site

The following information about the buildings on the Subject Property was obtained from the City of Waterbury Tax Assessor property cards, observations made during the site inspection, and other historical sources. The site building numbers used in the table below are also used to identify the buildings for the remainder of this report.

Building Number	Parcel Address	Year Built	Number of Stories	Construction Details	Square Footage	Other Building Details
1	39 Cherry Avenue	Pre-1900	5/6	Brick, stone foundation	62,000	2 elevators, steam heat, sprinklers, suspect boiler room in basement, partial basement/partial crawl space below building
2		Approximately 1921, with later modifications	1	Brick and concrete block		Boiler room, compressor area, former electrical room, 20,000-gallon fuel oil AST
3	215 Cherry Street	Approximately 1900	5	Brick, stone foundation	44,400	2 elevators, steam heat, sprinklers, boiler room, partial basement
4			5	Brick, stone foundation		Steam heat, sprinklers, full basement
5	0 Cherry Avenue	Pre-1900	2 ½	Brick	8,500	Steam heat, full basement
6	177 Cherry Street	Approximately 1900	6	Brick, stone foundation	42,000	Elevator, forced air heat, full basement
7			6	Brick, stone foundation		Forced air heat, full basement

The buildings on the Subject Property have been vacant since approximately 2004, and are currently in poor condition. The building interiors, where accessible, were observed to have brick, concrete block or sheetrock interior walls, wood floors in the upper stories and concrete floors in

basement levels, and wood or sheetrock ceilings. Fluorescent light fixtures were observed throughout the site buildings.

Sections of many of the buildings were empty. In other areas, miscellaneous debris, piles and racks of belts and other manufactured items, small machines used for sewing or clothing manufacturing, and other stored or discarded items were observed inside the buildings. Water mains feeding the fire-sprinkler systems throughout the buildings were observed in the basements of Buildings #1 and #4. Inactive boiler rooms were observed in Buildings #1, #2 and #3.

The exterior areas of the Subject Property surrounding the buildings consist of shared driveways, alleyways and courtyards that provide access to the loading docks and other areas of the buildings. These areas are paved with cobblestones, gravel, asphalt or concrete, and were generally poorly kept and overgrown. Site buildings and other relevant features are shown on figure 2.

3.5 Current Uses of the Adjoining Properties

Currently, the adjacent land use to the north of the Subject Property consists of a vacant commercial/residential building that abuts the north wall of Building #6 on the 215 Cherry Street parcel, and an electrical substation. Adjacent land use to the east of the subject property consists of light manufacturing in the abutting building at 203-205 Cherry Street, and a parking lot and two portable storage pods on the property at 197 Cherry Street. Across Cherry Street to the east of the Subject Property, land uses consist of several vacant properties, multi-family residential buildings, a commercial building used as a church, a commercial building used as a social club, and a multi-story automobile tire sales garage. Land use across Cherry Avenue to the south of the subject property consists of a parking lot, two vacant multi-story factory buildings and several vacant warehouse-type buildings. Land use adjacent to the west of the subject property consists of former factory buildings converted to offices and apartments that abut the buildings on the Subject Property. The northern portion of the adjacent former factory building to the west of the Subject Property is currently used as a restaurant, beauty salon, and a parking lot.

4.0 USER PROVIDED INFORMATION

Ms. Toni Hirst, Chief Administrative Officer for New Opportunities for Waterbury, the current owner of the Subject Property, has provided answers to the user questionnaire. A copy of the completed User Questionnaire is included in Appendix II.

A title search, environmental liens and land use restrictions search was requested by the User of Carmody & Torrance, the legal representative of the User, and was provided to LBG for use in this assessment.

4.1 Title Records

LBG reviewed the most current property deeds and referenced survey maps at the Waterbury Town Clerk's office. The following ownership information was obtained from the property deeds:

Volume/Page	Date	Parcel Address	Grantor	Grantee
6486/106	2/4/2009	0 Cherry Avenue 39 Cherry Avenue 200-205 Cherry Street 215 Cherry Street	Carpe, LLC Coastal Financial Lending, LLC	North Square Gateway Development, Inc.
6486/114	2/4/2009	Cherry Street 0255-0167-0130 (177 Cherry Street)	Bernard Cantillion	New Opportunities, Inc.
6513/108	2/4/2009	Ground lease area on smokestack and portions of 39 Cherry Street	North Square Gateway Development, Inc.	GTP Towers I, LLC

A copy of the title search conducted by Carmody & Torrance, the legal representative of the User, was provided to LBG. Select portions of the title search, including a summary of the ownership history of the four parcels that comprise the Subject Property, are included in Appendix III. A copy of the current property deeds and survey maps reviewed by LBG at the City Clerk's office are included in Appendix III.

4.2 Environmental Liens or Activity and Use Limitations

According to the title, environmental liens and land use restrictions search conducted for the User by Carmody & Torrance, there have been no environmental clean-up liens or activity or land use limitations recorded for the Subject Property.

4.3 Specialized Knowledge

The User does not have any specialized knowledge or experience related to the Subject Property or nearby properties.

4.4 Commonly Known or Reasonable Ascertainable Information

The User was aware of the following past uses of the property: manufacturing of ties and belts, production of clocks (Waterbury Clock Factory), and other manufacturing uses.

The User was aware of radium contamination and partial radium clean-up conducted on the 39 Cherry Avenue and 215 Cherry Street parcels, but was not aware of any other information indicative of a release or threatened release of hazardous or toxic substances on the Subject Property.

4.5 Valuation Reduction for Environmental Issues

The User indicated that the Subject Property was purchased at fair market value.

4.6 Owner, Property Manager and Occupant Information

New Opportunities and North Square Gateway Development, Inc. (a subsidiary of New Opportunities) are the current owners and managers of the Subject Property. The buildings on the Subject Property are currently unoccupied.

4.7 Reason for Phase I ESA

This Phase I ESA was completed as part of due diligence for pre-development work to determine the best use of the property, potential remediation costs and impacts on future use. This Phase I ESA was completed as part of a U. S. Environmental Protection Agency Brownfields Grant program to redevelop the site.

4.8 Other

The User provided a report entitled “Phase I Environmental Site Assessment, 215 Cherry Street & 39 Cherry Avenue, Waterbury, Connecticut”, issued in March 2005 by Berkshire Environmental Services and Technology, LLC. That report pertains to the 0 and 39 Cherry Avenue

parcels and the 215 Cherry Street parcel, which are a portion of the Subject Property. The findings of that report are discussed further in Section 5.2 below.

5.0 RECORDS REVIEW

5.1 Standard Environmental Record Sources

Federal, state and tribal environmental databases were reviewed for the Subject Property in an effort to determine the regulatory status of the Subject Property and to establish the location of surrounding properties with environmental records. A search of U.S. Environmental Protection Agency (USEPA) and Connecticut Department of Environmental Protection (CTDEP) databases was completed by an independent firm, Environmental Data Resources Inc. (EDR).

Based on the topography of the area and the inferred direction of groundwater flow to the southwest, releases of petroleum and hazardous substances in areas to the north, northeast and east may have the potential to impact groundwater at the Subject Property. The sites identified by the database were checked to assess whether or not they are within this potential area of concern. Search radii, Geographic Information System (GIS) maps of the appropriate databases, and a copy of the database report are included in Appendix IV.

Seventy-three databases were searched and, along with the associated search radii, are listed as follows (with TP indicating that only the target property was searched):

Environmental Record Source	Search Radius (miles)	Number of Sites Found in Database Search Results	Environmental Record Source	Search Radius (miles)	Number of Sites Found in Database Search Results
1. National Priority List (NPL)	1	0	38. Land Use Control Information System, (LUCIS)	0.5	0
2. Proposed NPL Sites	1	0	39. Environmental Liens Listing (LIENS)	TP	0
3. National Priority List Liens (NPL Liens)	TP	0	40. Property Transfer Filings (CT Property)	TP	0
4. National Priority List Deletions (Delisted NPL)	1	0	41. Hazardous Materials Information Reporting System (HMIRS)	TP	0
5. Comprehensive Environmental Response, Compensation, Liability System (CERCLIS)	0.5	0	42. State Oil & Chemical Spill Database (SPILLS)	TP	0

Environmental Record Source	Search Radius (miles)	Number of Sites Found in Database Search Results	Environmental Record Source	Search Radius (miles)	Number of Sites Found in Database Search Results
6. Federal Facility Site Information Listing (FEDERAL FACILITY)	1	0	43. RCRA Non Generator (NonGen)	0.25	2
7. CERCLIS No Further Remedial Action Planned (CERC-NFRAP)	0.5	2	44. Incident and Accident Database, (DOT OPS)	TP	0
8. Corrective Action Report (CORRACTS)	1	6	45. Department of Defense (DOD) Sites	1	0
9. Resource Conservation and Recovery Act (RCRA) Information (RCRA-TSD)	0.5	1	46. Formerly Used Defense Sites (FUDS)	1	0
10. RCRA Large Quantity Generator (LQG)	0.25	0	47. Superfund Consent Decree, (CONSENT)	1	0
11. RCRA Small Quantity Generator (SQG)	0.25	0	48. Records of Decision (ROD)	1	0
12. RCRA Conditionally Exempt Small Quantity Generator (CESQG)	0.25	0	49. Uranium Mill Tailings Sites (UMTRA)	0.5	0
13. Engineering Controls Sites List (US ENG CONTROLS)	0.5	0	50. Mines Master Index Files (MINES)	0.25	0
14. Sites with Institutional Controls (US INST CONTROLS)	0.5	1	51. Toxic Chemical Release Inventory System (TRIS)	TP	0
15. Emergency Response Notification System (ERNS)	TP	0	52. Toxic Substance Control Act (TSCA)	TP	0
16. Inventory of Hazardous Disposal Sites (SHWS)	1	5	53. Federal Insecticide, Fungicide & Rodenticide/TSCA Tracking System (FTTS)	TP	0
17. Site Discovery and Assessment Database (SDADB)	0.5	15	54. Tracking System Administrative Case Listings, (HIST FTTS)	TP	0
18. List of Landfills/Transfer Stations (SWF/LF)	0.5	0	55. Section 7 Tracking Systems (SSTS)	TP	0
19. Leaking Underground Storage Tank (LUST) List	0.5	24	56. Integrated Compliance Information System, (ICIS)	TP	0
20. Indian Leaking Underground Storage Tanks, (INDIAN LUST)	0.5	0	57. PCB Activity Database System (PADS)	TP	0
21. Underground Storage Tank (UST) Data	0.25	11	58. Material Licensing Tracking System (MLTS)	TP	0
22. Marine Terminal and Tank Information, (AST)	0.25	0	59. Radiation Information Database, (RADINFO)	TP	0

Environmental Record Source	Search Radius (miles)	Number of Sites Found in Database Search Results	Environmental Record Source	Search Radius (miles)	Number of Sites Found in Database Search Results
23. Indian Underground Storage Tanks, (INDIAN UST)	0.25	0	60. Facility Index System/Facility Identification Initiative Program Summary Report (FINDS)	TP	TP
24. FEMA-Owned Underground Storage Tanks (FEMA UST)	0.25	0	61. RCRA Administrative Action Tracking System (RAATS)	TP	0
25. Environmental Land Use Restriction (AUL) Sites	0.5	0	62. Connecticut Leachate and Wastewater Discharge Sites (LWDS)	1	23
26. Voluntary Remediation Sites (VCP)	0.5	0	63. Hazardous Waste Manifest Data (MANIFEST)	0.25	21
27. Indian Voluntary Cleanup Priority Listing (INDIAN VCP)	0.5	0	64. Dry Cleaners	0.25	0
28. Connecticut Brownfields Inventory (BROWNFIELDS)	0.5	0	65. Enforcement Case Listing (ENF)	TP	0
29. Listing of Brownfield sites (US BROWNFIELDS)	0.5	0	66. Wastewater Permit Listings (NPDES)	TP	0
30. Torres Martinez Reservation Dump Locations (DEBRIS REGION 9)	0.5	0	67. Permitted Air Source Listings, (AIRS)	TP	0
31. Open Dump Inventory (ODI)	0.5	0	68. Indian Reservations, (INDIAN RESERV)	1	0
32. Recycling Facilities (SWRCY)	0.5	0	69. State Coalition for Remediation of Drycleaners (SCRD)	0.5	0
33. Indian Open Dump Sites, (INDIAN ODI)	0.5	0	70. PCB Transformer Registration Database (PCB TRANSFORMER)	TP	0
34. US Department of Justice Clandestine Drug Labs (US CDL)	TP	0	71. Coal Combustion Residues Surface Impoundments List (COAL ASH EPA)	0.5	0
35. Clandestine Drug Labs (CDL)	TP	0	72. Sleam-Electric Plan Operation Data (COAL ASH DOE)	TP	0
36. National Clandestine Laboratory Register (US HIST CDL)	TP	0	73. Manufactured Gas Plants	1	1
37. CERCLA Liens Information (LIENS 2)	TP	0			

The Subject Property (Waterbury Neckwear, 39 Cherry Ave) was listed in the FINDS database. The details provided indicate that this facility has been listed in the CTDEP Site Information Management System (SIMS), an indication that there may be environmental issues associated with this facility. The database search results did not provide any other details pertaining to this facility.

Fifty-four (54) sites were identified in the search of databases to be within the ASTM recommended search distances. Of the 54 sites identified, the following are located adjacent to or within an up-gradient position relative to the subject property:

- Ville Swiss Automatic, Inc., located at 215 Cherry Street, is listed in the CT Manifest Database. This property is thought to be located in the adjacent building referred to in Tax Assessor records as 203-205 Cherry Street, located to the east of the Subject Property. According to the database search results, 2 manifests are on file for this facility. Manifest details included a date of March 24, 2000 for both manifests, and material details included shipments of 13 drums and 7 drums of “combustible liquid, NOS”, UNNA code 1993. This property is located on the west side of Cherry Street, south of the 215 Cherry Street parcel, north of the 177 Cherry Street parcel, east of the 39 Cherry Street parcel, and northeast of the 0 Cherry Street parcel. Based on the adjacent, up-gradient position, releases on the 205 Cherry Street property may have the potential to impact portions of the Subject Property.
- Several listings were found for 289 Cherry Street, located approximately 100 ft west-northwest of the Subject Property, as follows:
 - Former Gasoline Service Station, 289 Cherry Street, was listed in the LUST database. The database search results indicate that an incident was reported on August 23, 1989, contamination was discovered during UST removal, the entire site was excavated down to 14 feet, contaminated soil was removed, and samples were collected. The status of the site is listed as “cleanup initiated”.
 - Abandoned Gas Station, 289 Cherry Street, was listed in the UST database. According to the database search results, 6 USTs (3 containing heating oil, 3 containing gasoline) were registered for the site. The date last used is listed as August 1, 1989, and all of the USTs are listed as having been removed.
 - Leader Oil Company, 289 Cherry Street, is listed in the CT Manifest database. According to the database search results, 2,700 gallons of “waste flammable liquid, NOS”, UNNA code 1993, was removed from the site on August 22, 1989.

The 289 Cherry Street property is located in a cross- to down-gradient position relative to the Subject Property. As such, this site may not have the potential to impact the environmental quality of the Subject Property; however it is noted here due to its close proximity to the Subject Property.

- Three listings were found for 232 North Elm Street, the adjacent property located to the west of the Subject Property, as follows:
 - New Opportunity of Waterbury, 232 N Elm Street, was listed in the CT Manifest database. According to the database search results, 3,200 pounds of “hazardous waste, liquid, NOS”, UNNA code 3082 were removed from the site on January 2, 2004.
 - New Opportunities for Waterbury, 232 North Elm Street, was listed in the CT Manifest database. According to the database search results, 3,200 pounds of waste code “D008-lead 5.0 mg/l TCLP”, UNNA code 3082, was removed from the site on January 2, 2004.
 - Advanced Excavation, 232 North Elm Street, was listed in the CT Manifest database. Manifests indicated that several shipments of “env. Hazardous substance liquid, NOS” were removed from the site between 1999 and 2002. In addition, one manifest for removal of “environmentally hazardous substances, solid”, UNNA code 3082 was listed for the site.

The 232 North Elm Street property is located adjacent to the Subject Property in a down-gradient position; however it is noted that the building located on this property abuts buildings on the Subject Property, and both were part of the same historic factory complex. As such, the possibility exists that similar operations were carried out or similar materials may have been used in the buildings on both properties, including radium.

- Several listings were found for a large industrial complex located on North Main Street to the north and northeast of the Subject Property, as follows:
 - Owens-Brockway Closure & Specialty Products, located at 574 North Main Street, is listed in the CT Manifest database. According to the database search results, 1 drum of “flammable liquid, NOS”, UNNA code 1993, was removed from the site on February 13, 2001.
 - Radio Research Instrument Co., located at 584 North Main Street, is listed in the NY Manifest database. According to the database search results, 2 drums of waste code “B003-petroleum oil with 500 ppm or > PCB” was removed from the site on April 1, 2005. An additional listing for this site indicated that 1 drum of “paint or paint related material”, UNNA code 1263, was removed from the site on April 1, 2005.
 - The EPAC Co., 730 North Main Street, is listed in numerous databases, and the environmental issues and status of the site is summarized here based on the database search results. The site has been subject to consent orders, liens, and numerous notices of violation; was formerly registered as a RCRA large-quantity generator of corrosive waste, PCB waste, halogenated solvents, metals and ignitable wastes; and the site has an NFRAP (No Further Remedial Action Planned) status on the NPL (National Priority List). The site is also listed as a State Hazardous Waste Site with reported waste disposal to a lagoon or water body, and one release was reported to CTDEP Oil and Chemical Spills Response Division (OCSR).

- EPAC Strip and Dip, no address listed in the search results; however the name and location correspond to the same industrial complex located at 730 North Main Street. This site was listed in the Leachate and Wastewater Discharge (LWDS) database. The discharge location is listed as “surface”, and the status is listed as “inactive”.
- Great Brook Industrial Park, no address listed in the search results; however the location corresponds to the same industrial complex. This site was listed in the LWDS database. The discharge location is listed as “ground”, and the status is listed as “inactive”.

This site is located in an up-gradient position relative to the Subject Property. In addition, a pond/wetland area on this site is contiguous with Great Brook, which appears to flow beneath Cherry Street and North Elm Street to the west and northwest of the Subject Property via a culvert or storm sewer. Based on the location and known environmental issues related to the North Main Street site, this site would have the potential to adversely impact the environmental quality of the subject property.

Based on the information listed in the database search results, the Subject Property has been identified as potentially having environmental issues or pertinent environmental records. In addition, the above-mentioned three cross-gradient and up-gradient properties and one adjacent, down-gradient property were identified as having known environmental issues. These properties may have the potential to affect the environmental status of the Subject Property, and also indicate that the general vicinity of the Subject Property has a commercial/industrial history and provide an indication of potentially degraded environmental quality.

5.2 Additional Environmental Record Sources

5.2.1 Previous Environmental Investigations

LBG reviewed the report “Phase I Environmental Site Assessment, 215 Cherry Street and 39 Cherry Avenue, Waterbury, Connecticut”, prepared in March 2005 by Berkshire Environmental Services & Technology, LLC, provided by the User. The Phase I ESA was performed on the 0 and 39 Cherry Avenue parcels and the 215 Cherry Street parcels of the Subject Property. The 177 Cherry Street parcel was not included in the 2005 Phase I ESA. The 2005 Phase I ESA identified the following historic uses of the Subject Property: clock manufacturing between approximately 1890 and the 1940s; offices, a bakery, a furnace company, clothing manufacturers, and tool and metal product production between the 1940’s and the 1970’s; clothing, handbag and belt manufacturing between the 1970’s and 2004; and vacant between 2004 and 2005.

The following findings with respect to hazardous materials and environmental issues were identified in the 2005 Berkshire Phase I ESA:

- One 20,000-gallon, above-ground storage tank (AST) used for heating fuel storage was located in Building #2. The AST was reported to contain approximately 3,000 gallons of heating fuel.
- One 3,000-gallon, heating-fuel UST was thought to be located beneath the floor of Building #3. The exact location and contents of the UST were not confirmed.
- One 3,000-gallon, heating-fuel UST was thought to be located between Buildings #1 and #5. The exact location and contents of this UST were not confirmed.
- Drums and containers of paints, adhesives and other materials were observed in various areas of the site buildings.
- Pallets with containers of paints and other items were observed beneath trailers located to the north of Building #2.
- A flammable liquids vault was located in Building #2.
- A former site occupant used chlorinated solvents for the manufacture of metal products.
- A PCB spill was reported in 1989 due to oil leaking from a discarded transformer. Follow-up testing by CTDEP indicated that the oil did not contain PCBs.
- Wood flooring in various parts of the buildings has known radium contamination due to historic clock manufacturing activities. Remedial activities were conducted in 2003-2004 by the CTDEP, however the project was not completed, and radium-contaminated flooring remains in some of the buildings. Areas identified as “affected areas” for radium contamination were listed as the 2nd, 3rd, 4th, and 5th floors of the former Belco company in Building #1 and #3. Radium is also allegedly present in dust within Building #6.
- Florescent light fixtures were observed throughout the buildings, and unused fluorescent light fixtures were observed in a basement.
- Suspect asbestos-containing materials (ACM) were observed throughout the site buildings. In addition, ACM were discovered during the removal of radium-contaminated flooring. Lead-based paint may also be present in the site buildings.
- Neighboring properties were not thought to present any environmental risk to the site.
- The site was thought not to be an establishment, as defined in the CT Transfer Act.

The 2005 Phase I ESA recommended that a Phase II Subsurface Investigation be conducted on the site to assess soil and groundwater quality with respect to past uses of the property. Additional recommendations included locating the two 3,000-gallon USTs, appropriate registration, removal and collection of closure samples for all site USTs; further radium remediation coordinated with CTDEP prior to any other renovation activities; conducting asbestos and lead-based paint surveys of the site buildings; and appropriate disposal of all materials, including fluorescent light ballasts.

The 2005 Phase I ESA also stated that a stream named Great Brook flows in a southerly direction through an underground conduit between the western portion of the site and North Elm Street. The location of the stream or conduit is not depicted on the site plan, and the source of the information regarding the stream is not listed in the text of the report.

5.2.2 State Environmental Records Search

LBG conducted a search of environmental reports on file at the CTDEP for the Subject Property and adjacent properties suspected to have environmental issues. The following is a list of CTDEP programs and departments that contained files for the Subject Property and/or adjacent properties.

Underground Storage Tank Enforcement Program

There were no records or files for the Subject Property. Several records were found in the UST Program Database for 289 Cherry Street as follows:

- A Leaking Underground Storage Tank (LUST) report for “Former Gasoline Service Station” dated August 23, 1989 indicated that contaminated soil was encountered and removed during UST removal.
- A UST Data Report for Leader Oil Company, 289 Cherry Street indicated that 3 heating-oil USTs are currently in use, and four gasoline USTs were removed in 1989.

Emergency Incident Report Database (1996-present) and Scanned Oil & Chemical Spills and Correspondence Records (Waterbury, 1972-2007)

These files were queried for information or reported incidents either on or in the vicinity of the Subject Property, with the following findings:

- Numerous items were filed for 232 North Elm Street/Great Brook in 1980, including three CTDEP Oil Spill Reports that describe a solvent odor thought to be from nearby industry/dumping; several sets of surface water sample results collected by CTDEP, one set of results indicated that trichloroethylene, acetone, xylenes and other volatile organic compounds (VOCs) were detected; and CTDEP and Waterbury Health Department correspondence regarding a written complaint about people working in the building experiencing physical symptoms due to unidentified odors within the buildings.
- Several other Emergency Incident reports filed for 232 North Elm Street/NOW Building in the years 1986, 1998, 2006 and 2007 describe complaints of a similar nature regarding odors, oily sheens and suspected contamination of Great Brook.
- An Emergency Incident Report dated August 23, 1989 was filed for Leader Oil Co. at 289 Cherry Street. The incident is described as contamination discovered during the removal of tanks. The attached report summary indicates that all tanks were removed, the contents were listed as gasoline, kerosene, diesel and #2 oil, and the report lists soil and groundwater contamination were evident. Follow-up soil sampling results were attached to the report.
- An Emergency Incident Report dated July 17, 1989 was filed for Seri-Print at 215 Cherry Street. The incident is described as possible PCB oil leaking from transformer. The status is listed as Open, with a note that the case was referred to the PCB division.
- An Emergency Incident Report dated January 4, 2007 was filed for the location Cherry Street and North Elm Street. The release is described as “unknown amount of fuel-oil into Great Brook possibly coming from Stolfi Oil Co”. The status is listed as Closed.
- An Emergency Incident Report dated May 19, 2009 was filed by Connecticut Light & Power for 253 Cherry Street. The incident is described as a release of 3 gallons of dielectric transformer oil to the ground surface. The status is listed as Closed.

Hazardous Waste Program

There were no records or files for the Subject Property in the CTDEP Hazardous Waste Program files. A search was also conducted of the CTDEP Hazardous Waste Manifests Database (1984-2007) for relevant street addresses and occupant names for the Subject Property and nearby properties. The Subject Property was not listed in the Hazardous Waste Manifests Database. The following abutting or nearby properties had records in the database:

- Ville Swiss Automatics, 205 Cherry Street
- Lead Oil Company, 289 Cherry Street
- New Opportunities for Waterbury, 232 North Elm Street

- Advanced Excavation, 232 North Elm Street
- Yankee Gas, North Elm Street

A record in the Hazardous Waste Manifest indicates that these sites have generated and shipped hazardous materials, or have filed for an EPA Hazardous Waste Generator ID number in order to ship hazardous materials.

Industrial Files

Two P-5 industrial inspection forms were filed for one former occupant of the Subject Property, as follows:

- A P-5 form dated April 12, 1962 for Lakewood Metal Products, Inc., 39 Cherry Ave, indicated that the company manufactured lipstick cases, pen, pencil and bottle caps and eyelets. Processes were listed as machining, washing, buffing, lacquering and assembly. Wastes were listed as containing soaps, detergent, and sawdust. The form indicates that industrial wastewater is discharged to a stream, and the receiving water body is listed as Great Brook. The form also indicates the presence of municipal sewer and storm sewer.
- A P-5 form dated February 16, 1967 for Lakewood Metal Products, Inc., 39 Cherry Ave indicated that the company manufactured lipstick. Processes listed were the same as the 1962 form with the addition of degreasing. Wastes were listed as containing caustic soda, mild alkali soluble coolants and trichloroethylene. Other notes on the form indicate that waste materials are “carted away”, parts are either washed or degreased, not both; a storm sewer serves many industries in the area and likely discharges to the Naugatuck River; and the company leases the property from Cherry Realty, Inc.

In addition, a P-5 form dated September 26, 1978 for Interstate Diesel, Cherry Street was also reviewed. Processes were listed as rebuilding of diesel engines, alkaline cleaner dip tank and hose rinse, solvent cleaner. Wastes were listed as alkaline cleaning solution, grease and oil, diesel fuel. Other notes on the form indicate that the property was owned by M. Aron Corp. (former owner of the Subject Property), dip tank and rinse tanks discharge to a drain in an alley, parts washed with diesel fuel and hosed off near storm drain in alley, and storm drain is a tributary to Great Brook. Based on the information in this P-5 form, the exact location of this facility cannot be determined, but based on the address and other information, the possibility exists that this business may also have been located on or near the Subject Property.

Remediation Program Files

There were no files or reports for the Subject Property in the CTDEP Remediation Program files. Several environmental investigation reports were filed for a nearby property located on the east side of the intersection of North Main Street and North Elm Street to the east of the Subject Property. The environmental reports identified historic land uses including a dry cleaner; identified soil, soil vapor and groundwater contamination by chlorinated VOCs; and conducted remediation activities and air sparging to remediate the site prior to construction of a day care facility.

Water Orders

The CTDEP Water Orders files contained one document for a former occupant of the Subject Property. Order No. 635, issued on December 18, 1967 for Lakewood Metal Products Company, indicated that Lakewood was causing water pollution. The order stated that the company should install facilities to assure adequate pre-treatment of waste waters to remove metal ions, neutralize acidity, remove oils and oil base materials, and to ensure waters are discharged appropriately to the Waterbury municipal sewer system.

PCB Program Files

One PCB Program file pertaining to a former occupant of the Subject Property, Seri-Print, 215 Cherry Street was reviewed for relevant information. In summary, the incident filed for this address concerned two electrical transformers that were discarded in a dumpster on the property. The transformers leaked while in the dumpster, and CTDEP and a consultant collected samples for PCB analysis. Sample results indicated that the material collected from the transformers did not contain PCBs.

Copies of select files reviewed at CTDEP are included in Appendix V of this report.

5.3 Physical Setting Sources

The land surface at the Subject Property ranges in elevation from approximately 340 to 370 feet above mean sea level. The topography of the Subject Property slopes to the south and west.

Bedrock at the Subject Property is mapped as the Waterbury Gneiss, which is described as a gray to dark-gray, fine- to medium-grained schist and gneiss (Rodgers, 1985).

According to the “Surficial Materials Map of Connecticut,” (1992), the unconsolidated sediments overlying the bedrock are mapped as thin glacial till generally less than 10 to 15 feet thick (Stone et al., 1992). Glacial till is an ice-deposited mixture of clay, silt, sand, gravel and boulders capable of yielding small supplies of water.

According to the United States Department of Agriculture web soil survey, the shallow surficial soils on the Subject Property are mapped as Urban Land and Udorthents-Urban Land Complex. These units are generally described as being well drained, having 0 to 25 percent slopes, and being composed of loam to very gravelly sandy loam and other materials of anthropogenic origin.

Groundwater beneath the Subject Property has a CTDEP water-quality classification of “GB”. A “GB” water-quality classification is assigned to groundwater that is within a historically highly urbanized area or an area of intense industrial activity and where public water supply service is typically available. Class “GB” groundwater may not be suitable for human consumption without treatment due to waste discharges, spills or leaks of chemicals or land use impacts (CTDEP, 1996). Based on the topography of the area, the general direction of groundwater flow is estimated to be from northeast to southwest across the Subject Property.

The nearest mapped surface water body is an unnamed pond located approximately 200 ft north of the subject property. The CTDEP surface water quality classification for this pond is “A”. Class “A” designated uses include habitat for fish and other aquatic life and wildlife; potential drinking water supplies; recreation; navigation; and water supply for industry and agriculture. The CTDEP water-quality classification of the Mad River, located approximately $\frac{3}{4}$ mile south of the Subject Property, is “B”. Class “B” designated uses include habitat for fish and other aquatic life and wildlife; recreation; navigation; and industrial or agricultural water supply. The surface water quality classification of the Naugatuck River, located approximately $1\frac{1}{4}$ miles west of the subject property is “C/B”, which indicates that due to point or non-point sources of pollution, surface water quality is currently not meeting the Class “B” standards.

According to USGS and CTDEP mapping provided with the EDR database search results, there is one public-water supply well within 1 mile of the Subject Property. Based on descriptions provided with the database search results, this location appears to be a Waterbury Water Department pumping station facility, and is located approximately $\frac{3}{4}$ mile west of the subject property near the

east bank of the Naugatuck River. Based on the location of this facility, any potential environmental issues on the Subject Property would not have the potential to adversely affect this public water supply facility.

According to FEMA 100-year and 500-year flood zone map overlays included with the EDR radius search results (FEMA Flood Electronic Data), the subject property is not located within the 100-year or 500-year flood zone boundary.

According to the Natural Diversity Areas Database (CTDEP, 2002), the subject property is not mapped or identified as a Natural Diversity Area.

The leachate and wastewater discharge map for the Housatonic River, Hudson River, and Southwest Coastal Basin indicated that there are eight sites within a ½-mile radius of the subject property (CTDEP, 1997). Of these sites, five are situated at lower elevations and/or down-gradient positions relative to the Subject Property. The three sites located topographically and hydraulically up-gradient of the Subject Property are as follows:

- Chase Brass & Copper, industrial water, metal-bearing discharge is located approximately ¼ mile north-northeast of the Subject Property
- EPAC Strip & Dip, industrial water, metal finishing discharge is located approximately 1/3 mile north-northeast of the Subject Property
- Oil & Chemical Spills reported spill, Great Brook Industrial Park, illegal discharge of #2 fuel-oil is located approximately 1/3 mile north-northeast of the subject property.

Based on the up-gradient locations and the nature of the discharges, these sites may have the potential to adversely affect the environmental status of the Subject Property.

The Subject Property is located in an area with moderate potential for radon (CTDEP, 1997). According to the CTDEP, the description of “moderate” potential is based on 22 percent of sampled homes having basement air radon concentrations greater than 4 pCi/L (pico Curies per liter). Measures to reduce radon concentrations are generally recommended when the concentration exceeds 4 pCi/L. Two potential pathways for radon exposure are typically present. The first pathway is radon emanating from bedrock on a property and the second is from water usage from an onsite groundwater supply well. The potential for radon exposure via the first pathway occurs most frequently when there are below-grade rooms. There are basement levels in many of the buildings on the Subject Property and radon exposure via this pathway may be a potential concern for the

Subject Property. The potential for radon exposure via the second pathway is highly unlikely at the Subject Property because the potable water is obtained from a public water-supply system.

5.4 Historical Use Information on the Property

Aerial Photographs

Aerial photographs for the years 1940, 1955, 1963, 1975, 1985, 1991, and 2006 were reviewed with respect to historic land uses on the Subject Property.

In the 1940 aerial photograph, the Subject Property appears to be developed with its current configuration of buildings. A tall chimney stack is discernible on the northern portion of the Subject Property. The individual use of the buildings and detailed site features cannot be determined based on the resolution of the photograph.

The layout of the Subject Property appears similar to its current configuration in the 1955, 1963, 1975, 1985, 1991 and 2006 aerial photographs. It is noted that the 1975 and 1985 aerial photographs have poor resolution, and individual features on the Subject Property are not discernible in these photographs. Copies of the noted aerial photographs are included in Appendix VI of this report.

Historical Topographic Maps

United State Geological Survey (USGS) topographic quadrangle maps for the years 1904, 1955, 1968, 1972, and 1984 were reviewed with respect to historical land uses on the Subject Property.

In the 1904 topographic map, the Subject Property and surrounding areas are depicted as being developed, but individual features and buildings are not depicted. There is a stream running approximately north-south on the adjacent block to the north of the Subject Property, however the location of the stream cannot be seen further south due to other map features.

The 1955 topographic map shows the Subject Property to be developed with industrial-type buildings.

The 1968, 1972 and 1984 topographic maps show the subject property as having urban-type development, but individual features and buildings are not shown. Copies of the historical topographic maps reviewed for this investigation are included in Appendix VII of this report.

Sanborn Fire Insurance Maps

A search was conducted for historic Sanborn Fire Insurance maps by EDR, Inc. The EDR search results provided Sanborn maps for the years 1884, 1890, 1895, 1901, 1921, 1950, 1956, 1959, 1963, 1967, 1972 and 1977 that provided coverage of the Subject Property and surrounding areas. The following information was obtained from the Sanborn maps regarding historical uses of the Subject Property:

Year	Parcel Number/ Building Number	Description of Land Use	Notes
1884-1890	0 Cherry Avenue	Residential development and an office building associated with Waterbury Clock Co.	
1895-1901	0 Cherry Avenue Building #5	2-story office building associated with Waterbury Clock Co.	Approximately the western half of the current Building #5
1921	0 Cherry Avenue Building #5	Fire Department Headquarters and offices in existing building 1-story addition to the east of existing building, laboratory and offices	Approximately the same footprint as the current Building #5
1950-1956	0 Cherry Avenue Building #5	A.V.W.W. Club Bowling in basement level	Possible office or social club Passway connects Buildings #1 and #5
1959-1977	0 Cherry Avenue Building #5	Bakery in western portion of building Storage in eastern portion of building	Passway connects Buildings #1 and #5
1884-1890	39 Cherry Avenue	Storage buildings and a stable associated with Waterbury Clock Co.	
1895	39 Cherry Avenue Building #1	2 industrial buildings (4- and 5-story) associated with Waterbury Clock Co.	
1901	39 Cherry Avenue Building #2	Several storage buildings and other outbuildings associated with Waterbury Clock Co.	
1921	39 Cherry Avenue, Building #1	6-story industrial building associated with Waterbury Clock Co. 1 st floor-shipping room 2 nd floor – machinery 3 rd & 4 th floors – watch movement 5 th floor – finishing 6 th floor - packing	Entire building is listed as 6 stories, 2 elevators in building
1921	39 Cherry Avenue Building #2	1-2-story building associated with Waterbury Clock Co. Engine room (adjacent to Building #1) Main portion of building is occupied by 5 steam boilers, pump house	Square brick chimney located to the west of current chimney/stack location. Fire pump depicted in location of current circular chimney stack
1950-1959	39 Cherry Avenue Building #1	Loft Building layout appears similar to 1921 layout; no description of building occupant(s)	Passway connects Buildings #1 and #5

Year	Parcel Number/ Building Number	Description of Land Use	Notes
1950-1959	39 Cherry Street Building #2	Boiler room added to southeast corner of building Rectangular structure of unknown use in southwest corner of building	Building use not listed, Square chimney not shown, circular structure depicted in location of current chimney stack
1963-1977	39 Cherry Avenue Buildings #1 and #2	Buildings and uses appear similar to earlier Sanborn maps, but appear to be associated with Enterprise Properties, Inc.	
1884-1895	177 Cherry Avenue 215 Cherry Avenue	Residential development	
1901	177 Cherry Avenue Buildings #6 and #7	4-story industrial buildings associated with Waterbury Clock Co.	
1901	215 Cherry Avenue	Residential development and outbuildings associated with Waterbury Clock Co.	
1921	177 Cherry Avenue Building #6	6-story industrial building associated with Waterbury Clock Co. 1 st floor – shipping 2 nd floor – frame making 3 rd floor – gear making 4 th floor – clock repair 5 th floor – watch repair 6 th floor - storage	1 elevator in building
1921	177 Cherry Avenue Building #7	6-story industrial building associated with Waterbury Clock Co. 1 st floor – shipping 2 nd floor – presses 3 rd floor – gear room 4 th floor – model room & machine room 5 th floor – watch repair 6 th floor - storage	
1921	215 Cherry Avenue Building #3	5-story industrial building associated with Waterbury Clock Co. 1 st floor – inspecting 2 nd floor – watch dials 3 rd floor – watch fitting 4 th floor – watch finishing 5 th floor - storage	Elevator in building
1921	215 Cherry Avenue Building #4	5-story industrial building associated with Waterbury Clock Co. 1 st floor – carpenter shop 2 nd & 3 rd floors – watch assembling 4 th floor – hair spring department 5 th floor – assembling	Elevator in building
1950-1959	177 Cherry Street Building #6	Loft Building layout appears similar to 1921 layout; no description of building occupant(s) 1-story addition & possible loading dock on south side of building	

Year	Parcel Number/ Building Number	Description of Land Use	Notes
1950-1959	177 Cherry Street Building #7	Loft Building layout appears similar to 1921 layout; no description of building occupant(s)	
1950-1959	215 Cherry Street Building #3	Loft Building layout appears similar to 1921 layout; no description of building occupant(s) 1-story addition on north side of building	Elevator is not shown in this building
1950-1959	215 Cherry Street Building #4	Loft Building layout appears similar to 1921 layout; no description of building occupant(s)	
1963-1977	177 Cherry Avenue Buildings #6 and #7 215 Cherry Avenue Buildings #3 and #4	Buildings and uses appear similar to earlier Sanborn maps, but appear to be associated with Enterprise Properties, Inc.	

In addition, the Sanborn maps from 1884 through 1977 depict water mains on all streets surrounding the Subject Property, which indicates that the Subject Property and surrounding areas were likely served by public water during this time period. Hydrants are depicted along the streets and on industrial properties adjacent to the Subject Property beginning with the 1884 Sanborn maps. Following the industrial development of the Subject Property the Sanborn maps indicate that the site buildings contain sprinkler systems, another indication of public water supply. Copies of the noted Sanborn maps are included in Appendix VIII of this report.

Historical City Directories

Historical city directories were reviewed as far back as 1890 for the Subject Property to identify past land uses. City directories were searched at approximately 5-year intervals, where available, for the current addresses of the Subject Property and by the nearest cross streets in cases when unnumbered properties were listed. Addresses or properties that are not listed in the directories provide indication that a building on a parcel is no longer present, or a parcel was not yet developed; addresses within the directories that list individuals as the occupants are typically residential properties.

The following information, listed by parcel, was obtained from the city directories regarding historical uses of the Subject Property:

Years Listed	Address Listed in City Directory	Subject Property Parcel ID	Name	Description of Use
1890-1900	North Elm Street & Cherry Street	Unknown	Waterbury Clock Company	Clock manufacturing, description states "in business since 1857"
1910-1930	31 Cherry Street	May occupy all of Subject Property, no listings for other addresses associated with Subject Property		
1938-1943	31 Cherry Avenue	0 Cherry Ave 39 Cherry Ave 177 Cherry Street 215 Cherry Street	Waterbury Clock Company Ingersoll Division, Waterbury Clock Company	Clock manufacturing
1948	31 Cherry Avenue	0 Cherry Ave 39 Cherry Ave 177 Cherry Street 215 Cherry Street	No listing	Vacant/Subject Property may have been occupied by Benrus Watch Co. for watch manufacturing
	30 Cherry Avenue		Benrus Watch Company	
1953-1968	47 Cherry Avenue	0 Cherry Avenue	Veterans Affairs Waterbury Model Bakery	Social services, bakery
1973	47 Cherry Avenue	0 Cherry Avenue	Vacant	Vacant
1978-2007	Not listed	0 Cherry Avenue	Vacant	Vacant
1953	31, 39, 41, 55 Cherry Avenue	39 Cherry Avenue	Bernell Tool Manufacturing Cafeteria Cold Forming Manufacturing Co Cathedral Plastic Lakewood Metal Products, Inc. Perfection Screw & Rivet Co. Delson Manufacturing Co. Dibner I & Bro Vacant (41 Cherry Ave)	Tool manufacturing, metal products, plastic products, hardware, clothing manufacturing
1958	31, 39, 41, 55 Cherry Avenue	39 Cherry Avenue	Bernell Tool & Manufacturing Cafeteria Cold Forming Manufacturing Co Clarion Lingerie Lakewood Metal Products 1 st floor vacant (39 Cherry Ave) Esther Dress Dibner I & Bro Vacant (41 Cherry Ave)	Tool manufacturing, metal products, clothing manufacturing
1963	31, 39, 41, 55 Cherry Avenue	39 Cherry Avenue	Cafeteria Capri Lingerie Clarion Lingerie Lakewood Metal Products 1 st floor, 5 th floor vacant Esther Dress Dibner I & Bros Vacant (41 Cherry Ave)	Metal products, clothing manufacturing

Years Listed	Address Listed in City Directory	Subject Property Parcel ID	Name	Description of Use
1968	31, 39, 41, 55 Cherry Avenue	39 Cherry Avenue	Cafeteria Lakewood Metal Products Lakewood Metal Products-storage Waterbury Leather & Suede Esther Dress, Inc. Dibner I & Bro Waterbury Neckwear Corp.	Metal products, clothing manufacturing, leather products
1973-2007	31, 41 Cherry Avenue	39 Cherry Avenue	Vacant/not listed	Vacant
1973	39 Cherry Avenue	39 Cherry Avenue	1 st , 4 th , 5 th floors vacant	Vacant
	55 Cherry Avenue		Dibner I & Bro, clothing manufacturing and cutting department Waterbury Neckwear Corp.	Clothing/necktie manufacturing
1978	39 Cherry Avenue	39 Cherry Avenue	1 st , 4 th , 5 th floors vacant Waterbury Neckwear Corp	Necktie manufacturing
	55 Cherry Avenue		Dibner I & Bro, clothing EJC Woodcraft G & A Sportswear Project Fire Tracy A Co.	Clothing manufacturing, woodworking
1982-2002	39 Cherry Avenue	39 Cherry Avenue	Aron M Corp Belco Corp Waterbury Neckwear	Clothing/necktie manufacturing, leather products/belts
2007	Not listed	39 Cherry Avenue	Vacant	Vacant
1982	55 Cherry Avenue	39 Cherry Avenue	Debwear Co Emanon Fashions G & A Sportswear Somerset Fashions	Clothing manufacturing
1987-1990	55 Cherry Avenue	39 Cherry Avenue	The DeSalvo Organization	Unknown
1995	55 Cherry Avenue	39 Cherry Avenue	Commercial/office listings	Offices
2000-2007	55 Cherry Avenue, Not listed	39 Cherry Avenue	Vacant	Vacant
1953	177 Cherry Street	177 Cherry Street	Esther Dress Leila Dress Co. Hilda Dress Co.	Dress manufacturing
1958-1963	177 Cherry Street	177 Cherry Street	Hilda Dress Co. Leila Dress Co. Better Formed Metals	Dress manufacturing, metal products
1968-1973	177 Cherry Street	177 Cherry Street	Hilda Dress Co	Dress manufacturing
1978	No address	177 Cherry Street	Esther Dress Co	Dress manufacturing
1982-2007	Not listed	177 Cherry Street	Vacant	Vacant
1953	215 Cherry Street	215 Cherry Street	Radnor Tool & Mfg Co Waterbury Garment Corp Holgrath Corp S & W Screw Machine Products Waco Realty	Tool manufacturing, underwear manufacturing, surgical instruments, metal products

Years Listed	Address Listed in City Directory	Subject Property Parcel ID	Name	Description of Use
1958	215 Cherry Street	215 Cherry Street	Waterbury Garment Corp Thrall Manufacturing Corp S & W Screw Machine Products Uniconn, Inc. Waco Realty	Underwear manufacturing, metal stamping, metal products, instrument manufacturing
1963	215 Cherry Street	215 Cherry Street	Waterbury Garment Corp Waco Realty	Underwear manufacturing
1968	215 Cherry Street	215 Cherry Street	Capri Lingerie Clarion Lingerie	Underwear manufacturing
1973	215 Cherry Street	215 Cherry Street	Clarion Lingerie	Underwear manufacturing
1978	215 Cherry Street	215 Cherry Street	Vacant	Vacant
1982	Not listed	215 Cherry Street	Vacant	Vacant
1987-1995	215 Cherry Street	215 Cherry Street	C & R Handbags Daniel's Sportswear Starlight Fashions DUJA Ltd.	Clothing manufacturing, leather products
2000-2002	215 Cherry Street	215 Cherry Street	Waterbury Leatherworks	Leather products
2007	Not listed	215 Cherry Street	Vacant	Vacant

The following activities listed in the city directories for portions of the Subject Property provide evidence that hazardous materials may have been used on the subject property: watch making and other metal product manufacturing between approximately 1890 and 1968, and production of leather goods between approximately 1982 and 2002. In addition, clothing, necktie and underwear/lingerie manufacturing was performed on the Subject Property between approximately 1953 and 2002. Based on the information obtained from the city directories, it appears that the clothing-related activities conducted on the Subject Property consisted primarily of assembly (cutting and sewing), which generally would not involve the use of hazardous materials; however it is noted that other activities associated with clothing/cloth manufacture such as dyeing, bleaching, or cleaning may involve potentially hazardous materials.

A copy of the EDR City Directory search results is included in Appendix IX. It is noted that additional city directory information discussed in this section was obtained from the Connecticut State Library and Archives.

5.5 Historical Use Information on the Adjoining Properties

Aerial Photographs

Aerial photographs for the years 1940, 1955, 1963, 1975, 1985, 1991, and 2006 were reviewed with respect to historic land uses in the general vicinity of the Subject Property.

The 1940 aerial photograph shows dense urban development in the areas surrounding the Subject Property. There is a large factory/industrial complex to the north of the Subject Property. A surface water body, possible pond or lagoon is located on the southern portion of this industrial complex. Other development to the north of the Subject Property consists of a mix of residential and commercial development and there is an adjacent multi-story building located to the north. There are several adjacent multi-story, factory-type buildings located to the west and south of the Subject Property. Development in the general vicinity of the Subject Property to the west and south consists of a mix of residential, commercial and industrial-type development. Development to the east of the Subject Property consists of dense residential and commercial development.

Land uses in the general vicinity of the Subject Property appear similar in the 1955 and 1963 aerial photographs. In the 1963 aerial photograph, several buildings appear to have been demolished at the industrial complex to the north of the subject property and the multi-story building to the north of the subject property appears to have been demolished.

In the 1975 and 1985 aerial photographs, the general vicinity to the north, east and south of the Subject Property appears similar to the preceding photographs. Numerous buildings on several city blocks to the east and northeast of the Subject Property appear to have been demolished.

In the 1991 and 2006 aerial photographs, several city blocks to the east and northeast of the subject property appear to have been redeveloped with commercial-type buildings. There is a large 1- or 2-story, industrial-type building located one block to the south of the subject property that was not discernible on the earlier aerial photos. There are visible piles of debris or scrap on the industrial property to the north of the Subject Property, and the pond area appears to be covered with vegetation. Copies of the noted aerial photographs are included in Appendix VI of this report.

Historical Topographic Maps

United State Geological Survey (USGS) topographic quadrangle maps for the years 1904, 1955, 1968, 1972, and 1984 were reviewed with respect to historical land uses in the vicinity of the Subject Property.

In the 1904 topographic map, the Subject Property and surrounding areas are depicted as being developed, but individual features and buildings are not depicted. There is a stream running approximately north-south on the block adjacent to the north of the Subject Property, however the location of the stream cannot be seen further south due to other map features.

The 1955 topographic map shows industrial-type buildings on land to the south and north of the Subject Property. There is a large industrial-type complex located on the block to the north of the Subject Property, and there is an unnamed pond on the southern portion of this property. Other areas in the vicinity of the Subject Property are depicted as having urban development.

The 1968, 1972 and 1984 topographic maps show the areas surrounding the Subject Property as having urban-type development, but individual features and buildings are not shown. The pond located on the industrial property to the north of the Subject Property is shown on the 1968, 1972 and 1984 topographic maps. Copies of the historical topographic maps reviewed for this investigation are included in Appendix VII of this report.

Sanborn Fire Insurance Maps

A search was conducted for historic Sanborn Fire Insurance maps by EDR, Inc. The EDR search results provided Sanborn maps for the years 1884, 1890, 1895, 1901, 1921, 1950, 1956, 1959, 1963, 1967, 1972 and 1977 that provided coverage of the Subject Property and surrounding areas.

The following information was obtained from the Sanborn maps regarding historical land uses to the north of the Subject Property:

Year	Address or Description of Location	Description of Land Use
1884	Cherry Street, between North Elm Street and Vine Street	Grocery store and residential development
1890-1895	Cherry Street, between North Elm Street and Vine Street	Similar to 1884 Race (waterway) bordered by an embankment, and a brook are depicted to the north/rear of buildings along Cherry Street
1901	Cherry Street, between North Elm Street and Vine Street	Commercial buildings (shops/retail) and residential development

Year	Address or Description of Location	Description of Land Use
1921	Cherry Street, between North Elm Street and Vine Street	Commercial development (shops/retail) Residential Development Area to north of these buildings is occupied by a canal, and large pond/basin, with a stream extending southwards toward Cherry Street
1950-1967	Cherry Street, between North Elm Street and Vine Street	Commercial development Filling station (gasoline UST shown adjacent to ice house on Clock Ave, 1950 map only) Residential development Stream is depicted as an underground pipe extending south toward Cherry Street
1972-1977	Cherry Street, between North Elm Street and Vine Street	Vacant land Filling Station Residential and commercial/retail buildings
1884-1901	Adjacent property to the north of 39 Cherry Street Parcel	Residential development
1921	Adjacent property to the north of 39 Cherry Street Parcel	Coal pocket (coal storage)
1950-1956	Adjacent property to the north of 39 Cherry Street Parcel	Vacant building
1959-1977	Adjacent property to the north of 39 Cherry Street Parcel	Vacant property
1890-1921	Clock Avenue	Residential development
1921	Clock Avenue	Residential development Ice house
1950-1956	Clock Avenue	Ice house, gasoline UST depicted adjacent to ice house (1950 only)
1959-1977	Clock Avenue	Storage building, possibly garage for autos

The following information was obtained from the Sanborn maps regarding historical land uses to the south of the Subject Property:

Year	Address or Description of Location	Description of Land Use
1884	Cherry Avenue, between North Elm Street and Cherry Street	Manufacturing facility (stove trimmings, saddlery, hardware) Pond or lagoon Residential Development
1890-1901	Cherry Avenue, between North Elm Street and Cherry Street	Manufacturing facility (same as above), larger, with buildings occupying the pond area Residential Development
1921	Cherry Avenue, between North Elm Street and Cherry Street	Scovill Manufacturing Co. (foundry, soldering, plating) Glass manufacturing buildings
1950-1977	Cherry Avenue, between North Elm Street and Cherry Street	Manufacturing buildings (name and activities not listed) Benrus Watch Co. Factory
1884-1921	Maple Avenue	Residential Development
1950-1977	Maple Avenue	Vacant lots associated with nearby manufacturing Eler & Long, Inc. (paint manufacturing) Other manufacturing, names not listed

The following information was obtained from the Sanborn maps regarding historical land uses to the west of the Subject Property:

Year	Address or Description of Location	Description of Land Use
1884	East side of North Elm Street, from Cherry Street to Cherry Avenue	Salon, bar and residential development Waterbury Clock Co. (factory complex), listed processes include turning, fitting, plating, lacquering, casting, boiler rooms, gas house
1890-1895	East side of North Elm Street, from Cherry Street to Cherry Avenue	Salon, bar and residential development Brook extends from north of Cherry Street between residential buildings and the Subject Property to the Waterbury Clock Co. complex Waterbury Clock Co. has additional factory buildings and outbuildings
1901	East side of North Elm Street, from Cherry Street to Cherry Avenue	Salon, bar and residential development, brook/raceway Waterbury Clock Co. complex, raceway is not shown and additional factory buildings occupy area of raceway and areas adjacent to 39 Cherry Street parcel, factory buildings abut/attach to buildings on 39 Cherry Street parcel
1921	East side of North Elm Street, from Cherry Street to Cherry Avenue	Residential development Bottling works Waterbury Clock Co. complex, additional buildings constructed further to north, listed processes include plating & tempering, brass casting, tumbling & dipping, machining, pressing, polishing
1950-1972	East side of North Elm Street, from Cherry Street to Cherry Avenue	Filling station, 3 gasoline USTs Auto repair/club Lofts (former Waterbury Clock Co. factory complex), labeled Enterprise Properties, Inc. (1963-1977) 2 filling stations on west side of North Elm Street (1950-1967)
1977	East side of North Elm Street, from Cherry Street to Cherry Avenue	Vacant filling station Club Enterprise Properties, Inc. (Lofts)

The following information was obtained from the Sanborn maps regarding historical land uses to the east of the Subject Property:

Year	Address or Description of Location	Description of Land Use
1884	Cherry Street, between Vine Street and High Street	Residential development and grocery store
1890	Cherry Street, between Vine Street and High Street	Residential development, grocery store, photo
1895-1901	Cherry Street, between Vine Street and High Street	Residential development Church Die sinker

Year	Address or Description of Location	Description of Land Use
1921	Cherry Street, between Vine Street and High Street	Residential development with more retail buildings Church Dairy & ice cream factory
1950	Cherry Street, between Vine Street and High Street	Residential and commercial/retail buildings Church Salvation Army Dairy & ice cream factory
1956	Cherry Street, between Vine Street and High Street	Residential and commercial buildings Mattress factory Church Salvation Army Dairy & ice cream factory
1959-1977	Cherry Street, between Vine Street and High Street	Residential and commercial buildings Office Church Salvation Army Tire sales and repair garage

A copy of the EDR Sanborn map report is included in Appendix VIII of this report.

Historical City Directories

Historical city directories were reviewed as far back as 1890 for the vicinity of the Subject Property to identify past land uses. City directories were searched at approximately 5-year intervals, where available, for the current addresses of specific properties and by the nearest cross streets in cases when unnumbered properties were listed. Addresses or properties that are not listed in the directories provide indication that a building on a parcel is no longer present, or a parcel was not yet developed; addresses within the directories that list individuals as the occupants are typically residential properties. It is also noted that the 1890-1910 city directories did not provide listings by street, so land uses during these years for specific streets could not be determined.

The following information was obtained from the city directories regarding historical uses to the north of the Subject Property:

Years Listed	Address	Name	Description of Use
1920-1978	241-289 Cherry Street	Residential and Commercial listings	Single and multi-family residential, increasing commercial uses in later years
1982-2007	241-277 Cherry Street	Commercial listings and vacant buildings, few residential listings	

Years Listed	Address	Name	Description of Use
1943	256 Cherry Street	North End Ice & Fuel Co	Ice and Fuel sales
1948-1982	260 Cherry Street	Gasoline station Barone's Gas Station Barone & Whitney Vacant (1982)	Gas station
1990-2007	260 Cherry Street	Hoffler's Auto Body & Used Cars	Auto repair and sales
1958-1973	261 Cherry Street	CL&P substation	Electrical substation
1920-1953	Clock Avenue	No listings	Vacant
1963-1973	17 Clock Avenue	Paul's Beverages Riverside Bottling Co	Beverage bottling
1982	Clock Avenue	No Listings	Vacant

The following information was obtained from the city directories regarding historical uses to the south of the Subject Property:

Years Listed	Address	Name	Description of Use
1987-1990	No number, Cherry Avenue	Residential listings	Apartments
1995-2007	1 Cherry Avenue	Residential listings	Apartments
1968-1978	7 Cherry Avenue	Various manufacturing companies	Clock manufacturing
1982	7 Cherry Avenue	No information	Vacant
1987-2000	13 Cherry Avenue	Residential listings	Apartments
2000-2007	13 Cherry Avenue	Abbott Towers & Enterprise Apartments	Apartments
1938-1943	14 Cherry Avenue	White Co	Button manufacturing
1895-1920	16 Cherry Avenue	Matthews & Willard Manufacturing Co. Division of Scovill Manufacturing	Brass goods manufacturing
1930	16 Cherry Avenue	Vacant	Vacant
1938-1948	16 Cherry Avenue	Various manufacturing companies	Plating, metal manufacturing
1953-1968	16 Cherry Avenue	Not Listed	Vacant
1973	16 Cherry Avenue	Vacant Architect	Office
1978	16 Cherry Avenue	Sara Glove	Protective clothing
1982	16 Cherry Avenue	Various manufacturing and commercial listings	Metal fabrication, protective clothing, construction contractors
1987-2007	16 Cherry Avenue	No information/not listed	Vacant
1973-1978	25 Cherry Avenue	Enterprise Properties, Inc. Enterprise Properties Real Estate	Unknown
1982	25 Cherry Avenue	No information	Vacant
1973-1978	26 Cherry Avenue	Vacant	Vacant
1973-1982	27 Cherry Avenue	Various manufacturing companies	Clothing manufacturing, clock manufacturing
1953-1958	29 Cherry Avenue	Various manufacturing companies	Machining, underwear manufacturing, plastics, clock manufacturing
1968	29 Cherry Avenue	Hayden AW Co	Unknown, likely manufacturing

Years Listed	Address	Name	Description of Use
1973	29 Cherry Avenue	Bokay Tool & Manufacturing Co. Shamrock Cutters Grinding Co.	Manufacture of metal products
1938-1968	30 Cherry Avenue	Benrus Watch Co	Watch manufacturing
1973	30 Cherry Avenue	Interstate Diesel Terminal Inc	Fuel sales or engine repair
1970	30 Cherry Avenue	Vacant	Vacant
1920	Maple Avenue	Residential listings	
1930-1943	Maple Avenue	Residential Listings and manufacturing listings	Residential, paint company, metal goods manufacturing, floor surfacing
1948-1968	Maple Avenue	Manufacturing, with few residential listings Vacant listings (1973-1982)	Electro plating, printing company, metal stamping, curtain manufacturing, paint company,
1987-2007	Maple Avenue	Manufacturing and commercial listings, vacant listings	Clothing manufacturing, woodworking, vacant

The following information was obtained form the city directories regarding historical uses to the east of the Subject Property:

Years Listed	Address	Name	Description of Use
1920-1982	160-242 Cherry Street	Residential listings, few commercial/retail listings	Commercial listings consist of grocery store, plumber, Salvation Army, mattress sales, restaurant, social services, church, vacant properties
1982-2007	160-242 Cherry Street	Commercial listings, vacant, with few residential listings	
1920-1953	146, 152 Cherry Street	Dairy & ice cream manufacturer	Dairy & ice cream manufacturer
1958	152 Cherry Street	McElligott Fuel Corp	fuel company
1963-2007	152 Cherry Street	United Tire Sales Firestone Tire & Battery Gabe's Tire Factory	Tire sales, possible auto & tire repair
1920-1978	195, 201 Cherry Street	Church	Church
1982-2007	195, 201 Cherry Street	Not Listed	Vacant
1953	203 Cherry Street	Tires, Inc	Tire sales
1958-2007	203 Cherry Street	Not listed	Vacant
1953-1958	205 Cherry Street	Seri-Print Products Other metal fabrication, plating and metal finishing businesses	Sign painting, metal stamping, fabrication and finishing
1963-1978	205 Cherry Street	Vacant	Vacant
1978-2007	205 Cherry Street	Ville Automatics (1978-2007) others listed occasionally: Brooklyn Moving Co. Credit reporting companies Main Salvage Corp Fournier Andre Real Estate	Metal machining, moving company, possible storage, salvage company, offices
1953-1963	242 Cherry Street	Cleaner's	Possible dry cleaning
1968-2007	242 Cherry Street	Commercial/vacant	Appliance store, vacant

The following information was obtained from the city directories regarding historical uses to the west of the Subject Property:

Years Listed	Address	Name	Description of Use
1890-1900	North Elm Street & Cherry Street	Waterbury Clock Company	Clock manufacturing, description states "in business since 1857"
1910-1930	31 Cherry Street	Waterbury Clock Company	Clock Manufacturing
1938-1943	31 Cherry Avenue	Waterbury Clock Company Ingersoll Division, Waterbury Clock Company	Clock manufacturing
1953-1968	269 Cherry Street	Waterbury Instrument Parts	Metal products (located adjacent to the west of the Subject Property)
1973	269 Cherry Street	Vacant	Vacant
1938-1943 No listing 1948 1953-1973	289 Cherry Street	Leader Oil Co Leader Oil & Coal Co (1943) Leader Oil Co & Terminal	Fuel oil sales, coal sales
1973-2007	No Listing for 289 Cherry Street	Vacant	Vacant
1953-1968	202 North Elm Street	LSM Manufacturing Haydon AW Company	Screw machine products, electric motor manufacturing
1973-2007	202 North Elm Street	Vacant	Vacant
1953-1973	232 North Elm Street	Hadyon AW Company Leopold Furniture Co Warehouse	Electric motors-manufacturing, storage
1978	232 North Elm Street	Gruen Industries New Opportunities for Waterbury, other social service agencies	Watch manufacturing, offices
1982-2007	232 North Elm Street	Multiple office, social and municipal services	Offices
1920-1958	238 North Elm Street	Commercial listings	Veterinarian, taxi, bottling company, plumbing supply, furniture company, auto parts
1963-1973	238 North Elm Street	Elks/Goodwill lodge Brass City Tool & Die Co.	Club/lodge, metal products manufacturing
1978-2007	238 North Elm Street	Elks/Goodwill lodge	Club/lodge
1920	242 North Elm Street	Roofing company	Commercial
1930	242 North Elm Street	Auto repair garage	Auto repair
1938-2007	242 North Elm Street	No listing	Vacant
1982	700 North Elm Street	Duke's Social Club	Club/restaurant

A copy of the EDR City Directory search results is included in Appendix IX. It is noted that additional city directory information discussed in this section was obtained from the Connecticut State Library and Archives.

Information on development patterns and land uses obtained from the historical sources discussed above indicates that the vicinity of the Subject Property was heavily developed and used for industrial/manufacturing purposes since at least as early as the 1890's. The various manufacturing activities as well as other commercial uses including gas stations, coal and fuel

storage and distribution, a possible dry cleaner, and an electrical substation documented in close proximity to the Subject Property would all have the potential to release hazardous materials to the subsurface which may have the potential to impact soil or groundwater quality in the immediate vicinity of the subject property.

6.0 SITE RECONNAISSANCE

6.1 Methodology and Limiting Conditions

The site inspection was completed on March 3, 2010 by Peter Shea and Katherine Levenduski of LBG. The site contact person, Mr. John Stenson, of New Opportunities for Waterbury, arranged for two persons knowledgeable of the current safety and accessibility conditions of the site buildings to accompany LBG on the site inspection. Mr. Stenson was not present for the site inspection.

The environmental conditions of the exterior areas and portions of building interiors were assessed during the site inspection. The interiors of Buildings #5, #6 and #7 were not accessible for inspection due to safety concerns related to the structural condition of the buildings. The basement levels of Buildings #1, #3, and #4; portions of the upper floors of Buildings #1 and #3; and all of Building #2 were included in the site inspection. It is noted that the buildings on the subject property did not have electrical power at the time of the inspection. The inspection of building interiors was conducted with flashlights and spotlights, and the dim lighting conditions and miscellaneous debris located throughout the buildings limited inspection of the building interiors and floor surfaces.

It is noted that a separate hazardous building materials survey to be conducted by others is planned for all buildings on the Subject Property. As such, the building interiors were not inspected for hazardous building materials by LBG. Portions of the interiors of Buildings #1 and #3 and all of Building # 6 were inaccessible due to the reported presence of hazardous materials including radium and asbestos containing materials (ACM).

During the exterior inspection of the Subject Property, close inspection of the ground surface for staining and other issues was limited by brush and debris on the ground at the time of the inspection. Observations of site features and current land uses of adjacent properties documented during the site inspection are discussed further below.

6.2 General Site Setting

The Subject Property occupies approximately the eastern half of one city block bordered by North Elm Street to the west, Cherry Street to the north and east, and Cherry Avenue to the south. The Subject Property is sloped to the south and west. The general topography and physical setting of the Subject Property is described in Section 3.2. Surface cover, vegetation and other property conditions are described in detail below. Figure 2 illustrates the configurations of buildings and other features on the Subject Property, and figure 3 illustrates additional features observed during the site inspection and identified areas of concern (AOCs). Figures 4A through 4C depict photographs of site conditions during the site inspection.

6.3 Exterior Observations

The seven buildings on the Subject Property form part of a larger former factory complex, and are structurally connected to buildings on adjacent properties to the north, west and east. Buildings #1 through #4, #6 and #7 are interconnected, and Building #5 is a separate structure. Exterior areas surrounding the buildings consist of courtyards, driveways and alleyways, some of which are shared with adjacent properties. In general, the exterior areas of the Subject Property that provide shared access to adjacent properties are well-kept and are surfaced with pavement, concrete or cobblestones. Other exterior areas on the Subject Property are fenced to restrict access, and are generally in poor condition.

Exterior areas to the west of Building #1 consist of a paved driveway that provides access to a courtyard parking area on the adjacent property to the west, and a sloped cobblestone driveway that terminates at the southern end of Building #2. At the time of the inspection, the cobblestone driveway appeared to be used as additional parking for the adjacent apartment and office buildings. Areas along the exterior of the western portion of Building #1 were observed to be neat and well-kept. One catch basin located on the adjacent property to the west appeared to collect some type of drainage from Building #1. A small amount of water was flowing into the catch basin from a below-grade PVC pipe that appeared to originate from Building #1. Two possible former loading areas, and one vestibule that provided access to the southern elevator and stairwell were observed in the west wall of Building #1.

On the south side of Building #1 there is a large courtyard shared with Buildings #5, #6, and #7. The courtyard is paved with bricks, and a large portion of the courtyard was covered by ponded water. Numerous bags containing leaves or garbage were observed along the north wall of Building #5, and other items of miscellaneous debris were observed on the ground surface throughout the courtyard. Catch basins in the courtyard area were located off the southwestern corner of Building #1, and at the base of a set of metal stairs on the exterior of the southern corner of Building #6. Both catch basins appeared to be constructed of square, cobblestone-type walls, and no drainage pipes were observed. The catch basin adjacent to Building #6 was filled in with soil and debris and was located under ponded water.

At the base of the exterior stairwell at the southeastern corner of Building #6, a possible fill pipe was observed, an indication that a UST may have been present in this area of the Subject Property. The exact location, size or contents of the UST could not be determined, however a slight depression in the ground surface with ponded water was observed in the courtyard area to the south of the fill pipe, which may indicate the location of the UST.

Two loading areas opened into the southern courtyard. An overhead door opened onto a concrete loading platform at the south end of Building #1, and a second concrete loading platform with an adjacent elevator shaft was located in the south wall of Building #6. A 1-story brick wall extended along the south side of Building #6. One dumpster and debris and solid waste were observed in this area. This area may have historically been covered by a roof, and may have historically been used as a storage area. In addition, several open horizontal pipes and holes at ground level that appeared to be discharge points for roof drains were observed in the south walls of Buildings #1 and #6. These drains discharged to the ground surface in the courtyard area.

Other exterior areas around Buildings #5, #6 and #7 consisted of fenced alleyways that were overgrown with shrubs. The ground surfaces of these areas were covered with leaves and debris. One pole-mounted electrical transformer was observed along Cherry Street to the east of Building #7. The transformer appeared to be of an older vintage, and there was no visible information regarding PCB content of the transformer.

To the south of Building #3 there is an alleyway with a sloped concrete driveway shared with the adjacent offsite building. Three loading areas open into this driveway/courtyard area: one from Building #1, one from Building #3, and one from the adjacent, offsite property. There is a covered,

elevated wooden ramp extending from the Building #3 loading area along the south wall of Building #3. This ramp is presumed to have been used to transport materials between the loading area and Buildings #3 and #4. Debris and solid waste were observed beneath the wooden ramp and on the ground surface along the south wall of Building #3. One rusted and deteriorated 55-gallon drum containing sandy soil was observed beneath the wooden ramp.

Along the exterior east side of Buildings #3 and #4 there is a narrow fenced alleyway between the building and the sidewalk. The condition of this area was similar to other exterior areas of the Subject Property. A double doorway with concrete steps in the east wall of Building #3 provided access to Cherry Street. A pipe or conduit was observed in the alleyway running below the Cherry Street sidewalk to the basement level of Building #4. One pole-mounted electrical transformer was observed along Cherry Street to the east of Building #4. The transformer appeared to be of an older vintage, and there was no visible information regarding PCB content of the transformer.

Exterior areas on the northern portion of the subject property consisted of a small courtyard to the north of Building #2, and alleyways to the east and west of Building #2 providing access to other buildings. The northern courtyard area was surfaced with gravel. This area contained a large brick chimney stack currently used for communications transmission equipment, an adjacent fenced area containing other communications equipment, and several parked vehicles. An oily sheen was observed on the ground surface near the vehicles. Debris including what appeared to be old engine parts was observed adjacent to the exterior walls of Building #2.

The alleyway to the east of Building #2 provided access to the furnace rooms in Buildings #2 and #3. Two fill pipes and one vent pipe were observed in the east wall of Building #2, and one fill pipe was observed in the north wall of the furnace room area of Building #3. The alleyway was very overgrown with vines and shrubs, and the ground surface was covered with leaves and miscellaneous debris. The alleyway to the west of Building #2 was occupied by a dumpster, a storage trailer and piles of plowed snow. The storage trailer was not accessible to LBG. Therefore, its contents are unknown. Several wood pallets were stacked against the side of Building #2.

In addition, numerous metal chimneys, flues and other types of metal vent pipes were observed on the exterior of all of the site buildings. These features may be attributed to the presence of boilers for heat, for venting fumes or for other processes with associated manufacturing activities

formerly performed in the buildings. There was no process information available to LBG that would enable us to determine the usage of these atmospheric discharges

6.4 Interior Observations

The buildings on the Subject Property were all vacant and unused at the time of the inspection. The general condition of the buildings was poor, and conditions such as leaking roofs, wet and deteriorated wood floors, interior paint flaking and peeling, and other interior finish materials such as sheetrock buckling and separating, were observed in all of the site buildings. Windows in the lower floors of many of the site buildings were either absent or boarded up. Portions of the interiors and basements of Buildings #1, #3 and #4 were included in the site inspection, and all of Building #2 was accessible during the site inspection. The interior inspections of the site buildings, where accessible, are discussed in more detail by building.

Building #1

Building #1 runs in an approximately north-south direction across the Subject Property. The foundation of the building steps down to the south following the natural topography, and the northern portion of the building has 5 stories and a crawl space, the central portion of the building has 5 stories and a partial basement, and the southern portion of the building has 6 stories and a partial basement or crawl space.

Accessible areas of the lowermost floor/basement of Building #1 were inspected for the use or storage of hazardous materials or petroleum products. The southern portion of the lowest level of the building has a wood floor and appears to have a crawl space or basement, which was not accessible at the time of the inspection. In the lowest level in the southern portion of Building #1, there is a recessed floor pit located adjacent to the west wall. An apparatus thought to be a heater or pressure tank, and miscellaneous other debris was observed in the floor pit. The motor and electrical switchgear for the southern elevator were located adjacent to the floor pit. A water service with shut-off valve and pressure gauge used for the sprinkler system was also observed along the west wall in the southern portion of the building. In other areas of the southern portion of the lowest level of the building the following items were observed: miscellaneous building debris, extremely rusted and

corroded spray cans and 1- to 5-gallon containers of unknown contents, and small-scale motors and other electrical appliances used for manufacturing or assembly.

In the central portion of Building #1, there is a partially below-grade room, referred to in this report as the basement level, constructed of stone and concrete block walls and a concrete slab floor. This area appeared to have been used as a possible furnace room or machine room, and a slight synthetic or chemical odor was observed in this area. Several regulators, pressure gauges and possible fill pipes were observed along the east wall of the room. The pipes appeared to have been cut or truncated, and the possibility exists that a former machine, boiler or storage tank may have been located in this area. Several metal 55-gallon drums and a cart of partially full 5-gallon containers were stored in the basement room. Labels on some of the 5-gallon containers were absent or illegible, other labels indicated the following contents: roof cement, interior enamel paints, leather dye solvent, hydraulic oil, edge sealer, leather dyes and leather conditioners, leather dye finish, flammable materials, and KEM Manufacturing (description of contents was not legible). Two 5-gallon containers were tipped on the floor, and the contents, which appeared to be a light-colored glue or sealant, had spilled onto the floor. One metal 55-gallon drum appeared to be empty, and the labels were not legible. A second 55-gallon drum was approximately half full of liquid and bore labels indicating "pressure treatment" and personal protection required. Other materials observed in the basement area included stacks of metal shelves and metal clothing racks, metal file cabinets, miscellaneous pieces of wood, a rolling metal lift or hand-truck, and other items of debris and garbage. The remaining area to the north of this basement room consisted of a crawl space with a dirt floor, and was not accessible for inspection.

Several upper levels of Building #1 were briefly inspected, and were used to access other adjoining buildings. Conditions such as peeling and flaking paint, warped and detached sheetrock panels and warped floor boards indicative of water damage were observed throughout the building. Clothing racks containing belts, work tables, and piles of cloth, belts, cardboard boxes, fans, and other miscellaneous debris were also observed in the inspected portions of Building #1. The interior areas of the building, including the basement and lower levels were wet, which may be due to roof leaks, open windows, or possible leakage of water pipes within the building. Several floors of Building #1 were not accessible due to partially completed radium abatement previously conducted in the building.

There are two freight elevators located in the northern and southern portions of Building #1. The motor and switchgear controls for the southern elevator were inspected in the lowermost level of the building, and the mechanical equipment associated with the northern elevator was not accessible at the time of the site inspection.

Building #2

The southernmost portion of Building #2 adjoins the first floor of the northern portion of Building #1. Building #2 is constructed of slab-on-grade floors and does not have a basement. The southern portion of Building #2 contains a large room occupied by a spray paint booth, several work tables and miscellaneous building debris and piles of insulation, cloth, belts and metal clothing racks and shelves. Three large canisters associated with the spray paint booth were located in the paint booth area. These canisters with regulators and associated piping, and several containers of paints were observed in the spray paint booth area.

The southeastern portion of Building #2 consists of two adjoining boiler rooms. The boiler rooms contained a furnace constructed of brick and metal, an industrial-sized boiler formerly used for heating the buildings, and two compressors. In addition, four 5-gallon containers of hydraulic oil, three 5-gallon buckets that appeared to contain waste oil, one approximately half full plastic 55-gallon drum of corrosive material, rolls of felt and other debris were observed in the boiler room area.

The northern portion of Building #2 consists of a large garage-type area with an overhead door that opens to the west. The floor in various portions of the garage area consisted of concrete, asphalt, and compacted fill. Several box trucks, pick-up trucks and passenger vans were parked inside the garage area, and several piles of sand, hand tools, hand trucks, metal shelves and other building materials were stacked in various areas inside the building. A large dark stain was observed high on the north wall of the building in the vicinity of the chimney stack. The southeastern corner of the building adjacent to the boiler room is occupied by a large enclosure constructed of concrete block walls with wood framing that contains a fuel oil AST. The interior of the AST area was not accessible at the time of the inspection. Fill pipes for the AST were observed exiting the east wall of this portion of the building.

A small room on the northwestern corner of Building #2 appears to have been used as an electrical room according to exterior signs. This room has a concrete floor and was vacant at the time of the inspection, with the exception of electrical conduits located along the walls and floor.

Building #3

The lowermost level of Building #3 consisted of a partially below-grade basement level contiguous with the first floor of the northern portion of Building #1. Along the north side of the basement level of Building #3 there was a former boiler room that appeared to have been added to the building. The boiler room was constructed of a concrete floor, concrete block walls and a sloped metal roof. The interior of the boiler room contained portions of a furnace constructed of concrete and metal. Two metal pipes which appeared to be fill pipes were observed in the floor adjacent to the furnace, an indication that a fuel storage tank may have been located in this area. In addition, a small metal cabinet containing quart to gallon sized containers of flammable materials was observed along the north wall of the room. A sump with an electric pump was located near the south wall of the boiler room as depicted on figure 2. A small amount of liquid and sediment were observed in the sump area. A floor drain was observed adjacent to the sump.

The interior of the first floor of Building #3 was accessible for inspection. The conditions observed were similar to those described in Building #1, discussed above. The upper floors of Building #3 were not accessible due to partially completed radium abatement previously conducted in the building. The uppermost portion of the elevator shaft was observed on the 5th floor of Building #3. The elevator cables and electrical conduits were observed in the elevator shaft.

Building #4

The basement level of Building #4 was accessible for inspection. The basement level was mostly vacant, with a few wood work tables and several quart-sized containers of what appeared to be leather dyes or leather conditioners. An electrical control panel and water service with shut-off valve and pressure gauge used for the sprinkler system were observed on the east wall of the basement. Water seepage from the sprinkler water service was observed, and the basement floor was covered with approximately 1 to 2 inches of water at the time of the inspection.

The upper levels of Building #4 were not accessible at the time of the inspection.

Building #5

Building #5 was not accessible for inspection due to safety reasons. Basement and first floor windows were mostly boarded up, however the following observations were made from the exterior of the building. The basement level appeared to be completely vacant, and was constructed of stone foundation walls and a concrete floor. A metal flue pipe was observed along the north wall of the building, which indicated the likely presence of a furnace or boiler inside the building.

Buildings #6 and #7

Buildings #6 and #7 were not accessible at the time of the inspection due to safety concerns. Both buildings have 6 stories with partially below-grade lower levels, windows were completely missing. An elevator shaft located on the south side of Building #6 appeared to have been an addition to the building. Several metal flue pipes and a possible furnace area were observed on the first floor of Building #6. Interior floors of Buildings #6 and #7 were wood, and portions of the floors were covered with plywood or other materials due to suspected deterioration or damage to the floors.

Other Observations

The following environmental conditions are outside the scope of Phase I ESA standard ASTM-E1527-05, but are being included by LBG to provide further information about the current environmental status of the Subject Property.

Based on the age of the structures on the Subject Property, and known or previously identified manufacturing processes conducted on the premises, it is likely that additional hazardous building materials are present within the site buildings. Suspect ACM may be present in the historic furnace units in the boiler rooms, and suspect ACM pipe insulation was observed in many areas of the various buildings on the subject property. In addition, based on the age of the buildings, the potential exists that older plumbing and paints within the buildings may contain lead. Peeling and flaking paints were observed throughout the interiors of the site buildings, and as such presents a concern for health and safety.

Fluorescent light fixtures were observed throughout the interiors of the buildings, both in suspended ceiling light fixtures and as general debris within the buildings. PCBs may be present in

older fluorescent light ballasts, and if present, must be disposed of properly prior to any renovation, demolition or other activities within the buildings.

Radium contamination from historic watch and clock manufacturing activities had been previously identified within Buildings 1 and 3. Radium removal activities were conducted in 2003-2004 by the CTDEP, however the project was not completed, and radium-contaminated building materials remain in some of the buildings on the Subject Property.

At the time of the site inspection, numerous leaks and wet interior materials were observed, possibly due to open windows, roof leaks or leaking pipes within the building interiors. Warped and buckled interior materials and peeling and flaking paints were observed throughout the site buildings, and indication of water damage. The possibility exists that mold or other indoor air quality hazards are also present within the site buildings.

6.5 Adjoining Properties

The following observations were made during the site inspection regarding land uses or potential impacts to the Subject Property from adjoining properties.

A fill pipe and vent pipe for a UST were observed in the pavement surface on the north side of the adjacent building at 203-205 Cherry Street. The fill pipe was opened, and a petroleum odor and approximately one foot of what appeared to be fuel-oil were observed in the UST. The approximate dimensions of the UST were 10 ft 2 inches from grade to the bottom of the UST, and approximately 20 ft between the fill pipe and the vent pipe, which would indicate the tank has approximately 12,000 gallons capacity.

7.0 INTERVIEWS

7.1 Interview with Owner and Owner's Representative

Ms. Toni Hurst, Chief Administrative Officer for New Opportunities, the current owner of the Subject Property, provided answers to the user questionnaire. Documentation of the title search and environmental liens and land use restrictions search was provided by Carmody & Torrance, the legal representative of the User. Information provided by the User is discussed in Section 4.0 of this report.

7.2 Interviews with Occupants

The Subject Property is currently vacant and unoccupied, and as such, interviews with occupants were not conducted as part of this Phase I ESA.

7.3 Interview with Local Government Officials

LBG conducted research at the Waterbury City Hall Annex which consisted of inquires into relevant files for the Subject Property at the Planning & Zoning Department, Inland Wetlands Department, Department of Inspections (Building Department), Public Works and Engineering Department, Health Department and Fire Marshall's office.

According to Planning & Zoning Department and Inland Wetlands Department personnel, there were no zoning or wetlands files for the Subject Property. According to the Designated Inland Wetland and Watercourses of Waterbury, CT map (2003), reviewed via the City of Waterbury's GIS system, there are no mapped wetlands or watercourses on the Subject Property. The nearest mapped water body is located to the north of the Subject Property. According to the City of Waterbury Planning & Zoning Department personnel, the Subject Property is zoned RH, which is the designation for dense, multi-family residential zoning.

The following building permits were on file for the Subject Property at the Department of Inspections:

- A Building Permit dated October 10, 1967 for addition to boiler room was filed for Cherry Realty, Inc, at 39 Cherry Avenue.
- A Building Permit dated November 8, 1967 for repair of floors after a fire was filed for Dibner, Inc. at 55 Cherry Avenue.
- Two Building Permits dated July 8, 1981 for "demolition (oil tank storage)" and "demolition (two-car garage)" were filed for 177-205 Cherry Street.
- A Building Permit dated April 20, 1982 for interior alterations-coffee was filed for 55 Cherry Avenue.
- A Building Permit dated March 6, 1992 for construction of a ramp with overhead door was filed for 215 Cherry Street.
- A Building Permit dated June 27, 2006 for a telecommunication antenna to be installed on the 39 Cherry Avenue parcel.

A request was made to review additional files pertaining to the 1981 “oil-tank” permit, however the Department of Inspections staff stated that the files were in offsite storage and could not be reviewed.

The following maps depicting the Subject Property and surrounding area were reviewed at the Department of Public Works and Engineering:

- A map entitled “Waterbury Clock Co.” dated May 1912 shows the Subject Property and adjacent properties to the west that formed the Waterbury Clock complex. The configuration and layout of the buildings on the Subject Property appear similar to the current configuration, except that Building #2 is smaller and the chimney and boiler are located further west of their current locations; there is a scale located adjacent to the south of Building #1; and there is an elevated bridge between Buildings #1 and #5. In addition, on the adjacent factory property to the west of Building #1 an underground benzene tank is indicated. The benzene tank appears to have been located in the area used currently as a parking area.
- A map entitled “Great Brook Storm Water Drainage” dated 1926 illustrates the construction details and elevations of the buried conduit where Great Brook crosses beneath Cherry Street to the west of the Subject Property. The conduit is constructed of 2-foot thick unmortared stone walls, a brick floor underlain by a concrete base and concrete footings, a reinforced concrete slab cover, and there is a 6-inch diameter tile underdrain set in crushed stone beneath the conduit.
- A map entitled “Map of Land of Benrus Watch Co. Inc.” revised February 1949 shows the Subject Property and adjacent properties to the west that formed the Benrus Watch Company complex. The configuration of the buildings on the Subject Property appear similar to the current configuration, except that there is a scale located adjacent to the south of Building #1; and there is an elevated bridge between Buildings #1 and #5; there are numerous steel plates, manholes and drains located on the exteriors of the buildings; and electrical wires traverse the second floor of Building #1 to connect a “transformer house” located on the parcel adjacent to the east of the Subject Property to factory buildings adjacent to the west of the Subject Property. Building #2 is labeled “Power House” and Building #5 is labeled “Office”. The building adjacent to the north of the Subject Property is described as a coal storage building, equivalent to 3 stories. In addition, the map indicated that a storage house and another area adjacent to the west of Building #1 could be leased to CL&P for storage or construction of a vault. The survey map shows Great Brook running approximately north-south in an underground conduit to the west of the Subject Property.

Based on inquiry to the Waterbury Fire Marshall’s office on March 3, 2010, no records of underground storage tanks, spills, or the storage and disposal of hazardous materials are on file for

the Subject Property. The Fire Marshall files contained documents pertaining to underground storage tanks on two nearby properties, 260 Cherry Street and 289 Cherry Street.

Based on inquiry to the City of Waterbury Department of Public Health, Environmental Health Division submitted on February 17, 2010, no relevant records are on file for the Subject Property. Copies of select files reviewed at the Waterbury City Hall Annex and other municipal offices are included in Appendix X.

The current property deeds were reviewed at the Waterbury Town Clerk's office, and were discussed in Section 4.1 above. In addition, three survey maps referenced in the deeds were reviewed at the Town Clerk's office, as follows:

- A map entitled "Plan of a Portion of Land of Benrus Watch Co. Inc." revised December 1948 shows the 215 Cherry Street parcel and the northernmost portion of the 39 Cherry Street parcel surrounding Building #2. The buildings appear similar to their current configuration, and the uses of the buildings on the Subject Property and adjoining properties are not indicated. One small adjacent building to the east of the central portion of Building #1 is labeled "Transformer House". The transformer house is located on the parcel currently referred to as 197 Cherry Street.
- A map entitled "Map of Land of Benrus Watch Co. Inc" dated January 1949 appears similar to a February 1949 revision reviewed at the Department of Engineering, discussed above. Fewer site features are depicted in this survey map, and the buildings on the southwestern portion of the Benrus Watch Co. property are not shown.
- A map entitled "Map of Land of Benrus Watch Co. Inc." revised May 1949 appears similar to the February 1949 revision, with the following changes noted. Changes ownership are noted on some of the buildings on the Subject Property and in other areas of the complex. A portion of the coal house located adjacent to the north of the Subject Property is labeled "fuel oil storage building".

A copy of the current property deeds and survey maps reviewed at the Town Clerk's office are included in Appendix III.

7.4 Interviews with Others

LBG attempted to contact Mr. Steve Fontanez, former plant manager at the Subject Property, to obtain additional information regarding the history and operations conducted on the Subject Property. LBG was not able to interview Mr. Fontanez.

8.0 FINDINGS

The Subject Property is comprised of four parcels of land encompassing approximately 1.5 acres located on Cherry Street and Cherry Avenue in Waterbury, Connecticut. The Subject Property is currently unoccupied and is developed with five industrial buildings, one office building and one garage/boiler building. The buildings located on the Subject Property form part of a larger factory complex built in the late 1800's through early 1900's for watch and clock manufacturing. Prior to the construction of the existing buildings, the Subject Property was developed with residential development and outbuildings associated with the adjacent watch factory. The Subject Property was used primarily for watch and clock manufacturing between approximately 1895 and 1945, and for manufacturing of metal products, tools, and plastics between approximately 1950 and 1968. Other manufacturing uses such as production of leather goods (belts and handbags) and clothing, necktie and underwear were conducted on the Subject Property between approximately the 1950's and 2002. The Subject Property has been vacant since approximately 2004.

The Subject Property is currently zoned RH (multi-family residential zone), and is located in an urban area surrounded by a mix of commercial, high density residential and formerly industrial land uses. The groundwater-quality classification of the Subject Property and surrounding areas is GB, which indicates that the water quality is not suitable for drinking water due to industrial activity, urban land uses and the potential for waste discharges, spills or other land use impacts to groundwater.

Releases of petroleum or hazardous substances are not known to have occurred on the Subject Property; however it is noted that an Order was filed by the CTDEP against a former occupant of the Subject Property (Lakewood Metal Products) for suspected contamination of groundwater. This company was known to have used hazardous materials including trichloroethylene, caustics and alkaline materials while occupying a portion of the Subject Property. In addition, evidence of the use and storage of other hazardous materials such as leather cleaners, dyes and conditioners; paints; hydraulic oils and petroleum products; and corrosive materials on the Subject Property was documented in the course of this investigation.

The following AOCs have been identified on the Subject Property, which may present a current or historic threat of release of hazardous substances to the subsurface (locations shown on Figure 3):

Building #1

- AOC #1: Suspect boiler room and drum-storage area located in the basement in the central portion of Building #1. Hazardous materials were observed to be stored in this area, and the possibility exists that a former boiler, fuel-oil or other storage tank, or other manufacturing equipment may have historically been located in this area. As such, the possibility exists that releases of hazardous materials may have occurred in this area.
- AOC #2: The floor pit located along the west wall of the lower level in the southern portion of Building #1. This area was observed to be recessed below the building floor, and contained a water heater or pressure tank, and may have historically contained other manufacturing equipment or storage of potentially hazardous materials. In addition, because of limited access and visibility at the time of the inspection, the floor of this area could not be fully inspected for floor drains or other pathways to the subsurface.
- AOC #3: There are overhead doors, loading docks and other historical loading areas located in the east, west and south walls of Building #1. Overhead doors and loading docks are areas where raw materials and manufactured materials are loaded and unloaded for transport and use. Various types of hazardous materials and petroleum products were known to have been used on the Subject Property, and the loading areas are locations where potential releases of these materials may have occurred.
- AOC #4: Radium contamination is known to be present in building materials in certain areas of the site buildings, specifically portions of Buildings #1, #3 and #6. The radium contamination is associated with historical watch and clock manufacturing during the late 1800's and early 1900's on the Subject Property. Some of the radium-contaminated building materials have been remediated, however the remediation work was not completed.
- AOC #5: The potential presence of an UST to the south of Buildings #1 and #6 was indicated by the observation of a fill pipe adjacent to the building. No documentation of this subject UST or its contents were found in the course of this investigation; however the potential presence of a UST with unknown contents, and the potential for a release cannot be ruled out without further investigation.

Building #2

- AOC #3: There is an overhead door in the west wall of Building #2. Overhead doors and loading areas are locations where potential releases of hazardous materials may have occurred, as discussed further under Building #1 above.
- AOC #6: The boiler room located in Building #2 contains an old, inactive furnace and a more recent oil-fired furnace. In addition, several containers of what appeared to be hydraulic-oil, as well as a drum of caustic material were observed in this area. The

possibility exists that other types of hazardous materials such as coal or fuel-oil may have been stored and used in this area, and that releases may have occurred in this area.

- AOC #7: The compressor area located in Building #2 contained two compressors and several buckets of what appeared to be waste oil. Compressors may use hydraulic or petroleum-based oils, and compressor condensate may contain oil. In addition, the possibility exists that other historical uses of this area may have involved hazardous materials, and the possibility exists that releases may have occurred in this area.
- AOC #8: An approximately 20,000-gallon AST used for fuel-oil storage is located adjacent to the boiler and compressor areas in Building #2. The AST is located inside an enclosure constructed of concrete block, and was not fully accessible at the time of the site inspection.
- AOC #9: The spray paint booth located in Building #2 contained several containers of paint, as well as pressurized containers used for spray painting. The exact nature of the paints used and type of painting performed in this area is unknown. It is noted that certain types of paints, paint-thinners and primers may contain oils, VOCs or other hazardous materials, and that stains and drips of paint were observed in the vicinity of the spray paint booth. The possibility exists that historical releases may have occurred in this area.
- AOC #10: Two storage trailers and pallets of hazardous materials stored outside the north of Building #2 were identified in the 2005 Phase I ESA conducted on portions of the Subject Property. According to the site contact, the trailers and hazardous materials were removed from the Subject Property in approximately September 2009. The possibility exists that releases to the ground surface may have occurred in this area.
- AOC #11: There is a storage trailer and dumpster located to the west of Building #2. The contents of the trailer are unknown, and the area to the west of Building #2 around the dumpster and trailer was not accessible at the time of the inspection. The possibility exists that hazardous materials may have been stored in the trailer, or disposed of in the dumpster area, and the possibility exists that releases to the ground surface may have occurred in this area.
- AOC #12: According to historical survey maps reviewed at the Waterbury Engineering Department, the northern portion of the Subject Property adjacent to the current electrical substation appears to have been used as a storage area for fuel-oil during the 1940's, and possibly later. There was no indication whether the storage area was located above-ground or below-ground, however a building permit dated 1981 for demolition of an oil-tank storage area was discovered during this investigation. The potential exists that releases of fuel-oil may have occurred during the time that this area was used for fuel-oil storage.

Building #3

- AOC #3: There is a loading dock located in the south wall of Building #3. Loading areas are locations where potential releases of hazardous materials may have occurred, as discussed further under Building #1 above.
- AOC #4: Radium contamination is known to be present in building materials in certain areas of the site buildings, specifically portions of Buildings #1, #3 and #6. The radium contamination is associated with historical watch and clock manufacturing during the late 1800's and early 1900's on the Subject Property. Some of the radium-contaminated building materials have been remediated, however the remediation work was not completed.
- AOC #13: The boiler room in the lower/basement level of Building #3 contained a furnace, evidence of a storage tank likely used for storage of fuel-oil for the furnace, a floor drain, a sump with an electric pump, and a small cabinet of hazardous materials. Observations indicate that fuel oil, small quantities of other hazardous materials and potentially coal were stored and used in this area. In addition, the outlet for the floor drain could not be determined during the site inspection. The possibility exists that releases of hazardous materials may have occurred in this area, and the sump and floor drain would provide a pathway to the subsurface.

Building #6

- AOC #3: There is a loading dock located in the south wall of Building #6. Loading areas are locations where potential releases of hazardous materials may have occurred, as discussed further under Building #1.
- AOC #4: Radium contamination is known to be present in building materials in certain areas of the site buildings, specifically portions of Buildings #1, #3 and #6. The radium contamination is associated with historical watch and clock manufacturing during the late 1800's and early 1900's on the Subject Property. Some of the radium-contaminated building materials have been remediated, however the remediation work was not completed.
- AOC #5: The potential presence of an underground storage tank to the south of Buildings #1 and #6 was indicated by the observation of a fill pipe adjacent to the building. No documentation of such a UST or its contents were found in the course of this investigation; however the potential presence of a UST with unknown contents, and the potential for a release cannot be ruled out without further investigation.

Site-wide/Exterior Areas of Concern

- AOC #14: Based on the known age of the buildings on the Subject Property (circa 1900), and the urban and industrial nature of the site vicinity, the possibility exists that historic

urban fill materials may be present beneath the buildings or in the subsurface materials on the Subject Property. Potentially hazardous or contaminated materials such as coal, ash, slag, metal, building demolition debris and other debris are known to have been used historically as fill materials during construction work. The possibility exists that urban fill may be present in the subsurface on the Subject Property.

- AOC #15: According to survey maps of the Subject Property provided by the User, documents reviewed at state agencies, and visual observations, several drywell-type catch basins are located around the buildings on the Subject Property. Industrial inspection reports reviewed at the CTDEP indicate a report of discharge of materials into catch basins adjacent to the buildings, and catch basins discharge to a nearby stream. However no evidence of conduit or discharge points from the catch basins was observed during the site inspection. Nevertheless, catch basins provide a pathway for released materials to enter the subsurface, and the potential exists that releases of hazardous materials or other types of dumping may have historically occurred.
- AOC #16: Site-wide groundwater is an AOC due to the potential for groundwater impacts from the onsite and offsite AOCs discussed in this report.

In addition to the above-listed onsite AOC, the following adjacent or nearby properties may have the potential to adversely affect the environmental status of the Subject Property:

- AOC #17: An electrical transmission substation has been located on the property adjacent to the north of the Subject Property since approximately the late 1950's. According to historical maps, this property had been used as a coal storage area associated with the Subject Property prior to the construction of the substation. Potentially hazardous materials including coal and dielectric transformer oil that may contain PCBs have been present on this property. This property is situated in an up-gradient position relative to the Subject Property, and as such, any releases on this property may have the potential to adversely affect the Subject Property.
- AOC #18: A previously unidentified underground storage tank (UST) containing a small quantity of what appeared to be fuel-oil was observed at 205 Cherry Street during the site inspection. This property is not known to have any USTs registered with the CTDEP, and the current status of the UST (active/inactive), and its age could not be determined. This property is situated in an up-gradient position relative to portions of the Subject Property, and any release associated with the UST may have the potential to adversely affect the Subject Property.
- AOC #19: According to survey maps of the Subject Property and surrounding areas reviewed during this investigation, electrical transformers associated with the Benrus Watch Company appear to have been housed in a small structure formerly located on the 197 Cherry Street parcel. This property is located adjacent to the north of Building #6, and adjacent to the east of Building #1 in an up-gradient position relative to these

portions of the Subject Property. Electrical transformers have the potential to contain dielectric oils containing PCBs, and the possibility exists that historical leakage or a release of such materials has the potential to impact the subject site.

- AOC #20: Two pole-mounted electrical transformers were observed along the west side of Cherry Street, one adjacent to Building #4, and the second adjacent to Building #7. No information regarding the PCB content of the transformers was visible on the transformers, and the potential exists that PCB-containing materials may be present within the transformers, and the possibility exists that historical leakage or a release of such materials may have occurred.
- AOC #16: The Subject Property is located within an area of current and historical urban and heavy industrial land uses. Several nearby cross-gradient and up-gradient properties have documented environmental issues that have the potential to affect the surrounding areas. A large industrial complex to the north and up-gradient from the Subject Property historically discharged wastewater to an impoundment and Great Brook to the north of the Subject Property, and this site also has environmental issues such as PCB, metal and solvent contamination and releases to the subsurface. One property located to the north and up-gradient of the Subject Property has been used as a gas station and/or auto repair garage since approximately the 1940's; another property in close proximity to the Subject Property operated as a fuel and coal distributor and gas station between approximately 1938 and 1970 and soil and groundwater contamination have been documented at this site. Great Brook flows through a man-made underground conduit beneath the adjacent property to the west of the Subject Property; this water body receives up-gradient industrial wastewater discharges, and appears to be affected by groundwater contamination associated with several nearby offsite properties. Due to the proximity of Great Brook to the Subject Property, and the known environmental issues associated with nearby properties, the possibility exists that impacted groundwater in the nearby vicinity may also affect the Subject Property.

The following potentially hazardous building materials/issues on the Subject Property are outside the scope of ASTM Standard E 1527-05:

- Suspect asbestos-containing material (ACM) was observed in the site buildings. Based on the age of the buildings on the Subject Property, the presence of ACM in other unobserved building materials, such as in older furnaces and pipe insulation, is also a possibility.
- Because of the age of the buildings, the potential exists that plumbing and interior paints may contain lead. Interior paints throughout the buildings were observed to be flaking and peeling and in generally poor condition. Both lead in paint and in plumbing fixtures within the buildings may present a health risk which would warrant further investigation.

- Fluorescent light fixtures were observed within the site buildings in light fixtures and associated with general debris within the buildings. PCBs may be present in older fluorescent light ballasts, and would require appropriate characterization and disposal.
- Water damage was observed throughout the buildings on the Subject Property, and the possibility exists that mold or other indoor air quality issues may be present within the buildings.

A hazardous building materials survey was not included in the scope of this investigation by LBG, but should be conducted prior to any further alteration or demolition activities conducted on the Subject Property.

9.0 OPINIONS

In our opinion, the 20 AOCs identified by this inquiry are REC that are indicative of a release or threat of release of hazardous substances on, at, or in the subject property. Additional investigation of the REC is warranted to determine whether an actual release of hazardous substances has occurred.

In our opinion, based on the information available for review during this ESA, the Subject Property does not fit the definition of an establishment as defined in the Connecticut General Statutes (CGS) Section 22a-134, commonly known as the Property Transfer Act. The Subject Property is, therefore, not subject to the act. Any remediation that may be required should be performed in accordance with the State's Voluntary Remediation Program established in CGS Section 22a-133y.

Data Gaps

The following data gaps have been identified due to inaccessibility or the inability to obtain certain information regarding the history of the Subject Property during the course of this investigation.

Due to safety concerns regarding the structural integrity of Buildings #5, #6 and #7, the interior portions of these buildings were not included in the site inspection. Portions of the interiors of Buildings #1 and #3 and the interior of Building #6 were inaccessible due to incomplete hazardous materials abatement conducted in 2003-2004, and these areas were also not included in the site inspection.

LBG attempted to contact Mr. Steve Fontanez, former plant manager at the Subject Property, to obtain additional information regarding the history and operations conducted on the Subject Property. LBG was not able to interview Mr. Fontanez.

10.0 CONCLUSIONS

LBG has completed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E1527-2005 for the property located at 0 and 39 Cherry Avenue and 177 and 215 Cherry Street, Waterbury, Connecticut and the Site Characterization Guidance Document prepared by the CTDEP. Any exceptions to, or deletions from these practices are described in Section 12.0 of this report. The assessment has revealed evidence of 20 AOCs that present REC in connection with the Subject Property. AOCs are identified in Section 8.0 of this report.

Based on review of the available information, it appears that the Subject Property does not qualify as an establishment and, therefore, is not subject to the Connecticut property transfer law related to transfer of ownership of an establishment.

LBG recommends a Phase II Environmental Site Assessment to determine whether a release of hazardous substances may be associated with each of the AOCs listed in Section 8.0 of this report. LBG also recommends that ACM, LBP and mold inspections, and further remediation of radium-contaminated building materials be conducted prior to any alterations or demolition of the buildings.

11.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

Katherine Levenduski is the primary author and researcher for this Phase I ESA. Ms. Levenduski has three years of experience performing ESAs, including Phase I due-diligence inspections and file searches, Phase II and III subsurface investigations, including field sampling and soil boring and monitoring well installation, and has worked on several EPA Brownfields properties. She has completed numerous Phase I and II ESAs at properties throughout Connecticut.

Keith J. Shortsleeve, PG, LEP, CHMM assisted with the site inspection, and Phase I ESA report preparation. Mr. Shortsleeve is a Connecticut Licensed Environmental Professional (LEP) and professional geologist with over 24 years of environmental health and safety management experience serving industrial, municipal, legal and financial services clientele. Mr. Shortsleeve has

performed ESAs under contract to EPA, and has worked on assessment and remediation services at several Brownfield properties in Connecticut.

Robert F. Good, Jr., CPG, LEP, is the Principal-in-Charge who reviewed the information presented in this report. Mr. Good is a certified professional geologist and a Connecticut LEP. He oversees hydrogeological and environmental projects for LBG and has over 29 years of experience in geologic, hydrogeologic and hazardous waste site investigation and remediation services. He has been the Principal-in-Charge for numerous ESA and remediation projects in Connecticut for municipal, industrial and private clients. Mr. Good provided technical direction and quality assurance/quality control review of the work product.

12.0 LIMITATIONS

The purpose of this Phase I Environmental Site Assessment is to identify potential impacts to the environment status of the physical conditions (i.e., soil, ground water, structure, etc.) at the Subject Property, due to the use, storage or disposal of hazardous or toxic materials or wastes. As such, any other property conditions or characteristics are not addressed in the scope of work for this report. The scope of work does not include, nor should the report be considered as, an audit of compliance with environmental permits, management practices, or federal, state or local laws and regulations, even though in the course of work such information may be obtained and noted in the report.

The conclusions stated above have been developed from what is considered to be a reasonable investigation based on the present and past land use of the Subject Property and the property's location with respect to adjacent land uses. The conclusions, to some degree, are based upon information provided by others as referenced or noted in the report. Reasonable efforts have been made to confirm the information with other sources; however, LBG is not responsible for missing or incomplete information if such information is not available at the source or provided at LBG's request, or if such information cannot be obtained within the time constraints of the work or within a level of effort reasonable for the work being completed.

The conclusions and/or recommends are applicable to areas of the Subject Property that were accessible at the time of inspection and represent the conditions observed in those areas. Areas that were hidden, covered or otherwise inaccessible to inspection are not covered by the conclusions and recommendations. The conclusions and recommendations are based in part on conditions observed on

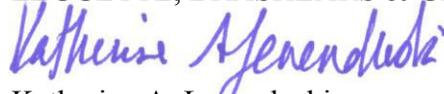
the Subject Property at the time of the inspection. The conclusions do not include subsequent changes to the Subject Property, or use of the Subject Property, which could alter the environmental status of the property from its present condition.

This report, and all work associated with it, has been completed solely for the use of Waterbury Development Corporation and New Opportunities for Waterbury. Use of the report by others, or conclusions drawn from the information contained herein without confirmation by LBG, is done at the users risk. LBG asserts that the data are complete and appropriate at the time and for the work conducted, but is not responsible for the use of the information for purposes for which it was not intended.

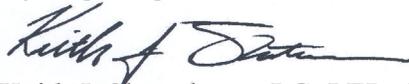
13.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in 40 CFR310.10. 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.

LEGGETTE, BRASHEARS & GRAHAM, INC.

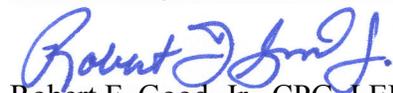


Katherine A. Levenduski
Hydrogeologist II



Keith J. Shortsleeve, PG, LEP, CHMM
Associate

Reviewed by:



Robert F. Good, Jr., CPG, LEP
Principal

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April 20, 2010

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14.0 REFERENCES

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FIGURES

APPENDIX I
TAX ASSESSOR MAP AND TAX CARDS

APPENDIX II
INTERVIEW DOCUMENTATION

APPENDIX III
PROPERTY DEEDS AND TITLE SEARCH
DOCUMENTATION

APPENDIX IV
DATABASE REPORT

APPENDIX V
CTDEP FILES

APPENDIX VI
AERIAL PHOTOGRAPHS

APPENDIX VII
TOPOGRAPHIC MAPS

APPENDIX VIII
SANBORN MAPS

APPENDIX IX
CITY DIRECTORIES

APPENDIX X
CITY OF WATERBURY FILES