

Phase I Environmental Site Assessment Report Town of Greenfield, MA

Former Lunt Silversmiths Property
298 Federal Street
Greenfield, MA

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Weston&Sampson

Weston & Sampson Engineers,
Inc.
Five Centennial Drive
Peabody, MA 01960-7985
www.westonandsampson.com
Tel: 978-532-1900 Fax: 978-
977-0100

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EXECUTIVE SUMMARY

Weston & Sampson, on behalf of the Franklin Regional Council of Governments (FRCOG) performed a Phase I Environmental Site Assessment (ESA) of the former Lunt Silversmith's property located at 298 Federal Street in Greenfield, Massachusetts (the "Site"). This investigation focused on the vacant industrial portion of the building and baseball fields. This ESA was funded through a Brownfields Assessment Grant provided by the United States Environmental Protection Agency (EPA).

The major findings of the Phase I ESA are as follows:

- The Site consists of two parcels totaling 10.8-acres and takes up an entire street block. The property consists of vacant industrial buildings in a contiguous complex, and baseball fields.
- The Site building complex is vacant. The Site is the former Lunt Silversmiths factory which operated from 1902 and ceased operations a couple of years ago.
- Trichloroethylene (TCE) was the predominant chemical utilized during silver manufacturing processes. Other chemicals include petroleum products, metals, and other chemical substances.
- The Site is heated with petroleum stored in an enclosed 30,000-gallon aboveground storage tank.
- The Site was identified as a small quantity RCRA generator of waste.
- The western portion of the Site was historically developed for housing for World War II Veteran's and currently consists of three baseball fields utilized by the Greenfield Minor Leagues.
- Suspect asbestos-containing materials (ACMs), lead-based paint (LBP) and Polychlorinated biphenyls may be present inside the building. In addition, mercury thermostats, fluorescent lights and light ballasts were observed throughout the building.

The Phase I ESA identified Areas of Recognized Environmental Concern (RECs) that include:

- REC 1: - Historic industrial use of the Site to manufacture silverware, holloware, tableware using high powered machinery. The various processes including cutting, stamping, degreasing, smelting, annealing, electroplating, buffing, and polishing and utilized raw hazardous chemicals such TCE and various petroleum products. These processes generated hazardous waste including waste silver cyanide, dry cyanide mixture, waste nitrating acid mixture, and nitric acid.
- REC 2: - The presence of abandoned chemical containers located throughout interior of the factory building. The majority of these containers are unlabeled and improperly stored; some were observed to be in poor condition. The containers may constitute a risk to safety.
- REC 3: - The Site has been identified as a RCRA generator and potentially having a release of TCE, based on a spill report. Additionally, chlorinated solvents have been detected in groundwater at the Site (in MW-6) at concentrations that may exceed Reportable Concentrations per the MCP. A Downgradient Property Status has been submitted by the owners of Goly's Garage.
- REC 4: - The presence of a 30,000-gallon heating oil AST encased in a cinder block and concrete building. The age and condition of the tank and interior ground surface are unknown.
- REC 5: - The presence of four exterior cyclones which were utilized to remove silver and other particulates.
- REC 6: - The western portion of the Site has been identified as a REC due to the industrial nature of the Site and the unknown quality of fill below the ballfields.
- REC 7: - The suspected presence of ACMs, LBP, and PCBs associated with the building and other exterior structures (i.e. cyclones).

Weston and Sampson recommends conducting a Phase II Subsurface Investigation and interior building hazardous materials survey to address RECs as well as a chemical container inventory to identify and characterize containers for disposal. Weston & Sampson recommends the Phase II include an evaluation of groundwater (including MW-6) and whether a reportable condition per the MCP, exists at the Site.

1.0 INTRODUCTION

Weston & Sampson was contracted by the Franklin Regional Council of Governments (FRCOG) to perform a Phase I and Limited Phase II Environmental Site Assessment (ESA) of the property located at 298 Federal Street in Greenfield, Massachusetts (hereinafter referred to as the "Site"), see Figure 1. The Site consists of contiguous vacant industrial buildings formerly occupied by Lunt Silversmiths and three baseball fields utilized by Greenfield's Minor League Baseball. The main Site building was built in multiple phases and is contiguous. The Site also includes multiple small structures (sheds) associated with the ballfields. The Site does not include the addition located on the northeastern corner of the main building complex, which is located on a separate parcel.

This ESA was funded through a Brownfields Assessment Grant provided by the United States Environmental Protection Agency (EPA) to evaluate select properties in the Franklin County region. Specifically, the project was funded via the 2009 American Recovery and Reinvestment Act (ARRA) Grant #2B96108801. Properties are nominated by the constituent communities, in this case the Town of Greenfield, and approved by a Brownfields Steering Committee, composed of representatives from municipalities, regional non-profit organizations and the private sector including local banks.

The ESA was performed in accordance with the Phase I ESA Process (Standard Practice E 1527-05), as developed by the American Society for Testing and Materials (ASTM), the Oil and Hazardous Material Release Prevention and Response Act, Massachusetts General Law Chapter 21E (MGL c. 21E) and in accordance with EPA's All Appropriate Inquiry (AAI) standard. As part of the AAI rule, a copy of reporting requirements checklist for assessment grant recipients is included as Appendix A. The ESA included an environmental database search, review of local, state, and federal regulatory agency files, and a limited reconnaissance of the Site and vicinity for potential on- and off-Site contamination sources.

1.1 Purpose

The purpose of this ESA was to identify potential Recognized Environmental Conditions (RECs) associated with the historic use of the Site and surrounding properties. This assessment utilized the general quality principals and practices for the preparation of this report incorporating suggested methods under ASTM E 1527-05. The term "recognized environmental condition" referenced in the ASTM refers to "the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property." The ASTM definition does not include "de minimis" conditions, which generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of the appropriate governmental agencies. Therefore, de minimis conditions are not considered RECs.

The ESA included the following tasks:

- Review of an environmental database search report for sites identified on databases including National Priorities List (NPL); Comprehensive Environmental Response Compensation and Liability Act (CERCLA); Resource Conservation and Recovery Act (RCRA); emergency response notification sites (ERNS); state hazardous waste sites (SHWS), state spills, and landfill sites.
- Review of files at the Assessor's Office, Building/Health Department, Fire Department and Town Clerk's Office.
- Site reconnaissance to observe conditions exposed at ground surface for evidence of previous and current property usage, and indications of environmental impact (e.g., stressed vegetation, staining, etc.).
- Limited reconnaissance of surrounding properties to identify potential off-site sources of contamination.

In accordance with the approved scope of work, Weston & Sampson did not conduct any subsurface sampling and analysis at the Site or collect samples for suspect asbestos-containing material (ACM), lead-based paint (LBP), or radon gas. This ESA was performed in accordance with the limitations and exceptions identified in Section 11.0 of this report.

2.0 SITE DESCRIPTION

2.1 Site Ownership and Location

Site Owner:	Lunt Silversmiths, Inc.
Site Occupants:	Vacant industrial building and baseball fields
Site Location:	298 Federal Street
County:	Franklin County
Parcel ID:	Maps 95 1 Lot UTB and 96 260
Latitude/Longitude:	42°36'3" North 72°35'40" West
UTM Coordinates:	697343.93 Meters East 4719075.07 Meters North
Size:	10.82-acres

The Site consists of two parcels totaling 10.8 acres of land and which takes up an entire street block bound by Federal Street to the east, Norwood Street to the north, Davis Street to the west and Kenwood Street to the south. The northeast corner of the block includes a newer building addition (Map 95 Lot UTA) constructed in 1996. This portion of the complex is classified as an industrial warehouse with retail condominiums and has the same Site address but is on its own parcel. Parcel 95 Lot UTA is not part of this Phase I ESA investigation and therefore will not be further discussed in this report. A Site Locus Map is provided as Figure 1.

2.2 Current Use of the Property

The Site currently consists of a vacant industrial building formerly occupied by Lunt Silversmiths, silver manufacturers and a recreational complex comprised of ballfields. The Site also includes some additional structures associated with the ballfields. The main factory building is situated along the eastern and central portions of the Site. The main Site building is vacant and were built at various stages. The main building (which consists of multiple structures that are connected) was used for the production of silver ware and holloware. The interior of the vacant building contains various chemical containers ranging in size from aerosol spray cans to 55-gallon drums, shelving units, a former Trichloroethylene (TCE) aboveground tank (AST), an annealing furnace, miscellaneous leftover equipment, and two large boilers. Four cyclones, formerly utilized for the removal silver and other particulates during process operations are located along the exterior of the factory building. Additionally a 30,000 fuel tank is located enclosed within a cinder block building. A small paved area off the southeast portion of the building appears to be utilized as parking by Goly's Garage located immediately south of the Site across Kenwood Street.

The western portion of the Site is currently utilized by the Greenfield Minor Leagues and consists of three baseball fields with associated spectator bleachers, dugouts, and other shed-like structures.

2.3 Description of Structures, Roads, Other Improvements on the Site

The Site consists of an approximate 75,000 square foot two-story industrial building complex (comprised of several contiguous additions to the original building) with a partial basement along the west side of the factory and a full basement under the main part of the factory.

Loading docks are located along the southern, western, and northern portions of the factory building. The rear, west side of the factory building is enclosed with a combined wooden and chain-linked fence. The southwest cinder block and concrete building addition encases the approximate 30,000-gallon heating oil AST. A landscaped/garden area with walking pathways is located just east of the main entrance to the factory building complex. A courtyard area is located between the factory building complex and the newer addition (not the Site) attach on the north side of the property.

The Site is accessed via Federal Street, Kenwood Street, Norwood Street. Paved parking lots are located on the east side of the building near the main entrance, the west side between the building and the adjacent baseball fields, and on the north side of the building.

The Town of Greenfield provides both water and sanitary sewer service to the vacant industrial building, which is currently heated with oil. Drainage is via sheet flow towards catch basins located within the adjacent streets and landscaped areas. One groundwater monitoring well was observed on the south side of the building near the intersection of Federal and Kenwood Streets. A Site Plan is provided as Figure 2.

2.4 Current Uses of Adjoining Properties

The Site is located in a mixed residential and commercial business area and is zoned "GI-General Industrial." A building addition attached to the northeast section of the main building is not part of the Site but is currently utilized for light industrial operations. From west to east, residential properties followed by an Aubuchon Hardware Store are located north of the Site across Norwood Street. Residential properties are located west of the Site across Davis Street. From east to west, Goly's Garage followed by Franklin County Plumbing, followed by residential properties are located south of the Site across Kenwood Street. Various commercial businesses are located east of the Site across Federal Street and they include from north to south: a cab station, a Sunoco Gas Station (directly across the main entrance to the Site), a Tire Warehouse Store, and a McDonald's Restaurant.

3.0 USER PROVIDED INFORMATION

A User Questionnaire was completed by Mr. Robert Pyers, Assistant to the Mayor for Economic Development and Marketing for the Town of Greenfield. A summary of the information obtained by Mr. Pyers is provided below. A copy of the completed User Questionnaire is provided in Appendix B.

Historical Information is provided in Sections 4.0 and 5.0 of this report. The information in this section was based primarily on the information collected from Mr. Pyers.

3.1 Environmental Liens

The user reported that he is unaware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law.

3.2 Activity and Use Limitations

The user reported that he is unaware of any Activity and Use Limitations on the property.

3.3 Specialized Knowledge

The user reported he had no specialized knowledge related to the property.

3.4 Commonly Known or Reasonable Ascertainable Information

The user reported that he is aware of Trichloroethylene (TCE) that may have been generated and potentially released at the Site.

3.5 Valuation Reduction for Environmental Issues

This task was beyond the scope of the Phase I.

3.6 Degree of Obviousness of Contamination

As mentioned above, the User indicated that TCE, or chlorinated solvents, may be present in groundwater. The extent of contamination is unknown at this time.

4.0 DATABASE SEARCH REPORT AND MUNICIPAL RECORDS

4.1 Standard Environmental Record Sources

Weston & Sampson contracted FirstSearch Technologies Corporation (FirstSearch) to perform an on-line radius search (based on ASTM standards) of applicable State and Federal environmental databases. The FirstSearch Report dated September 6, 2010 (the first 55 pages are included in Appendix C) reviewed the following databases for the area within the specified radius of the subject parcel:

- EPA NPL, 1-mile radius;
- EPA Comprehensive Environmental Response Compensation Liability Information System (CERCLIS) List (which includes EPA Superfund sites), 0.5-mile radius;
- RCRA sites (Generators within 0.25-mile radius; Treatment, Storage and Disposal facilities within 0.5-mile radius; and Corrective Action Sites within 1-mile radius);
- Emergency Response Notification System (ERNS) Sites, 0.15-mile radius;
- State Hazardous Waste Sites (SHWS), 1-mile radius;
- State Spills Sites -- 1990s, 0.5-mile radius;
- State Spills Sites -- 1980s, 0.15-mile radius;
- Solid Waste Landfill (SWL) Sites, 0.5-mile radius;
- Registered underground storage tanks (USTs) and above ground storage tanks (ASTs) listings, 0.15-mile radius; and
- Leaking ASTs/Leaking USTs (LASTs/LUSTs) listing, 0.5-mile radius.

4.1.1 On-Site Listings from Database Search

The Site was identified on the RCRA generator and spills databases searched by FirstSearch. Each of the database listings for the Site is summarized below.

- The RCRA generator database currently lists the status of the Site as a small quantity generator. The database report listed numerous waste manifests dated from April 1990 through February 1997. Waste materials included waste silver cyanide, dry cyanide mixture, waste nitrating acid mixture, and nitric acid.
- The spills database states that a release of an unknown amount of TCE occurred in February 2010. The status of the Site is currently listed as unclassified as the release has not reached its Tier Classification deadline and according to the database report a Response Action Outcome (RAO) Statement, Downgradient Property Status (DPS) Submittal, or Tier Classification Submittal has not been received by the Massachusetts DEP (MassDEP). It must be noted that the Site is not listed in MassDEP's database.

4.1.2 Off Site Listings from Database Search

The below table presents the findings from the FirstSearch database search for the parameters listed in Section 4.1

Number of listings	Search Distance (miles)	Database
6	0.25	RCRA Generator
32	1.0	SHWS
6	0.50	Spills
18	0.50	LUST
4	0.15	Registered UST/AST

In general terms, properties on the above list may tend to pose a risk to the Site based on characteristics such as proximity, elevation, and type of contaminant. Whether or not an off-site source has the potential to impact the Site depends on the distance of the source from the Site, its direction from the Site relative to groundwater flow, magnitude of release, contaminant type, and location. In addition, the Site is located on top of a hill that slopes to the north. Off-site sources that are proximal to and presumed hydraulically upgradient of the Site may have the potential to impact the Site. The presumed direction of groundwater flow for this Site is in a south-southeasterly direction.

RCRA Generators

The FirstSearch report identified six RCRA generators located within a 0.25-mile radius of the Site. Of the six properties, one property, Goly's Garage at 286 Federal Street is located immediately south of the Site across Kenwood Street and is potentially hydraulically crossgradient of the Site. According to the database report, this facility is listed as a conditionally exempt small quantity generator of hazardous waste. The database report lists numerous violations pertaining to general generator requirements. Goly's Garage is listed as generating several spent halogenated (chlorinated) solvents. Based on the numerous violations and proximity to the Site, this facility has the potential to adversely impact the Site. The remaining five properties are located hydraulically downgradient of the Site and therefore are unlikely to adversely impact the Site.

SHWS

The FirstSearch report identified 32 State Hazardous Waste Sites (SHWS) located within a one mile radius of the Site. Of the 32 listed SHWS, two properties including New England Telephone Garage located at 113 Norwich Street and the Shattuck Residence located at 138 Cleveland Street are approximately 0.5-mile northwest and hydraulically upgradient of the Site. However, based on topography and distance, these properties are unlikely to adversely impact the Site.

The New England Telephone Garage property has a "Pending No Further Action" Status indicating that a Site assessment has determined that no further actions was required. An A-2 Release Action Outcome (RAO) was achieved for the Shattuck Property indicating that a level of no significant risk has been achieved.

Goly's Garage (as mentioned above on generator list) was also listed on the SHWS list. The database report indicates that a release to soil and groundwater from an underground storage tank (UST) has occurred and was assigned a RTN of 1-0001047. The database report states that site

actions commenced in October 1993 with the reported release date and have included a Phase II, Phase III, Phase IV, status reports, and a DPS transmittal filed in February 2010 indicating that this property has been affected by contaminations from an upgradient source. A class C-1 RAO is listed as the current status of this facility. Although a DPS was submitted to the MassDEP, based on proximity to the Site, this facility has the potential to adversely impact the Site. The remaining 29 properties including the Sunoco Service Station east of the Site and across Federal Street are located hydraulically downgradient of the Site and therefore are unlikely to adversely impact the Site.

Spills

The FirstSearch report identified six spills listings within a 0.50-mile radius of the Site. The six listings include the Sunoco Service Station and Cumberland Farms (2 listings) east of the Site across Federal Street and Goly's Garage (3 listings). The Sunoco and Cumberland Farms properties are located hydraulically downgradient of the Site, and are therefore unlikely to adversely impact the Site.

The three spills listed for Goly's Garage include a release of gasoline from a leaking UST in October 1993 associated with RTN 1-0001047 (as mentioned in the SHWS listing above), a release of approximately 70-gallons of diesel fuel from a tanker failure (date not listed) and assigned RTN 1-0010824, and a release of diesel fuel in April 1993 from a UST. RAO's have been achieved for the two spills with RTNs. The status of RTN 1-0001047 is listed as a C-1 RAO and RTN 1-0010824 is listed as an A-2 RAO. The status of the third spill is listed as "Closed" with the MassDEP. As stated above, based on proximity to the Site, Goly's Garage has the potential to adversely impact the Site.

LUST

The FirstSearch report identified 18 properties that have leaking USTs located within a 0.50-mile radius of the Site. Goly's Garage was identified on the LUST list due to the October 1993 release. The information provided in the database report for this release (RTN 1-0001047) is reported the same as above. The remaining 17 properties are located hydraulically downgradient of the Site and therefore are unlikely to adversely impact the Site.

Registered USTs/ASTs

The FirstSearch report identified four properties that have registered USTs located within a 0.15-mile radius of the Site. Goly's Garage is listed on the registered UST list. The database report states that two 3,000-gallon, one 5,000-gallon, and one 500-gallon UST containing gasoline, diesel, and waste oil were removed from the Site. The remaining three properties are located hydraulically downgradient of the Site and therefore are unlikely to adversely impact the Site.

4.2 Municipal Records

Weston & Sampson conducted a file review at The Town of Greenfield municipal offices and a chain of title search on the Franklin County Registry of Deeds website. Significant information pertaining to the Site is included in Appendix D and discussed below.

4.2.1 Town of Greenfield Assessor's Office

According to the assessor's field card, the Site building was constructed in 1890. The assessor card list a building addition in 2004 and remodeling in 1998, 2001, and 2002. The buildings are reportedly heated with two boilers using an oil/steam system. A copy of the assessor card and map, and building floor plan for the Site is included in Appendix D.

4.2.2 Town of Greenfield Fire Department

The Town of Greenfield Fire Department did not possess any information pertaining to UST's, AST's, leaks or fire incidents for the Site.

4.2.3 Town of Greenfield Building/Health Department/Engineering Department

The building department possessed numerous records pertaining to additions and renovations to the factory building from dates ranging from October 1945 through October 2002. A building permit dated September 20, 1979 was on file to erect an oil storage tank. Details on the tank such as size and capacity were not provided on the permit. A building permit dated January 2001 was on file for a new metal stamp room. Copies of the two building permits are included in Appendix D. No information of environmental significance was found on file for the Site at the Health Department.

The engineering department has a 1922 site plan depicting the layout of the Site and surrounding properties. The site plan depicts many sections of the factory building situated along the central and southeastern areas of the Site. The plan identifies Rogers, Lunt & Bowlen Co., manufacturers of sterling silverware as the Site occupant. The southern portions of the building are labeled "Factory Building". Finishing, buffing, rolling, and plating operations appear to have taken place in the central area of the main building. A transformer field is depicted between the two building areas. A copy of this plan is included in Appendix D.

4.2.4 Town of Greenfield Clerk's Office/Greenfield Library

The Town of Greenfield Clerk's Office possessed a license for a 20,000-gallon bunker oil AST and a 10,000-gallon fuel oil AST which was granted to Lunt Silversmiths on July 11, 1952. A copy of this license is included in Appendix D.

Weston & Sampson obtained historical information from the Massachusetts Historical Commission which was on file at the Greenfield Library. The historic information provides a photograph and hand-sketch drawing of the building. The document states that the original portions of the factory building were constructed in 1890. The document reports that during World War II the business diversified from productions of silverware to surgical instruments, airplane parts, bronze star medals, and parts for Pack-Howitzer submachine guns. A copy of this historical document is included in Appendix D.

4.2.5 Registry of Deeds

Weston and Sampson searched the Franklin County Registry of Deeds website for chain of title information. The website offered the following information:

- Unit Deed - Rogers, Lunt, and Bowlen Company granted to Lune Silvermiths, Inc.; Book 3894, Page 34. A copy of this deed is included in Appendix D.

4.3 Site and Area History

4.3.1 Sanborn® Maps

On September 6, 2011 Weston & Sampson requested Sanborn® Fire Insurance Maps for the Site and the surrounding area through FirstSearch. Sanborn® Fire Insurance Maps are provided as Appendix E. Sanborn® Fire Insurance Maps were available for the years 1909, 1914, 1922, 1948, 1965.

The Sanborn® Fire Insurance Maps from 1909 to 1965 depict the central part of the main building being used for manufacturing on the first floor with buffing and finishing on the second floor. It also depicts the eastern portion of this building being utilized as office space and for shipping purposes. The western portion of the building was used for general manufacturing from 1909 until 1965.

The site also includes land to the west of the building originally occupied by two large storage buildings in 1909. Between 1909 and 1922 these two large buildings were razed and a smaller storage house was erected. A carriage printing and repository building is located to the west of the main building between 1909 and prior to 1922, it is not present in the 1948 Sanborn® Map. A jewelry manufacturing building was constructed after 1909 and was changed to a tool manufacturer between 1914 and 1922. In 1909 a single storage building for electrotypes was located on the south side of the Site. Sometime between 1909 and 1925 an additional building was erected in this area which was used for printing and finishing prior to 1922.

From 1948 through 1965 the building is listed as a general factory building. Additions were also constructed off of the main portion of the building throughout this time period including a small addition on the north side of the building between 1909 and 1914, which was used for tempering and plating. Another addition was added between 1914 and 1922 on the south side of the main portion of the building which was used for manufacturing hollowware and changed to a plating area between these years. An addition was constructed and a connection to the previous electrotypes storage building was completed between 1922 and 1948. This addition was later expanded between 1922 and 1948 for manufacturing.

Veteran temporary housing was constructed between 1922 and 1948 and was razed prior to 1965 on the western portion of the Site. During that time a street named Center Lane cut through the center of the housing development which was known as Norwood Village. Surrounding properties are depicted as predominantly residential. A filling station with associated tanks (currently Goly's Garage) is depicted south of the Site across Kenwood Street on the 1948 and 1965 maps.

4.3.2 City Directories

On September 6, 2011 Weston & Sampson requested City Directories for the Site and the surrounding area through FirstSearch. The City Directories are provided as Appendix F. City Directories provided listings for the years 1916, 1919, 1924, 1930, 1935, 1940, 1945, 1950, 1954, 1959, 1963, 1966, 1992, 1995, 2000, 2004, and 2007.

- The 1916 through 2000 City Directories listed the site occupant as Rogers, Lunt and Bowlen Co.;
- The 1924 City Directory added a listing of Franklin Silver Plate Co. along with Rogers, Lunt and Bowlen, but was removed in the 1930 City Directory;
- The 1954 through 2004 City Directories added Lunt Silversmith along with Rogers, Lunt and Bowlen;
- The 2000 City Directory listed Artisans Restaurant, Lunt Design Center and Marketplace, and Lunt Direct (occupant most likely associated with the adjoining building with the same address but not part of the Site) and;
- The 2004 and 2007 City Directories listed Couzon USA Inc. (also an occupant of the adjoining building).

4.3.3 Aerial Photographs

On September 6, 2011 Weston & Sampson requested aerial photographs from FirstSearch in order to gain knowledge of the Site and area history. Aerial photographs were available for the years 1939, 1952, 1966, 1985, 1992 and 2008. Copies of the aerial photographs are provided in Appendix G.

The 1939 aerial photograph depicts the Site manufacturing building on the eastern portion of the parcel and what appears to be open land on the western portion of the parcel. Residences are depicted to the north, west, and south of the Site building while commercial buildings are depicted along Federal Street.

The 1952 aerial photograph depicts the Site similar to that in 1939 except for apparent remnants of roads in the open land to the west of the manufacturing building, trees along the north and south borders, as well additions to the building itself on the south and north sides.

The 1966, 1985 and 1992 aerial photographs depict the manufacturing plant with open land seen to the west of the building with faint outlines of baseball fields. The surrounding properties appear to have remained unchanged.

The 2008 aerial photograph depicts that the surrounding properties remained relatively unchanged with residential and commercial properties along Federal Street and residential properties dominating Kenwood, Norwood and Davis Streets. Three distinct baseball fields can now be seen to the west of the manufacturing building with associated structures such as dugouts and a field house.

4.3.4 Topographic Maps

Topographic maps were obtained online through the University of New Hampshire Government Documents Department. Specific maps reviewed included the United States Geological Survey

(USGS) Greenfield, MA 15-Minute Quadrangle from 1894 revised to 1918, and the Greenfield, MA 7.5-Minute Quadrangles from 1941, 1941 revised to 1947, and 1954. The historical topographic maps are presented in Appendix H and offer the following historical Site information:

- Topography of the Site is relatively flat. Topographic maps depict the Site located west of the Connecticut River well past the rise of the bank;
- The 1894 revised to 1918 topographic map depicts the Site and surrounding area as undeveloped land. Kenwood Street, Norwood Street and Davis Street do not exist at this time and there are scattered buildings along Federal Street;
- The 1941 topographic map shows the manufacturing building is present as well as Kenwood Street, Norwood Street and Davis Street to the south, north and west respectively. Few residences are present to the south along Kenwood Street and east along Federal Street. To the north along Norwood Street residential buildings are denser.
- The 1941 revised to 1946 and 1954 topographic maps are similar to the 1941 topographic map with the addition of another industrial building to the west of the main manufacturing building.

4.3.5 Flood Insurance Rate Map Information

The Site is located in a Zone C flood area of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for the Town of Greenfield, Franklin County, Massachusetts (Community-Panel # 250118-0007-B). Zone C areas are areas of minimal flooding. A copy of the FIRM is included in Appendix I.

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5.0 EXISTING ENVIRONMENTAL INFORMATION

5.1 State Records

Weston and Sampson conducted a file review at the Western Region office of the MassDEP located in Springfield, Massachusetts on September 14, 2011 for files related to the Site. The MassDEP possessed documents pertaining to the Site involving its distribution of wastewater from its facility, its status as a small generator site, the emissions of vapors from manufacturing, and substances used to clean its machines. Weston & Sampson also downloaded reports from the abutting Goly's Garage property, one of which included a Downgradient Property Status (DPS) Opinion. A brief summary of the documents reviewed is provided below:

- On September 21, 1984 a notice from the United States Environmental Protection Agency to Rogers, Lunt & Bowlen Company states that the status of the facility was changed from a treatment/storage/disposal facility to a small quantity generator of hazardous waste. The document stated that no more than 1,000 kilograms (kg) of hazardous material may be generated in any one month nor generate more than 1 kg of acutely hazardous waste in any one year. The above is based on the inspection of the facility by the DEP on June 21, 1983 which deemed that it indeed is a small quantity generator, generating half a drum of TCE every six months.
- A letter from the MassDEP to Lunt Silversmiths dated September 22, 1989 states that the plans, specifications, standard operating, and maintenance procedures for the proposed installation of one vapor degreaser was approved by the MassDEP and is in conformance with modern air pollution control engineering practice but is subject to certain provisions which are listed in this document.
- A letter from the Town of Greenfield states that as of July 1, 2007 Lunt Silversmiths was granted authorization from the Town of Greenfield to discharge wastewater into the Town of Greenfield's Sanitary Sewer System per town regulations and provisions.
- Inspection Report dated May 26, 2009 states that Lunt Silversmiths manufactured pewter utensils, silver plating and sterling silverware, silver plating tableware and holloware. The report states that the two main pollutants are volatile organic compounds (VOCs) from five vapor degreasers (one Talley vapor degreaser and four Detrex VS 800 degreasers) that utilize TCE and dust emissions from eleven Rotoclones which collect dust from buffing operations. The inspection reported five lead pots for melting silver and other metals utilizing natural gas. The inspection report states that two ASTs were used on-Site to store TCE which was used in degreasing operations. Drums of waste oil (which was not reported as a waste) and waste TCE were observed during this inspection. Waste oil was reportedly generated from waste lubricating oil from the Metallix machines that fabricate metals for manufacturing silverware and waste TCE generated from the five degreasers. Examples of the hazardous waste manifest are attached to this letter.

- As a result of the May 26, 2009 inspection, a notice of noncompliance was issued by MassDEP to Lunt Silversmiths citing that Lunt Silversmiths failed to notify MassDEP of additional hazardous waste they were generating.

Copies of the MassDEP records are included in Appendix J.

5.2 Off-Site Data Review

An off-Site data review was also conducted at the MassDEP on September 14, 2011 for Goly's Garage located at 286 Federal Street. This property is located south and in close proximity to the Site and has a RTN 1-0001047 with the MassDEP. A Phase IV Remedy Implementation Plan as well as correspondence letters regarding the same RTN was on file for the Site. The Phase IV – Remedy Implementation Plan dated April 2008 and Phase IV Status Report and Tier Permit Extension Request dated August 5, 2009 prepared by Environmental Compliance Services, Inc. (ECS) report investigations and remedial actions associated with a release of gasoline from a leaking UST in 1993 and do not involve the Site.

A Phase IV Completion Report, Downgradient Property Status (DPS) Opinion, Class C-1 RAO Statement and Method 3 Risk Characterization report submitted by ECS to the MassDEP on behalf of Goly's Garage was available on the MassDEP searchable sites website and reports that Goly's Garage is not the source of the chlorinated solvents detected in groundwater at this facility. ECS stated that the presence of chlorinated VOCs on the Goly's Garage property is likely a result of an off-site upgradient release. ECS based this opinion on historical and readily-available data that suggest that there are no on-site sources of chlorinated VOCs present at this facility. The reports indicate that both TCE and 1,1,1 Trichloroethane (TCA) were present in groundwater.

Additionally, the report documents that the northerly abutting property, i.e. Lunt Silversmiths ("the Site"), formerly generated waste including spent chlorinated solvents under a RCRA Generator permit and that chlorinated solvents were detected in groundwater monitoring wells on the Lunt property. Specifically, the reports indicate that chlorinated solvent concentration on the Goly's Garage property were below reportable concentrations (RCs) but indicate that concentrations in MW-6, located upgradient (and apparently on the Lunt property parking lot) are above RCs.

The ECS report states that the Method 3 Risk Characterization has concluded that a condition of No Significant Risk is applicable to the Site and that Site conditions have not been reduced to Background. The requirements of a Class C-1 RAO have been met and no additional operation, maintenance and/or monitoring of the remedial action alternative is necessary to ensure the integrity of the RAO. A Permanent Solution (Class A-2 RAO) will be applicable to the Site once the upgradient source(s) of chlorinated VOCs have been identified and mitigated. Copies of the MassDEP records are included in Appendix J.

5.3 Previous Environmental Reports

Weston & Sampson is not aware of any previous environmental investigations that may have been conducted at the Site other than what was obtained during the Municipal Record and MassDEP file searches discussed in Sections 4.2 and 5.1, respectively.

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6.0 SITE RECONNAISSANCE

On September 9, 2011 Weston & Sampson personnel performed a visual reconnaissance of the Site. The Site was observed by walking around the property and the surrounding properties. The purpose of the Site reconnaissance was to observe current Site conditions and assess, based on visual observations, if there were release(s) of oil and/or hazardous materials (OHM) to the surface or subsurface. In addition, the purpose of the Site reconnaissance was to determine Site accessibility and to evaluate potential sources of contamination to be assessed during a Phase II ESA (limited Site subsurface investigation), if warranted.

It should be noted that Weston and Sampson did not have access to the heating oil AST encased in a building at the northwest corner of the building. Additionally, the full basement area was inaccessible due to flooding from a recent storm and visual observations were limited in the partial basement area and some areas of the factory building due to lack of electricity. Photographs taken at the Site are provided in Appendix K.

6.1 Physical Setting

6.1.1 Site Setting and Topography

The Physical Setting of the Site is discussed in Section 2.0 of this report and is shown in Figure 1. The Site is relatively flat.

6.1.2 Groundwater Characteristics

Groundwater and surface water at the Site is presumed to flow in a south-southeasterly direction towards the Connecticut River located to the east of the Site.

6.1.3 Bedrock Characteristics

According to the USGS Bedrock Geologic Map of Massachusetts (Zen *et al.*, 1983) bedrock underlying the Site is characterized as Devonian volcanics. No bedrock outcrops were observed on Site.

6.1.4 Potential Environmental Receptors

According to the Area Receptors Map (Figure 3) prepared using the MassGIS Environmental Receptors Database, the Site is not located within an Interim Well Protection Area (IWPA). The Site is not located above a potentially productive aquifer or within a Current or Potential Drinking Water Source Area (Zone II). There are no wetlands or water bodies located on the Site.

6.2 Physical Characteristics

The following is a list of observations made during the reconnaissance of the Site.

6.2.1 Land Area

The 10.6-acre Site includes a vacant industrial building on the eastern portion of the Site and three baseball fields on the western portion of the Site. The Site is accessed via curb cuts off of Federal, Kenwood, and Norwood Streets all which lead paved parking areas. A landscaped/garden area with walking pathways is located just east of the main entrance to the

factory building. A courtyard area is located on the north side of the building complex. There are catch basins located in the streets, in the parking lot, and one in a landscaped area in front of the main entrance. A groundwater monitoring well is located on the southeast side of the building where additional paved parking is located and currently utilized by Goly's Garage located to the south across Kenwood Street.

The three baseball fields on the west side of the site each have two dugouts and spectator bleachers and are fenced in around their perimeters. A field house sits next to the eastern most field and is used for storage.

6.2.2 Buildings

The Site consists of an approximate 75,000 square foot two-story industrial building complex consisting of contiguous multiple additions to the original building, with a partial basement along the west side of the factory and a full basement under the main part of the factory. Loading docks are located along the southern, western, and northern portions of the factory building. The rear, west side of the factory building is enclosed with a combined wooden and chain-linked fence. The southwest cinder block and concrete building encases the approximate 30,000-gallon heating oil AST. The full basement area was flooded during the day of the reconnaissance due to recent weather and therefore could not be inspected. The partial basement area appeared to contain a dirt floor. Numerous, various size, unlabeled chemical containers were observed throughout this space as well as a large open concrete tank with baffles, currently containing what appears to be water and miscellaneous equipment.

Visual observations of the dirt floor were limited due to lack of electricity; therefore evidence of releases such as staining could not be determined on the day of the reconnaissance. Numerous floor drains were observed throughout the factory building, which reportedly discharge to the Town of Greenfield's Sanitary Sewer system. Overall the building was in fair condition with some pitting and cracking observed throughout the factory floors. Various pits and bolts exist in areas where old machinery was formerly located.

6.3 OHM Storage and Use

As stated previously, the building is currently vacant and used mostly for storage of remnant equipment and chemicals leftover after Lunt Silversmiths ceased operations. Many containers ranging in size from an aerosol can to 55-gallon drums were observed throughout the building, many without labels. The majority of the chemical storage was located at loading docks areas on the south, southwest side, and northern sides of the building. Shelving units within the second floor office space were packed with unknown substances in containers of various sizes.

Some of the 55-gallon drums were observed to be corroding, some with holes on the side, and some with an unknown, white powdery substance on top. Similar instances were found with 5-gallon size containers some with no covers. These 5-gallon containers were observed to be stored together in masses directly on the floor, as were the larger drums and stacked precariously at times. The bulk of the chemical storage was located near the northern loading dock area. This area contained numerous 55-gallons drums and 5-gallon containers. Secondary containment units were observed in this area but no containers were stored on top of them. Containers that were labeled stored the following substances: sulfuric acid, machine grease, various cleaning

materials, corrosive materials, lacquer thinner, spray paint, and buffing chemicals. A stand along former TCE AST was observed in the main factory area directly behind the first floor office space.

What appears to be an old elevator was also observed in the main factory building and most likely contains hydraulic fluids. An annealing furnace was observed in one area of the building. Two boilers (one steam and one oil) were observed in the boiler room located near the northwest section of the building. The 30,000-gallon heating oil AST is enclosed in a cinder block and concrete building and therefore could not be inspected. The condition and exact age of this AST is unknown, nor the condition of the floor (dirt or concrete). The fill hoses were observed on the north side of the structure and are attached to the exterior wall. Minor black staining beneath the hoses was observed on the grass surface directly beneath as well as on the exterior wall.

Various suspect asbestos-containing materials (ACMs) were observed throughout the building including floor tiles, window caulk, pipe wrap, and insulation associated with the furnace and boilers. Mercury thermostats were also observed throughout the facility. Suspect lead-based paint (LBP) was observed peeling throughout many interior and exterior surfaces of the building as well as all four exterior cyclones. One pad-mounted transformer was observed on the southwest side of the building. The transformer possessed a green "Non-PCB" sticker and appeared to be in good condition. Evidence of a release such as staining on the concrete pad or unit was not observed.

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