Adirondack Regional Business Incubator Site
36 Elm Street
City of Glens Falls, New York

Environmental Restoration Project

Appendix A - O

Site Investigation Report

New York State Assistance Contract No. C303163
ERP Project No. E557019

May 2008

Prepared For:

Greater Glens Falls Local Development Corporation
42 Ridge Street
Glens Falls, New York 12801

Attn: Mr. Thomas Donohue
Tel: (518) 761-3883

Barton & Loguidice, P.C.
Engineers · Environmental Scientists · Planners · Landscape Architects

2 Corporate Plaza
264 Washington Avenue Extension
Albany, New York 12203

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Appendix A

Phase I & II Environmental Site Assessments
(Clough, Harbour and Associates LLP)

PHASE I
ENVIRONMENTAL SITE ASSESSMENT

OF

36 ELM STREET
GLENS FALLS, NEW YORK

Prepared For:

City of Glens Falls
42 Ridge Street
Glens Falls, New York 12801

January 2003

CHA Project No: 11028.1004.1102

Prepared By:

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File No: m:\11028\esas\36 elm\esa.report

QUALIFICATIONS AND CERTIFICATION STATEMENT

This Phase I Environmental Site Assessment was performed by a qualified environmental scientist employed by Clough, Harbour & Associates LLP (CHA). CHA, a full service engineering consulting firm with offices throughout the eastern United States, has the resources and the capabilities to perform Phase I Environmental Site Assessments. The individuals responsible for the preparation of this report meet the definition of an *Environmental Professional* as defined by Section 3.3.11 of the American Society for Testing and Materials (ASTM) Standard Practice 1527-00.

This report has been prepared expressly for the use of the City of Glens Falls. No other parties are entitled to rely upon this report unless our express written consent is first obtained. All conclusions drawn were based on CHA's review of available historical, regulatory, and site specific information pertaining to this project. Recommendations were submitted based on CHA's knowledge, experience, and professional judgement concerning Phase I Environmental Site Assessments.

ESA Performed By:

Rogina M. Camilli

Rogina M. Camilli
Project Scientist

ESA Reviewed By:

Keith J. Ziobron, P.E.
Environmental Operations Manager
Associate

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EXECUTIVE SUMMARY

The purpose of this assessment was to identify recognized environmental conditions, as defined by the American Society for Testing and Materials (ASTM) Standard Practice E 1527-00, associated with the subject site. CHA has performed this Phase I ESA in conformance with the scope and limitations of ASTM Standard Practice E 1527-00. The Phase I Environmental Site Assessment Report has been prepared by CHA to: provide a general description of the subject site, any structures occurring thereon, and the site vicinity; discuss the current and historical usage of the property; and identify the presence or absence of recognized environmental conditions in connection with the subject site, based upon the results of historical and regulatory records reviews, interviews, and a site inspection.

The subject site is identified as tax parcel 309.28-1-13 and consists of approximately 0.13 acres. The site is entirely occupied by a three story masonry building with a basement. The basement and all of the upper floors are used for storage of restaurant supplies and equipment (i.e., dishes, chairs, appliances). The site structure is currently unheated, however, was formerly heated by a fuel oil-fired boiler system. When the system was operational it was supplied with fuel via four fuel oil storage tanks that remain in the basement of the building. The heating system has been out of service for approximately 30 years. Site utilities consist of public water and sewer, natural gas (though not actively used), and electricity.

Historical research indicates that the subject site was used for residential purposes until the construction of the existing building in the early 1920s. The facility had been used for shirt making and later for the manufacturing of ladies undergarments through the early 1970s. Since the cessation of manufacturing in the early 1970s, the site has been used by ABC Equipment as a storage facility for restaurant supplies. Historical uses of concern of neighboring property consists of the location of a gasoline station across from the site at 37 Elm Street during the 1950s and 1960s, and automotive repair services conducted from the 1920s through the 1960s at the building directly abutting the southern side of the subject site

The subject site does not appear on any federal or state regulatory databases for hazardous waste sites, hazardous waste generators, registered tanks, spills, leaking tanks, or solid waste landfills. There are several such facilities within specified radii of the subject site.

CHA has performed this Phase I ESA in conformance with the scope and limitations of ASTM Standard Practice E 1527-00. Any exceptions to, or deletions from, these practices are described in Section 2.0 of this report. This assessment pertaining to the property located at 36 Elm Street in the City of Glens Falls, New York, revealed evidence of recognized environmental conditions relative to the subject site pertaining to historic use of a fuel oil-fired heating system including the aboveground storage tanks remaining on the site, potential off-site impacts from historic neighboring automotive service and gasoline station facilities, potential PCB light ballasts, and potential asbestos-containing building materials and lead-based paints.

CHA recommends that the four fuel oil tanks be properly closed and/or removed according to applicable state and federal regulations. Subsurface soil and groundwater should be sampled to evaluate potential impacts from the on-site tanks and heating system, in addition to off-site sources of concern.

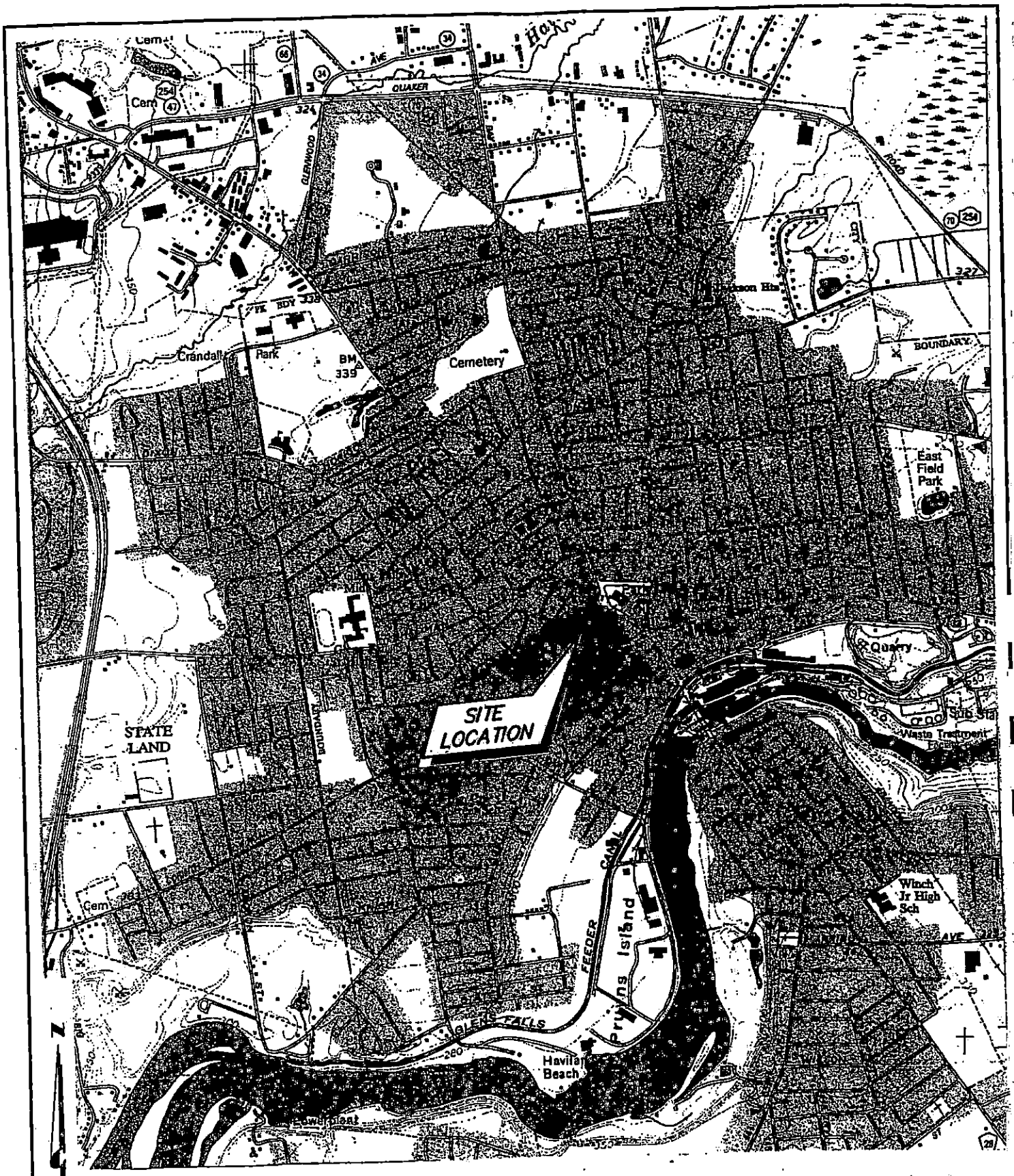
In anticipation of site activities (renovation and/or demolition) that would potentially disturb any suspect asbestos and lead building materials, CHA recommends that an Asbestos and Lead Paint Survey be performed. The survey should be performed by properly trained and certified personnel in accordance with applicable State and Federal regulations. The results of the survey will provide data necessary to develop abatement cost estimates. In addition, light fixture ballasts should be inventoried and properly characterized for disposal.

1.0 INTRODUCTION

At the request of the City of Glens Falls, Clough, Harbour & Associates LLP (CHA) performed a Phase I Environmental Site Assessment (ESA) of the building located at 36 Elm Street in the City of Glens Falls, Warren County, New York (see Figure 1), and is hereinafter referred to as the subject site. The subject site consists of approximately 0.13 acres of land entirely covered by a 17,550 square foot three-story former manufacturing building.

The purpose of this assessment was to identify recognized environmental conditions, as defined by the American Society for Testing and Materials (ASTM) Standard Practice E 1527-00, associated with the subject site. The term *recognized environmental conditions* is defined by ASTM as the presence or likely presence of any hazardous substance or petroleum products on a property under conditions that indicate an existing release, past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term *recognized environmental conditions* is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment.

The Phase I ESA Report has been prepared by CHA to provide a general description of the site, any structures occurring thereon, and within the site vicinity; to discuss the current and historical usage of the site; and to identify the presence or absence of recognized environmental conditions in connection with the site, based upon the results of a historical and regulatory records review, interviews, and a site inspection.



SOURCE: NYSDOT 7.5' Topographic
QUADRANGLE: GLENS FALLS, NY

SCALE: 1:2000

CHA
CLOUGH, HARBOUR & ASSOCIATES LLP
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11 WINNERS CIRCLE ALBANY, NEW YORK, 12205

FIGURE 1
SITE LOCATION MAP

36 ELM STREET

2.0 SCOPE OF WORK

The scope of work for this Phase I ESA consisted of a number of work elements including a review of the physical site setting, a historical review of the site, a site inspection, and a review of state and federal regulatory records. Each work element is described in greater detail below.

2.1 SITE SETTING

A description of the physical setting of the site, including geology, hydrogeology, topography, and surface water features was compiled by reviewing published information for the general vicinity of the site. Published sources reviewed included county soil surveys, geologic maps, topographic maps, and local groundwater well maps/records.

2.2 HISTORICAL LAND USE

CHA has documented the historical land use of the site and encompassing property through review of a number of records, such as:

- Land title records back at least 50 years
- Sanborn Fire Insurance maps
- Aerial photography
- City directories
- Site contact interviews
- Local government offices
- Historic maps and atlases
- Previous environmental investigations

2.3 SITE INSPECTION

An inspection of the site was performed to identify visible environmental concerns such as those listed below.

- Fuel oil and hazardous materials storage
- Aged electrical transformers and switch gear
- Stressed vegetation

- Stained soils/surfaces
- Chemical odors
- Neighboring land use
- Vicinity of wells to existing underground and/or aboveground tanks
- Visual evidence of improper disposal of waste
- Site topography/regional geology/hydrology
- Potable/wastewater distribution systems
- Lead paint potential (potential for, no sampling)
- Suspect asbestos-containing building materials (potential for, no sampling)

2.4 REGULATORY RECORD SEARCH

A review of local, state, and federal records was performed to identify the presence or occurrence of solid waste, hazardous waste, or petroleum products on the site and on properties within specified search radii of the site. The following records were reviewed:

- Federal NPL list (1.0 mile)
- Federal CERCLIS list (0.5 miles)
- Federal RCRA TSDF Corrective Actions list (1.0 mile)
- Federal RCRA TSDF Non-Corrective Action list (1.0 miles)
- Federal RCRA hazardous waste generator list (0.25 miles)
- State list of inactive hazardous waste sites (1.0 mile)
- State list of solid waste sites (1.0 miles)
- State registry of petroleum and chemical bulk storage facilities (0.25 miles)
- State leaking underground storage tank registry (0.5 miles)
- State spills inventory (0.5 miles)

2.5 ADDITIONAL WORK

Subsurface exploration activities, including installation of test pits, soil borings, and monitoring wells; building material sampling, surface water sampling, and wetland delineation were not included in the scope of this project. In addition, this scope of work does not address compliance with any federal, state, or local laws, regulations, ordinances, or codes.

3.0 SITE DESCRIPTION

3.1 GENERAL

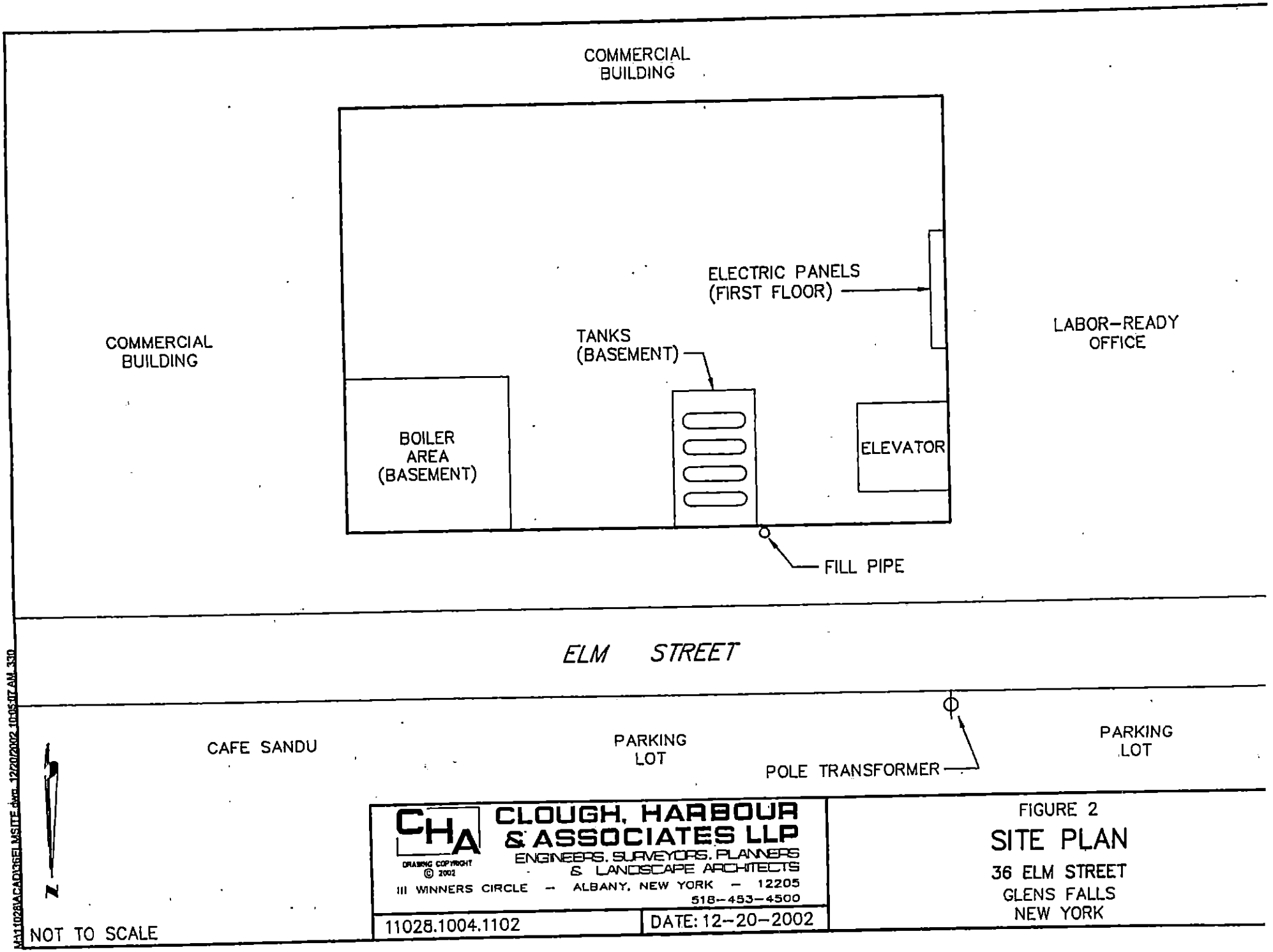
The subject site is identified as tax parcel 309.28-1-13 and consists of approximately 0.13 acres. The site is occupied by a three story masonry building which encompasses the entire site (Photo 1). The first, second, and third floors are used for the storage of restaurant supplies and equipment (Photos 2 & 3) such as dishes, tables, chairs, stainless steel sinks, and appliances. A basement underlies the entire building and is also used for storage purposes. Site utilities consist of public water and sewer, natural gas, and electricity. It should be noted that the only utility actively used is electricity. A Site Plan depicting site features has been included as Figure 2.

The site building was originally constructed in the 1920s as a shirt manufacturing facility. The basic structure today is the same as that originally constructed. The structure is an unheated masonry three-story building with a basement. The building is covered by a flat rubberized roof. All of the windows have been removed and boarded over. Interior surfaces consist of bare wooden floors, suspended tin ceiling (photo 4), and painted concrete walls. The basement consists of a concrete floor with concrete walls on the north, east, and south sides with the western wall made of stone. Portions of the former heating system (boiler tank and other piping) are located in the northeastern corner of the basement. A freight elevator is located in the northwestern corner of the structure with the associated mechanical equipment located on the roof.

3.2 NEIGHBORING PROPERTIES

The subject site is located in a mixed commercial/residential setting. Adjacent site uses are as follows:

- North – Elm Street with a mixed commercial/residential area located on the northern side of Elm Street. The properties immediately to the north consist of a parking lot and the Café Sandu. Commercial buildings are located further to the north.



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DATE: 12-20-2002

FIGURE 2

SITE PLAN

36 ELM STREET
GLENS FALLS
NEW YORK

- South – A commercial building immediately abuts the southern wall of the site structure. Commercial and residential buildings are located further to the south of the subject site.
- East – A three-story commercial building with retail shops on street level and residential and offices on the upper levels. A commercial district and the Glens Falls Hospital are located further to the east of the subject site.
- West – An alley separates the site structure from a small commercial building, currently occupied by Labor-Ready offices, on the western side of the site. Residential and commercial buildings are located further to the west.

3.3 SITE GEOLOGY AND HYDROLOGY

According to the United States Department of Agriculture's (USDA) Soil Survey for Warren County, the soils of the subject site consist of Oakville loamy fine sand. This soil type consists of deep, well drained soils on outwash plains. According to the Surficial Geologic and Geologic Maps, Hudson Mohawk Sheets, the surficial sediments of the site consist of Lacustrine sands overlying bedrock of limestone.

The actual direction of groundwater flow beneath the subject site has not been physically verified; however, based on regional topography, groundwater is assumed to flow to the southeast toward the Hudson River. There were no surface water features present on the site at the time of the site inspection.

3.4 SITE TOPOGRAPHY

The New York State Department of Transportation (NYSDOT), 7.5 Minute Series Topographic Map, Glens Falls Quadrangle, indicates that the approximate elevation of the subject site is 345 feet above mean sea level (AMSL). The topographic profile of the site is flat. There were no apparent areas of fill material noted on the subject site at the time of the site inspection.

3.5 WETLANDS

The New York State Department of Environmental Conservation (NYSDEC) and the National Wetlands Inventory mapping indicated that there are no federally or state delineated wetland areas located on or adjacent to the subject site.

3.6 RADON GAS POTENTIAL

According to the New York State Department of Health (NYSDOH) Basement Radon Database, the subject site is located in an area in which the average indoor basement radon level is 1.5 picocuries per liter (pCi/l). The federal recommended allowable continuous exposure level for radon is 4.0 pCi/l.

4.0 SITE HISTORY

4.1 TITLE DEED SEARCH

A title deed search was conducted at the Warren County Clerk's Office. The purpose of the title deed search was to establish past property ownership and to attempt to identify past uses of the property which may have had a detrimental environmental impact on the site. An attempt was made to trace property ownership for a minimum of 50 years with an emphasis on the transfer or lease of lands to corporations or industrial/manufacturing facilities. Chronology of title ownership is summarized below.

Owner	Date of Ownership
U.J. Limited Partnership	July 1998
Jack Lebowitz	July 1998
Jack & Philip Lebowitz	October 1971
Iser Realty Corporation	February 1956
Simon Milberg	April 1955
Milstone Undergarment Corporation	August 1952
Milestone Foundation	June 1948

4.2 STANDARD HISTORICAL SOURCES

Sanborn Fire Insurance Maps

The Sanborn Fire Insurance Map collection maintained by the New York State Library located in Albany, New York, was searched for coverage of the area of the subject site. The review of the Sanborn Maps is summarized below and a copy of the maps have been included in Appendix B.

Map Year	Site Description	Surrounding Area
1981	Building occupies the entire site. Site use is identified as storage.	N = Elm Street, parking lot, restaurant, store, apartments W = Restaurant, parking lot, dwelling, offices; E = Stores, South Street; S = Stores and associated parking lots.
1967	Building occupies the entire site. Site use is identified as ladies wear factory.	N = Elm Street, filling station with three gas tanks identified, restaurant, and dwellings; W = Restaurant, parking lot, and dwellings; E = Stores, South Street; S = Store, auto repair facility, additional stores, one referencing a gas tank.
1952	Same as 1967	Same as 1967.
1935	Steel post building encompasses entire site, Use identified as auto sales and service with a gas tank located on the north side of the site	N = unreported; W = Dwelling; E = Stores, paint and oil shop, South Street; S = Auto repair and storage, paint store, and a warehouse.
1911	Dwelling.	N = Elm Street and dwellings; W = Dwellings; E = Stores, South Street; S = Stores, hay barn.
1901	Dwelling.	N = Elm Street, dwellings, and R.S. Hilkins Livery and Boarding; W = Dwellings; E = Grocery, barber shop, cobbler shop; S = Dwelling, grocery warehouse.

City Directories

City directories for the City of Glens Falls, beginning with 1985 and regressing at roughly five-year increments until 1915, were reviewed at the Crandall Library located in Glens Falls. The city directory findings are summarized below.

Directory Year	Site Occupant
1985, 1980	No listing
1975	Vacant
1970, 1966	J&J Lingerie, Inc. – ladies undergarments
1961, 1955	R&J Lingerie, Inc. – ladies undergarments
1950	Milbro Mills, Inc. – ladies undergarments
1944, 1940	Manhattan Shirt Company
1935	Sunshine Manufacturing Company, McNaughton & Hughes Auto Repair
1930	Artistic Shirt Company
1925	C.R. Thomson Shirt Company
1920	Vacant
1915	Residential – S.R. Stoddard

Beer's Atlas

The Beer's Atlas for the City of Glens Falls, dated 1875, was reviewed at the Crandall Library. The subject site was identified as residential property under the name of S.R. Stoddard.

Aerial Photographs

Aerial photographs, dated 1990, 1982, 1973, 1968, and 1947 were reviewed at the New York State Office for Technology's Geographic Information Center located in Albany. The subject site was noted to be similar as at present in all of the photographs, with a single structure encompassing the entire site. The evolution of the surrounding area from residential to commercial use was observed over time.

4.3 LOCAL GOVERNMENT OFFICES

City of Glens Falls Assessor's Office

The subject site is identified as tax parcel 309.28-1-13. Information derived from the Assessor's property card is listed below:

- Owner: U.J. Limited Partnership
- Lot Size: 90' x 66'
- Building Size: 17.550 square feet, three stories

- Utilities: public water and sewer, electric and natural gas
- Property Class: warehouse

City of Glens Falls Building Department

The subject site is located in an area zoned as a Central Commercial District. Mr. John Ward, the City Building Inspector indicated that there were no active files for the subject site, however, information in archived files existed. These files have been unavailable for review as of the date of this report,

City of Glens Falls Fire Inspector

The City Fire Inspector, Mr. John Ellingsworth, was contacted relative to records of tank and/or chemical usage at the subject site, and spill or hazardous material responses made relative to the subject site. Mr. Ellingsworth furnished CHA with a copy of a 1935 Sanborn map for the site and indicated that they had no record of any specific environmental concerns pertaining to the subject site.

4.4 PREVIOUS ENVIRONMENTAL INVESTIGATIONS

No reports of any previous environmental investigations of the subject site were made available to CHA during the course of this project.

4.5 SITE CONTACT INTERVIEW

Mr. John Pagano, property owner representative, met with the CHA inspector at the time of the site inspection. Mr. Pagano stated that the building has been unheated and used as a storage facility since ownership by the current owner (approximately 30 years). The fuel oil storage tanks and heating system were in the building at the time of purchase, though, have not been used by the current owner. There are no chemicals stored or used at the site. To his knowledge there are no underground storage tanks at the site and there have been no spills reported for the site.

5.0 SITE INSPECTION

On December 5, 2002, CHA conducted an inspection of the subject site. The site was examined, photographs were taken (Appendix A), and neighboring land uses were noted. The results of the inspection are detailed below.

5.1 FUEL OIL AND HAZARDOUS MATERIAL STORAGE FACILITIES AND CONTAINERS

5.1.1 Tanks

There was no evidence of underground storage tanks (USTs) observed on the subject site at the time of the site inspection.

Four approximately 500 gallon aboveground storage tanks (ASTs) were located within a concrete block enclosure in the basement of the building (Photos 7 & 8). The enclosure was filled with sand. The tanks are connected in series and filled from a fill pipe located on the exterior of the building adjacent to the northwestern overhead door (Photo 5). The fill pipe enters the basement through the northern wall (Photo 6) and connects to the northern most tank. As mentioned, the tanks were surrounded with sand, so the tanks and the interior of the enclosure were unable to be visually examined. It was unknown as to the actual size of the tanks or if any product remained in any of the tanks.

The boiler tank of the former heating system was located in the northeastern corner of the basement. The fuel burner unit of the system had previously been removed from the site. Piping and miscellaneous pieces of the system remain.

5.1.2 Chemical Storage Facilities and Containers

A small inventory of five-gallon plastic containers of soap were observed adjacent to the elevator entrance on the first floor. All of the containers appeared in good condition at the time of the site inspection with no evidence of release.

5.2 POLYCHLORINATED BIPHENYLS (PCBs)

There were no transformers located on the subject site at the time of the site inspection. Electrical panels were located along the western wall of the first floor (Photo 9). Fluorescent light fixtures were located throughout the building on each floor and in the basement (Photo 10). Based on the age of the building, it is possible that these fixtures may contain PCB ballasts.

5.3 STRESSED VEGETATION

There was no vegetation apparent on the subject site at the time of the site inspection.

5.4 STAINED SOIL AND SURFACES

There was no surface staining apparent on the subject site at the time of the site inspection.

5.5 CHEMICAL ODORS

No chemical odors were noted on the subject site at the time of the site inspection.

5.6 LOCATION OF WATER WELLS RELATIVE TO STORAGE TANKS

There were no USTs or water wells located on the subject site at the time of the site inspection.

5.7 VISUAL EVIDENCE OF IMPROPER WASTE DISPOSAL

There was no visual evidence of improper waste disposal observed on the subject site at the time of the site inspection.

5.8 WATER AND WASTE WATER DISTRIBUTION SYSTEMS

The subject site is serviced by the public drinking water and sanitary sewer systems administered by the City of Glens Falls, however, these services are not actively utilized at the site. The was no evidence of water supply wells or septic systems observed on the subject site at the time of the site inspection.

5.9 LEAD PAINT POTENTIAL

Based on the age of the site structure, the potential exists for the presence of lead-based paint to be associated with the structure. Several painted surfaces were noted to be peeling at the time of the site inspection (Photo 11).

5.10 SUSPECT ASBESTOS-CONTAINING BUILDING MATERIALS

Based on the age of the building, asbestos-containing materials may be associated with the building. At the time of the site inspection, suspect materials were noted in the form of, though not necessarily limited to, pipe wrap (Photo 12) noted throughout the building, heating equipment insulation associated with remaining equipment, and paint. Many of these materials were observed to be in a deteriorated condition at the time of the site inspection. According to Mr. Pagano, the roof is rubber and was installed approximately 15 years ago. However, he did not know if the old roof had first been removed or merely covered by the new roof. As a result, historic roofing materials are also considered to be suspect asbestos-containing materials.

6.0 ENVIRONMENTAL REGULATORY REVIEW

Environmental regulatory agency records were searched through the use of state and federal databases accessed and summarized through the use of DataMap Technology's FirstSearch technology. The information contained in the FirstSearch report is summarized below, and a copy of the regulatory database report is included in Appendix C. (Note that, due to the close proximity of the subject site to the property previously investigated at 20 Elm Street, the regulatory database radius report that was used for the assessment of 20 Elm Street was also used for the 36 Elm Street property.)

6.1 HAZARDOUS WASTE SITE LISTS

The subject site does not appear on the USEPA CERCLIS list of potential hazardous waste sites (September 2002), nor does it appear on the USEPA NPL list (September 2002) or New York Department of Environmental Conservation (NYSDEC) Inactive Hazardous Waste Sites List (April 2001). According to these lists, there are no NPL sites located within one mile of the subject site, however, there are two sites located within 0.5 miles of the subject site listed by the CERCLIS and state databases. These sites are listed below.

Facility	Location	Comments
Niagara Mohawk Operation HQ	Mohican Street (0.31 miles SE)	CERCLIS – No further remedial action planned 6/26/91. State – investigation resulted in no discovery of documented disposal of hazardous waste at this site, considered a Class D site.
Finch Pruyn	Off Route 149 (0.41 miles SE)	CERCLIS – preliminary assessment and site inspection resulted in status of "not proposed" for listing, 3/20/91. State – only non-hazardous paper sludge disposed of at this site, considered a Class D site.

It should be noted that both of these sites are located downgradient of the subject site and are considered to present no environmental threats relative to hazardous waste. As a result, it is not expected that either of these sites has impacted the subject site.

6.2 HAZARDOUS WASTE TREATMENT, STORAGE, DISPOSAL, AND GENERATOR FACILITIES

Review of the USEPA Resource Conservation and Recovery Information System (RCRIS) list of Treatment, Storage and Disposal Facilities (TSDF) and the USEPA RCRIS list of small (SQG) and large quantity (LQG) hazardous waste generators report (August 2002) indicated that the property investigated for this report is not a TSDF facility or a permitted generator of hazardous waste. The regulatory database report indicated that there are no TSDF or corrective action sites located within one mile of the subject site and three hazardous waste generators located within 0.25 miles of the subject. The generator sites are listed below.

Generator	Location	Status
Glens Falls Hospital	100 Park Street, 0.19 miles SE	SQG
Evergreen Bank NA	234 Glen Street, 0.05 miles NW	CSQG
Cortons Creative Instant Printing	100 Glen Street, 0.24 miles SE	CSQG

SQG = small quantity generator, generates 100 – 1000 kg of hazardous waste per month.
CSQG = conditionally exempt small quantity generator, generates less than 100 kg of hazardous waste per month.

Based on the fact that none of these generators abuts the subject site, the fact that there have been no violations filed against any of the generators, the relatively small volumes of waste generated at these sites, and the fact that most of them are located cross to downgradient of the subject site, it is not expected that these hazardous waste generators have impacted the subject site.

6.3 PETROLEUM AND CHEMICAL BULK STORAGE TANK REGISTRY

Review of the NYSDEC Registered Petroleum and Chemical Bulk Storage Facilities database (January 2002) indicated that there are no USTs or ASTs currently or formerly registered to the subject site.

The tank database referenced registered tank facilities which are located within 0.25 miles of the subject site. These facilities and respective tank inventories are listed below.

Facility	Location	Tanks & Status	Product
Glens Falls Hospital	100 Park Street (0.19 miles SE)	3 USTs CR 1 UST CIP 3 USTs in service 2 ASTs in service	Gasoline, fuel oil, diesel
Dom's Service Center	10 Broad Street (0.05 miles SW)	4 USTs CR	Gasoline, diesel
Moore's, A Division of Harcros Lumber & Building Supplies	679 Glen Street (0.05 miles NW)	1 UST CR 1 AST in service	Gasoline, diesel

CR = closed and removed
CIP = closed in place

Several of these tank facilities are located either cross or downgradient of the subject site, and as a result, are not expected to have impacted the subject site. Upgradient facilities have either not had any leaking tank reports filed against them, or such releases were confined to the lands of those facilities and have since been remediated and closed, and as such, are not expected to have impacted the subject site (see Section 6.4)

6.4 SPILLS AND LUST INVENTORY

Review of the NYSDEC Spills and Leaking Underground Storage Tank (LUST) database (January 2002) indicated that there have been no spill or LUST incidents reported for the subject site.

Several such incidents have been reported for properties within 0.5 miles of the subject site. Many of which were reported for the Finch Pruyn plant on Glen Street. The majority of the spill/LUST sites are located downgradient relative to the subject site, were restricted to lands of those sites, and/or have been closed by the NYSDEC, indicating that they require no further action at those sites.

Only one upgradient active spill was reported by the database search. Subsurface contamination was indicated during an in-place closure of a fuel oil UST at the Evergreen Bank located at 237 Glen

Street (0.05 miles northwest of the subject site). The contamination was reported on October 25, 2000. The spill report indicated that the contamination was confined to the Evergreen Bank property.

Based on the closed status or the restriction to lands of the spill site, it is not expected that the spill/LUST incidents occurring within 0.5 miles of the subject site have impacted the subject site. Details specific to each spill and LUST report are contained in the regulatory database report included in Appendix C.

6.5 SOLID WASTE FACILITIES

Review of the NYSDEC database of solid waste facilities and transfer stations (March 2002) indicated that the subject site is not a listed active or inactive solid waste facility or transfer station. Further review of the list indicated that there is one permitted solid waste facility located within 0.5 miles of the subject site. The listed landfill was identified as the Finch Pruyn paper sludge landfill located at 1 Glen Street, approximately 0.4 miles southeast (downgradient) from the subject site. The database report indicates an inactive status for this landfill. Based on its downgradient location relative to the subject site, the Finch Pruyn landfill is not expected to impact the subject site.

7.0 CONCLUSIONS & RECOMMENDATIONS

Based upon CHA's site observations and the review of available regulatory and historical information concerning the site and surrounding areas, CHA has established the following conclusions and recommendations.

7.1 CONCLUSIONS

CHA has performed this Phase I ESA in conformance with the scope and limitations of ASTM Standard Practice E 1527-00. Any exceptions to, or deletions from, these practices are described in Section 2.0 of this report. This assessment pertaining to the property located at 36 Elm Street in the City of Glens Falls, New York, revealed evidence of recognized environmental conditions relative to the subject site pertaining to the historic use of a fuel oil-fired heating system including the aboveground storage tanks remaining on the site, potential off-site impacts from historic neighboring automotive service and gasoline station facilities, potential PCB light ballasts, and potential asbestos-containing building materials and lead-based paints.

7.2 RECOMMENDATIONS

CHA recommends that the four fuel oil tanks be properly closed and/or removed according to applicable state and federal regulations. Subsurface soil and groundwater should be sampled to evaluate potential impacts from the on-site tanks and heating system, in addition to off-site sources of concern.

In anticipation of site activities (renovation and/or demolition) that would potentially disturb any suspect asbestos and lead building materials, CHA recommends that an Asbestos and Lead Paint Survey be performed. The survey should be performed by properly trained and certified personnel in accordance with applicable State and Federal regulations. The results of the survey will provide data necessary to develop abatement cost estimates. In addition, light fixture ballasts should be inventoried and properly characterized for disposal.

8.0 RESOURCE SUMMARY

In compiling the report summarizing this investigation, the following persons/agencies were interviewed and/or contacted and resources checked.

Warren County Soil Survey: published by the USDA, 1983.

Topographical Map of New York: Glens Falls Quadrangle, NYSDOT, 1993.

Surficial Geologic Map of New York: Hudson Mohawk Sheet, 1989.

Geologic Map of New York: Hudson Mohawk Sheet, 1970.

NYS Wetlands Inventory Map: Glens Falls Quadrangle, NYSDEC, 1987.

DataMap Technology: regulatory database report dated 11/19/02.

City of Glens Falls Municipal Offices: Assessor: contacted in person 12/5/02; Building Inspector, John Ward, contacted in person 12/5/02; City of Glens Falls Fire Inspector, John Ellingsworth, contacted via telephone 12/5/02, written response received 12/17/02.

Warren County Clerk: Record room, title deed records, researched 12/5/02.

New York State Department of Health Basement Radon Database: March 2000.

New York State Library: Sanborn Fire Insurance Maps, reviewed 12/4/02.

City Directories for the City of Glens Falls: reviewed at the Crandall Library on 12/5/02, directories dated 1985, 1980, 1975, 1970, 1964, 1959, 1955, 1950, 1945, 1940, 1935, 1930, 1925, 1920, 1915.

Beers Atlas: Dated 1875, reviewed at the Crandall Library, 12/5/02.

New York State Office of Technology, Geographic Information Section: Aerial photographs dated 1990, 1982, 1973, 1968, and 1947, reviewed 12/4/02.

Mr. John Pagano: property owner representative, interviewed in person 12/5/02.

9.0 LIMITATIONS

The conclusions presented in this report are based on information gathered in accordance with the Scope of Services defined in Section 2.0 of the report. This report is not intended to assess the condition of the subsurface environment at the site. All conclusions reflect observable conditions existing at the time of the site inspection (December 5, 2002). Information provided by the resources referenced in Section 8.0 was utilized in assessing the site. The accuracy of the conclusions drawn from this investigation is, therefore, dependent upon the accuracy of information provided.

PHASE II
ENVIRONMENTAL ASSESSMENT REPORT
FOR
36 ELM STREET

CITY OF GLENS FALLS
BROWNFIELD ASSESSMENT PILOT DEMONSTRATION PROGRAM
WARREN STREET CORRIDOR
EPA ASSISTANCE # BP98228901-0

Prepared For:

City of Glens Falls
42 Ridge Street
Glens Falls, New York 12801

November 2003

CHA Project No: 11028.1004.1102

Prepared By:

CLOUGH, HARBOUR & ASSOCIATES LLP
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APPENDIX A: Phase I Environmental Site Assessment
APPENDIX B: Subsurface Boring Logs, Monitoring Well Construction Logs, and Well Sampling Logs
APPENDIX C: Soil Sample Laboratory Reports
APPENDIX D: Sand Sample Laboratory Reports
APPENDIX E: Groundwater Laboratory Reports
APPENDIX F: Asbestos and Lead Paint Laboratory Reports

EXECUTIVE SUMMARY

Clough, Harbour and Associates, LLP (CHA) was retained by the City of Glens Falls to conduct a Phase II Environmental Assessment of the property located at 36 Elm Street, Glens Falls, New York. The assessment consisted of a subsurface investigation, including soil borings, sampling of sand in a tank vault, and groundwater sampling at the subject site, as well as an asbestos containing materials and lead based paint survey with limited sampling in the building located on the subject site.

The conclusions below have been drawn through the completion of this investigation. Recommendations have been included relative to specific issues that will require further action. The issues included in this executive summary are fully discussed and summarized in the report that follows.

The boring and monitoring well installed at the subject site were located to access a particular area of concern as identified by the January 2003 Phase I Environmental Site Assessment. Boring/well MW-1 was located on the west side of the building in the sidewalk to assess the subsurface impact from the four ASTs in the building's basement as well as potential off-site impacts from historic neighboring automotive service and gasoline station facilities. Boring B-2 was located in the basement of the building on the subject site to assess the subsurface conditions directly beneath the building and to assess the impacts from possible leaks from the ASTs. The two sand samples were collected from the north side of the tank vault and were collected to assess the condition of the sand which surrounds the four ASTs located in the tank vault in the building's basement. There were also ten suspect asbestos containing materials and 3 types of suspect lead based paint identified and sampled in the building.

The completion of this Phase II Investigation has demonstrated that there is no analytical evidence of subsurface soil or groundwater impact concerning the above mentioned areas of concern at levels in excess of current standards at the time the investigation was performed.

The sand in the tank vault located in the basement was found to have number of detected parameters, including VOC's, SVOC's, Metals, and PCB isomers. However, when compared to the TAGM #4046 guidance standards there are no parameters exceeding the standards. Regardless of concentration, the presence of these parameters in the sand in the tank vault suggests that a release has occurred within the confines of the vault and that PCBs were present or mixed with the fuel oil stored in the tanks. As a result, given that the tanks are no longer in use, CHA recommends that the tanks, their contents, and the sand in the tank vault be removed and disposed of in accordance with applicable regulations. It is also recommended that at the time the tanks are removed, that the condition of the underlying concrete flooring be examined for cracks and other defects. If evidence of release to the site's subsurface via cracking in the floor slab or other damage is present additional borings should be installed through the floor slab to assess localized impact.

Asbestos containing materials confirmed to be present in the building include aircell type pipe insulation located in the basement, 2nd, and 3rd floors, window glazing located throughout the building on the windows, and finally the built-up (layered) roof system underlying the rubber membrane roof. The paint found on the first, second, and third floors was found to contain lead at varying concentrations. Only one of the samples contained lead at greater than 0.5% by weight, the EPA standard for lead based paint. However each paint type sampled contained a measurable amount of lead and therefore, if disturbed, must be handled per the OSHA Lead in Construction Standard.

If any demolition or renovation project is undertaken that could impact asbestos-containing materials, these materials must be properly removed and disposed of by a NYSDOL licensed asbestos abatement contractor using NYS certified abatement workers prior to the start of renovation/demolition activities.

Similarly, if the subject building is to be demolished or renovated, surfaces coated with lead based paint may potentially be removed and disposed of as part of the work. Precautions must be taken to ensure workers are aware of the presence of lead-based paint and to ensure that the

requirements of OSHA's Lead in Construction Standard must be followed. Lead based paint waste or contaminated building debris must be characterized and disposed of according to State and Federal hazardous and solid waste regulations.

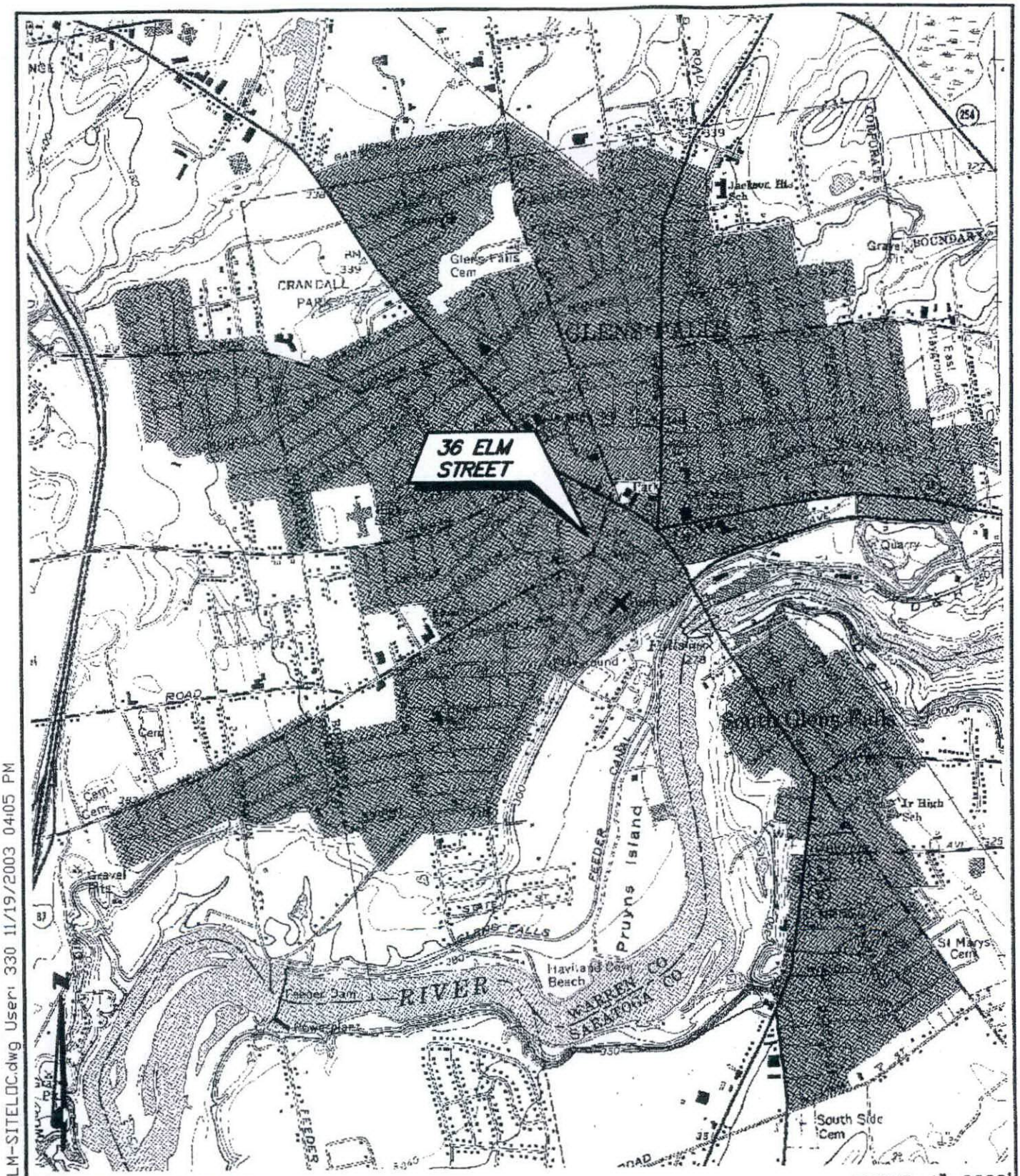
1.0 INTRODUCTION

From September 26 through October 8, 2003, Clough Harbour and Associates, LLP (CHA) completed a series of field activities associated with a Phase II Environmental Assessment of the property located at 36 Elm Street in Glens Falls, New York. The work was performed to address the recommendations put forth in CHA's Phase I Environmental Site Assessment (ESA) dated January 2003. The text and figures from the Phase I ESA report have been included as Appendix A.

Phase II field work was performed per the Environmental Protection Agency (EPA) approved Work Plan & Field Sampling Plan and Quality Assurance Project Plan both dated October 28, 2003. These documents had been approved prior to the commencement of fieldwork, however minor revisions were made and the final revised copies are dated October 28, 2003. There was also an approved Site Health and Safety Plan for the site dated March 14, 2003. This report summarizes the investigative activities conducted at the Site and presents CHA's conclusions and recommendations, based on the results generated therefrom.

The 36 Elm Street site consists of one tax parcel, and totals approximately 0.13 acres. The site is entirely occupied by a three story masonry building with a basement. The basement and all of the upper floors are presently used for storage of restaurant supplies and equipment (i.e., dishes, chairs, appliances). The structure was formerly heated by a fuel oil-fired boiler system. Site utilities consist of municipal water and sewer services, natural gas, and electricity. A site location plan is included as Figure 1.

The Phase I ESA pertaining to the property located at 36 Elm Street in the City of Glens Falls, New York, revealed evidence of recognized environmental conditions relative to the subject site pertaining to historic use of a fuel oil-fired heating system including the aboveground storage tanks remaining on the site, potential off-site impacts from historic neighboring automotive service and gasoline station facilities, potential PCB light ballasts, and potential asbestos-containing building materials and lead-based paints.



SOURCE: U.S.G.S. 7.5' Topographic
QUADRANGLE: GLENS FALLS, NY

SCALE: 1"=2000'

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III WINNERS CIRCLE – ALBANY, NEW YORK – 12205
518-453-4500

11028.1004.1102 | DATE: 11-19-2003

FIGURE 1
PHASE II ENVIRONMENTAL ASSESSMENT
SITE LOCATION MAP
36 ELM STREET
GLENS FALLS
NEW YORK

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This report includes the following sections. Section 1.0 includes this introduction and a brief background of the site. Section 2.0 discusses the field activities performed and the subsurface conditions encountered. Section 3.0 presents the analytical results of all of the sampling activities. Following Section 3.0, Section 4.0 discusses the findings of the asbestos and lead based paint sampling effort. Section 5.0 is a discussion of CHA's internal Quality Assurance/Quality Control review. Section 6.0 presents CHA's conclusions and recommendations developed from the investigation, and finally, Section 7.0 presents the limitations that were present in preparing this report.

2.0 FIELD ACTIVITIES

To further evaluate the potential for contamination from the above mentioned environmental concerns, CHA conducted a subsurface investigation, consisting of the following items. Two soil borings were installed. One on the exterior of the building was installed using a track mounted Geoprobe rig using direct push technology. The second boring taken in the basement was collected using a hand auger. The boring installed on the exterior of the building was converted into a temporary ground water monitoring well. This work was performed by Environmental Drilling – New York LLC of South Glens Falls, New York. Boring and monitoring well locations are presented on Figures 2 & 3, and copies of the boring logs, monitoring well construction logs and well sampling logs are included as Appendix B.

In addition to the subsurface soil borings, two samples of sand were collected from the tank vault located in the basement. CHA personnel collected these samples using a hand auger. The tank vault houses four AST assumed to store fuel oil. Sampling of suspect asbestos containing materials and lead based paints was also performed to assess the presence of these materials and assess the possible risk to occupants of the building.

Boring MW-1 was located on the west side of the building in the sidewalk to assess the subsurface impacts from the four ASTs in the building's basement and from potential off-site impacts from historic neighboring automotive service and gasoline station facilities. B-2 was located in the basement of the building on the subject site to assess the subsurface conditions directly beneath the building, and to assess the impacts from possible leaks from the ASTs. The two sand samples were collected from the north side of the tank vault. Each sample was taken approximately 6" from the bottom of the vault to assess contamination from the possible leaking tanks or spillage during filling. Samples of suspect asbestos containing materials and lead based paints were taken at random locations where materials deemed to be suspect for asbestos or lead content were observed.

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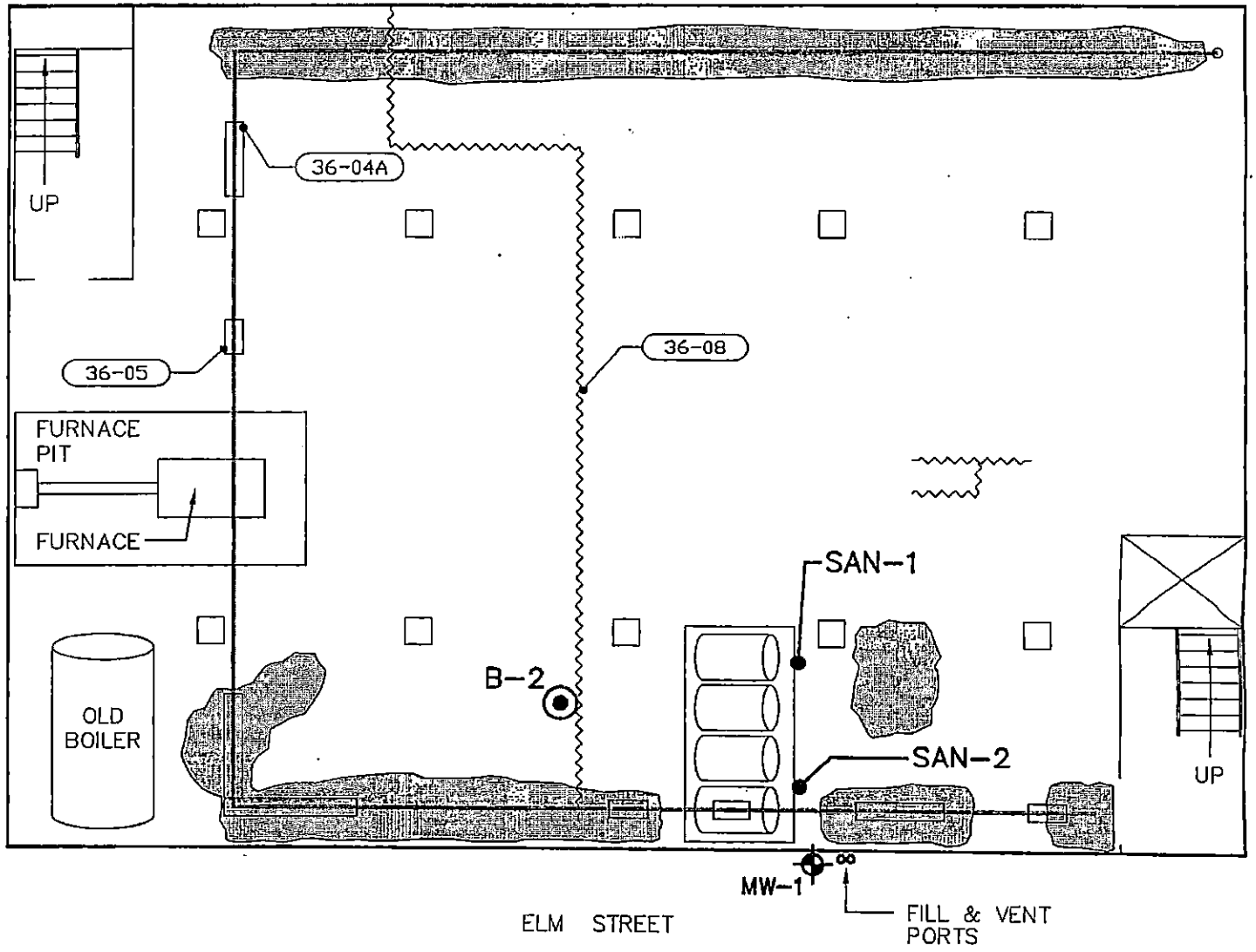
LEGEND

- 36-01A — ASBESTOS SAMPLE LOCATION
- 36Pb-01A — PAINT CHIP SAMPLE LOCATION
- BLACK PIPE WRAP
- PIPE WITH AIRCELL
- AREA OF INTACT AIRCELL
- AREA OF AIRCELL DEBRIS
- B-2 — BORING LOCATION
- SAN-1 — SAND SAMPLE LOCATION
- MW-1 — MONITORING WELL LOCATION



APPROXIMATE SCALE: 1" = 12'

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FIGURE 2
PHASE II ENVIRONMENTAL ASSESSMENT
BASEMENT PLAN
36 ELM STREET
GLENS FALLS
NEW YORK

Sampling of subsurface soil, sand from the tank vault, groundwater, and suspect asbestos and lead based paints were completed according to Table 1 below. Table 1 outlines the number of samples that were collected, methods of analysis, maximum holding times, packing and preservation, and field QC samples.

TABLE 1

CONTAINER, PRESERVATION, AND PACKAGING REQUIREMENTS
PHASE II ENVIRONMENTAL ASSESSMENT
36 ELM STREET

Analysis	# of Samples	Analytical Detection Level	Max. Holding Times	Shipping Means	Packaging/ Preservation	Field QC Samples
Subsurface Soil/Sand Samples						
VOCs EPA 8260	4	≤ TAGM 4046 Standards	10 days from Validated Time of Sample Receipt (VTSR) to analysis	Hand Delivery/ FedEx Priority	Cooler/Ice to maintain 4° C temp.	2 Field Duplicates 2 MSMSD
SVOCs EPA 8270 B/N	4	≤ TAGM 4046 Standards	5 days from VTSR to extraction/ 40 days from VTSR to analysis	Hand Delivery/ FedEx Priority	Cooler/Ice to maintain 4° C temp.	same as above
8 RCRA Metals SW-846 6010B SW-846 7471A	4	≤ TAGM 4046 Standards	6 months from collection to analysis	Hand Delivery/ FedEx Priority	Cooler/Ice to maintain 4° C temp.	same as above
PCBs EPA 8082	4	≤ TAGM 4046 Standards	5 days from VTSR to extraction/ 40 days from VTSR to analysis	Hand Delivery/ FedEx Priority	Cooler/Ice to maintain 4° C temp.	same as above
Groundwater Samples						
VOCs EPA 8260	2 (1 Trip Blank)	≤ TAGM 4046 Standards	7 days from VTSR to analysis	Hand Delivery/ FedEx Priority	Cooler/Ice to maintain 4° C temp.	1 Field Duplicate 1 MS/MSD
SVOCs - EPA 8270 B/N	2	≤ TAGM 4046 Standards	5 days from VTSR to extraction	Hand Delivery/ FedEx Priority	Cooler/Ice to maintain 4° C temp.	same as above
8 RCRA Metals SW-846 6010B SW-846 7471A	2	≤ TAGM 4046 Standards	6 months from collection to analysis	Hand Delivery/ FedEx Priority	Cooler/Ice to maintain 4° C temp.	same as above
PCBs - EPA 8082	2	≤ TAGM 4046 Standards	5 days from VTSR to extraction/ 40 days from VTSR to analysis	Hand Delivery/ FedEx Priority	Cooler/Ice to maintain 4° C temp.	same as above
Asbestos and Lead Samples						
Asbestos PLM EPA600/R-93/116	8	≤ 1.0 % Asbestos by weight	Indefinite	Hand Delivery/ FedEx Priority	4-mil zip lock bags	1 Field Duplicates
Asbestos PLM NOB NYSDOH 198.1	9	≤ 1.0 % Asbestos by weight	Indefinite	Hand Delivery/ FedEx Priority	4-mil zip lock bags	1 Field Duplicates
Asbestos TEM NOB NYSDOH 198.4	4	≤ 1.0 % Asbestos by weight	Indefinite	Hand Delivery/ FedEx Priority	4-mil zip lock bags	1 Field Duplicates
Lead - Paint Chip Flame AA AOAC 5.009(974.02)	3	≤ 0.5 % Lead by weight	Indefinite	Hand Delivery/ FedEx Priority	4-mil zip lock bags	1 Field Duplicates

Table Notes: (1). Pre-sanitized disposable equipment for sampling and filtering of aqueous and soil samples were utilized during the course of this investigation. (2) TAGM 4046 = NYS DEC Technical and Administrative Guidance Memorandum #4046. Detection level goals are set less than or equal to New York State TAGM 4046 guidance values. (3) Aqueous samples for metals are preserved with HNO_3 and preserved with HCl for volatiles.

Two soil samples, one from each boring, were collected and analyzed for the presence of volatile organic compounds, semi-volatile organic compounds (base/neutral fraction), the eight toxicity characteristic metals, and PCBs. Soil samples from boring/well MW-1 were collected continuously at standard four foot intervals. Soil samples from boring B-2 were collected continuously at 6 inch intervals. Each soil sample was screened by a qualified CHA Environmental Scientist for visual, olfactory and photoionic evidence of contamination. One field duplicate was collected. At this site, the soil sample duplicate was collected from Boring B-2. MS/MSD samples were also collected. These samples were collected from boring/well MW-1. The duplicates and MS/MSD samples were collected from the same horizon as the main samples, if possible. If sufficient volume was not present at the original sample horizon, part of the sample may have been collected from the horizon directly above the horizon from which the original sample was collected.

Two sand samples were collected to characterize the sand in the tank vault located in the basement and were analyzed for the same constituents as the soil samples. The sand samples were collected from the bottom of the vault, by coring a hole in the vault wall and inserting a hand auger to extract a sample of the sand. The samples were taken from just above the floor of the tank vault. As a QA/QC measure, one field duplicate was collected. The duplicate sand sample was collected from the same location as sample SAN-1. MS/MSD samples were also collected. These samples were collected from the same location as sample SAN-2. Soil and sand samples were submitted to Katahdin Analytical Services of Westbrook, Maine, following proper chain of custody procedures. Katahdin Analytical Services is currently certified by the New York State Department of Health and reports and deliverables were produced in accordance with New York State Department of Environmental Conservation (NYSDEC) 1989 ASP (revised 12/91), Category B.

One week following the installation and development of the groundwater monitoring well on, October 8, 2003, groundwater samples were collected from the monitoring well installed on the site. The groundwater samples were analyzed for the same parameters as the soil samples noted above. One field duplicate was collected. The duplicate for the groundwater samples, recorded

as sample MW-2, was collected from monitoring well MW-1. MS/MSD samples were also collected from the same location. A well sampling log for MW-1 is included in Appendix B. The groundwater samples were also submitted to Katahdin Analytical Services.

2.1 Subsurface Conditions/ Hydrogeology

Soil Boring & Tank Vault Sampling Program

Subsurface conditions encountered in individual borings are detailed on the subsurface boring logs included as Appendix B. The subsurface conditions can generally be described as generally well graded, fine to coarse sand. The depth to groundwater was estimated in the field based on the moisture content in the soil samples and the borings was generally observed at a depth of 12 ft. bgs. It should be noted that boring B-2 was installed in the basement of the building, approximately 10' - 12' below the exterior ground surface were boring/well MW-1 was installed. Therefore the boring B-2 installed to 3' below the basement floor is at approximately the same depth as 16' bgs of boring/well MW-1. Field screening results indicated no visual, olfactory, and/or photoionic evidence of contamination in either of the borings installed on the site.

The sand sampled from the tank vault located in the buildings basement was dry, brown in color, well graded, and fine to medium grained. There was olfactory evidence of a slight petroleum odor observed at the time of sample collection at both sample locations.

Groundwater Flow

A single groundwater monitoring well was installed at the subject site, therefore groundwater flow could not be determined. Measured depth to ground water below the riser pipe of monitoring well MW-1 was 10.84 feet.

3.0 ANALYTICAL RESULTS

3.1 Soil Sample Analysis

Representative soil samples were collected from each of the two boring locations. Samples were to be collected at depths, which exhibited visual or olfactory signs of contamination. If no signs of contamination were observed, as was the case with the borings installed at this site, samples were collected from a depth just above the top of the groundwater table. The locations of the subsurface borings are shown on Figures 2 & 3. The soil analytical results were compared to those presented in NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046, December 1994. Detected parameters are summarized in Table 2. It should be noted that sample numbers have been abbreviated for clarity on the table and do not include the full prefix which notes the date of sample collection that is shown on the chains of custody and laboratory reports.

Table 2
Detected Parameters
Soil Samples

Test Parameter (ppm)	MW-1 (12'-16')	B-2 (2' or 3' approx. 14' bgs relative to MW-1)	DUP-1 (B-2)	TAGM #4046 Recommended Soil Cleanup Standards (ppm)
Methylene Chloride	ND	0.004	0.003	0.1
Diethylphthalate	0.083*	0.094*	0.095*	7.1
Bis (2-Ethylhexyl) phthalate	0.46*	0.49*	0.570*	435.0
Arsenic	0.56*	0.94	0.41*	7.5 or SB
Barium	9.9	11.0	15.4	1 or SB
Cadmium	0.04*	0.05	0.02*	300 or SB
Chromium	2.1	2.3	2.6	10 or SB
Lead	1.0	1.8	1.9	SB (4 - 61ppm in rural areas)

Notes: ppm = parts per million
ND = not detected
SB = site background
* = also detected in laboratory method blank

As shown in Table 2, a number of parameters were detected from the two locations sampled. Methylene Chloride was the only VOC parameter detected among the three samples analyzed. This parameter is below TAGM #4046 guidance levels. Methylene Chloride is known to be a common laboratory contaminant.

Diethylphthalate and Bis (2-Ethylhexyl) phthalate were semi-volatile organic compound (SVOC) detected in all three samples. These parameters were also detected at levels well below TAGM #4046 levels and all were detected in the laboratory method blank analyzed concurrently with the samples.

It should be noted that no PCB isomers were present in the soil samples collected during the Phase II investigation.

Arsenic, Barium, Cadmium, Chromium, and Lead were detected in each of the samples. All metals levels are below TAGM #4046 recommended standards. A copy of the analytical report for the soil sample analysis is included in Appendix C.

3.2 Sand Sample Analysis

Two sand samples were collected from the AST vault located in the basement of the subject building. The sand samples were collected from the bottom of the vault, by coring a hole in the vault wall and inserting a hand auger into the vault to extract a sample of the sand. The samples were taken from just above the floor of the tank vault. Sample SAN-1 was collected from the north side of the vault and the west end and sample SAN-2 was collected from the north side of the vault on the east end of the vault. Each sample was taken approximately 6" from the bottom of the vault. The sand sample locations are both shown on Figure 2. The analytical results for the two sand samples were compared to NYSDEC TAGM #4046 soil cleanup standards.

As these are sand samples from the tank vault, and they were not taken from subsurface environments, these guidelines were used as a basis for comparison only. Detected parameters are summarized below in Table 3. It should be noted that sample numbering has been abbreviated for clarity on the table and does not include the full prefix, noting the date of sample collection that is shown on the chains of custody and laboratory reports.

Table 3
Detected Parameters
Sand Samples

Test Parameter (ppm)	SAN-1	SAN-2	DUP (SAN-1)	TAGM #4046 Recommended Soil Cleanup Standards (ppm)
Chloromethane	ND	0.3	ND	--
Bromomethane	ND	0.13	ND	--
Methylene Chloride	0.005	ND	ND	0.1
1,2,4-Trimethylbenzene	ND	0.095*	ND	3.3
Napthalene	ND	0.44*	ND	13.0
2-Methylnapthalene	ND	1.9	ND	36.4
Acenapthene	ND	0.39	ND	90.0
Dibenzofuran	ND	0.52	ND	--
Diethylphthalate	0.07	ND	0.071	7.1
Flourene	ND	0.39	ND	350.0
N-Nitrosodiphenylamine	ND	1.4	ND	--
Phenanthrene	0.036	1.8	0.048	218
Anthracene	ND	1.8	ND	50.0
Fluoranthene	0.035	0.088	0.045	50.0
Pyrene	0.036	0.15	0.049	665.0
Benzo (a) anthracene	ND	ND	0.021	3.0
Chrysene	ND	ND	0.028	0.4
Bis (2-Ethylhexyl) phthalate	0.028	0.032	0.042	435.0
Benzo (b) fluoranthene	0.015	ND	0.03	1.1
Benzo (a) pyrene	ND	ND	0.022	11.0
Aroclor-1254	0.067	0.018	0.07	10**
Arsenic	1.1	0.59*	0.98	7.5 or SB
Barium	18.3	11.2	26.3	1 or SB
Cadmium	0.13*	0.07*	0.12*	300 or SB
Chromium	5.1	3.7	5.9	10 or SB
Lead	9.8	3.0	11.2	SB (200 – 500 ppm in urban/suburban areas)
Mercury	0.02*	0.01*	0.03	0.1
Selenium	0.28*	ND	0.21*	SB

Notes: ppm = parts per million
ND = not detected
SB = site background
* = also detected in laboratory method blank
** = total subsurface PCBs

As stated in Table 3, a number of parameters were detected in both samples. A slightly greater number of parameters were detected in sand sample SAN-2. Four VOCs including Chloromethane, Bromomethane, 1,2,4-Trimethylbenzene, and Napthalene were detected in sample SAN-2, while none of these parameters were detected in sample SAN-1. All levels are below the TAGM #4046 recommended soil standards.

The sand samples from both SED-1 and SED-2 were found to have multiple detected parameters. Ten SVOCs were detected in SAN-2 and nine were detected in the duplicate sample of SAN-1. All levels of SVOC's were below standards.

One PCB isomer, Aroclor-1254 was detected in both sand samples as well as the duplicate. Aroclor-1254 was detected at 0.067 ppm in sample SAN-1, 0.018 ppm in sample SAN-2, and at 0.07 ppm in the duplicate to sample SAN-1. All of these levels are below the standard for total subsurface PCBs of 10.0 ppm. However, this suggests that PCB's were likely present in or mixed with the fuel oil used at the site.

Seven RCRA metals were detected among the two samples and single duplicate. All were found to be below the TAGM #4046 soil standard. A copy of the analytical report for the sand sample analysis is included in Appendix D. The approximated volume of sand in the tank vault is 285 cubic feet. The metals analyses do not suggest that the sand in the vault will be considered to be a characteristic hazardous waste.

3.3 Groundwater Samples

A groundwater sample was collected from monitoring well MW-1 that was installed at the site. As this was the only monitoring well, a duplicate sample (MW-2) was also collected at this location. The samples were submitted to Katahdin Analytical Services for analysis for the parameters identified in Section 2.0 of this report. The analytical results for the groundwater samples were compared to the New York's Ambient Water Quality Standards, Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1. The detected parameters are tabulated below in Table 4.

Table 4 below shows that no parameters were detected at levels above ambient groundwater quality standards. Tetrachloroethene, Methyl tert-butyl ether (MTBE), and Diethyl phthalate were detected at 3.0, 0.5, and 5.0 ppb respectively, in the sample collected from MW-1 as well as the duplicate. Each of these levels are below standards.

Table 4
Detected Parameters
Groundwater Samples

Test Parameter (ppb)	MW-1	MW-2 (MW-1 duplicate)	NYS Ambient Groundwater Standards (ppb)
Tetrachloroethene	3.0*	3.0	5.0
Methyl tert-butyl ether (MTBE)	0.5	0.5	NS
Acetone	8.0	ND	50.0
Diethyl phthalate	5.0	5.0	50.0**
Barium	69.0	68.9	1,000
Chromium	4.4*	5.2*	50.0
Lead	6.6	12.6	25.0
Mercury	0.07*	0.08*	0.7

Notes: ppb = parts per billion
ND = not detected
NS = no standard
* = also detected in laboratory method blank
** = guidance value, not standard

Barium, Chromium, Lead, and Mercury were each detected at consistent levels in both samples. Chromium and Mercury were also detected in the laboratory method blank in each sample.

It should be noted that no PCB isomers were present in the groundwater samples collected during the Phase II investigation.

A copy of the laboratory report for the groundwater samples is included as Appendix E.

4.0 ASBESTOS CONTAINING MATERIALS AND LEAD BASED PAINT

The asbestos containing materials (ACM) and lead based paint (LBP) survey of the Building located at 36 Elm Street was carried out on October 8, 2003. The survey involved the onsite inspection and sampling of suspect ACMs and LBPs associated with the subject building. The results of the survey are detailed below. Figures 2 through 5 show the locations of asbestos and lead paint samples. Areas of asbestos containing pipe insulation and pipe insulation debris on the floor area also shown. Analytical reports detailing the type of asbestos and relative percentages of asbestos present in a given material and the percent lead found in paints surveyed are included in Appendix F.

4.1 Asbestos Containing Materials

The subject building as briefly discussed in Section 1.0 of this report consists of a three story masonry building with a basement. Currently the building is used for storage of restaurant supplies and equipment. Generally the layout of each floor has a stairwell and elevator at the northeast corner and a second stairwell at the southwest corner with open an open floor plan in the center.

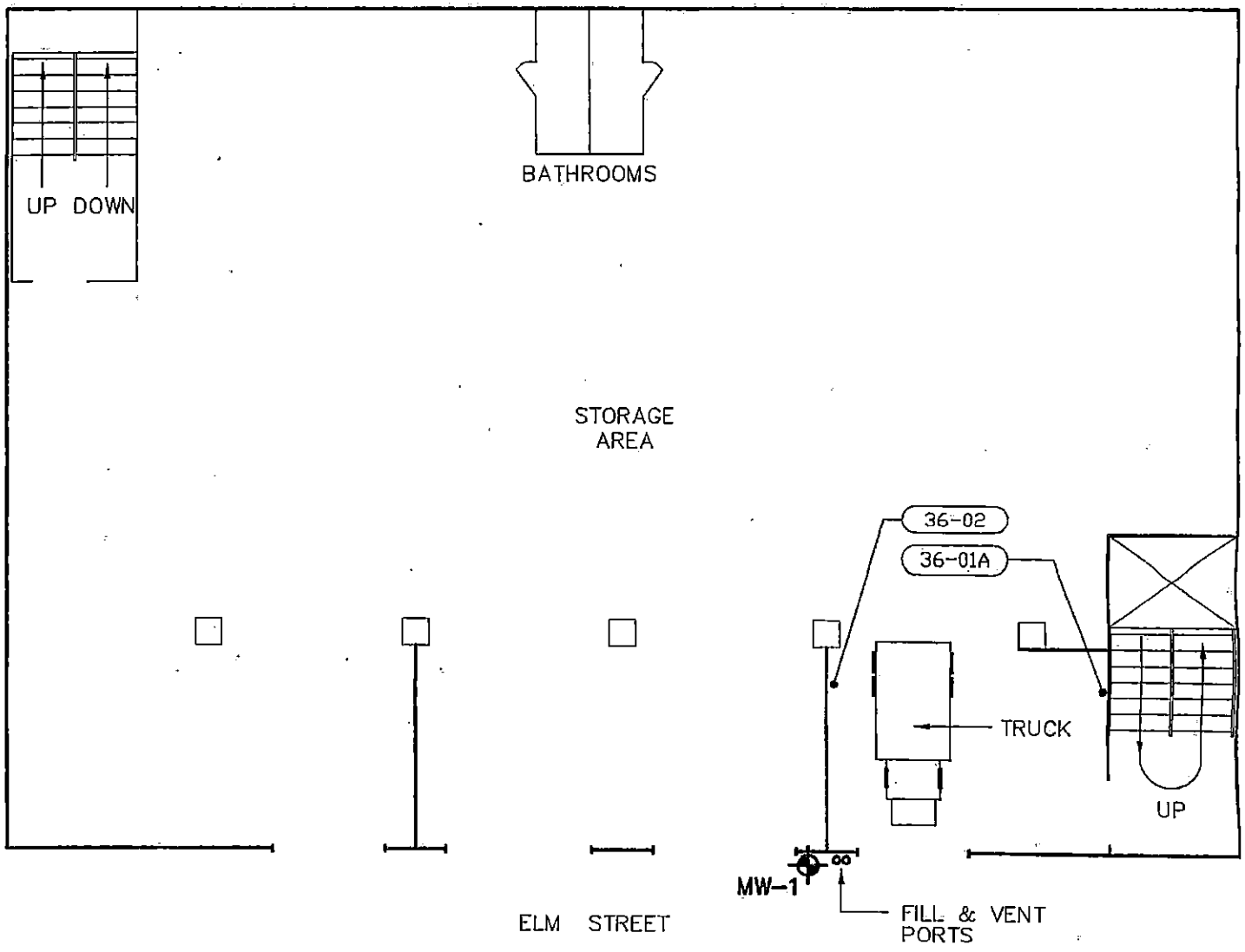
Suspect materials observed in the basement consist of two types of pipe insulation. One is an aircell type insulation while the second is a black pipe wrap which appears to be tar or bituminous asphalt soaked cork. There are also areas of aircell pipe debris on the floor that has become detached from the piping.

The first, second, and third floors are generally of similar construction. Suspect asbestos containing materials observed on each of the three floors are plaster, drywall, and window glazing. On the second floor, there was floor tile observed in the rooms located on the east side of the floor. The second and third floors also have aircell type insulation runs along the west wall. Pipe insulation was not observed on the first floor. It should be noted that the current use of the building is for storage and therefore many areas are completely filled with stored articles &

File: M:\11028\ACAD\ADJUST-36ELM-1ST.dwg User: 330 11/20/2003 08:40 AM

LEGEND

- 36-01A — ASBESTOS SAMPLE LOCATION
- 36Pb-01A — PAINT CHIP SAMPLE LOCATION
- MW-1 — MONITORING WELL LOCATION



APPROXIMATE SCALE: 1" = 12'

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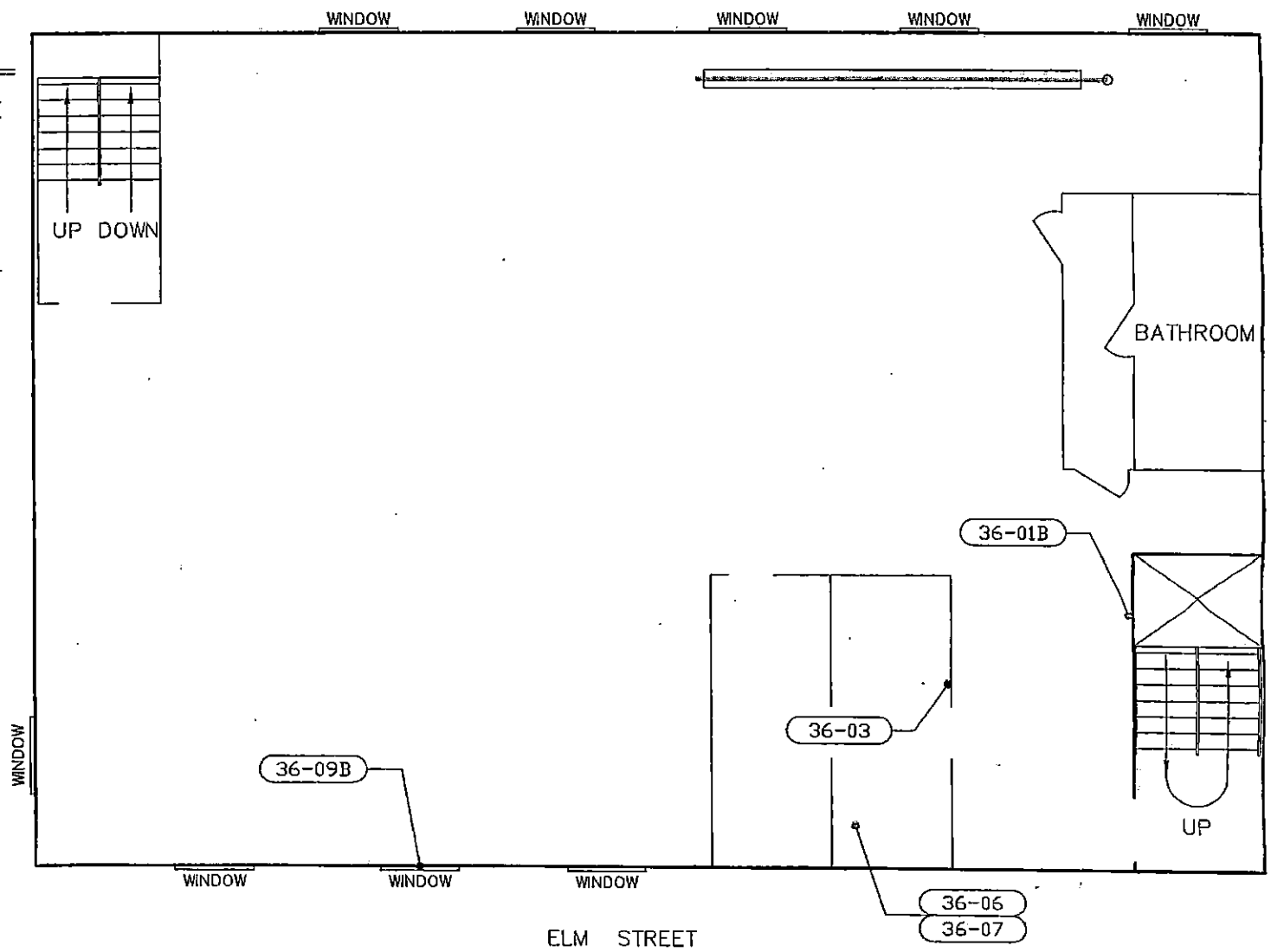
11028.1004.1102 | DATE: 11-14-2003

FIGURE 3
PHASE II ENVIRONMENTAL ASSESSMENT
FIRST FLOOR PLAN
36 ELM STREET
GLENS FALLS
NEW YORK

File: M:\11028\ACAD\ADJUST-36ELM-2ND.dwg User: 330 11/20/2003 08:41 AM

LEGEND

- 36-01A — ASBESTOS SAMPLE LOCATION
- 36Pb-01A — PAINT CHIP SAMPLE LOCATION
- PIPE WITH AIRCELL
- AREA OF INTACT AIRCELL



APPROXIMATE SCALE: 1" = 12'

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FIGURE 4

PHASE II ENVIRONMENTAL ASSESSMENT
SECOND FLOOR PLAN

36 ELM STREET
GLENS FALLS
NEW YORK

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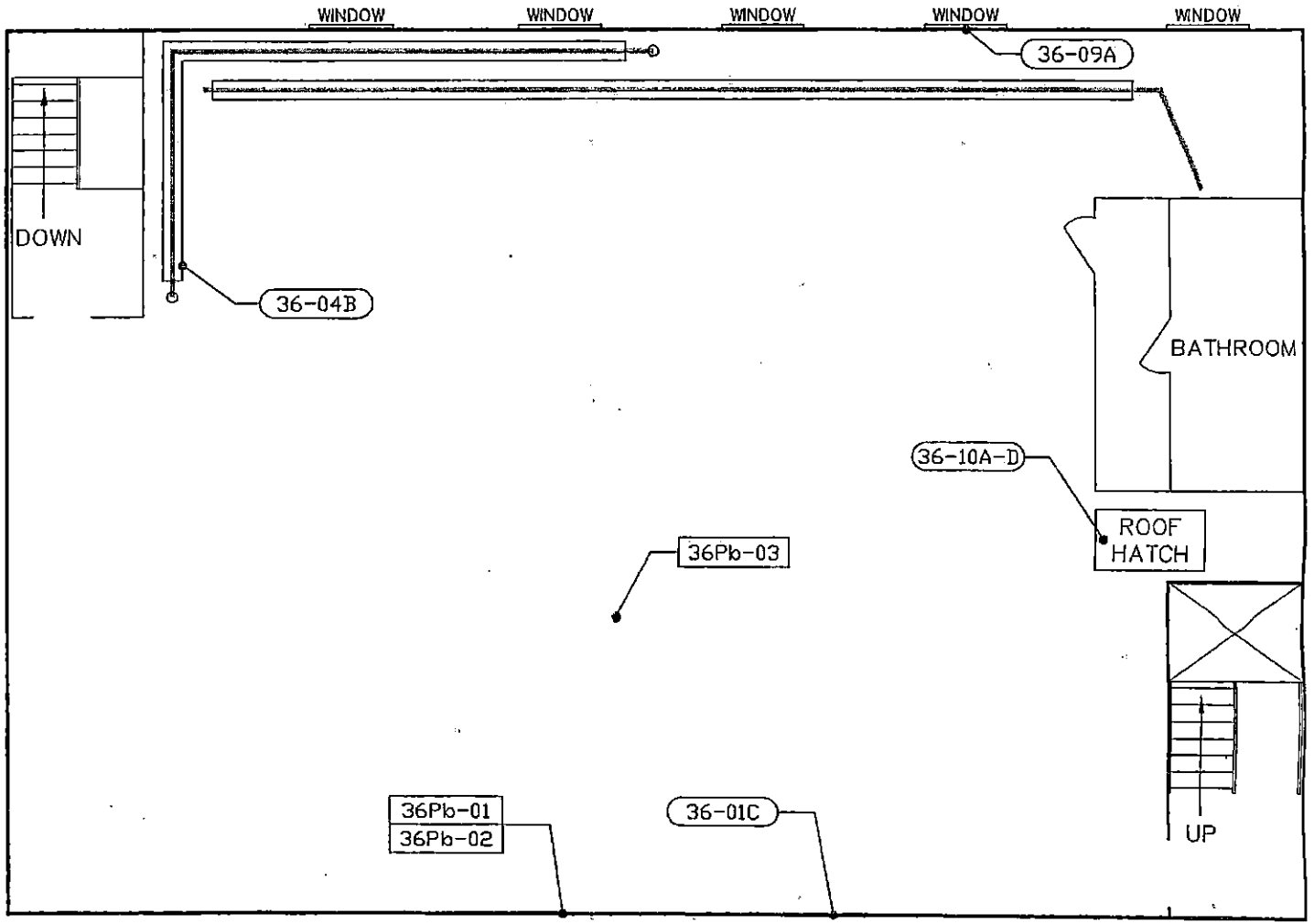
LEGEND

- 36-01A — ASBESTOS SAMPLE LOCATION
- 36Pb-01A — PAINT CHIP SAMPLE LOCATION
- PIPE WITH AIRCELL
- AREA OF INTACT AIRCELL



APPROXIMATE SCALE: 1" = 12'

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FIGURE 5
PHASE II ENVIRONMENTAL ASSESSMENT
THIRD FLOOR PLAN
36 ELM STREET
GLENS FALLS
NEW YORK

equipment, restricting access to some areas and preventing complete visual confirmation of the presence and/or absence of suspect materials in the inaccessible areas.

All asbestos samples were submitted to Fibers, ID Inc of Albany, NY and all TEM analysis required was performed at EAS, Inc. of Elmsford, NY.

4.2 Lead Based Paint

The lead based paint survey of the subject building was carried out concurrently with the asbestos survey. This involved the onsite inspection and sampling of suspect lead based paints associated with the subject building. All of the paint observed was considered to be suspect for the presence of lead, due to the age of the building.

The interior of the building exhibited very basic paint schemes at the time of inspection. The basement of the building was observed to have no painted surfaces. The first, second, and third floor were all observed to have the same general paint scheme, that being a dark green and light green combination on the walls with a light green paint on the tin ceilings.

The majority of the painted surfaces appear to be peeling or chipping. Every effort was made during sample collection to minimize the amount of substrate that was included with the paint chip sample. Analytical reports detailing the types/colors of paint and relative percentages of lead present in them are included in Appendix F. As stated, Figures 2 through 5 illustrate sample locations for both asbestos and lead based paint.

All suspect paint chip samples were sent to EMSL Analytical of Westmont, NJ for analysis.

4.3 Asbestos and Lead Based Paint Sample Results

The laboratory analysis summary provided in Table 5 is for all suspect asbestos containing materials that were sampled. Analytical reports for Asbestos and Lead analysis are included in Appendix F. Bolded analytical results are provided for materials that tested positive for asbestos.

TABLE 5
SUSPECT ASBESTOS CONTAINING MATERIAL BULK SAMPLING
36 ELM STREET

SAMPLE I.D. NUMBER	MATERIAL	LOCATION	COND.	ANALYTICAL RESULT	APPROX. QUANITITY
36-01A	Plaster – single coat	1st floor, North	Good	NAD	-
36-01B	Plaster – single coat	2nd floor, Adj. elevator	Good	NAD	-
36-01C	Plaster – single coat	3rd floor, East	Good	NAD	-
36-02	Drywall	1st floor, south of truck	Good	NAD	-
36-03	Drywall	2nd floor east rooms	Good	NAD	-
36-04A	Aircell Pipe Insulation	Basement SW corner	Poor	**24% Chrysotile**	135 lin.ft.
36-04B	Aircell Pipe Insulation	3rd floor adj. stairs	Fair	**14% Chrysotile**	165 lin.ft.
36-05	Debris on floor	Basement, West of furnace	Poor	NAD	-
36-06	Floor tile – black	2nd floor, East rooms	Fair	NAD	-
36-07	Floor tile – brown	2nd floor, East rooms	Fair	NAD	-
36-08	Black pipe wrap	Basement	Fair	NAD	-
36-09A	Window Glazing	3rd floor, west side	Poor	NAD	-
36-09B	Window Glazing	2nd floor, east side	Poor	**1.3% Chrysotile**	Throughout
36-10A	Built-up Roofing – top layer	Main Roof	Good	NAD	-
36-10B	Built-up Roofing – 2nd layer	Main Roof	Good	**44% Chrysotile**	5,850 sq. ft.
36-10C	Built-up Roofing – 3rd layer	Main Roof	Good	NA Stop 1st positive	-
36-10D	Built-up Roofing – bottom layer	Main Roof	Good	NA Stop 1st positive	-

ACM is considered to be materials where the asbestos content by weight is greater than 1%.
sq. ft. = square feet
lin. ft. = linear feet
NAD = No Asbestos Detected
NA Stop 1st positive = Not analyzed due to previous analysis of positive layer in system

Based upon CHA's site observations and bulk sampling analysis results for asbestos containing materials at the subject site, the following asbestos containing materials were confirmed: Aircell pipe insulation, window glazing and the roof system. Each of these three materials were

analyzed and found to contain asbestos at greater than 1.0% by weight. The quantities in Table 5 include total quantities found throughout the building, and not just in the sample locations. It should also be noted that window glazing on the 1st floor could not be accurately assessed due restricted access from stored materials and boarded up windows.

The laboratory analysis summary provided in Table 6 identifies the paint types that were collected for analysis and the percentage of lead by weight found in each sample.

TABLE 6
SUSPECT LEAD BASED PAINT BULK SAMPLING
36 ELM STREET

SAMPLE I.D. NUMBER	COLOR	LOCATION	COND.	ANALYTICAL RESULT (% lead by weight)
36Pb-01	Light Green	Wall, 3rd floor east	Fair	0.16
36Pb-02	Dark Green	Wall, 3rd floor east	Fair	0.68
36Pb-03	Light Green	On Tin Ceiling, 3rd floor	Fair	0.31

The Occupational Safety and Health Administration (OSHA) considers any measurable amount of lead enough to trigger the requirements of the OSHA Lead in Construction Standard. As shown in Table 6, all samples have measurable amounts of lead present. Housing and Urban Development (HUD) and the Environmental Protection Agency (EPA) both consider lead based paint to be any paint containing 0.5% or greater lead by weight. Only sample 36Pb-02 was found to contain levels of lead in excess of 0.5% lead by weight.

5.0 DATA QUALITY ASSESSMENT

5.1 Precision

Precision is a measure of the mutual agreement between measurements of the same parameter. Precision is assessed by comparing the analytical results of the matrix spike (MS) and the matrix spike duplicate (MSD) samples and is reported as relative percent difference (RPD).

RPD values reported for the three analytic groups (soil, sand, and groundwater) appeared to be within the QC limits established by the analytical protocols utilized for this project.

5.2 Accuracy

Accuracy is a measure of the difference of a set of analytical results to the accepted or expected values. Accuracy is assessed by using the MS/MSD and surrogate spike recovery data. Recovery values reported outside the QC limits established for each analytical parameter group are listed below. Based on corresponding recoveries, sample results may be considered to be biased either high or low for specific compounds.

Soil

- MS/MSD recoveries were high for several VOCs, and SVOCs of 4-chloroaniline, hexachlorocyclopentadiene, diethylphthalate, and 3,3-dichlorobenzidine.
- MS/MSD recoveries were low for 1,1,2,2-tetrachloroethane and vinyl acetate.

Groundwater

- MS/MSD recoveries for several SVOCs were low.

Sand

- MS/MSD recoveries were low for several SVOC compounds.

5.3 Representativeness

Each of the proposed sampling locations deemed critical in providing information necessary for the preliminary assessment of the site were installed and sampled in accordance with applicable standard operating procedures as outlined in the Work Plan for this project. All holding times for analysis appear to have been maintained, with the exception of VOC analysis of the groundwater samples which exceeded the ASP required holding time by two days. As a result the reported results may be biased low.

The analyses of associated trip blanks indicated the samples for VOC analyses were not impacted during transport or sample management by the laboratory. Laboratory blank samples analyzed in association with the Elm Street sample delivery groups indicated that the subject samples were generally not impacted during the analytical process, with the exception of bis(2-Ethylhexyl)phthalate in the soil blank; diethylphthalate in the soil and groundwater blanks; and several VOCs in the blank for 10/16 analyses. However, the analytical data is expected to provide an acceptable level of representativeness relative to existing site conditions.

5.4 Comparability

Comparability of the data is derived from the evaluation of field duplicate samples and the adherence to established sampling and analytical protocols.

All of the soil, groundwater, and sand samples collected from the Elm Street site were sampled and analyzed utilizing standardized USEPA methodologies as per the latest version of the NYSDEC's Analytical Services Protocol (ASP).

Field duplicates were identified as follows:

- Soil – Sample 92603SF-Dup 1 was a duplicate sample of soil sample 92603SF-B2.

- Groundwater – Sample 100803SF-MW2 was a duplicate sample of collected from monitoring well MW1.

- Sand – Sample 100603-SAND DUP was a duplicate of sand sample 100603-SAN1.

The duplicate results were generally comparable to each of the original samples.

5.5 Completeness

Completeness is the measure of the amount of valid data obtained from a measurement system compared with the amount that was expected to be obtained under normal conditions. An 80% QC acceptance criteria was established as the acceptable goal for determining completeness of the data for this project. Based on the review of the laboratory data, a greater than 80% QC criteria has been met, as all of the samples proposed under the project work plans were collected.

5.6 Asbestos & Lead Analytical QA/QC

All suspect asbestos containing materials were sampled by an EPA/NYS certified asbestos building inspector. All samples were analyzed at NYS Department of Health certified laboratories following all applicable federal and state approved methodology. Multiple samples of homogenous materials were sampled to ensure consistent sample analysis results and upon reviewing the analytical data all sample analyses appear valid and complete.

The collection of suspect lead based paints was intended to screen the building for the presence of lead based paints. Paint chip samples were collected and analyzed at an American Industrial Hygiene Association (AIHA) accredited laboratory following the Flame AAS (SW846, 7420) method.

6.0 CONCLUSIONS/RECOMMENDATIONS

CHA's conclusions/recommendations regarding the current environmental status of the site based upon the Phase II investigations completed to date are presented below.

Boring/well MW-1 was located on the west side of the building in the sidewalk to assess the subsurface impact from the four ASTs in the building's basement as well as potential off-site impacts from historic neighboring automotive service and gasoline station facilities. Boring B-2 was located in the basement of the building on the subject site to assess the subsurface conditions directly beneath the building and to assess the impacts from possible leaks from the ASTs. The two sand samples were collected from the north side of the tank vault and were collected to assess the condition of the sand which surrounds the four ASTs located in the tank vault in the building's basement. There were also ten suspect asbestos containing materials and 3 types of suspect lead based paint identified and sampled in the building.

The completion of this Phase II Investigation has demonstrated that there is no analytical evidence of subsurface soil or groundwater impact concerning the above mentioned areas of concern at levels in excess of current standards at the time the investigation was performed.

The sand in the tank vault located in the basement was found to have number of detected parameters, including VOC's, SVOC's, Metals, and PCB isomers. However, when compared to the TAGM #4046 guidance standards there are no parameters exceeding the standards. Regardless of concentration, the presence of these parameters in the sand in the tank vault suggests that a release has occurred within the confines of the vault and that PCBs were present or mixed with the fuel oil stored in the tanks. As a result, given that the tanks are no longer in use, CHA recommends that the tanks, their contents, and the sand in the tank vault be removed and disposed of in accordance with applicable regulations. It is also recommended that at the time the tanks are removed, that the condition of the underlying concrete flooring be examined for cracks and other defects. If evidence of release to the site's subsurface via cracking in the floor slab or other damage is present, additional borings should be installed through the floor slab to assess localized impact.

Asbestos containing materials that have been confirmed in the building include aircell type pipe insulation located in the basement, 2nd, and 3rd floors. Window Glazing positive for asbestos is located throughout the building on the window. Finally the built-up roof system underlying the rubber membrane of the building was found to be asbestos containing. The paint found on the first, second, and third floors was found to contain lead at varying concentrations. Only one of the samples contained lead at greater than 0.5% by weight, the EPA standard for lead based paint. However each paint type sampled contained a measurable amount of lead and therefore if disturbed must be handled per the OSHA Lead in Construction Standard.

If any demolition or renovation project is undertaken that could impact asbestos-containing materials, these materials must be properly removed and disposed of by a NYSDOL licensed asbestos abatement contractor using NYS certified abatement workers prior to the start of renovation/demolition activities.

Similarly, if the subject building is to be demolished or renovated, surfaces coated with lead based paint may potentially be removed and disposed of as part of the work. Precautions must be taken to ensure workers are aware of the presence of lead-based paint and to ensure that the requirements of OSHA's Lead in Construction Standard must be followed. Lead based paint waste or contaminated building debris must be characterized and disposed of according to State and Federal hazardous and solid waste regulations.

7.0 LIMITATIONS

This Phase II Investigation was performed under the 2001 Environmental Protection Agency (EPA) Brownfield Assessment Demonstration Pilot Program grant awarded to the City of Glens Falls. The conclusions presented in this report are based on information gathered through investigations outlined in section 2.0 of this report. Conclusions presented in this report are based on observations and analyses at the time that Phase II activities were completed. Due to ever-changing geological and environmental conditions, the future status of this or any site regarding the presence of hazardous materials and/or oil can only be determined through continual surveillance and/or chemical testing.

This report has been prepared for the exclusive use of the City of Glens Falls and its assigns in evaluating the property located at 36 Elm Street, Glens Falls, New York. Clough, Harbour & Associates (CHA) performed work in accordance with standard scientific, engineering, and hydrogeological practices in accordance with EPA approved project plans referenced herein. The work is performed without warranty, expressed or implied. CHA will be responsible only for injury, loss or damage caused directly by the sole negligence or willful misconduct of CHA and its employees.

Further, the following limitations apply to this study:

1. The findings presented in this report are strictly limited in scope and time to the location and dates of this report, and such findings shall not be used by any person(s) other than our client and shall not apply prospectively, nor shall this report be used for any purpose other than that set forth herein.

2. This report contains findings that are primarily based on the analysis and interpretation of data accumulated at the time and place of the report. Further investigations may reveal additional data or variations of the current data that might require the current findings and conclusions to be reevaluated.

3. During the performance of this assessment, CHA made measurements and interpretations of groundwater levels in the monitoring well that was installed for those and other purposes. This measurement and interpretations are based upon conditions at the specific times of testing and only at the locations of the monitoring well.

4. This report presents the results from sampling, analyses, and interpretation of data for a practical and scientifically sound number of samples and parameters based upon the scope and intended purpose of the report. However, this report does not address the possible presence of other constituents and/or contaminants in the soil and/or groundwater at the subject property.

Appendix B

Subsurface Boring Logs, Monitoring Well Construction Logs, and Well Sampling Logs

CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS

PROJECT NUMBER: 11028.1004.1102 October 27, 2003

36 Elm Street
SUBSURFACE LOG
HOLE NUMBER MW-1

LOCATION: Glens Falls, New York
CLIENT: City of Glens Falls
CONTRACTOR: EDNY
DRILLER: Steve
INSPECTOR: S. Fowler
START DATE: 9-26-03
FINISH DATE: 9-26-03
SURFACE ELEV:
CHECKED BY: K. Ziobron

DRILL FLUID: None
DRILLING METHOD: Geoprobe

WATER LEVEL OBSERVATIONS DURING DRILLING

DATE	TIME	WATER DEPTH (ft)	CASING BOTTOM (ft)	HOLE BOTTOM (ft)
9-26-03	00:00	15	0	16

SAMP./CORE NUMBER	SAMP. ADV. (ft) / LEN. CORE (ft)	RECOVERY (ft)	PID Readings (ppm)	"N" Value or RQD%	SAMPLE	DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
								CONCRETE (CONCRETE)		0'-4': PID Reading = 0.0 ppm. No odor and no staining observed.	
								f.m.c. SAND Some f. Gravel, brown, moist (SW)			
S1	4	0				2				No recovery for S1. Drove a piece of concrete with sampler.	
						4				4'-8': PID Reading = 0.0 ppm. No odor and no staining observed.	
S2	4	1.2				6					
						8		m.c. SAND brown, wet (SW)		8'-12': PID Reading = 0.0 ppm. No odor and no staining observed.	
S3	4	2.7				10					
						12		becomes saturated (SW)			
S4	4	3.8				14				Collected sample at this location, including MS/MSD sample.	
						16		End of Boring at 16 ft		12'-16': PID Reading = 0.0 ppm. No odor and no staining observed.	

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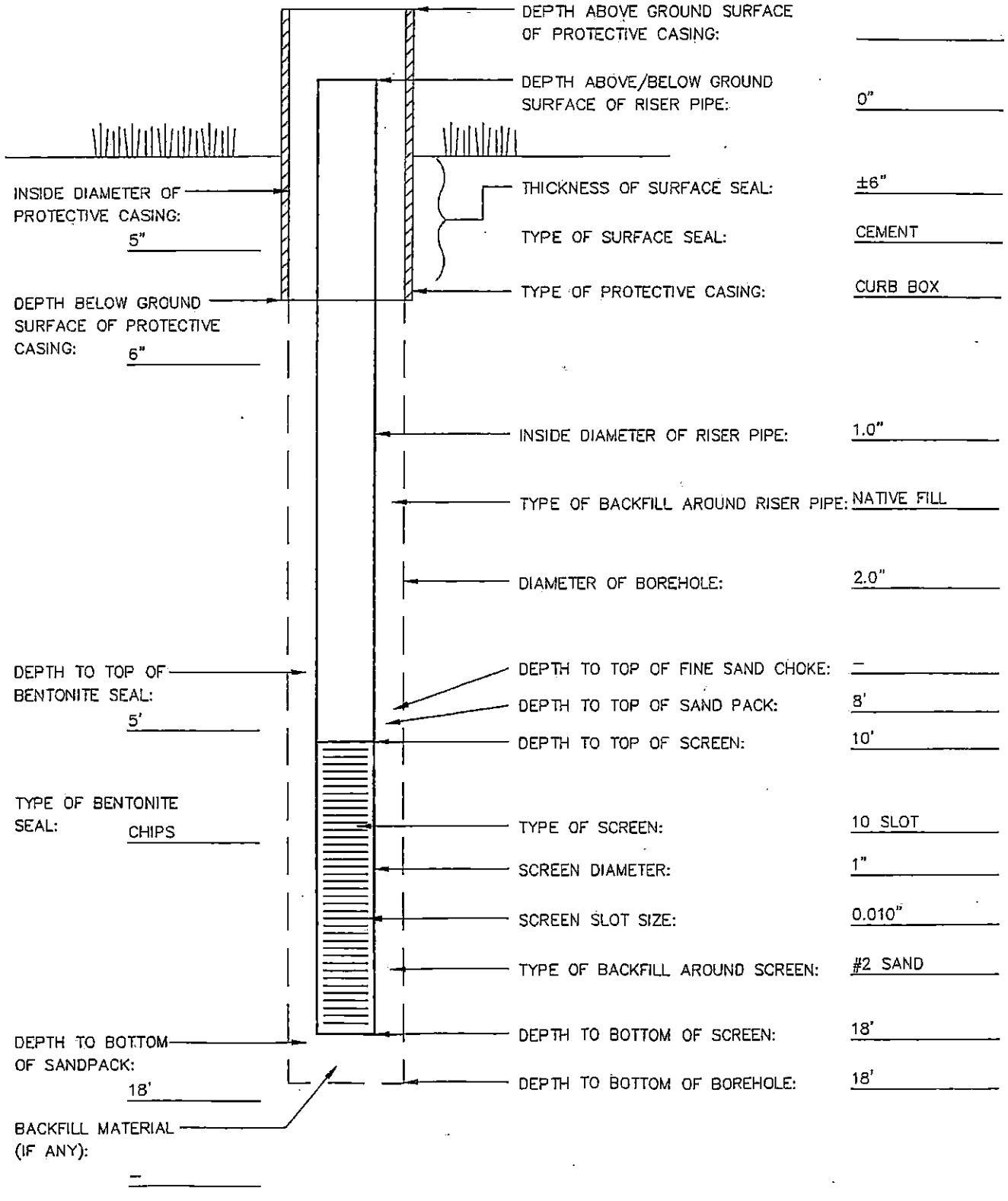
MONITORING WELL CONSTRUCTION DETAILS

BORING NO.: _____
WELL NO. MW-1

PROJECT & LOCATION: Glens Falls Brownfield, Warren Street Corridor – 36 Elm Street
CLIENT: City of Glens Falls
CONTRACTOR: Environmental Drilling – New York, LLC

PROJECT NO.: 11028
SHEET NO.: 1 OF 1
ELEVATION: _____
START DATE: 9/26/03
FINISH DATE: 9/26/03
DRILLER: Steve
INSPECTOR: S. Fowler



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36 Elm Street
SUBSURFACE LOG
HOLE NUMBER B-2

PROJECT NUMBER: 11028.1004.1102 October 27, 2003

LOCATION: Glens Falls, New York | DRILL FLUID: None | DRILLING METHOD: Hand Auger

CLIENT: City of Glens Falls

CONTRACTOR: EDNY

DRILLER: Duane | INSPECTOR: S. Fowler

START DATE: 9-26-03 | FINISH DATE: 9-26-03

START TIME: | FINISH TIME:

SURFACE ELEV: | CHECKED BY: K. Ziobron

WATER LEVEL OBSERVATIONS DURING DRILLING

DATE	TIME	WATER DEPTH (ft)	CASING BOTTOM (ft)	HOLE BOTTOM (ft)
9-26-03	12:00 AM	3	0	3

SAMP./CORE NUMBER	SAMP. ADV. (ft) LEN. CORE (ft)	RECOVERY (ft)	Blows Per 6" on Split Spoon Sampler	"N" Value or RQD%	SAMPLE	DEPTH (Feet)	GRAPHICS	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S1	0.5	0.5	NA					f.m.c. SAND, brown, dry (SW)		0'-0.5': PID Reading = 0.0 ppm. No odor and no staining observed.	
S2	0.5	0.5	NA					becomes moist (SW)		0.5'-1.0': PID Reading = 0.0 ppm. No odor and no staining observed.	
S3	0.5	0.5	NA					m.c. SAND, brown, wet (SW)		1.0'-1.5': PID Reading = 0.0 ppm. No odor and no staining observed.	
S4	0.5	0.5	NA							1.5'-2.0': PID Reading = 0.0 ppm. No odor and no staining observed.	
S5	0.5	0.5	NA			2		becomes saturated (SW)		2.0' bgs. Collected sample, including duplicate sample.	
S6	0.5	0.5	NA							2.0'-2.5': PID Reading = 0.0 ppm. No odor and no staining observed.	
								End of Boring at 3 ft		2.5'-3.0': PID Reading = 0.0 ppm. No odor and no staining observed.	
						4					
						6					

Clough, Harbour & Associates LLP **Well Sampling Log**	Sample Designation: MW-1 (MS/MSD)
Project Name: Glens Falls – Warren Street Corridor Project Location: 36 Elm Street	Project No: 11028.1004.1102 Date: 10/08/03 Screen Length: 10'

Purge Information:

(1) Depth to Bottom of Well: 17.94 ft (from TOC)

(2) Depth to Water: 10.84 ft (from TOC)

(3) Column of Water: 7.1 ft (#1 - #2)

(4) Casing Diameter: 1.0 in

(5) Volume Conversion: 0.041 gal/ft

(6) 3 Vol. of Well: 1.8 gal (#3 x #5 x 6)

Method of Purging: WaTerra/Bailer/Submersible/Other: Peristaltic Pump

Volume Conversion: (gal/ft)

2" = 0.163 4" = 0.653 6" = 1.469 8" = 2.611 10" = 4.08

Field Analysis:

Vol. Purged (gal)	.5	1.0	2.0					
Time	7:50	7:55	8:02					
ORP/EH (MV)	-56.1	-57.3	-56.9					
pH	7.43	7.3	7.31					
Cond. (MS/CM)	1518/ 1186	1487/ 1179	1475/ 1171					
Turbidity (NTU)	261	56.6	22.8					
Temperature (°C)	13.54	14.14	14.20					

Total Volume Purged: 2.0 gal Total Purge Time: 15 minutes

Sampling Info:

Sample Method: GRAB - Bailer for VOCs, Peristaltic Pump for remainder

No. of Bottles: 8

Sample Time: 8:40 a.m.

Sample Analyses: VOCs, SVOCs, 8 RCRA Metals, PCBs

Comments: Collected MS/MSD at this location.

Logged By: SF

J:\EES\Forms\Well Sampling Log.doc