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COMBINED PHASE I - PHASE II

ENVIRONMENTAL

SITE ASSESSMENT

July 31, 2000

Site Identification:	"Barney Cohen Site" Red Flynn Drive City of Beacon Dutchess County, New York 12508
Tax Lot Identification:	Grid Number 30-5954-32-488835
Property Description:	Approximately 4.2-acre property containing a house and a barn

ESI File Number: SB2096.20

Prepared By:

Ecosystems Strategies, Inc.
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COMBINED PHASE I - PHASE II

ENVIRONMENTAL

SITE ASSESSMENT

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EASTERN FIELD UNIT

July 31, 2000

ESI File Number: SB2096.20

Prepared By:

Ecosystems Strategies, Inc.
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Prepared For:

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Services performed by Ecosystems Strategies, Inc. and summarized in this Combined Phase I and Phase II Environmental Site Assessment have been conducted in accordance with Method 1527-97 as developed by the American Society for Testing and Materials (ASTM).

The undersigned has reviewed this Assessment and certifies to Scenic Hudson Land Trust, Inc. that the information provided in this document is accurate as of the date of issuance by this office.

Paul H. Ciminello
President

TABLE OF CONTENTS

1.0 INTRODUCTION 1
- 1.1 Purpose of the Investigation
- 1.2 Methodology
- 1.3 Limitations

2.0 SITE LOCATION AND DESCRIPTION 2
- 2.1 Description of the Subject Property
  - 2.1.1 Site Topography
  - 2.1.2 Site Geology
  - 2.1.3 Site Hydrogeology
  - 2.1.4 Surface Hydrology
- 2.2 Description of Surrounding Properties
  - 2.2.1 Surrounding Land Uses
  - 2.2.2 Sensitive Environmental Receptors

3.0 PHASE ONE INVESTIGATION 5
- 3.1 Ownership Records
- 3.2 Site History
  - 3.2.1 Aerial Photographs
  - 3.2.2 Local Records
  - 3.2.3 Property Representative Information
- 3.3 Review of Federal and State Agency Records
  - 3.3.1 Methodology
  - 3.3.2 Findings of Regulatory Records Review
- 3.4 Site Inspection
  - 3.4.1 Protocol
  - 3.4.2 Physical Characteristics of Subject Property
  - 3.4.3 Specific On-Site Environmental Conditions
  - 3.4.4 Environmental Conditions on Adjoining Properties

4.0 PHASE TWO INVESTIGATION 15
- 4.1 Areas of Concern
- 4.2 Field Work Overview
- 4.3 Field Work Methodology
  - 4.3.1 Test Pits and Soil Cores
  - 4.3.2 Groundwater Well Sample Collection
  - 4.3.3 Precision Tank Testing
- 4.4 Field Work Observations
  - 4.4.1 Test Pit Excavation
  - 4.4.2 Soil Cores
  - 4.4.3 Groundwater Well Sampling
  - 4.4.4 Precision Tank Testing
- 4.5 Laboratory Analysis and Results
  - 4.5.1 Terminology
  - 4.5.2 Submission and Analysis
  - 4.5.3 Laboratory Results

5.0 CONCLUSIONS AND RECOMMENDATIONS 23

6.0 SOURCES OF INFORMATION 26
- 6.1 Regulatory Records Review
- 6.2 Maps and Documents
- 6.3 Local Agency Records
- 6.4 Communications

TABLE OF CONTENTS
(Continued)

TABLES

Page 4 *Table 1: Land Uses in the Vicinity of the Subject Property*
Page 5 *Table 2: Ownership Information*
Page 10 *Table 3: Radon Levels in Vicinity of Subject Property*
Page 17 *Table 4: Description of Findings Noted During Test Pit Extension*
Page 20 *Table 5: Summary of Detected Metals in Soils*
Page 21 *Table 6: Summary of Detected PCBs in Soils*

APPENDICES

A *Site Maps*
B *Site Photographs*
C *Regulatory Review Printouts*
D *Laboratory Results*

1.0 Introduction

1.1 Purpose of the Investigation

This Combined Phase I and II Environmental Site Assessment ("ESA") identifies environmental conditions which might represent a financial liability resulting from or associated with the storage, use, transport, or disposal of hazardous or regulated materials on the property and structure located on Red Flynn Drive, City of Beacon, Dutchess County, New York A full property description is provided in Section 2.1, below.

1.2 Methodology

This ESA has been prepared in conformance with guidelines set forth by the American Society for Testing and Materials (ASTM) Method E1527-97. The specific components of this ESA are as follows:

1. Investigation of the subject property's history and characteristics through the analysis of aerial photographs, local and regional maps, municipal records, and information provided by subject property representatives. Complete references are provided in Section 5.0 of this ESA.

2. Review of Federal and State computer databases and printed records for documentation of potential liabilities relevant to the subject property. Records reviewed and corresponding search radii are consistent with, or exceed, the requirements set forth by the ASTM.

3. An initial visual inspection of the subject property conducted on June 9, 2000 by Paul H. Ciminello of Ecosystems Strategies, Inc. ("ESI").

4. A subsurface investigation conducted on specified portions of the subject property by Mary F. Martello and Larry A. Porres on June 29, 2000. This additional investigation consisted the extension of soils cores and collection of surface soil samples in areas identified during the Phase I review as being areas of potential contamination.

1.3 Limitations

This ESA is an evaluation of the property described in Section 2.1 below and is not valid for any other property or location. It is a representation of the property analyzed as of the dates that services were provided. This ESA cannot be held accountable for activities or events resulting in environmental liability after the respective dates of the site inspection or historic and regulatory research.

This ESA is based in part on certain information provided in writing or verbally by Federal, State and local officials (including public records) and other parties referenced herein. No attempt was made to independently verify the accuracy or completeness of this information. Unless specifically noted, the findings and conclusions contained herein must be considered not as scientific certainties, but as probabilities based on professional judgement.

2.0 Site Location and Description

2.1 Description of the Subject Property

The subject property as defined in this ESA consists of the 4.2-acre "Barney Cohen" property located on Red Flynn Drive, City of Beacon, Dutchess County, New York. A map depicting the location of the subject property is provided in Appendix A of this ESA. The subject property is composed of one tax parcel (City of Beacon Tax Identification: Grid Number 30-5954-32-48835).

The subject property is an irregularly-shaped lot located on the westernmost end of Red Flynn Drive where the property has approximately 170 feet of frontage. The subject property extends approximately 1,100 feet westward from Red Flynn Drive. The western property line extends approximately 150 feet into the Hudson River. Located on the subject property are two structures, trees and open areas.

A map illustrating the layout of the subject property is provided in Appendix A of this ESA. Photographs of the subject property are provided in Appendix B of this ESA.

2.1.1 Site Topography

Information on the subject property's topography was obtained from the review of the United States Geological Survey (USGS) Topographic Maps of the Wappingers Falls, New York Quadrangle (dated 1956, photorevised 1981), the West Point, New York Quadrangle (dated 1957, photorevised 1981), and observations made by this office during the June 9, 2000 and June 29, 2000 site inspections. A copy of the USGS Topographic Map with the subject property indicated is included in Appendix B of this Phase I ESA.

According to the above-referenced topographic map, the topography of the area in which the subject property is located has a gentle downward slope to the southwest, towards the Hudson River. The topography of the subject property has a surface elevation of approximately 10 feet above mean sea level (msl). Observations made during the site inspection indicate that the topography of the subject property is relatively level on the eastern portion; on the western portion of the subject property the land slopes slightly downward from east to west.

A review of the above-referenced topographic map did not indicate the presence of any soil/gravel mining operations or unusual topographic patterns indicative of landfilling activities on the subject property.

2.1.2 Site Geology

A subsurface investigation conducted by this office on June 29, 2000, indicates that the subsurface soils from 0' to 4' below surface grade consist of medium to dark brown soils with interspersed gravel, cobble and small stones. A soil sample taken from the southern property border contained ash and a few samples taken from the eastern portion of the property contained some organic materials. Don't think geoprobe will work then.

The Dutchess County Soil and Water Conservation District's Dutchess County Soil Survey ("Soil Survey"), dated September 1991, was reviewed by this office to ascertain which soil types are likely to be present on the subject property. Provided below is a summary of the information obtained from this review.

According to the Soil Survey, the subject property is located in an area composed of the smoothed Udorthents (0 to 8 percent slopes) soil type. The smoothed Udorthents are very deep, somewhat excessively drained to moderately well drained soils that have been altered by cutting and filling.

Depth to bedrock in the Udorthents soil type is most likely to be greater than 60 inches below grade.

↑ Is that it?

2.1.3 Site Hydrogeology

The subsurface investigation conducted by this office on June 29, 2000 indicated that on-site groundwater is found at a depths of two feet to four feet below surface grade. No site-specific investigation of the direction of groundwater flow is known to have been performed on the subject property; therefore, no documented determinations are provided in this Phase I ESA. Information contained in the above-referenced Soil Survey indicates that shallow groundwater is likely to be present at depths of greater than three feet below grade from November to June. The direction of on-site groundwater flow is likely to be in a westerly direction, toward the Hudson River which adjoins the subject property to the west. On-site groundwater flow and depth may be subject to tidal influences.

2.1.4 Surface Hydrology

Information regarding on-site surface hydrology was obtained from the review of available maps and from observations made by this office during the June 9, 2000 and June 29, 2000 site inspections. According to these sources, the westernmost portion of the subject property extends into the Hudson River.

Wetlands

The New York State Department of Environmental Conservation (NYSDEC) Freshwater Wetlands Map (1973) and the United States Department of the Interior Federal Wetlands Map (1990) of the Wappingers Falls, New York Quadrangle were reviewed by this office. According to a review of these maps, there are no NYSDEC wetlands (areas greater than 12.4 acres) located in the immediate vicinity of the subject property. The Hudson River which is located on the western portion of the property and which adjoins the subject property to the west is a federally designated Esturarine, Subtidal, Unconsolidated Bottom, Subtidal, Oligohaline (E1UBL6) wetland.

2.2 Description of Surrounding Properties

2.2.1 Surrounding Land Uses

The subject property is located in an urban area comprised primarily of single-family residential properties and woods. A description of the adjoining and nearby properties is provided in Table 1, below.

Table 1: Land Uses in the Vicinity of Subject Property

Direction	Adjoining Use(s)	Vicinity Use(s)
North	• Vacant • Train Station Parking	• Beacon Train Station • Residential • Small Commercial
East	• Train Station Parking • Vacant	• Residential
South	• Vacant (former Garrett Storm MOSF)	• Vacant • Commercial (Nabisco Building) • Residential
West	• Hudson River	• Hudson River • City of Newburgh

2.2.2 Sensitive Environmental Receptors

A review of available information including maps, as well as observations made during the site inspection indicate that there is one sensitive environmental receptor on the subject property. This sensitive environmental receptor is the Hudson River which flows over the westernmost portion of the subject property.

3.0 Phase One Investigation

3.1 Ownership Records

The information listed below on current or former property ownership is gathered from available sources, including the City of Beacon Assessor's Office records. This ownership summary does not constitute a title search. Provided below in Table 2 is a summary of the ownership information for lot 30-5954-32-48835

Table 2: Ownership Information

Parcel ID	Owner	Date
TAX ID: 30-5954-32-48835	Benj. & Elise Cohen	Unknown

3.2 Site History

The history of the subject property is reconstructed through the review of historic photographs, City of Beacon Assessor's Office and Building Department files, and information provided by subject property representatives.

3.2.1 Aerial Photographs

I want these!

A summary of the information obtained from the review of aerial photographs dated 1935, 1945, 1960, 1967, 1980, and 1995 is provided below. The small scale and quality of the photographs made distinguishing details difficult.

1935: The subject property is an open lot containing a few structures. There are two small structures on the eastern portion of the subject property. To the west of these structures is a pile of debris or area of disturbance. Located on the southwestern corner of the subject property is a shed or a small house. A dirt road which appears to be associated with the railroad is located on the southern and eastern portions of the subject property.

Adjoining the subject property to the north is a vacant lot. Farther north are fields, a railroad station, woodland, farmland and a few small structures. Adjoining the subject property to the east are railroad tracks and a dirt road. Farther east is the City of Beacon, which is heavily developed with residential and commercial structures. Adjoining the subject property to the south is an open lot and a small structure. There are a few dirt roads extending throughout this adjoining parcel. Farther south are residential and commercial structures. The Hudson River adjoins the subject property to the west and the City of Newburgh is located farther west of the property across the Hudson River.

1945: No significant changes are noted on the subject property or adjoining parcels.

Development within the City of Beacon has spread farther east; also, additional structures have been constructed farther north of the subject property.

1960: All of the previously shown structures are still present. There is also an additional small shed located on the eastern portion of the property. The areas of the subject property surrounding the structures are open and there are trees extending along the eastern property border. The area of disturbance formerly located on the property is not visible.

The northern adjoining parcel consists partially of woodland and partially of a vacant lot. Farther north there are several docks, a golf course and the Newburgh-Beacon Bridge. The southern adjoining property now contains one large tank and nine smaller tanks. There are also large tanks located on the western bank of the Hudson River. No other significant changes are noted on the adjoining parcels or in the surrounding area.

1967: No significant changes are noted on the subject property, adjoining parcels, or in the area surrounding the subject property.

1980: There appear to be areas which could be piles of debris or car/boat storage on the southern and eastern portions of the subject property. All the previously mentioned on-site structures are still present.

No significant changes are noted on the adjoining parcels or in the surrounding area.

1995: The westernmost portion of the subject property is now vacant. This portion now consists of an open field. There are still two structures on the eastern portion of the property. Noted to the east of the structures is a pile of material which may be debris.

There are two new tanks located on the southern adjoining parcel. The eight smaller tanks, however, are no longer present. The rest of the southern adjoining property is still vacant. No significant changes or areas of disturbance are noted on other parcels in the surrounding area.

3.2.2 Local Records

City of Beacon Assessor's Office Records

City of Beacon Assessor's Office property card records and associated files for the subject property were reviewed by this office on June 16, 2000. According to a document included in the Assessor's file for the subject property dated May 2000, there are a one-family house which is 150 years old and a barn, which has been vacant for approximately 30 years, located on the subject property. It is also noted that the house has been vacant for approximately 30 years. The barn is approximately 150 years old and there is no heat or hot water available to the subject property. Another document included in the Assessor's records, dated March 1988, indicated that there is no city sewer available to the subject property. No other information pertinent to the environmental integrity of the subject property was present in these records. A summary of the readily available property ownership information is provided in Table 2, above.

City of Beacon Building Department Records

City of Beacon Building Department records for the subject property were requested by this office on June 16, 2000. According Building Department personnel, there are no records on file for the subject property.

3.2.3 Subject Property Representative Information

Pertinent information regarding the subject property was provided to this office by Barney Cohen, the owner of the subject property. According to Mr. Cohen, no past, threatened, or pending environmental liens, violations, governmental notifications, lawsuits, administrative proceedings, or documents relevant to the environmental condition of the property are known to exist. Mr. Cohen had no specialized knowledge or experience regarding previous ownership or uses of the property which was material in identifying recognized environmental conditions.

When queried about the potential presence and/or usage of petroleum products or hazardous substances on the subject property, Mr. Cohen stated that other than a 275-gallon heating oil AST located near the on-site residential structure, he was not aware of the former presence or usage of these materials.

Pertinent information provided by Mr. Cohen is also provided in relevant sections of this Phase I ESA, where appropriate.

3.3 Review of Federal and State Agency Records

3.3.1 Methodology

Federal and State computer databases and printed records were reviewed for documentation of potential liabilities relevant to the subject property. Records reviewed and corresponding search radii are consistent with, or exceed, the requirements set forth by ASTM.

The following ASTM databases were searched at their specified radii, consistent with ASTM protocol:

USEPA National Priority List (1.0 mile)
USEPA CERCLIS List (0.5 mile)
USEPA RCRIS CORRACTS Hazardous Waste TSD Facilities (1.0 mile)
USEPA RCRIS non-CORRACTS Hazardous Waste TSD Facilities (0.5 mile)
NYSDEC Registry of Inactive Hazardous Waste Disposal Sites (1.0 mile)
NYSDEC Registry of Active and Inactive State Landfills (0.5 mile)
NYSDEC Leaking Underground Storage Tank (LUST) Records (0.5 mile)
USEPA RCRIS Hazardous Waste Generators Facilities List (subject/adjoining properties)
USEPA Emergency Response Notification System (subject property)
NYSDEC Petroleum Bulk Storage Tank Records (subject/adjoining properties)
NYSDEC Chemical Bulk Storage Tank Records (subject/adjoining properties)

The following databases not required by ASTM protocol were also reviewed:

NYSDEC Resource Recovery Projects in New York State (1.0 mile)
USEPA RCRIS Hazardous Waste Transporters List (0.5 mile)
NYSDEC Major Oil Storage Facilities (0.5 mile)
NYSDEC Petroleum and Chemical Spill Records (0.5 mile)
NYSDOH Basement Radon Readings (by County, Municipality and Zip Code)
USEPA Wastewater Discharge NPDES Permits (subject/adjoining properties)

A complete definition of each database, along with the date of the version used for this review, is provided below in Section 6.1 of this Phase I ESA. Provided in Appendix C of this Phase I ESA are copies of the facility printouts for the sites identified herein.

3.3.2 Findings of Regulatory Records Review

Federal Hazardous Waste Sites

The subject property is not identified on the United States Environmental Protection Agency's (USEPA) National Priority List (NPL) of uncontrolled or abandoned hazardous waste sites identified for priority remedial actions. According to a review of USEPA records, there are no NPL sites located within 1.0 mile of the subject property.

The subject property is not listed on the USEPA's CERCLIS list detailing all sites which are either proposed to the NPL or are in the screening and assessment phase for possible inclusion on the NPL. According to a review of USEPA records, there are no CERCLIS sites located within 0.5 mile of the subject property.

State Hazardous Waste Sites

The subject property is not listed with the New York State Department of Environmental Conservation (NYSDEC) as an inactive hazardous waste disposal site. According to a review of NYSDEC records, there are no NYSDEC inactive hazardous waste disposal sites located within 1.0 mile of the subject property.

Hazardous Waste Storage and Disposal

The USEPA Resource Conservation and Recovery Information System (RCRIS) database details facilities which report generation, storage, transportation, treatment, or disposal of hazardous waste.

SQG/LQG

According to a review of USEPA records, the subject property is not registered with the USEPA as a small (between 100 and 1,000 kg/month) or large (greater than 1,000 kg/month) quantity generator (SQG or LQG) or transporter of hazardous waste. According to a review of USEPA records, there are no SQGs, LQGs, or hazardous waste transporters located on adjoining properties.

TSDFs

The subject property is not registered with the USEPA as a treatment, storage, or disposal facility (TSDF) for hazardous waste or materials. No TSDFs are located within 1.0 mile of the subject property.

Landfills and Solid Waste Disposal Facilities

According to a review of NYSDEC records, the subject property is not listed with the NYSDEC as an active or inactive landfill, transfer station, solid waste disposal, or resource recovery facility. No active or inactive transfer stations, solid waste disposal, resource recovery facilities, or active landfills are located within 0.5 mile of the subject property according to NYSDEC records.

There is one inactive landfill located within 0.5 mile of the subject property. This is the Beacon Landfill (sludge) facility (Facility ID: 14S91) which is located approximately 0.19 mile north northeast of the subject property. No additional information was provided in NYSDEC records.

Chemical Bulk Storage

A review of NYSDEC records indicates that the subject property is not registered with the NYSDEC as a chemical bulk storage (CBS) facility. Observations made during the site inspection did not indicate the presence of chemical bulk storage on the subject property. No adjoining properties are registered with the NYSDEC as CBS facilities.

Petroleum Bulk Storage

SUBJECT PROPERTY

According to a review of the NYSDEC PBS database the subject property is not registered as a PBS facility. A 275-gallon, active, fuel oil AST was noted on the western side of the residential structure. No information regarding the age of the tank was provided by the site representative.

State and Federal PBS Regulations

NYSDEC Petroleum Bulk Storage Regulations 6 NYCRR Parts 612-614 apply to facilities with a combined storage capacity greater than 1,100 gallons (excluding tanks less than 1,100 gallons used to store fuel oil for on-site consumption), and Federal Regulations specified in 40 CFR, Part 112 apply to all facilities storing greater than 42,000 gallons of petroleum product underground or 1,360 gallons aboveground. Based on the known active storage capacity of the subject property (275 gallons aboveground), the subject property is not subject to either State or Federal PBS regulations.

ADJOINING PROPERTIES

According to a review of NYSDEC records, there are no PBS facilities adjoining the subject property. No overt evidence of PBS tanks was noted on adjoining properties during the site inspection.

Major Oil Storage Facilities (MOSFs)

The subject property is not listed with the NYSDEC as a major oil storage facility (MOSF). According to a review of NYSDEC records, there is one MOSF located within 0.5 mile of the subject property. This is the Garret Storm, Inc. facility (MOSF Number: 3-2500) which adjoins the subject property to the south. This is an inactive facility which was a petroleum storage terminal in the past. The site is listed as no longer being a MOSF and the tanks at this site have been removed.

Federal Chemical and Petroleum Spills

The USEPA Emergency Response Notification System (ERNS) database details initial reports of releases of oil and hazardous substances as reported to federal authorities. There are currently no chemical or petroleum spills on record for the subject property, according to a review of the USEPA ERNS database.

State Chemical and Petroleum Spill and Leaking Underground Storage Tank Events

A review of NYSDEC spill records indicates that no spill events are known to have occurred on the subject property since 1986. Available information indicates that four spill events are believed to have occurred within 0.5 mile of the subject property. None of these events are classified as leaking underground storage tank (LUST) events.

The spill event with the greatest likelihood of impacting the subject property, based on available information, occurred on February 4, 1993 at the southern adjoining property, which is the former Garret Storm MOSF. This event (spill number 9212560) involved the release of an unknown quantity of #2 fuel oil which was discovered when digging test holes on-site. Groundwater is the resource listed as having been the most impacted by this event. The removal of the PBS tanks from this facility negates the possibility of future spill events at the Garrett Storm facility. This spill event has not been provided a closure date by the NYSDEC and has not met NYSDEC cleanup standards.

Air Discharges

No NYSDEC permits for air discharges from the subject property are known to exist. No operations likely to require a NYSDEC air discharge permit were noted on the subject property during the site inspection.

Groundwater Usage

According to observations made during the site inspection and information provided by the property representative, the subject property obtains potable water from the central water system. No uses of groundwater were noted on the subject property during the site inspection.

Wastewater Discharges

No USEPA National Pollutant Discharge Elimination System (NPDES) permit is known to exist for the subject property. No operations likely to require a NPDES permit were noted on the subject property during the site inspection. According to observations made during the site inspection and information provided by the property representative, the subject property is serviced by a private septic system. No adjoining properties are registered with the USEPA as NPDES facilities.

Radon

Information on radon levels was obtained from New York State Department of Health (NYSDOH) documents. No regulatory standards for radon levels currently exist in New York State. The USEPA has established a guidance value (the level where mitigation measures may be appropriate) for radon of 4.0 or greater picoCuries/liter (pCi/liter). Provided below in Table 3 is a summary of the available radon information for the subject property's vicinity.

Table 3: Radon Levels in Vicinity of Subject Property
All radon levels provided in picoCuries/liter (pCi/liter)

NYSDOH Radon Information	Dutchess County	City of Beacon	Zip Code (12508)
Median Radon Level	4.0	2.8	2.9
Percent of Homes >4pCi/l	50.00	39.03	Not Available
Number of Homes Tested	2513	40	36

These median radon level for the city in which the subject property is located is below the USEPA's guidance value of 4.0 pCi/liter; however, more than 39% of the homes tested in the subject property's vicinity had levels in exceedence of this guidance value. Therefore it is likely that there are elevated radon levels on the subject property. No radon testing is known to have been conducted on the subject property.

3.4 Site Inspection

3.4.1 Protocol

The site inspections were conducted on June 9, 2000 and June 29, 2000 in order to address any potential concerns raised during the regulatory agency records review (above, Section 3.1) and to identify any additional indications of contamination from the use, storage or disposal of hazardous or regulated materials. To the extent possible, site structures, vegetation, topography, surface waters, and other relevant site features were examined for any obvious evidence of existing or previous contamination or unusual patterns (e.g., vegetative stress, soil staining, surface water sheen, or the physical presence of contaminants), which would indicate that the environmental integrity had been or could be impacted.

Section 3.4.2 describes the physical characteristics of the subject property. Section 3.4.3 is divided into topics on specific environmental conditions or concerns, actual or potential, noted on the subject property during the site inspection. Section 3.4.4 describes the physical characteristics of adjoining properties as they concern the potential or actual environmental condition of the subject property.

A Selected Site Features Map illustrating the general layout of the subject property and the locations of specific identified concerns discussed specifically in this Section of the ESA is provided in Appendix A. Photographs of the subject property are provided in Appendix B of this ESA.

3.4.2 Physical Characteristics of Subject Property

3.4.2.1 Property

The subject property is an irregularly-shaped lot located on the westernmost end of Red Flynn Drive where the property has approximately 170 feet of frontage. The subject property also extends approximately 1,100 feet westward. Two structures are located on the subject property (see below). Located in the vicinity of the barn structure is a junk yard. The subject property consists of open areas with trees and overgrown vegetation. A fence surrounds the structure which is located on the western portion of the property. There is a pulley and a concrete retaining wall on the southwestern corner of the property along the Hudson River.

3.4.2.2 Structures

Two structures are located on the subject property. There is a wooden barn located on the eastern portion of the property. The floor of this barn is composed of concrete. Located inside this barn is metal and wood debris and other storage materials (see below).

A house is located on the western portion of the property. The exterior of this structure is constructed of aluminum siding and an asphalt shingled roof. The interior of this occupied residence was not accessible at the time of the site inspection.

Site Utilities

According to available information, the residential structure located on the subject property is serviced by the City of Beacon central water system and a private septic system. The house is heated with oil. There are no utilities connected to the barn.

3.4.3 Specific On-Site Environmental Conditions

Debris Areas

Approximately 400 cubic yards of debris were noted on the subject property. The debris consisted of 250-350 cubic yards of metal debris along the southern border of the property; approximately 50, empty 55-gallon drums with their tops removed; miscellaneous debris located on the northwestern corner of the property; two trucks near the center of the property; two trucks along the shore of the Hudson River; and two cut, 275-gallon tanks in the waters of the Hudson River.

Petroleum Storage

A 275-gallon fuel oil AST was noted on the western side of the residential structure. No staining indicative of prior spills was noted on or in the vicinity of the AST. No small quantities of petroleum products or indications of underground petroleum bulk storage tanks (e.g., fill ports or vent pipes) were noted on the subject property during the site inspection.

Chemical Storage

No small quantities of chemicals or aboveground chemical bulk storage tanks were noted on the subject property during the site inspection. No indications of underground chemical bulk storage tanks (e.g., fill ports or vent pipes) were noted on the subject property during the site inspection.

Floor Drains/Conduits

No floor drains or conduits to the subsurface were noted on the subject property during the site inspection.

Asbestos-Containing Materials

Asbestos-containing materials (ACMs) are those materials which are known to contain over 1% of any type of asbestos. The presence or absence of asbestos within a material can only be determined through the physical analysis of material samples.

The age of the on-site buildings suggests that ACMs may have been used during initial building construction and/or during subsequent maintenance work. An asbestos survey of the subject property is not known to have been conducted. No suspect materials were noted during the on-site inspection. However, the interior of the residential structure could not be accessed during the site inspection. Building construction materials (e.g., roofing, plaster, etc.) could potentially contain asbestos.

Lead-Based Paint

The presence or absence of lead-based paint (LBP) can only be determined through the material analysis of paint samples. However, as the manufacture of LBP is known to have ceased in 1978, a building's date of construction is often times used to help assess the likelihood that lead-based paint was used during initial building construction and/or during subsequent renovations. The presence of deteriorated paint is indicative of a potential health risk in that paint dust and chips could be inhaled and/or ingested.

The dates of construction of the on-site structures (1850s) indicates that LBP is likely to have been used. A lead-based paint survey of the subject property's structure is not known to have been conducted. All of the painted surfaces of the areas inspected by this office were in good condition at the time of the site inspection. However, no judgement can be made by this office regarding the presence or absence of LBP in underlying layers of paint or construction. Also, the interior of the residential structure could not be accessed during the site inspection.

Water Supply and Sewage Disposal

The on-site residential structure is connected to the City of Beacon central water system and is serviced by a private septic system. The septic system which serves the structure is located on the eastern side of the house. The on-site barn is not serviced by any utilities.

Topographic Irregularities

No overt topographic irregularities (e.g., sinkholes or berms) indicative of the presence of material in the subsurface were noted on the subject property during the site inspection.

Vegetative Features

Three burn spots which are approximately six feet in diameter were noted on the eastern portion of the subject property. No other overt areas of stressed or dying vegetation indicative of the presence of contaminants in surface or subsurface soils were noted on the subject property during the site inspection.

Surface Waters

Based on observations made during the site inspection, the Hudson River flows over the westernmost portion of the subject property. Inspections of the accessible portions of this water body did not indicate the presence of any evidence of contamination (e.g., staining, sheen, odor).

PCBs

An inspection for the presence of equipment likely to contain PCBs was conducted by this office during the site inspection. PCBs were widely used in equipment such as transformers, capacitors and hydraulic equipment until 1979 when the USEPA regulated their use in this capacity.

With the exception of fluorescent light fixtures which could potentially have ballasts containing PCBs, no equipment likely to contain PCBs was noted on the subject property during the site inspection.

There were also several "burn spots" noted on the eastern portion of the subject property. These areas were most likely used for the cleaning of metal equipment in the past. The oils which were cleaned from these materials may have contained PCBs.

3.4.4 Environmental Conditions on Adjoining Properties

No overt conditions judged by this office to pose a threat to the environmental integrity of the subject property were noted on adjoining properties during the site inspection.

4.0 Phase Two Investigation

4.1 Areas of Concern

The work described in this section was performed on specified portions of the subject property to address several potential environmental areas of concern identified during the initial phase one investigation conducted by this office. These areas of concern are as follows:

- the historic usage of the subject property as a scrap yard from the late 1950's through the early 1980s. This historic usage is likely to have involved the disposal of metals and petroleum products;
- historic usage of the site for kerosene-based pesticides, as referenced in a historic photograph of the property;
- integrity of the fill material used to create the site; and
- the presence of burn spots on the subject property associated with activities conducted at the junk yard.

4.2 Field Work Overview

In order to address the concerns identified above, additional investigative work was conducted on the subject property. This work consisted of the following:

- the extension of soil cores throughout the property to document the presence or absence of petroleum, metals and/or PCB contamination and;
- the sampling of surface soils in the area of the "burn spots" and debris pile areas noted on the subject property to document the presence or absence of petroleum, metal and/or PCB contamination;

A Selected Site Features Map indicating the coring locations and associated selected site features is provided in Appendix A of this ESA.

4.3 Field Work Methodology

All field work documented in this ESA was performed by ESI personnel. Prior to initiation of field work, a request for a complete utility markout of the Site was submitted by ESI as required by New York State Department of Labor regulations. Confirmation of underground utility locations was secured and a field check of the utility markout was conducted prior to the extension of soil corings.

All soil samples were collected in a manner consistent with NYSDEC sample collection protocols. Stainless steel trowels were used at each sample location to place samples into jars pre-cleaned at the laboratory. After sample collection, the sample containers were placed in a cooler prior to transport to the laboratory. The soil samples were transported on ice via overnight delivery to York Analytical Laboratories, Inc., which is a New York State Environmental Laboratory Approval Program (ELAP) certified laboratory (ELAP Number 11116) for chemical analyses. Appropriate chain of custody procedures were followed.

4.3.1 Soil Cores

All manual borings were extended by ESI personnel using a hand-held direct push sampling spoon equipped with a slide hammer. Sampling was conducted at five boring locations (see section 4.4.1) at two-foot intervals to a maximum depth of four feet below grade or until refusal was reached. The sampling spoon was equipped with 1½ -inch outer diameter disposable acetate sleeves to prevent the cross contamination of soil samples. All sample collection equipment was properly decontaminated prior to the initiation of sampling and between sample locations to avoid cross-contamination.

An assessment of subsurface soil characteristics, including soil type, the presence of foreign materials and field indications of contamination (e.g., unusual coloration patterns or odors) was made by ESI personnel during the extension of each test pit and soil coring. ESI personnel maintained independent field logs documenting the physical characteristics and any field indications of contamination for all encountered material at each boring location. Relevant information from ESI logs for each boring location is summarized in Section 4.3.2, below.

4.3.2 Surface Soil Sampling

All surface soil samples were collected from the 0' to 1' depth subsequent to the removal of all organic surface materials. All equipment used to obtain the surface soil samples were decontaminated after each sample was collected.

An assessment of subsurface soil characteristics, including soil type, the presence of foreign materials and field indications of contamination (e.g., unusual coloration patterns or odors) was made by ESI personnel during the extension of each test pit and soil coring. ESI personnel maintained independent field logs documenting the physical characteristics and any field indications of contamination for all encountered material at each boring location. Relevant information from ESI logs for each boring location is summarized in Section 4.3.2, below.

4.4 Field Work Observations

Provided below is a description of each of the five soil cores and seven surface soil samples. The locations of these soil cores and surface soil sampling points were chosen based on information obtained during the initial phase one review and on observations made at the time of field work. A map illustrating the approximate locations of these sampling locations is provided in Appendix A of this ESA.

4.4.1 Soil Cores

Five soil cores were extended on the subject property. The first sample (HB-1) was located in a weeded area of the property located to the west of the house. The second sample (HB-2) was taken along the southern property border to the south of the house. HB-3 was taken in a debris area approximately 25 feet northwest of the barn. HB-4 was taken approximately 5 feet south of the barn and HB-5 was taken approximately three feet from the southeastern corner of the barn.

Although some variation was noted amongst the twelve sample locations, the subsurface material encountered generally consisted of light to medium brown, fine grained soil with fine to gravel, stone fragments, and cobbles. Groundwater was encountered at depths ranging from two to four feet below grade. A summary of the specific conditions encountered in each of these soil cores is summarized in Table 4, below.

4.4.2 Surface Soil Observations

Seven surface soil samples were taken to properly characterize the present condition of the surface soils in the area of the "burn spots" and debris storage areas of the subject property. One sample (HB-6) was taken from a debris area located approximately 25 feet south of the barn. The second sample (HB-7) was taken on the northern edge of the drum storage area. The third sample (HB-8) was taken along the northeastern side of the barn. The final four samples (HB-9, HB-10, HB-11 and HB-12) were taken from the "burn areas" located on the eastern portion of the property.

The soils collected from these locations generally consisted of medium to dark brown soils with gravel, small stones and a small amount of organic materials. A summary of the specific conditions encountered in each of the surface soils is summarized in Table 4, below.

Table 4: Observations of On-Site Surface and Subsurface Soils

ID	Location	Depth of Soil Core	General Observations
HB-1	Western portion of the property in the center of the open area located within the overgrown vegetation	0'-2' 2'-4' 4'-5' 5' refusal	soils at 0'-2' were dry light to medium brown were gravel and sand. At 2'-4' soils consisted of medium to dark brown sand intermixed with gravel and cobbles. Soils at 4' were wet. No field indications of contamination noted.
HB-2	Along the southern property border directly south of the center of the house	0'-2' 2'-4'	soils at 0'-2' consisted of black coal, ash, gravel, etc. Soils from 2'-6' were consistent with HB-1. No field indications of contamination were noted.
HB-3	Approximately 20 feet west of barn in a debris storage area	0'-2' 2'-4'	Soils from 0'-4' were dark brown soils with stones interspersed. From 2'-4' soils were dark brown with gravel and small stones. These soils were also wet. No field indications of contamination were noted.
HB-4	Approximately 8 feet south of the barn	0'-2' 2'-4'	Soils from 0'-2' consisted of dark brown to black soils with interspersed gravel, cobbles and small stones. Soils from 2'-4' were dark brown with gravel, cobble and stones. The soils from 2'-4' were moist. No field indications of contamination were noted.
HB-5	Approximately 5 feet from the southwestern corner of the barn	0'-2' 2' refusal	Soils from 0'-2' consisted of dark brown to black soils interspersed with gravel, cobble and small stones. No field indications of contamination were noted.
HB-6	Approximately 20 feet south of HB-5 on the northern side of a debris pile	0'-1'	Soils from 0'-1' were medium to dark brown with cobble, small stones and gravel. NO field indications of contamination were noted.

HB-7	On the northern side of the drum storage area	0'-1'	Soils from 0-1 were medium to dark brown with organic matter and gravel. No field indications of contamination were noted.
HB-8	Approximately 2 feet from the northwestern corner of the barn	0'-1'	Soils from 0'-1' were medium to dark brown with organic matter, gravel and small stones. No field indications of contamination were noted.
HB-9	Approximately 30' east of the center of the barn's eastern facade	0'-1'	Soils from 0'-1' were medium to dark brown with gravel and small stones. No field indications of contamination were noted.
HB-10	Approximately 35' northeast of HB-6 in a burn spot location	0'-1'	Soils from 0'-1' were medium to dark brown with gravel and small stones. No field indications of contamination were noted.
HB-11	Approximately 10' east of HB-10 in a burn spot location	0'-1'	Soils from 0'-1' were medium to dark brown with gravel and small stones. No field indications of contamination were noted.
HB-12	Approximately 7' northwest of HB-11	0'-1'	Soils from 0'-1' were medium to dark brown with grave and small stones. No field indications of contamination were noted.

4.5 Laboratory Analysis and Results

During the course of the field work described in Sections 4.2 and 4.3, above, sixteen soil samples were collected. Fourteen samples were submitted to the laboratory for analysis to document the presence or absence of contamination of on-site soils. As described below, four samples were subsequently reanalyzed for leachable metals, PCBs and total petroleum hydrocarbons.

4.5.1 Terminology

Action Levels

The term "action level," as defined in this ESA, is the concentration of a particular contaminant above which remedial actions are considered more likely. The overall objective of setting action levels is to assess the integrity of on-site soils and groundwater relative to conditions which are likely to present a threat to public health, given the existing and probable future uses of the site. On-site soils and groundwater with contaminant levels exceeding these action levels are considered more likely to warrant remediation. No independent risk assessment was performed as part of this investigation.

The action levels identified in this ESA for metals and petroleum hydrcarbons are based on the NYSDEC's Division Technical and Administrative Guidance Memorandum (TAGM) on Determination of Soil Cleanup Objectives and Cleanup Levels (January 24, 1994) as modified by subsequent, relevant NYSDEC Records of Decision (RODs) and Spill Technology and Remediation Series Memo #1 (STARS), respectively. In accordance with standards set forth in the above-referenced documents, all detected compounds are provided with their established action levels.

Background Levels

The term "background level", as defined in this ESA is the concentration of a particular metal which is known to naturally occur in Eastern United States soils. The overall objective of setting background levels for metals in soil is to assess the concentrations of metals in on-site soils relative to those that are naturally occurring.

On-site soils with metal concentrations exceeding these background levels are considered more likely to have been affected by anthropogenic contributions. The background levels for metals provided in this ESA are based on the NYSDEC's TAGM (January 24, 1994) as modified by subsequent, relevant Records of Decision (RODs).

Background levels do not exist for refined petroleum hydrocarbons and PCBs and therefore, no discussion of naturally occurring levels for these compounds is appropriate.

4.5.1 Submission and Analysis

Soils

Eight soil samples collected from the soil cores extended on the subject property were submitted for laboratory analysis: HB-1 (0'-2', 4'-5'), HB-2 (0'-2'), HB-3 (0'-2', 2'-4'), HB-4 (0'-2', 2'-4') and HB-5 (0'-2'). Six surface soil samples were also submitted to the laboratory for analysis (HB-6, HB-7, HB-8, HB-9, HB-10 and HB-11). Each of these samples were collected from soils determined by ESI personnel to be an accurate representation of the current on-site soil conditions. All fourteen soil samples were submitted to the laboratory for analysis for all eight RCRA metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver). Samples HB-6 and HB-8 were also analyzed for TPHs (with a fuel ID for kerosene) using USEPA Method D120 and samples HB-9 through HB-11 were analyzed for PCBs using USEPA Method 8080.

Soil sample HB-1(0'-2') was also submitted to the laboratory for TCLP analysis of arsenic and soil samples HB-3 (2'-4'), HB-7 (0'-1') and HB-8 (0'-1') were analyzed for TCLP of lead. The TCLP analysis was conducted due to the elevated levels of these metals in the dry weight soil samples.

4.5.2 Laboratory Results

Summarized laboratory data and conclusions based upon laboratory results are outlined in the following discussion. Specific characteristics or trends in results are noted where applicable. Further discussion of the laboratory results may also be found in the Conclusions and Recommendations section of this ESA.

Metals

Laboratory analysis of sample HB-2 (0'-2') did not identify the presence of any of the eight metals at concentrations above their established action levels. Barium, cadmium, chromium, mercury and silver were not detected at concentrations above the given action level in any of the soils analyzed.

Arsenic was detected at concentrations exceeding its established action level (7.5 ppm) in eight of the fourteen soil samples analyzed. The levels of arsenic in the soils ranged from 1.6 in sample HB-2 to 106 ppm in HB-1.

Lead was also detected at concentrations exceeding its established action level (250 ppm) in seven of the analyzed samples. The level of lead in the sampled soils ranged from 13.3 in HB-2 (0-2) to 1170 ppm in HB-7. HB-9 also had a very elevated level of lead (1010 ppm).

Selenium which is used in pigments, photographic exposure meters, electronics and xerography was detected at concentrations exceeding its established action level (2 ppm) in thirteen of the samples. The level of selenium in the samples soils ranged from 1.54 in HB-2 to 22.9 in HB-1 (0-2).

The extent of contaminated soil does not follow a distinct horizontal pattern. The contaminated soil appears to be spread throughout the site based on laboratory results. Provided below in Table 5 is a summary of the detected levels of metals analyzed in on-site soils.

Table 5: Summary of Detected Metals in Soils
All data provided in mg/kg. Concentrations shown in **bold** exceed NYSDEC established action levels

Metals (ppm)	Background Levels[1]	Action Levels[1]	HB-1 (0'-2')	HB-1 (4'-5')	HB-2 (0'-2')	HB-3 (0'-2')	HB-3 (2'-4')	HB-4 (0'-2')	HB-4 (2'-4')	HB-5 (0'-2')
Arsenic	3.0 - 12.0	7.5	**106**	**25.9**	1.6	**11.6**	**16.7**	6.25	6.28	3.7
Barium	15 - 600	300	57.5	68.8	34.7	144	69.8	117	60.5	176
Cadmium	0.1 - 1.0	10	ND	ND	ND	1.66	ND	1.82	4.02	ND
Chromium	1.5 - 40	50	13.6	19.8	3.99	6.43	6.31	10.9	11.5	5.03
Lead	4.0 - 61	400	213	**535**	13.3	**886**	**418**	97.1	69.0	63.3
Mercury	0.0001 - 0.2	1	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	0.1 - 3.9	2	**22.9**	**7.50**	1.54	**8.03**	**4.79**	**3.39**	**2.43**	**2.55**
Silver	NA[2]	NA[2]	ND	ND	ND	ND	ND	ND	ND	ND

Notes: 1. Source: NYSDEC Technical and Administrative Guidance Memorandum (January 24, 1994) as modified by subsequent relevant RODs.
2. NYSDEC action and/or background levels were not available for this compound.
3. ND = Not detected above laboratory detection limit
4. NA = Not Analyzed.

Table 5 (cont'd): Summary of Detected Metals in Soils

Metals (ppm)	Background Levels[1]	Action Levels[1]	HB-6 (0'-1')	HB-7 (0'-1')	HB-8 (0'-1')	HB-9 (0'-1')	HB-10 (0'-1')	HB-11 (0'-1')
Arsenic	3.0 - 12.0	7.5	3.08	**19.0**	**8.79**	**12.6**	5.73	**21.2**
Barium	15 - 600	300	222	157	170	160	97.8	170
Cadmium	0.1 - 1.0	10	ND	2.23	3.34	3.09	1.63	ND
Chromium	1.5 - 40	50	6.19	16.0	24.6	17.8	8.72	8.16
Lead	4.0 - 61	400	151	**1170**	**896**	**1010**	276	187
Mercury	0.0001 - 0.2	1	ND	ND	0.26	0.35	0.85	ND
Selenium	0.1 - 3.9	2	**2.39**	**4.63**	**4.27**	**2.93**	**3.94**	**3.98**
Silver	NA[2]	NA[2]	ND	ND	ND	ND	ND	ND

Notes: 1. Source: NYSDEC Technical and Administrative Guidance Memorandum (January 24, 1994) as modified by subsequent relevant RODs.
2. NYSDEC action and/or background levels were not available for this compound.
3. ND = Not detected above laboratory detection limit
4. NA = Not Analyzed.

TCLP

Arsenic

Analysis for TCLP of arsenic in sample HB-1 (0'-2') indicated that leachable arsenic was not detected in the sample.

Lead

TCLP of lead was detected in the three samples analyzed by the laboratory (HB-3 (0'-4'), HB-7 (0'-1'), HB-8 (0'-1')). However the levels at which it was detected (0.126 mg/L, 0.488 mg/L, 0.405 mg/L) were under the respective action level (5 mg/L) for TCLP of lead.

PCBs

Analysis of the samples for the presence of PCBs indicated the presence of PCBs in the three samples analyzed. For confirmation, all samples were re-analyzed for PCBs, with all re-analyses confirming PCBs. Total PCB levels were exceeded for sample HB-10 (total PCBs of 17.72 ppm) and HB-11(total PCBs of 1.02 ppm).

At HB-9, total PCBs were 0.92 ppm, below the NYSDEC action level of 1.0 ppm.

Provided below in Table 6 is a summary of the findings regarding the samples analyzed for the presence or absence of PCBs in the soils.

Table 6: PCBs Detected in Soils

All data provided in *ug*/kg. Concentration shown is **BOLD** exceed action level.

		Sample Identification					
					Re-analyses		
Compound (Method 8082)	**Action Level[1]**	**HB-9 0-1**	**HB-10 0-1**	**HB-11 0-1**	**HB-9 0-1**	**HB-10 (010)**	**HB-11 (0-1)**
PCB-1016	1,000	80	**5,400**	240	ND	ND	ND
PCB-1221	1,000	ND	ND	ND	ND	ND	ND
PCB-1232	1,000	ND	ND	ND	ND	ND	ND
PCB-1242	1,000	ND	ND	ND	ND	ND	ND
PCB-1248	1,000	ND	ND	ND	ND	ND	ND
PCB-1254	1,000	260	**8,100**	570	540	**12,400**	730
PCB-1260	1,000	14	ND	ND	380	**5,320**	290
PCB-Total		480	**13,500**	810	920	**17,720**	**1,020**

Notes: 1. Action level for PCBs is 1,000 μg/kg for surface soils; 10,000 μg/kg for subsurface soils pursuant to the NYSDEC Technical Administrative Guidance Memorandum #4046 (TAGM) Revised January 24, 1994.
2. ND = Not Detected above specified detection limit.

Total Petroleum Hydrocarbons

Two of the three samples analyzed for total petroleum hydrocarbons (TPHs) documented the presence of low levels of TPHs in soil (maximum concentrations of 210 ppm). NYSDEC does not maintain an action level for TPHs; the identified conclusions on the Site are below established guidance values in New Jersey and Connecticut.

Data suggest low levels of TPH may be present in on-site soils. Levels do not indicate the presence of a petroleum release and are not at levels warranting remediation.

5.0 Conclusions and Recommendations

This ESA has been performed on the "Barney Cohen" property located on Red Flynn Drive, City of Beacon, Dutchess County, New York, as described in Section 2.0, above. All phase one work was conducted in conformance with the scope and limitation of ASTM Practice E 1527-97. This ESA has revealed no evidence of potential recognized environmental conditions in connection with the property with the exception of the items detailed below. With respect to these conditions, the following conclusions and recommendations (in **bold**) are made. Cost estimates for proposed investigations and/or remedial actions are provided in *italics* where appropriate.

1. Information obtained during a review of historic photographs, municipal records, and information provided by the property representative indicates that one of the two on-site structures has been present on the subject property since at least the early 1900s. The subject property has been used as a junk yard for several years. A small area of disturbance was noted on the subject property in the 1935 photograph. This area of disturbance was not observed on later photographs. Areas of debris or car/boat storage were noted on the 1980 and 1995 photographs.

   There were several aboveground oil tanks on the southern adjoining parcel from the 1960s to the late 1990s. These tanks have since been removed (see Paragraph # 11 below). There were no areas of disturbance likely to impact the subject property noted on the aerial photographs.

   No further investigation of historic records is recommended.

2. Five soil cores and seven surface soil samples were submitted to the laboratory to confirm the presence or absence of soil contamination resulting from the historic use of the property as a junk yard. These soil samples were analyzed for the presence of metals, PCBs and TPHs.

   Laboratory analysis indicated that there were levels of lead and arsenic above their respective action levels in the on-site soils. Further analysis indicated that there were not leachable levels of arsenic in the analyzed soil and the leachable levels of lead were below the respective action level.

   Data support the conclusion that elevated metal concentrations are present throughout the site in both surface and subsurface soils, and that the likely source of these elevated metals is the fill material used to create the property. The absence of elevated TCLP data supports the conclusion that on-site soils can be managed as a non-hazardous waste.

   No further investigation of metal concentrations is recommended. Future development plans of the site should incorporate specific actions to reduce the likelihood of direct contact with these soils, including the installation of a barrier layer and/or importation of fill.

   PCBs are present in surface soils in the vicinity of the barn at levels exceeding NYSDEC action levels. The lateral and vertical extent of PCB concentration is not known.

   It is recommended that additional sampling be conducted on the subject property to determine the extent of PCB contamination on-site. A grid should be established and samples be collected over a broad area surrounding the three areas currently identified. It is further recommended that additional samples be collected in the burn areas to determine the vertical extent of contamination.

   Estimated cost for additional investigation: $3,000

The laboratory analysis of TPHs in samples HB-4 and HB-8 indicated that 210,000 ppb of TPH was present in sample HB-8. TPH was not detected in HB-4. The source of petroleum is not known, but based on the fact that the subject property has been used for dumping of metallic wastes it can be assumed that cutting oils and other lubricants commonly found on the debris leached into the on-site soils. On-site TPH levels support the conclusion that no widespread petroleum contamination is present on the site and that documented levels do not warrant remediation.

No further investigation is recommended.

3. A 275-gallon, active fuel oil AST was noted on the western side of the residential structure. No staining indicative of prior spills was noted on or in the vicinity of the AST during the site inspection. This tank is not required to be registered with the NYSDEC.

It is recommended that all petroleum products be stored within adequate secondary containment areas and that appropriate absorbent materials be maintained in all areas where releases could potentially occur.

4. Approximately 400 cubic yards of debris was noted on the subject property. The debris consisted of 250-350 cubic yards of metal debris along the southern border of the property, approximately 50 55-gallon empty 55-gallon drums with their tops removed, miscellaneous debris located on the northwestern corner of the property, two trucks near the center of the property, two trucks along the shore of the Hudson River and two cut, 275-gallon tanks in the water.

It is recommended that all debris materials be segregated into appropriate waste streams (i.e., those which can be disposed of as solid waste and those which require special handling) and be disposed of in accordance with applicable regulations.

Estimated Cost of Debris Removal: $15,000-$20,000

5. Asbestos-containing materials could potentially be present on the subject property. No asbestos survey is known to have been conducted. No suspect materials were noted during the inspection. However, items such as roofing materials and ceiling tiles could potentially contain asbestos.

No further investigation is recommended. It is recommended that any suspect material encountered during maintenance, renovation, or demolition activities be tested for asbestos or be treated as though it were asbestos in the absence of analytical data. All maintenance, renovation, or demolition activities should be conducted in accordance with applicable regulations.

6. Lead-based paint could potentially be present on the subject property. A lead-based paint survey is not known to have been conducted. All of the painted surfaces of the areas inspected by this office were in good condition at the time of the site inspection and are likely to have been painted multiple times. However, no statement can be made by this office regarding the presence or absence of LBP in underlying layers of paint.

No further investigation is recommended. It is recommended that any suspect material encountered during maintenance, renovation, or demolition activities be tested for lead or be treated as though it were lead-based paint in the absence of analytical data. All maintenance, renovation, or demolition activities should be conducted in accordance with applicable regulations.

7. Fluorescent light fixtures which may have light ballasts which contain PCBs were noted on the subject property. No other equipment likely to contain PCBs was noted on the subject property during the site inspection.

   No further investigation is recommended. It is recommended that any equipment which could potentially contain PCBs or materials contaminated with PCBs encountered during maintenance, renovation, or demolition activities be handled, removed, and disposed of in accordance with applicable regulations.

   There were also several "burn spots" noted on the eastern portion of the subject property. These areas were most likely used for the cleaning of metal equipment in the past. The oils which were cleaned from these materials may have contained PCBs.

   See Paragraph #2, above.

8. Four spill events (zero LUSTs) are recorded with the NYSDEC for areas located within 0.50 mile of the subject property. Spill closure dates have been provided by the NYSDEC for three of these events and NYSDEC cleanup standards were met for three of these events. Based on available information, these events are not likely to have impacted the subject property.

   No further investigation is recommended.

9. The median radon levels in the subject property's vicinity are below the established guidance level of 4.0 pCi/liter however more than 39% of the homes tested had radon levels above the guidance level. Therefore, it is likely that there are elevated radon levels on the subject property.

   It is recommended that radon canisters be placed on the first floor of the on-site structure to document the presence or absence of elevated levels of radon.

   Estimated cost: less than $400

10. There is one inactive landfill located within 0.5 mile of the subject property. This is the Beacon Landfill (sludge) facility (Facility ID: 14S91) which is located approximately 0.07 mile south-southwest of the subject property. Based on available information, operations that had occurred at this facility would not have impacted the subject property.

    No further investigation is recommended.

11. The Garret Storm, Inc. facility which adjoins the subject property to the south is registered with the NYSDEC as a former MOSF. The tanks at this site have been removed. This property is located downgradient of the subject property.

    No further investigation is recommended.

6.0 Sources of Information

6.1 Regulatory Records Review

USEPA National Priorities List (NPL)

ASTM DATABASE
SEARCH: 1.0 MILE
UPDATED: JUNE 2000

LISTING OF SITES WHICH ARE CONSIDERED TO POSE AN IMMEDIATE THREAT TO HUMAN HEALTH AND THE ENVIRONMENT AND HAVE BEEN IDENTIFIED FOR PRIORITY CLEANUP UNDER SUPERFUND.

USEPA Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) List

ASTM DATABASE
SEARCH: 0.5 MILE
UPDATED: JUNE 2000

LISTING OF ABANDONED, INACTIVE OR UNCONTROLLED HAZARDOUS WASTE SITES WHICH THE USEPA HAS INVESTIGATED OR IS CURRENTLY INVESTIGATING FOR INCLUSION ON THE NPL.

USEPA Resource Conservation and Recovery Information System (RCRIS) Corrective Action Activity (CORRACTS) List of Hazardous Waste Treatment, Storage and Disposal Facilities (TSDF)

ASTM DATABASE
SEARCH: 1.0 MILE
UPDATED: JUNE 2000

LISTING OF FACILITIES REGULATED UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) THAT TREAT, STORE AND/OR DISPOSE OF HAZARDOUS WASTE WITH CORRECTIVE ACTION ACTIVITY.

USEPA Resource Conservation and Recovery Information System (RCRIS) Non-CORRACTS List of Hazardous Waste Treatment, Storage and Disposal Facilities (TSDF)

ASTM DATABASE
SEARCH: 0.5 MILE
UPDATED: JUNE 2000

LISTING OF FACILITIES REGULATED UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) THAT TREAT, STORE AND/OR DISPOSE OF HAZARDOUS WASTE WHICH ARE NOT SUBJECT TO CORRECTIVE ACTION.

NYSDEC Registry of Inactive Hazardous Waste Disposal Sites and Solid Waste Disposal Facilities

ASTM DATABASE
SEARCH: 1.0 MILE
UPDATED: APRIL 2000

LISTING OF FACILITIES SUBJECT TO INVESTIGATIONS CONCERNING LIKELY OR THREATENED RELEASES OF HAZARDOUS SUBSTANCES FROM THOSE FACILITIES.

NYSDEC Registry of Active and Inactive Landfills, Transfer Stations and Solid Waste Disposal Facilities

ASTM DATABASE
SEARCH: 0.5 MILE
UPDATED: JUNE 1999

LISTING OF ACTIVE AND INACTIVE LANDFILLS, TRANSFER STATIONS AND SOLID WASTE DISPOSAL FACILITIES.

NYSDEC Leaking Underground Storage Tanks (LUSTs)

ASTM DATABASE
SEARCH:0.5 MILE
UPDATED: JANUARY 2000

SUBSET OF NYSDEC CHEMICAL AND PETROLEUM SPILLS DATABASE (SEE BELOW) LISTING ALL REPORTED LEAKING UNDERGROUND STORAGE TANKS.

USEPA Resource Conservation and Recovery Information System (RCRIS) List of Hazardous Waste Generators (SQG/LQG)

ASTM DATABASE
SEARCH: TARGET/ADJOINING PROPERTY
UPDATED: JUNE 2000

LISTING OF FACILITIES REGULATED UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) THAT GENERATE HAZARDOUS WASTE.

USEPA Emergency Response Notification System (ERNS)

ASTM DATABASE
SEARCH: TARGET PROPERTY
UPDATED: APRIL 2000

LISTING OF RELEASES OF PETROLEUM, CHEMICAL AND/OR HAZARDOUS SUBSTANCES INTO THE ENVIRONMENT AS REPORTED TO THE USEPA AND COAST GUARD.

NYSDEC Petroleum Bulk Storage Tank Records (PBS)

ASTM DATABASE
SEARCH: TARGET/ADJOINING PROPERTY
UPDATED: JANUARY 2000

LISTING OF FACILITIES WHICH TYPICALLY STORE MORE THAN 1100 GALLONS OF PETROLEUM PRODUCT IN BULK STORAGE TANKS.

NYSDEC Chemical Bulk Storage Tank Records (CBS)

ASTM DATABASE
SEARCH: TARGET/ADJOINING PROPERTY
UPDATED: JANUARY 2000

LISTING OF FACILITIES WHICH STORE ANY VOLUME OF CHEMICALS IN AN UNDERGROUND STORAGE TANK AND/OR MORE THAN 185 GALLONS OF CHEMICALS IN AN ABOVEGROUND STORAGE TANK.

NYSDEC Resource Recovery Projects in New York State

NON-ASTM DATABASE
SEARCH: 1.0 MILE
UPDATED: JUNE 1999

LISTING OF ACTIVE RESOURCE RECOVERY FACILITIES.

USEPA Resource Conservation and Recovery Information System (RCRIS) List of Hazardous Waste Transporters

NON-ASTM DATABASE
SEARCH: 1.0 MILE
UPDATED: JUNE 2000

LISTING OF FACILITIES REGULATED UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) THAT TRANSPORT HAZARDOUS WASTE.

NYSDEC Major Oil Storage Facility Records (MOSF)

NON-ASTM DATABASE
SEARCH: 0.5 MILE
UPDATED: JANUARY 2000

LISTING OF FACILITIES STORING 400,000 GALLONS OR GREATER OF PETROLEUM PRODUCT.

NYSDEC Petroleum and Chemical Spill Records

NON-ASTM DATABASE
SEARCH: 0.5 MILE
UPDATED: JANUARY 2000

LISTING OF ALL PETROLEUM, CHEMICAL OR HAZARDOUS SUBSTANCE RELEASES REPORTED TO THE NYSDEC.

USEPA National Pollutant Discharge Elimination System (NPDES) Wastewater Discharge

NON-ASTM DATABASE
SEARCH: TARGET PROPERTY
UPDATED: JUNE 2000

LIST OF SIGNIFICANT STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM (SPDES) WASTEWATER DISCHARGE PERMITTED FACILITIES. FACILITIES ARE CONSIDERED SIGNIFICANT BASED ON SEVERAL CHARACTERISTICS INCLUDING VOLUME OF DISCHARGE, SIZE OF RECEIVING STREAM, AND TOXICITY OF EFFLUENT.

NYSDOH Basement Radon Readings

NON-ASTM DATABASE
UPDATED: MARCH 1999/JULY 1998

LISTING OF RADON LEVELS BY ZIP CODE, MUNICIPALITY AND COUNTY

6.2 Maps and Documents

Aerial photographs dated 1935, 1945, 1960, 1965, 1980 and 1995, available for viewing at the Dutchess County Soil and Water Conservation District Office.

New York State Department of Environmental Conservation Freshwater Wetlands Map of the Wappingers Falls, New York Quadrangle, dated 1973.

United States Department of the Interior Federal Wetlands Map of the Wappingers Falls, New York Quadrangle, dated 1990.

United States Geographic Survey Topographic Maps of the Wappingers Falls, New York Quadrangle, dated 1956, (photorevised 1981) and the West Point, New York Quadrangle (dated 1957, photorevised 1981).

6.3 Local Agency Records

City of Beacon Building Department records, requested June 16, 2000.

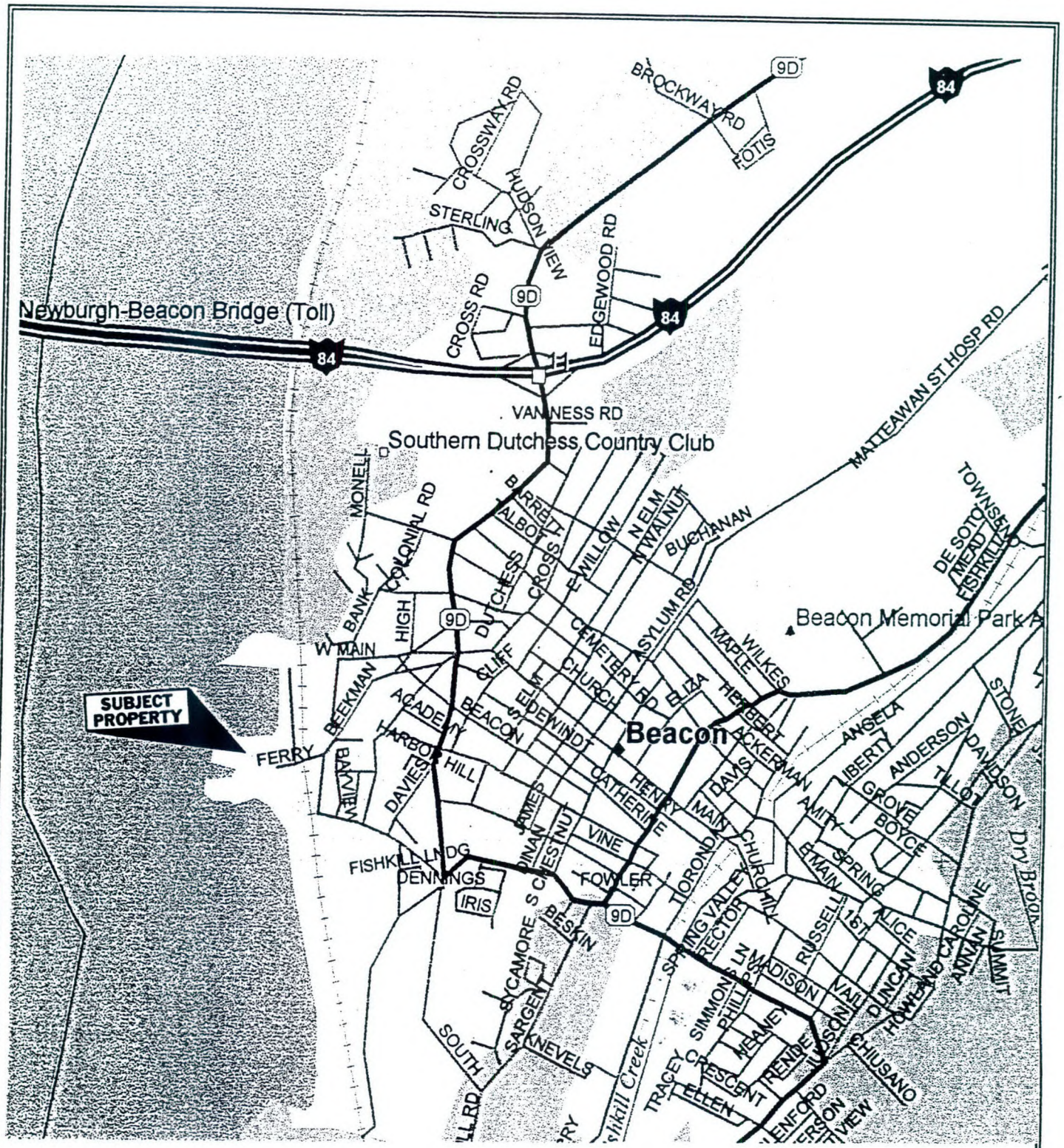
City of Beacon Assessor's Office records, reviewed June 16, 2000.

6.4 Communications

Barney Cohen, owner of the subject property, various dates June 2000.

ATTACHMENT A

MAPS

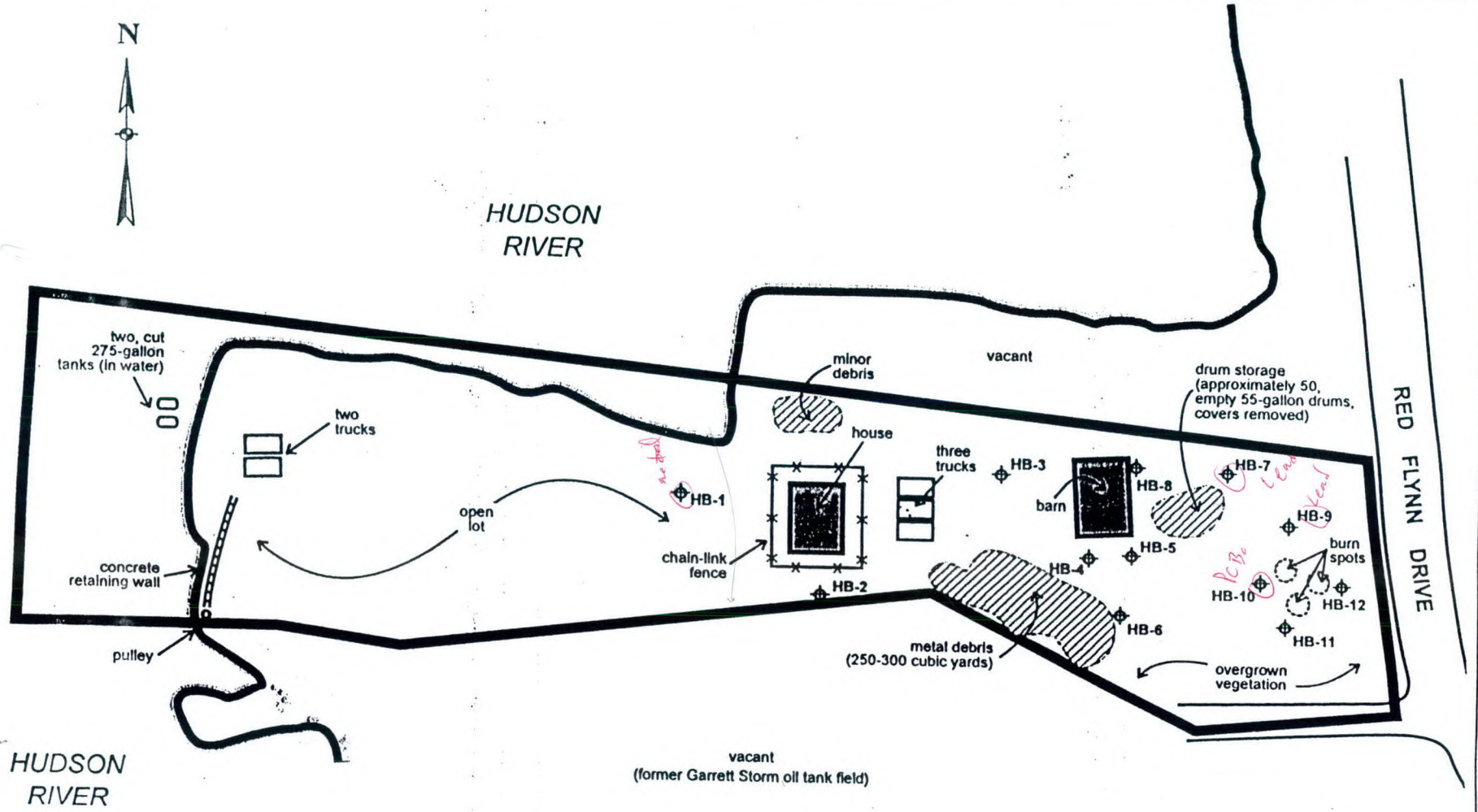


Source: DeLorme Street Atlas USA, Version 6.0

Site Location Map
Barney Cohen Site
Red Flynn Drive
City of Beacon, Dutchess County, New York

N

ESI File: SB2096.10
Date: July 2000
Appendix A



Feature locations are approximate.

Selected Site Features Map

"Barney Cohen Site"
Red Flynn Drive
City of Beacon
Dutchess County, New York

Legend:

subject property border

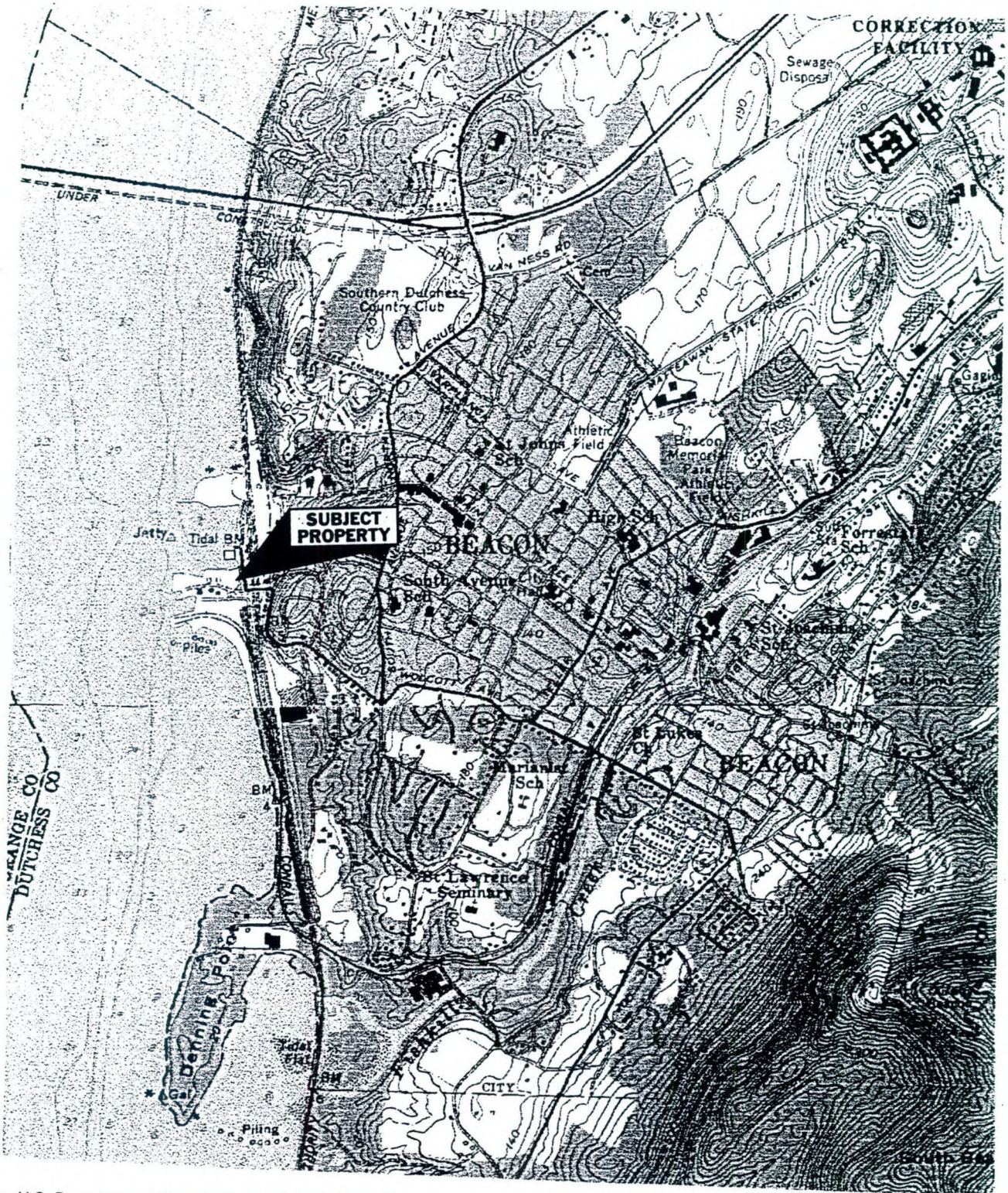
hand boring location HB-2

ESI File: SB2096.20

July 2000

Not to Scale

Appendix A



Source: U.S. Department of the Interior Geological Survey Topographic Map of the Wappingers Falls, New York Quadrangle, dated 19 56 (photorevised 1981)

U.S.G.S. Topographic Map

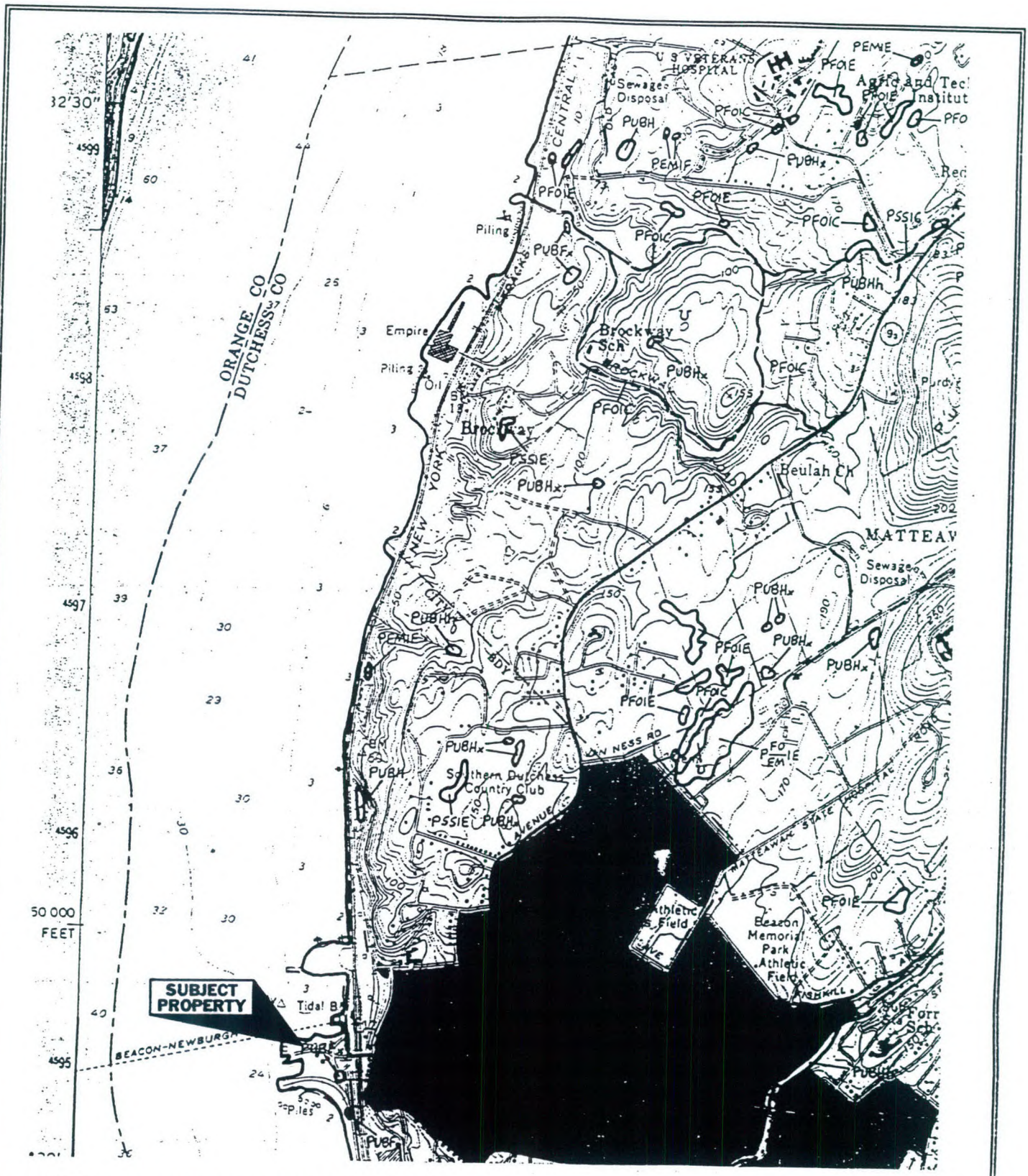
Barney Cohen Site
Red Flynn Drive
City of Beacon, Dutchess County, New York

N

ESI File: SB2096.10

Date: July 2000

Scale: 1:24000



Source: U.S. Department of the Interior National Wetlands Inventory Map of the Wappingers Falls, New York Quadrangle, dated 1990

National Wetlands Inventory Map

Barney Cohen Site
Red Flynn Drive
City of Beacon, Dutchess County, New York

N

ESI File: SB2096.10
Date: July 2000
Scale: 1:24000



Source: NYSDEC Freshwater Wetlands Map of the Wappingers Falls, New York Quadrangle, dated 1973

NYSDEC Freshwater Wetlands Map

Barney Cohen Site
Red Flynn Drive
City of Beacon, Dutchess County, New York

N

ESI File: SB2096.10

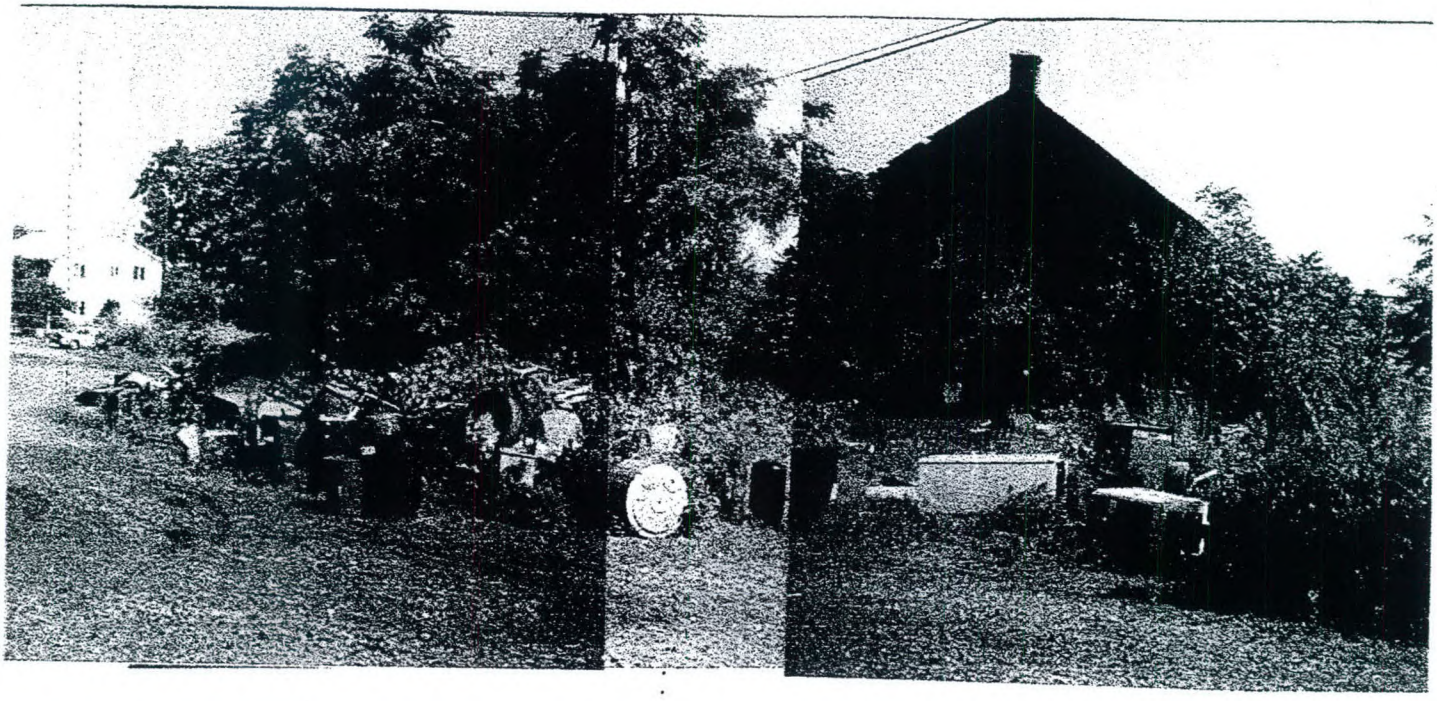
Date: July 2000

Scale: 1:24000

APPENDIX B

Site Photographs

PHOTOGRAPHS

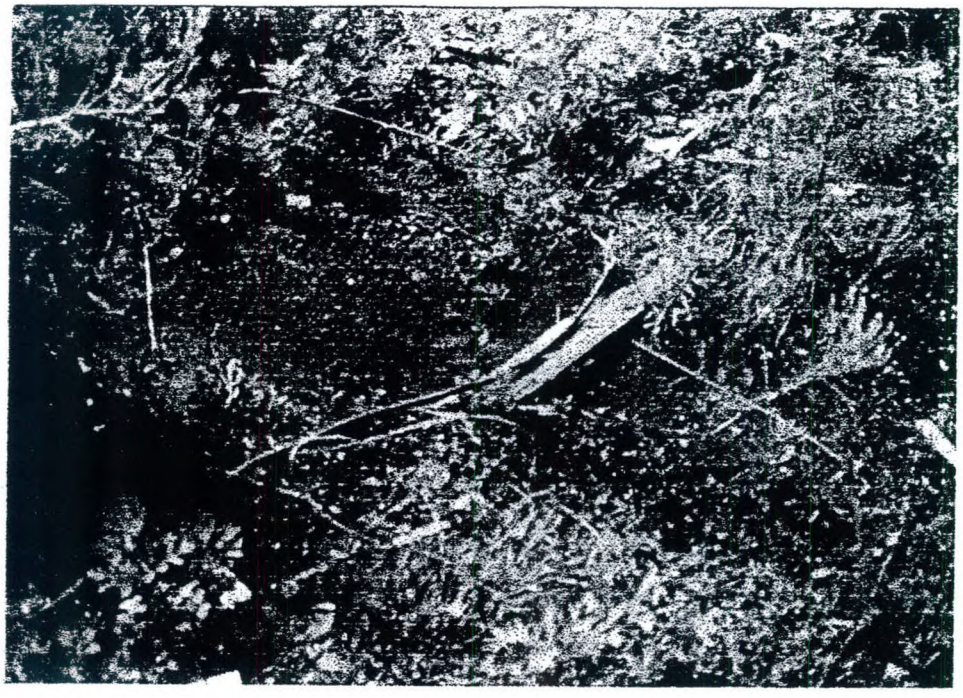


1. **Representative view of subject property, including residence (far left) and barn (right), facing northwest**



2. **View of drum pile located to the east of the barn**

PHOTOGRAPHS



3. View of a "burn spot" on the eastern portion of the subject property



4. View of the interior of the barn

APPENDIX C

Regulatory Review Printouts

Landfill Detail

FACNUMBR	14S91	FACNAME	Beacon LF (sludge) (C)
WASTETYPE:		ACTIVE	0 -1 = Active; 0 = Inactive
		ACTDATE	INACTDATE
FLOCATION		FPHONE:	( ) -
FCITY			
REMARKS			
OPNAME		TOXICSITE	
		TOXNUMBR	
REGSTAT	None	PERMISSUED	PERMNO: 0
OWNERTYPE	Munici	OPEREXPIRE	

Facility IDs - (each ID code contains 1 letter)

S = Mixed Solid Waste LF
N = Industrial/Commercial Waste LF
D = Construction Demolition Debris LF
A = Ash Residue Monofill LF
T = Large TS (>50,000 cub.yds./year)
R = Small TS (<50,000 cub.yds/year)
F = Landfill Gas Recovery
E = Solid Waste Incinerator with Energy Recovery

"Regulatory Staus" is defined as:

* Permit = operating under valid 6 NYCRR Part 360 permit
* Registered - operating under a registration program subject to 6 NYCRR Part 360 perscribed conditions and thresholds
* SAPA - operating under a State Administrative Procedures Act equivalency permit
* None - operating WITHOUT a valid 6 NYCRR Part 360 permit, SAPA or signed Order on Consent
* Closure Order - operating under a signed Order on Consent to close
* Upgrade Order - operating under a signed Order on Consent to upgrade

Landfill Detail

FACNUMBR	14S91	FACNAME	Beacon LF (sludge) (C)
WASTETYPE:		ACTIVE	0 -1 = Active; 0 = Inactive
		ACTDATE	INACTDATE
FLOCATION		FPHONE:	( ) -
FCITY			
REMARKS			
OPNAME		TOXICSITE	
		TOXNUMBR	
REGSTAT	None	PERMISSUED	PERMNO: 0
OWNERTYPE	Munici	OPEREXPIRE	

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* Upgrade Order - operating under a signed Order on Consent to upgrade

GLOSSARY OF NYSDEC TERMS
COMMONLY FOUND IN PETROLEUM AND CHEMICAL SPILL DATABASE

DEC	New York State Department of Environmental Conservation
DEP	New York City Department of Environmental Protection
DOT	Department of Transportation
EIR	Excavate, Isolate and Retest
FD	Fire Department
GPH	Gallons Per Hour
HAZ.MAT.	Hazardous Materials Department/Unit
IFO	In Front Of
LR	Leak Rate
NFA	No Further Action
NYCDEP	New York City Department of Environmental Protection
NYSDEC	New York State Department of Environmental Conservation
PCB	PolyChlorinated Biphenyl
PD	Police Department
RCHD	Rockland County Health Department
TTTF or TTF	Tank Test Tightness Failure or Tank Test Failure
USCG	United States Coast Guard
WCHD	Westchester County Health Department

NOTES AND EXPLANATIONS

QUANTITY
"0" or "-1" gallons may denote that no product was reported as being spilled or that the quantity spilled could not be determined.

CLOSE DATE
The date the spill was closed; i.e., cleanup activity is finished and all paperwork completed. Post-spill conditions may/may not meet environmental standards and/or guidance values. This field is filled in by the NYSDEC's regional office. Spills that have been provided with a "closure date" are generally events wherein sufficient investigation and/or remedial action has been conducted, and the NYSDEC has determined that no further action is required. Occasionally, the date "6/18/53" was used in this field to indicate that the DEC Agent needed to edit/update the file; an event with this close date is not necessarily closed.

RESOURCE
The natural resource that is most affected by the spill. Only one resource from the following list can be chosen when a spill is reported to the NYSDEC: On Land, In Sewer, Groundwater, Surface Water, or Air.

CALLER REMARKS and NYSDEC REMARKS
Remarks shown are exactly as found in NYSDEC records. On occasion, these remarks disagree. In general, Caller Remarks are recorded at the time the event is reported and NYSDEC Remarks are recorded after an inspection, determination or other follow-up activity has been made by NYSDEC personnel.

LEAKING UNDERGROUND STORAGE TANK (LUST)
An event which has been determined by the NYSDEC to have involved an UST (see below).

STANDARDS MET?
Does the cleanup meet standards and/or guidance values?
In some cases spills have a "close date", but standards and/or guidance values have not been met; of these situations it can generally be said that residual contamination remains which does not constitute an immediate threat to the public health or environment.

LUSTs
A LUST (Leaking Underground Storage Tank) is any reported spill event where the cause of the release is either a "Tank Failure" or a "Tank Test Failure".

GLOSSARY OF NYSDEC TERMS
COMMONLY FOUND IN PETROLEUM AND CHEMICAL SPILL DATABASE

DEC	New York State Department of Environmental Conservation
DEP	New York City Department of Environmental Protection
DOT	Department of Transportation
EIR	Excavate, Isolate and Retest
FD	Fire Department
GPH	Gallons Per Hour
HAZ.MAT.	Hazardous Materials Department/Unit
IFO	In Front Of
LR	Leak Rate
NFA	No Further Action
NYCDEP	New York City Department of Environmental Protection
NYSDEC	New York State Department of Environmental Conservation
PCB	PolyChlorinated Biphenyl
PD	Police Department
RCHD	Rockland County Health Department
TTTF or TTF	Tank Test Tightness Failure or Tank Test Failure
USCG	United States Coast Guard
WCHD	Westchester County Health Department

NOTES AND EXPLANATIONS

QUANTITY
"0" or "-1" gallons may denote that no product was reported as being spilled or that the quantity spilled could not be determined.

CLOSE DATE
The date the spill was closed; i.e., cleanup activity is finished and all paperwork completed. Post-spill conditions may/may not meet environmental standards and/or guidance values. This field is filled in by the NYSDEC's regional office. Spills that have been provided with a "closure date" are generally events wherein sufficient investigation and/or remedial action has been conducted, and the NYSDEC has determined that no further action is required. Occasionally, the date "6/18/53" was used in this field to indicate that the DEC Agent needed to edit/update the file; an event with this close date is not necessarily closed.

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LUSTs
A LUST (Leaking Underground Storage Tank) is any reported spill event where the cause of the release is either a "Tank Failure" or a "Tank Test Failure".

Spill #: 9702804 **Spill Street:** FERRY ST **Source:** Other Non-Commercial/Institutional **Close Date:** 6/10/97

Spill Date: 6/4/97 **Spill Name:** KELLAM PROPERTY **Cause:** UNKNOWN **Standards Met?** YES

Spill City: BEACON **Suspected Responsible Party:** UNKNOWN

Remarks:

Resource: ON LAND

Caller: CALLER RECIEVED RESULTS FROM A SOIL SAMPLE TAKEN FROM SITE WHICH IS A VACANT PIECE OF PROPERTY

NYSDEC: 06/05/97 PROPERTY TRANSFER; DEBRIS & CONTAINERS WITH POSSIBLE CONTAMINATED SOIL (BTEX);

06/09/97 CONTAMINATED SOIL REMOVED;

Product:	GASOLINE	**Quantity Released:**	0	(gallons)

Spill #: 9702804
Spill Date: 6/4/97

Spill Street: FERRY ST
Spill Name: KELLAM PROPERTY
Spill City: BEACON

Source: Other Non-Commercial/Institutional
Cause: UNKNOWN
Suspected Responsible Party: UNKNOWN

Close Date: 6/10/97
Standards Met? YES
Resource: ON LAND

Remarks:

Caller: CALLER RECIEVED RESULTS FROM A SOIL SAMPLE TAKEN FROM SITE WHICH IS A VACANT PIECE OF PROPERTY

NYSDEC: 06/05/97 PROPERTY TRANSFER; DEBRIS & CONTAINERS WITH POSSIBLE CONTAMINATED SOIL (BTEX);

06/09/97 CONTAMINATED SOIL REMOVED;

Product:	GASOLINE	Quantity Released:	0	(gallons)

YORK
ANALYTICAL LABORATORIES, INC.

RECEIVED
JUL 17 2000

Technical Report

prepared for

Ecosystems Strategies, Inc.
60 Worrall Avenue
Poughkeepsie, NY 12603
Attention: Larry Porres

Report Date: 7/13/2000
Re: Client Project ID: SB 2096.20
York Project No.: 00070044

CT License No. PH-0723 New York License No. 10854 Mass. License No. M-CT106 Rhode Island License No. 93 EPA I.D. No. CT00106

ONE RESEARCH DRIVE STAMFORD, CT 06906 (203) 325-1371 FAX (203) 357-0166

YORK
ANALYTICAL LABORATORIES, INC.

RECEIVED
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Technical Report

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ONE RESEARCH DRIVE STAMFORD, CT 06906 (203) 325-1371 FAX (203) 357-0166

Client Sample ID			HB-2/0-2		HB-3/0-2	
York Sample ID			00070044-03		00070044-04	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
Chromium, total			3.99	0.50	6.43	0.50
Lead, total			13.3	0.50	886	0.50
Selenium, total			1.54	1.00	8.03	1.00
Silver, total			Not detected	0.50	Not detected	0.50
Mercury	SW846-7471	mg/kG	Not detected	0.25	Not detected	0.25

Client Sample ID			HB-3/2-4		HB-4/0-2	
York Sample ID			00070044-05		00070044-06	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
Total RCRA Metals	SW846	mg/kG	---	---	---	---
Arsenic, total			16.7	1.00	6.25	1.00
Barium, total			69.8	0.50	117	0.50
Cadmium, total			Not detected	0.50	1.82	0.50
Chromium, total			6.31	0.50	10.9	0.50
Lead, total			418	0.50	97.1	0.50
Selenium, total			4.79	1.00	3.39	1.00
Silver, total			Not detected	0.50	Not detected	0.50
Mercury	SW846-7471	mg/kG	Not detected	0.25	Not detected	0.25
Total Petroleum Hydrocarbons-DRO	SW846-8015B	mg/kg	---	---	Not detected	6.1

Client Sample ID			HB-4/2-4		HB-5/0-2	
York Sample ID			00070044-07		00070044-08	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
Total RCRA Metals	SW846	mg/kG	---	---	---	---
Arsenic, total			6.28	1.00	3.70	1.00
Barium, total			60.5	0.50	176	0.50
Cadmium, total			4.02	0.50	Not detected	0.50
Chromium, total			11.5	0.50	5.03	0.50
Lead, total			69.0	0.50	63.3	0.50
Selenium, total			2.43	1.00	2.55	1.00
Silver, total			Not detected	0.50	Not detected	0.50
Mercury	SW846-7471	mg/kG	Not detected	0.25	Not detected	0.25

Client Sample ID			HB-6/0-1		HB-7/0-1	
York Sample ID			00070044-09		00070044-10	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
Total RCRA Metals	SW846	mg/kG	---	---	---	---
Arsenic, total			3.08	1.00	19.0	1.00
Barium, total			222	0.50	157	0.50
Cadmium, total			Not detected	0.50	2.23	0.50
Chromium, total			6.19	0.50	16.0	0.50

YORK

Client Sample ID			HB-2/0-2		HB-3/0-2	
York Sample ID			00070044-03		00070044-04	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
Chromium, total			3.99	0.50	6.43	0.50
Lead, total			13.3	0.50	886	0.50
Selenium, total			1.54	1.00	8.03	1.00
Silver, total			Not detected	0.50	Not detected	0.50
Mercury	SW846-7471	mg/kG	Not detected	0.25	Not detected	0.25

Client Sample ID			HB-3/2-4		HB-4/0-2	
York Sample ID			00070044-05		00070044-06	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
Total RCRA Metals	SW846	mg/kG	---	---	---	---
Arsenic, total			16.7	1.00	6.25	1.00
Barium, total			69.8	0.50	117	0.50
Cadmium, total			Not detected	0.50	1.82	0.50
Chromium, total			6.31	0.50	10.9	0.50
Lead, total			418	0.50	97.1	0.50
Selenium, total			4.79	1.00	3.39	1.00
Silver, total			Not detected	0.50	Not detected	0.50
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Total Petroleum Hydrocarbons-DRO	SW846-8015B	mg/kg	---	---	Not detected	6.1

Client Sample ID			HB-4/2-4		HB-5/0-2	
York Sample ID			00070044-07		00070044-08	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
Total RCRA Metals	SW846	mg/kG	---	---	---	---
Arsenic, total			6.28	1.00	3.70	1.00
Barium, total			60.5	0.50	176	0.50
Cadmium, total			4.02	0.50	Not detected	0.50
Chromium, total			11.5	0.50	5.03	0.50
Lead, total			69.0	0.50	63.3	0.50
Selenium, total			2.43	1.00	2.55	1.00
Silver, total			Not detected	0.50	Not detected	0.50
Mercury	SW846-7471	mg/kG	Not detected	0.25	Not detected	0.25

Client Sample ID			HB-6/0-1		HB-7/0-1	
York Sample ID			00070044-09		00070044-10	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
Total RCRA Metals	SW846	mg/kG	---	---	---	---
Arsenic, total			3.08	1.00	19.0	1.00
Barium, total			222	0.50	157	0.50
Cadmium, total			Not detected	0.50	2.23	0.50
Chromium, total			6.19	0.50	16.0	0.50

YORK

Client Sample ID			HB-10/0-1		HB-11/0-1	
York Sample ID			00070044-13		00070044-14	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
Lead, total			276	0.50	187	0.50
Selenium, total			3.94	1.00	3.98	1.00
Silver, total			Not detected	0.50	Not detected	0.50
Mercury	SW846-7471	mg/kG	0.85	0.25	Not detected	0.25

Units Key:

For Waters/Liquids: mg/L = ppm ; ug/L = ppb For Soils/Solids: mg/kg = ppm ; ug/kg = ppb

Notes:

1. The MDL (Minimum Detectable Limit) reported is adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. If dilution factor is reported at the end of the compound list, the MDL is determined by multiplying the MDL times the listed dilution factor.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.

Approved By: _____ **Date:** 7/13/2000

Robert Q. Bradley
Managing Director

YORK

Client Sample ID			HB-10/0-1		HB-11/0-1	
York Sample ID			00070044-13		00070044-14	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
Lead, total			276	0.50	187	0.50
Selenium, total			3.94	1.00	3.98	1.00
Silver, total			Not detected	0.50	Not detected	0.50
Mercury	SW846-7471	mg/kG	0.85	0.25	Not detected	0.25

Units Key:

For Waters/Liquids: mg/L = ppm ; ug/L = ppb For Soils/Solids: mg/kg = ppm ; ug/kg = ppb

Notes:

1. The MDL (Minimum Detectable Limit) reported is adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. If dilution factor is reported at the end of the compound list, the MDL is determined by multiplying the MDL times the listed dilution factor.
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Approved By: Robert Q. Bradley **Date:** 7/13/2000

Robert Q. Bradley
Managing Director

YORK

YORK
NALYTICAL LABORATORIES, INC.
ONE RESEARCH DRIVE
STAMFORD, CT 06906
203) 325-1371 FAX (203) 357-0166

Field Chain-of-Custody Record

Company Name	Report To:	Invoice To:	Project ID/No.	Samples Collected By (Signature)
ECOSYSTEMS	LARRY PORRES	PAM	SB2096.20	LARRY PORRES (Name Printed)

Sample No.	Location/ID	Date Sampled	Sample Matrix: Water	Soil	Air	OTHER	ANALYSES REQUESTED	Container Description(s)
HB-8	0-1	6-29-00		✓			RCRA METALS, TPH/FID*	1, 4oz Jar
HB-9	0-1	"		✓			RCRA METALS, PCB 8080	"
HB-10	0-1	"		✓			" "	"
HB-11	0-1	"		✓			" "	"
HB-12	0-1	"		✓			HOLD	"

Chain-of-Custody Record

Bottles Relinquished from Lab by	Date/Time	Sample Relinquished by	Date/Time	Sample Received by	Date/Time
		Larry Porres	6-30-00 9:40am	R. Van Dawsen	6-30-00 9:40
Bottles Received in Field by	Date/Time	Sample Relinquished by	Date/Time	Sample Received in LAB by	Date/Time
				J. Zuk	6-30-00/1740

Comments/Special Instructions
FID for kerosene

Turn-Around Time
✓ Standard ____ RUSH(define)_____

YORK
NALYTICAL LABORATORIES, INC.
ONE RESEARCH DRIVE
STAMFORD, CT 06906
203) 325-1371 FAX (203) 357-0166

Field Chain-of-Custody Record

Company Name	Report To:	Invoice To:	Project ID/No.	Samples Collected By (Signature)
ECOSYSTEMS	LARRY FORRES	PAM	SB2096.20	LARRY FORRES (Name Printed)

Sample No.	Location/ID	Date Sampled	Sample Matrix: Water	Soil	Air	OTHER	ANALYSES REQUESTED	Container Description(s)
HB-8	0-1	6-29-00		✓			RCRA METALS, TPH/FID*	1, 4oz Jar
HB-9	0-1	"		✓			RCRA METALS, PCB 8080	"
HB-10	0-1	"		✓			" "	"
HB-11	0-1	"		✓			" "	"
HB-12	0-1	"		✓			HOLD	"

ain-of-Custody Record

Bottles Relinquished from Lab by	Date/Time	Sample Relinquished by	Date/Time	Sample Received by	Date/Time
		Larry Forres	6-30-00 9:40am	R. Van Dawsen	6-30-00 9:40
Bottles Received in Field by	Date/Time	Sample Relinquished by	Date/Time	Sample Received in LAB by	Date/Time
				J. Gul	6-30-00/1700

mments/Special Instructions
ID for kerosene

Turn-Around Time
✓ Standard ____ RUSH(define)_____

YORK
ANALYTICAL LABORATORIES, INC.

RECEIVED
JUL 27 2000

Technical Report

prepared for

Ecosystems Strategies, Inc.
60 Worrall Avenue
Poughkeepsie, NY 12603
Attention: Larry Porres

Report Date: 7/25/2000
Re: Client Project ID: SB 2096.20
York Project No.: 00070345

CT License No. PH-0723 New York License No. 10854 Mass. License No. M-CT106 Rhode Island License No. 93 EPA I.D. No. CT00106

ONE RESEARCH DRIVE STAMFORD, CT 06906 (203) 325-1371 FAX (203) 357-0166

Report Date: 7/25/2000
Client Project ID: SB 2096.20

York Project No.: 00070345

Ecosystems Strategies, Inc.
60 Worrall Avenue
Poughkeepsie, NY 12603
Attention: Larry Porres

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on 07/17/00. The project was identifed as your project "SB 2096.20 ".

The analysis was conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables .

The results of the analysis are summarized in the following table(s).

Analysis Results

Client Sample ID			HB-1/0-2		HB-3/2-4	
York Sample ID			00070345-01		00070345-02	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
TCLP Arsenic	SW846-6010	mg/L	Not detected	0.010	---	---
TCLP Lead	1311/6010	mg/L	---	---	0.126	0.005

Client Sample ID			HB-7/0-1		HB-8/0-1	
York Sample ID			00070345-03		00070345-04	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
TCLP Lead	1311/6010	mg/L	0.488	0.005	0.405	0.005
Total Petroleum Hydrocarbons	EPA 418.1m	mg/kg	---	---	175	5.0

Client Sample ID			HB-9/0-1		HB-10/0-1	
York Sample ID			00070345-05		00070345-06	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
PCB	SW846-3550B/8082	mg/Kg	---	---	---	---
PCB 1016			Not detected	0.02	Not detected	0.10
PCB 1221			Not detected	0.02	Not detected	0.10
PCB 1232			Not detected	0.02	Not detected	0.10
PCB 1242			Not detected	0.02	Not detected	0.10
PCB 1248			Not detected	0.02	Not detected	0.10
PCB 1254			0.54	0.02	12.4	0.10
PCB 1260			0.38	0.02	5.32	0.10
PCB, Total			0.92	0.02	17.72	0.10

Client Sample ID			HB-11/0-1	
York Sample ID			00070345-07	
Matrix			SOIL	
Parameter	Method	Units	Results	MDL
PCB	SW846-3550B/8082	mg/Kg	---	---
PCB 1016			Not detected	0.02
PCB 1221			Not detected	0.02
PCB 1232			Not detected	0.02
PCB 1242			Not detected	0.02
PCB 1248			Not detected	0.02
PCB 1254			0.73	0.02
PCB 1260			0.29	0.02
PCB, Total			1.02	0.02

Units Key:

For Waters/Liquids: mg/L = ppm ; ug/L = ppb For Soils/Solids: mg/kg = ppm ; ug/kg = ppb

Notes:

1. The MDL (Minimum Detectable Limit) reported is adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. If dilution factor is reported at the end of the compound list, the MDL is determined by multiplying the MDL times the listed dilution factor.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.

Approved By: _____ Date: 7/25/2000

Robert Q. Bradley
Managing Director

YORK

YORK
ALYTICAL LABORATORIES, INC.
ONE RESEARCH DRIVE
STAMFORD, CT 06906
) 325-1371 FAX (203) 357-0166

00070044

Field Chain-of-Custody Record

Company Name	Report To:	Invoice To:	Project ID/No.	Samples Collected By (Signature) / Name (Printed)
COSYSTEMS	LARRY PORRES	PAM	SB2096.20	LARRY PORRES

Sample No.	Location/ID	Date Sampled	Sample Matrix: Water	Soil	Air	OTHER	ANALYSES REQUESTED	Container Description(s)
B-8	0-1	6-29-00		✓			RCRA METALS, TPH/FID*	1, 4oz Jar
B-9	0-1	"		✓			RCRA METALS, PCB 8080	"
B-10	0-1	"		✓			" "	"
B-11	0-1	"		✓			" "	"
B-12	0-1	"		✓			HOLD	"

Chain-of-Custody Record

Samples Relinquished from Lab by	Date/Time		
Samples Received in Field by	Date/Time	Sample Relinquished by (Larry Porres)	6-30-00 9:40CM Date/Time
		Sample Relinquished by	Date/Time
		Sample Received by (R. Van Dawsen)	6-30-00 9:40 Date/Time
		Sample Received in LAB by (J. Lal)	6-30-00/1740 Date/Time

Comments/Special Instructions
for Kerosene

Turn-Around Time
✓ Standard ___ RUSH(define)_____