



Customer-Focused Solutions

**PHASE I
ENVIRONMENTAL SITE ASSESSMENT**

April 2003

For Property at:

17 Central Street
Ashburnham, Massachusetts

TRC Project Number: 38825-0020

Prepared For:

Montachusett Regional Planning Commission

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Customer-Focused Solutions

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Executive Summary

This Phase I Environmental Site Assessment (ESA) was performed for the property located at 17 Central Street in Ashburnham, Massachusetts (the "site"). This Phase I ESA has been prepared for the Montachusett Regional Planning Commission by TRC Environmental Corporation (TRC) in accordance with the American Society for Testing and Materials (ASTM) Practice E 1527-00. The purpose of this assessment is to identify Recognized Environmental Conditions (RECs) as defined in the ASTM E 1527-00 standard, in connection with the site.

The site, which consists of approximately four acres of land developed with a one-story office building, several garages, and storage sheds, is located in a mixed residential and commercial area in the vicinity of downtown Ashburnham. The site is presently occupied by the Ashburnham Highway Department. Land in the immediate vicinity of the site is developed primarily with single-family residences and two commercial properties. Prior to 1871 the parcel was undeveloped. In the mid-1870s, the railroad line was completed and a railroad depot and roundhouse were constructed. In 1925, Ashburnham Station was dismantled and in 1938, the Town of Ashburnham Highway Department moved to its present location at 17 Central Street.

The Phase I ESA consisted of the following tasks:

- Site reconnaissance;
- Investigation of historical site conditions;
- Interviews with the key site manager;
- Review of environmental database and regulatory agency records;
- Review of previous Environmental Site Assessment reports; and
- Preparation of this report summarizing findings, opinions, and conclusions.

Several findings were identified in association with the former on-site underground storage tanks (USTs), on-site chemical use and storage, debris piles, historical site use, and a trench drain located in a garage floor. Based on a review of these findings, several RECs in connection with the site were revealed.

The following RECs were identified in connection with the site:

- Historical site use as railroad terminus and roundhouse, and coal storage facility;
- Former trench drain discharge to an on-site septic tank; and
- Current trench drain discharge to the on-site storm sewer.

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1.0 INTRODUCTION

TRC Environmental Corporation (TRC) prepared this Phase I Environmental Site Assessment (ESA) for the Montachusett Regional Planning Commission (the "Client").

1.1 Statement of Purpose

This Phase I ESA was performed on the property located at 17 Central Street in Ashburnham, Massachusetts (hereinafter the "site"). A site location map is presented as Figure 1 in Appendix 1. This Phase I ESA has been prepared by TRC in accordance with American Society for Testing and Materials (ASTM) Practice E 1527-00 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* and is intended for the sole use of the Client. The purpose of this assessment is to identify *Recognized Environmental Conditions* (RECs) as defined in the ASTM E 1527-00 standard, in connection with the site.

1.2 Scope of Investigation/Services

This Phase I ESA consisted of the following tasks:

- Site reconnaissance conducted on March 21, 2003.
- Investigation of historical site conditions.
- Interviews with the key site manager.
- Review of environmental database and regulatory agency records.
- Review of previous ESA reports for this property.
- Preparation of a report summarizing findings, opinions, and conclusions.

1.3 Limitations and Exceptions

Physical Obstructions to Observations – During the site visit conducted by TRC on March 21, 2003, the surface of the site was partially covered with several inches of snow. Therefore, TRC was unable to wholly observe the ground surface on the site and surrounding properties.

1.3.1 Accuracy and Completeness

TRC makes no guarantees as to the accuracy or completeness of information obtained from others. It is possible that information exists beyond the scope of this investigation or that was not provided to TRC. Additional data subsequently provided, discovered, or produced may alter findings or conclusions made in this Phase I ESA report. TRC is under no obligation to update this report to reflect such subsequent information. The findings presented in this report are based upon the information reasonably available

and observed site conditions at the time of this assessment. Conditions may have changed since that time and the findings and conclusions of this report are not meant to be indicative of future conditions at the site. This report may not be relied on by any party other than the Client with whom TRC has contracted to prepare this report.

1.3.2 Warranties and Representations

This report does not warrant against: (1) operations or conditions which were not in evidence from visual observations or historical information obtained; (2) conditions which could only be determined by physical sampling or other intrusive investigation techniques; or (3) locations other than the Client provided addresses and/or legal parcel description or information on off-site location (with possible impact on the sites) not published in available records.

1.3.3 Continued Validity/User Reliance

This report is presumed to be valid for a period of 180 days from its completion or until the Client obtains specific information that may materially alter a Finding, Conclusion or Opinion in this report or until the Client is notified by TRC that it has obtained specific information that materially alter a Finding, Conclusion or Opinion in this report.

1.3.4 Exceptions to the ASTM E 1527-00 Practice

The protocol utilized for this Phase I ESA was in general accordance with the requirements of ASTM Standard E 1527-00. Neither additions to nor deletions from the ASTM Standard E 1527-00 were requested by the Client.

2.0 SITE DESCRIPTION

The site, located at 17 Central Street in Ashburnham, Massachusetts, consists of approximately four acres of land developed with a one-story office building and adjoining vehicle maintenance garage, three multiple vehicle storage garages, a salt storage shed, an empty storage shed, and a former coal storage shed currently used as extra storage space. The features and layout of the site are shown in Figure 2 in Appendix 1. According to available records at the Town of Ashburnham Assessors Office, the current owner of the site is the Town of Ashburnham. At the time of this assessment, the site was occupied by the Town of Ashburnham Highway Department.

The site was developed in the mid-1870s with a railroad depot, referred to as Ashburnham Station, and a roundhouse. Prior to 1871 the parcel was undeveloped. In 1925 Ashburnham Station was dismantled, and in 1938, the Town of Ashburnham Highway Department moved to its present location at 17 Central

Street. Site photographs from the March 21, 2003 site visit are included in Appendix 2, and field notes written by TRC during the site visit are included in Appendix 3.

Reportedly, from the 1870s through 1925, the site served as a railroad roundhouse and terminus for the Boston and Maine Railroad

2.1 Site Location and Legal Description

The site is located at 17 Central Street, in Ashburnham, Massachusetts. The site is identified in Town of Ashburnham Assessors records as Map 62, Parcel 138, comprising a 4-acre parcel of land located in a mixed commercial and residential zoned area. This property served as the terminus of both the Fitchburg and Boston & Maine Railroads between 1874 and 1925. The site is bordered to the west by Central Street, to the east by Maple Avenue, to the south by residences on Puffer Street, and to the north by two commercial properties on Ames Street. A site location map is presented as Figure 1 in Appendix 1.

2.2 Site and Vicinity General Characteristics

The site is located in a mixed residential and commercial zoned area just south of downtown Ashburnham. Land in the immediate vicinity of the site is developed primarily with single-family residences and several small commercial properties.

The site is relatively level with a slight slope towards the south and southeast. Land elevations range from 994 feet above sea level in the northwest corner of the site to approximately 984 feet above sea level in the southeast portion of the site. Previous investigations related to the removal of two USTs formerly located on the site suggest that the general groundwater flow direction on the site is from north to south.

The site is located approximately $\frac{1}{8}$ to $\frac{1}{4}$ mile south-southeast of the center of Ashburnham and the Ashburnham Town Hall. Phillips Brook is located approximately 900 feet east of the site, with a tributary located about 500 feet south of the site. Refer to Figure 1 in Appendix 1.

2.3 Current Uses of Property – Description of Structures, Roads, and Other Improvements

The site is currently developed with a one-story office building and adjoining vehicle maintenance garage, three multiple vehicle storage garages, a salt storage shed, an empty storage shed, and a former coal storage shed currently used as extra storage space. The office building located in the northwest corner of the site was constructed in 1965 and consists of a concrete and cinder block frame, with an adjoining four-vehicle service garage to the east. Adjacent to and to the east of the four-vehicle garage is a two-vehicle storage garage. Southeast of the main office building and garage is the former coal storage

shed. The Ashburnham Water Department occupies the storage garage that is located in the center of the site. Northwest of the Water Department garage is the salt storage shed. To the northeast is a five-vehicle storage garage, and beyond that is an empty three-sided storage shed constructed of wood. The vehicle garages are constructed of corrugated steel with concrete floors. Information regarding the exact dates of construction for the other site buildings was not available. A site sketch showing the layout of the site structures is provided in Figure 2 in Appendix 1.

Main access to the site is through the west side of the property via Central Street. The site can also be accessed from the east via Maple Avenue. An unnamed road, which bisects the site from southwest to northeast, appears to be paved, however the site superintendent, Mr. Steve Neal, believed that the paved area extended only 8 feet out from the office building and garage. Extensive sand cover made it difficult to determine extent of paved area.

The office building is heated by a propane furnace. Propane is stored in a 500-gallon above-ground storage tank (AST) located behind the office building. The adjoining garage is heated with fuel oil, which is stored in a 330-gallon AST located in the northwest corner of the garage. The five-vehicle garage located adjacent to the Water Department garage is also heated with fuel oil that is stored in a 275-gallon AST located in that garage.

Municipal water and sewer for the site are provided by the Town of Ashburnham. Solid waste disposal at the site is handled by an independent contractor, Waste Management Inc. Waste oil is picked up periodically by Cyn Environmental.

2.4 Current Uses of Adjoining Properties

The properties adjoining the site to the south (#1-19 Puffer Street) are currently developed with single-family residential dwellings, and one commercial property, Flo Chemical Corporation, located at 20 Puffer Street. The site is bordered to the east by Maple Avenue. The Victorian House, a restaurant located on Maple Avenue, adjoins the site to the southeast. The site is abutted on the west by Central Street. The properties located adjacent to and west of the site, across Central Street, are comprised of residences, a nursing home, a sharpening shop, Northland Engineers and some tennis courts. The Garden Shed, a flower and garden shop and Roy's Auto Repair shop, which appears to include a residence, are the properties adjoining the site to the northwest along Ames Street. A residential property, located on Main Street, abuts the northeast boundary of the site.

3.0 USER PROVIDED INFORMATION

The following sections summarize information provided to TRC by the current owner and user of the site.

3.1 Title Records

TRC obtained the title record from the Town of Ashburnham, current owner of the site. A copy of the deed is provided in Appendix 4.

3.2 Environmental Liens or Activity and Use Limitations

A Response Action Outcome (RAO) Statement dated February 12, 1999, on file at the Department of Environmental Protection, did not require an Activity and Use Limitation(s) for the site.

3.3 Owner, Property Manager, and Occupant Information

The site is currently owned by Town of Ashburnham, and occupied by the Town of Ashburnham Highway Department. The Highway Department has occupied the site since its purchase by the Town of Ashburnham in 1938.

4.0 RECORDS REVIEW

The following sections summarize information obtained through a review of available historical and environmental records.

4.1 Mandatory Standard Physical Setting Source

To determine the topographic and hydrologic characteristics of the site and vicinity, TRC reviewed the United States Geological Survey (USGS) 7.5 Minute Topographic Map for the "Ashburnham, MA-NH" Quadrangle dated 1988. According to the 1988 USGS Topographic Map, land in the immediate vicinity of the site is generally flat, with a slight slope to the south and southeast. Phillips Brook is located approximately 900 feet east of the site, with a tributary located about 500 feet south of the site. Figure 1 in Appendix 1 consists of a portion of the USGS Topographic Map showing the location of the site.

4.2 Discretionary and Non-Standard Physical Setting Sources

Historical maps of the Town of Ashburnham were reviewed for this ASTM Phase I ESA. The maps, dating back to 1855, were obtained from the Ashburnham Library and showed no development of the site prior to 1855. Copies of these maps are provided in Appendix 4.

4.3 Standard Environmental Record Sources

A computerized radius search of State and Federal environmental record databases was performed on March 14, 2003 to investigate sites with known adverse environmental conditions that have the potential to impact the site and surrounding vicinity. The search was performed pursuant to ASTM Standard E1527-00 using an electronic database search by Environmental Data Resources, Inc. (EDR). A copy of the results of the database search, entitled The EDR Radius Map with GeoCheck® report, is contained in Appendix 5.

Table 4.3-1: Map Findings Summary
Number of Sites Within Given Radius of Site

17 Central Street Ashburnham, Massachusetts							
Database	Search Distance (miles)	Miles					Total Plotted
		<1/8	1/8-1/4	1/4-1/2	1/2-1	>1	
Federal ASTM Standard							
NPL	1.00	0	0	0	0	NR	0
Proposed NPL	1.00	0	0	0	0	NR	0
CERCLIS	0.50	0	0	0	NR	NR	0
CERCLIS-NFRAP	0.25	0	0	NR	NR	NR	0
CORRACTS	1.00	0	0	0	0	NR	0
RCRIS - TSD	0.50	0	0	0	NR	NR	0
RCRIS - Large Quan. Gen.	0.25	0	0	NR	NR	NR	0
RCRIS - Small Quan. Gen.	0.25	1	1	NR	NR	NR	2
ERNS	TP	NR	NR	NR	NR	NR	0
State ASTM Standard							
State Haz. Waste Sites	1.00	2	0	2	4	NR	8
State Landfill (SWL)	0.50	0	0	1	NR	NR	1
LUST*	0.50	1	1	0	NR	NR	2
UST*	0.25	2	1	NR	NR	NR	3
Release*	1.00	3	1	2	4	NR	10
Federal ASTM Supplemental							
CONSENT	1.00	0	0	0	0	NR	0
ROD	1.00	0	0	0	0	NR	0
Delisted NPL	1.00	0	0	0	0	NR	0
FINDS	TP	NR	NR	NR	NR	NR	0
HMIRS	TP	NR	NR	NR	NR	NR	0
MLTS	TP	NR	NR	NR	NR	NR	0

whens

Table 4.3-1: Map Findings Summary							
Number of Sites Within Given Radius of Site							
17 Central Street Ashburnham, Massachusetts							
Database	Search Distance (miles)	Miles					Total Plotted
		<1/8	1/8-1/4	1/4-1/2	1/2-1	>1	
MINES	0.25	0	0	NR	NR	NR	0
NPL Liens	TP	NR	NR	NR	NR	NR	0
PADS	TP	NR	NR	NR	NR	NR	0
RAATS	TP	NR	NR	NR	NR	NR	0
TRIS	TP	NR	NR	NR	NR	NR	0
TSCA	TP	NR	NR	NR	NR	NR	0
SSTS	TP	NR	NR	NR	NR	NR	0
FTTS	TP	NR	NR	NR	NR	NR	0
State or Local ASTM Supplemental							
AST	TP	NR	NR	NR	NR	NR	0
MA Spills	TP	NR	NR	NR	NR	NR	0
EDR Proprietary Historical Database							
Coal Gas	1.00	0	0	0	0	0	0
Notes: NR – Not Requested (beyond the searched radius). TP – Target Property; the site. * = Subject site identified in this database (For definitions of other abbreviations, refer to the EDR Report in Appendix 2.)							

TRC evaluated the properties within the vicinity of the site that are listed in the various databases to determine if those sites were likely to have a potential environmental impact on the site. The database search identified one Federal site, two state sites, two leaking underground storage tank (LUST) sites, one under-ground storage tank (UST) site, and three release sites listed within 1/8 mile of the site. In addition, one Federal site, one LUST site, one UST site and one release site were identified within 1/8 to 1/4 mile of the site. The subject site was identified as a UST site, a LUST site and a Release site in the database report.

4.3.1 Subject Property

According to the EDR report, the site was listed in the LUST, UST and Release Databases. One 1,000-gallon diesel fuel UST and one 4,000-gallon gasoline UST were removed from the site in 1993 and 1998, respectively. There were approximately six holes up to one inch in diameter observed along the bottom of the 1,000-gallon diesel fuel UST. SEA Consultants conducted a Phase I investigation in 1996. A release was identified during the removal of the 4,000-gallon gasoline UST in May 1998, however some of the

contamination was attributed to the 1,000 UST removed in 1993. A total of 104.23 tons (69.49 cubic yards) of contaminated soils were removed and transported off site in September of 1998. In 1999, a Class A-2 RAO Statement was prepared by W. E. Kuriger Associates stating that a permanent solution has been achieved and an Activity and Use Limitation(s) is not required to maintain a level of No Significant Risk. Soil and groundwater sampling was conducted to support the RAO. Sampling associated with the 1996 Phase I investigation and the RAO activities identified the presence of the solvent tetrachloroethene in soil and groundwater. The presence of tetrachloroethene may be associated with vehicle maintenance conducted on the site. Prior to 1996, a trench drain in the floor of the vehicle maintenance garage discharged directly to the septic tank and leach field, located west and cross-gradient of the UST excavation and monitoring wells. Copies of the previous Phase I investigation and RAO reports are provided in Appendix 6.

4.3.2 Adjacent Sites

19 Puffer Street – The residence located at 19 Puffer Street, located southeast of the site, was identified as a State Hazardous Waste Site (SHWS) and a Release in the database search. On January 12, 1995, MADEP was notified of a release of 100 gallons of #2 Fuel Oil at the residence located at 19 Puffer Street. On July 31, 1995, MADEP received an Immediate Response Action Completion Statement, and on January 11, 1996, an RAO Statement was issued indicating that no further remedial action is warranted for the site. Based on its downgradient location, the release at 19 Puffer Street is not expected to impact the subject site.

Flo Chemical Corporation, 20 Puffer Street – This property is a commercial property, located across Puffer Street southeast of the subject site. This property was not identified in the database search but was observed during TRC's site reconnaissance on March 21, 2003. According to records at the Ashburnham Fire Department, a 10,000-gallon UST containing fuel oil was removed in 1996 and replaced with a 2,000-gallon AST located in the basement of the building. The Fire Department has no documentation of clean closure or a release at this site. Due to this site's downgradient location, this site is not anticipated to have an impact on the subject site.

Roy's Auto Repair, Ames Street – This property is a commercial property, which abuts the subject site to the north. This property was not identified in the database search but was observed during site reconnaissance. The Ashburnham Fire Department has no records for the site indicating the presence or past presence of USTs, ASTs or releases on the site. Based on this information, it is not likely that this site poses a potential environmental impact to the subject site.

4.3.3 Other Properties in the Vicinity of the Site

Records for properties located within ¼ mile of the site that are listed in the database search as regulated waste or release sites were reviewed to assess their potential to impact the site with respect to environmental conditions. For the purposes of this assessment, properties located to the north, northwest, and northeast of the site are considered up gradient with respect to the site. Properties located east and south of the site are considered downgradient, while properties west of the site are considered cross-gradient, in relationship to the site, and were therefore not considered to have the potential to impact the subject site.

? **Ethan Allen Inc., 14 Pleasant Street** – This site, located 1/16 to 1/8 mile west of the site, was identified as a RCRIS Small Quantity Generator of Hazardous Waste in the database search. There are two Compliance Evaluation Inspection Violations listed for the site, which achieved compliance in February 1987. Based on the length of time since the violations occurred at the site and its cross-gradient location, it is not likely that this site poses an environmental concern relative to the subject site.

Roy Brothers Oil Company, 7 Central Street – This site, located 1/16 to 1/8 mile north of the site, was identified in the SHWS database, the Release database and the MA Spills database. On November 19, 1990, a release of approximately 10-50 gallons of fuel oil was reported to MADEP. On September 19, 1996, a Response Action Outcome Statement was issued indicating that no further remedial action is warranted for the site. Although the site is located hydrogeologically upgradient, due to the small volume of the release and the associated regulatory closure documentation, this site is not anticipated to impact the subject site.

Mr. Mike's Mobil, 47 Main Street – This site, located ½ to ¼ mile north of the site was identified in the LUST and Release databases. A release of gasoline was reported on October 29, 1998 and MADEP was notified of the 72-hour release condition. Phase I, Phase II and Phase III work were completed and a Response Action Outcome was issued on March 13, 2002 indicating that no further remedial action is warranted for the site. On June 28, 2002 MADEP conducted a Technical Screen Audit for the site. Although this site is located hydrogeologically upgradient of the subject site, on-site wells located downgradient of the disposal site showed very low levels of contamination, unlikely to have migrated to the subject site, therefore it is not likely that this site poses an environmental concern relative to the subject site.

Cushing Academy, 39 School Street – This site, located ½ to ¼ mile west-southwest of the site was identified as a RCRIS Small Quantity Generator of Hazardous Waste in the database search. There have been no violations found and based on the site's location on the other side of the tributary flowing to Phillips Brook, this site is not expected to have an impact on the subject site.

4.4 Historical Use Information on the Property/Adjoining Properties

The Town of Ashburnham Highway Department has occupied the site since 1938. Based on available records and interviews, between 1874 and the 1925 the site served as a railroad depot and roundhouse for both the Fitchburg and Boston & Maine Railroads. In 1925 the depot was dismantled, however the roundhouse remained standing until 1987 when a spring snow storm caused the roof to collapse. The current office building was constructed in the 1965. Prior to 1871, the site was undeveloped. Pesticide, herbicide and petroleum impacts are commonly associated with the operation and maintenance of railroads. Releases of hazardous materials may have occurred on the site as a result of its former use by the railroad.

Based on a review of historical maps of the Town of Ashburnham and copies of historic Sanborn® Fire Insurance Maps, the adjoining properties have historically been comprised of residences and small commercial properties. According to Mr. Steve Neal, the site superintendent, in the 1800's there was a chair manufacturing facility located to the east of the site across Maple Avenue. After the arrival of the railroad, the facility was transformed to the Ashburnham Car Company, producing railroad cars. There was a railroad spur that ran from the site across Maple Avenue to the car manufacturing building.

4.4.1 Sanborn Map Review

TRC obtained copies of historic Sanborn® Fire Insurance Maps from Environmental Data Resources, Inc., a vendor licensed to reproduce Sanborn® Maps. Sanborn Maps were available and were reviewed for the following years: 1904, 1909, 1917 and 1942. A copy of the Sanborn® Maps are included in Appendix 5.

Table 4.4-1: Sanborn® Map Review		
17 Central Street Ashburnham, Massachusetts		
Year	Site Use	Adjacent Property Use
1904	Western portion of site occupied by a railroad roundhouse, and multiple coal storage sheds.	Two story residential developments on western and northern adjoining properties. Eastern and southern adjoining properties not visible on map.
1909	Same as above with addition of a railroad depot.	Same as above. Some development of 1½ and 2 story residential dwellings to south along Puffer Street.
1917	Same as above. Large coal storage sheds appear to be located in area of current Water Department and vehicle storage garages.	Same as above. More residential development along Puffer Street. Manufacturing facility including a machine shop and multiple storage sheds along Maple Avenue to east.

Table 4.4-1: Sanborn® Map Review

**17 Central Street
Ashburnham, Massachusetts**

Year	Site Use	Adjacent Property Use
1942	Railroad tracks and depot dismantled. Roundhouse is now Town Highway Department. Two coal sheds remain and a Grain and Mason's Supply store is located on the eastern portion of the site.	Same as above with addition of Rifle Club on eastern side of Maple Avenue but small storage shed south of machine shop has been made into a Potter's Shop.

5.0 SITE RECONNAISSANCE

On March 21, 2003, TRC personnel performed a site reconnaissance. The site reconnaissance included a visual inspection of the interior and exterior of the site buildings and a site walk of the property to identify any evidence of activities or conditions that may be relevant to this assessment. Site photographs are included in Appendix 2, and field notes from TRC's site reconnaissance are included in Appendix 3.

5.1 Methodology and Limiting Conditions

At the time of the site visit conducted by TRC, the Highway Department facility was operating, and all portions of the site were accessible. With the exception of snow covering the ground on the site and surrounding properties, no limiting conditions were noted by TRC.

5.2 Observations

The following sections summarize the observations made during TRC's site reconnaissance on March 21, 2003.

5.2.1 Current Uses of the Property

During the site visit conducted by TRC on March 21, 2003, the site was developed with a one story office building and adjoining vehicle maintenance garage, three vehicle storage garages, two storage sheds and a former coal storage shed currently used as extra storage space. Current site operations include the storage of sand, salt and gravel piles as well as Highway Department vehicle storage and maintenance.

5.2.2 Past Uses of the Property

Based on site reconnaissance, the current on-site buildings appear to have been constructed for commercial use. Refer to section 4.4 for additional information on historical uses of the site.

5.2.3 Hazardous Substances and Petroleum Products in Connection with Identified Uses

The four-vehicle garage, located adjacent to and to the east of the office is used for vehicle maintenance. Numerous hazardous substances and petroleum products used in connection with vehicle maintenance are stored in the garage. TRC observed 55-gallon drums containing motor oil, heavy-duty motor oil, hydraulic oil, windshield washer fluid, anti-freeze, detergents, and degreasing solvents. TRC also observed 55-gallon drums containing anti-freeze and propylene glycol in the five-vehicle garage located adjacent to the Water Department. All drums were labeled and in good condition with the exception of one drum. The drum was properly labeled as a gasoline additive and appeared to be in good condition, however there was evidence of spillage and presence of absorbent material beneath the drum. Refer to Photograph 1.

5.2.4 Storage Tanks

There are currently no USTs and three ASTs located on the site. One 500-gallon AST containing heating oil is located outside, north of the office building and is used to heat the office building. One 330-gallon AST containing heating oil is located in the northwest corner of the vehicle maintenance garage, adjacent to the office building, and used to heat the garage. The five-vehicle Water Department garage has one 275-gallon AST containing heating oil, located inside the garage, used to heat the garage. A large white plastic storage container located outside the vehicle maintenance garage was used to store liquid calcium, a deicing agent, but according to Mr. Steve Neal, the container is now empty. Refer to Photograph 2.

Historical records indicate the past presence of two USTs located at the site. One 1,000-gallon UST containing diesel fuel and one 4,000-gallon UST containing gasoline were removed from the site in 1993 and 1998 respectively. In 1999 a Class A-2 RAO Statement was issued by W.E. Kuriger Associates of Fitchburg, Massachusetts for the release related to the USTs. The RAO states that a permanent solution has been achieved and an Activity and Use Limitation(s) is not required to maintain a level of No Significant Risk.

5.2.5 Odors

TRC did not detect the presence of odors on the site indicative of the presence of hazardous substances or petroleum products.

5.2.6 Pools of Liquid

TRC did not observe pools of liquid or standing water on the site or in the site buildings.

5.2.7 Drums

The four-vehicle garage, adjacent to the office is used for vehicle maintenance. Numerous hazardous substances and petroleum products used in connection with vehicle maintenance are stored in the garage. TRC observed 55-gallon drums containing motor oil, heavy-duty motor oil, hydraulic oil, windshield washer fluid, anti-freeze, detergents, and degreasing solvents. TRC also observed 55-gallon drums containing anti-freeze and propylene glycol in the five-vehicle garage located adjacent to the Water Department. All drums were labeled and in good condition with the exception of one drum. The drum was properly labeled as a gasoline additive and appeared to be in good condition, however there was evidence of spillage and presence of absorbent material beneath the drum. Refer to Photographs 1 and 3.

5.2.8 Hazardous Substance and Petroleum Products Containers

During the site reconnaissance TRC observed a red, two-gallon container, resting on a drill base. The site superintendent informed TRC that it was a container of diesel oil. Although the container appeared to be in good condition, the container was not labeled. Slight staining was observed on the floor around drill base. It was not apparent whether the staining was due to the presence of the container of diesel oil. Refer to Photograph 4.

5.2.9 Polychlorinated Biphenyls (PCBs)

There were no indications of current or previous PCB usage on the site. A utility pole is present near the Maple Avenue entrance on the east side of site, but the transformer located on the pole appears to be a new transformer not containing PCBs. Refer to Photograph 5.

5.2.10 Pits, Ponds, and Lagoons

There are no pits, ponds or lagoons located on the site or adjoining properties.

5.2.11 Stained Soil or Pavement

TRC observed a small area of stained pavement in the drum storage area in the vehicle maintenance garage, however there were no cracks or holes observed in the concrete floor of the garage. Due to the presence of snow and sand on the surface of the site, TRC was unable to completely observe site soils. Refer to Photograph 3.

5.2.12 Stressed Vegetation

TRC did not observe stressed vegetation on or adjacent to the site, however, due to the presence of snow on the surface of the site, TRC was unable to wholly observe on-site vegetation.

5.2.13 Solid Waste

In general, the interior of the on-site buildings did not contain solid wastes except for small quantities consistent with typical household wastes. A pile of cinder blocks was located behind the garage adjoining the office building (Photograph 6), and a debris pile containing scrap metal and an old truck body was located adjacent to the salt shed (Photograph 7). Two dumpsters, located by the Maple Avenue entrance and adjacent to the Highway Department garage, are periodically emptied by Waste Management Inc. (Photographs 8 and 9).

5.2.14 Waste Water

Municipal water and sewer are provided by the Town of Ashburnham. A trench drain located in the vehicle maintenance garage reportedly discharges to the on-site storm drain system. Mr. Steve Neal, the site superintendent, was unaware of the exact date when the site was switched over from a septic system to municipal utilities, but believes it to be sometime in 1996. Prior to 1996, the trench drain discharged to an on-site septic system located approximately 30 feet south of the office building in the southwest portion of the site. The site superintendent indicated that an oil water separator will be installed in the trench drain in the future. The location of the former on-site septic system is shown in the as-built drawing provided in Appendix 4. Refer to Photograph 10.

5.2.15 Wells

The site and vicinity are serviced by the Town of Ashburnham municipal water supply. The EDR Well Search identified a total of ten wells within a one-mile radius of the site. Six of the wells were determined to be test wells installed in 1963 and are not in use. Three of the six wells are located upgradient of the site, one appears to be located at or in close proximity to the site and two are located downgradient of the site.

One well was identified as a public water supply well, located at Camp Split Rock, $\frac{1}{8}$ to $\frac{1}{4}$ mile northeast of the site. The current status of the public water supply well at this property is active. According to the EDR Well Search report, this well "currently has or had major violation(s) or enforcement."

Three wells, all located within $\frac{1}{2}$ to 1 mile north of the site were identified as domestic water supply wells. All three are located upgradient from the site. Two of the wells, located north-northwest and west-northwest of the site, were installed in 1962 and 1966 respectively. An installation date for the well located northeast of the site was not reported.

There are reportedly two groundwater monitoring wells on the site associated with the removal of the former USTs. TRC did not observe these wells during site reconnaissance indicating they may have been

destroyed. There were no drinking water wells identified on the site based on site reconnaissance and interviews. The site superintendent had no knowledge of any former or abandoned water wells at the site.

5.2.16 Septic Systems

Currently the site is serviced by the Town of Ashburnham municipal sewer system. Mr. Steve Neal, the site superintendent, was unaware of the exact date when the site was switched over from a septic system to municipal utilities, but believes it to be in 1996. The former septic system was located approximately 30 feet south of the office building as shown in an as-built drawing obtained from the Ashburnham Board of Health Office in attached in Appendix 5. Mr. Neal believes that prior 1996 the trench drain discharged to the septic tank.

6.0 INTERVIEWS

The following persons were contacted or interviewed regarding on-site environmental conditions and present and/or former uses of the site.

6.1 Interview with Site Manager

During TRC's March 21, 2003 site reconnaissance, TRC was accompanied by the current Highway Department Superintendent, Mr. Steve Neal. TRC obtained information regarding the discharge location from the trench drain, the presence of a former septic system, location of current ASTs and the location of the former USTs from Mr. Neal during their site reconnaissance.

6.2 Interview with Local Government Official

TRC contacted local regulatory agencies including the Town Assessor, the Building Department, the Fire Department, and the Board of Health with regards to the site to obtain information on previous uses of the site and to further assess the accuracy of the database search. Information obtained through interviews with local officials is included throughout sections 2.0, 4.0, and 5.0.

7.0 FINDINGS AND OPINIONS

Former USTs – Removal of the 1,000-gallon diesel fuel UST and the 4,000-gallon gasoline UST is considered a historical REC, and thus included as a finding. Removal of the USTs was managed by a Licensed Site Professional (LSP) and documented in a Class A-2 RAO report dated February 1999. A Class A-2 RAO indicates that (a) a Permanent Solution has been achieved, (b) the level of oil and hazardous material in the environmental has not been reduced to background, and (c) Activity and Use Limitations are not required to maintain a level of No Significant Risk. The RAO report appears to have

been conducted in accordance with the Massachusetts Contingency Plan (310 CMR 40.0000). Based on this information, the former USTs do not represent a current REC.

Historical Site Use – No records were available relating to the demolition and removal of the machinery, structures and surrounding media (i.e., soil and groundwater) related to the railroad and roundhouse. Typically, large machinery, usually located below grade, is associated with railroad roundhouses. The large machinery would require the use of lubricating oils and grease. In addition, portions of the site, including the former coal storage shed, were historically used for the storage of coal. No record of the method of storage was available. Typically, heavy metals that comprise coal (e.g., arsenic, lead, and chromium) become deposited in media located beneath coal storage piles. Undocumented site conditions related to site use as a railroad and roundhouse, and use of the site for coal storage are considered current RECs.

Direct Discharge of Trench Drain to Septic System – Prior to 1996, the trench drain in the vehicle maintenance garage reportedly discharged directly to the abandoned on-site septic system. Based on indications of past spills (i.e., floor staining) and the potential for petroleum and hazardous substances to have been discharged, the abandoned septic system is considered a current REC. The solvent, tetrachloroethene was detected in soil excavated during the UST removal and in groundwater from an on-site monitoring well sampled in October 1994.

Direct Discharge of Trench Drain to On-Site Storm Drain System – In 1996, discharge of the trench drain in the vehicle service garage was changed from the septic system to the on-site storm drain system. Based on the potential for petroleum and hazardous substances to have been discharged or to be discharged in the future, the current configuration of the trench drain system is considered a current REC.

On-Site Chemical Use and Storage – Several 55-gallon drums containing petroleum products, detergents, coolants, degreasers, and solvents were observed in the garages located on the site. All drums observed on the site were labeled and in good condition with the exception of one drum located in the vehicle maintenance garage adjacent to the office building. The drum was properly labeled as a gasoline additive and appeared to be in good condition, however there was evidence of spillage and presence of absorbent material beneath the drum. In general, staining on the garage floor was observed, but no apparent cracks or holes were observed. On-site chemical use and storage does is not considered a REC. Potential spillage of these materials is addressed above.

Solid Debris – Several debris piles consisting of scrap metal, cinder blocks, and an old truck body are located on site adjacent to the salt storage shed. These items do not indicate an existing release, or material threat of release of hazardous or petroleum products to the environment. Therefore, the presence of the solid waste piles is not considered a REC.

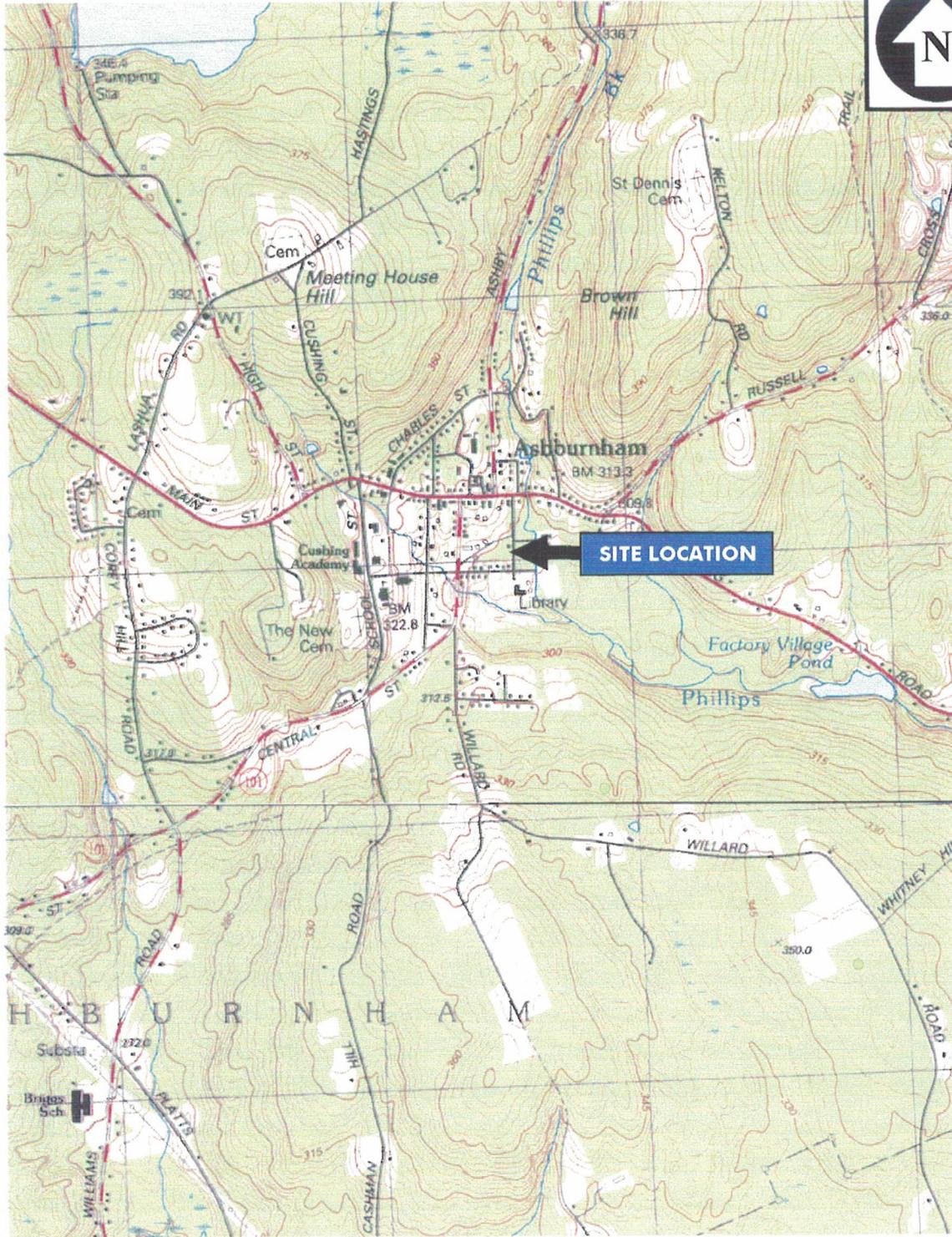
8.0 CONCLUSIONS

TRC has performed a Phase I ESA in conformance with the scope and limitations ASTM Practice E 1527-00 of the site located at 17 Central Street, Ashburnham, Massachusetts. Any exceptions to, or deletions from this practice are described in Section 1.3.4 of this report. This assessment has revealed the following RECs in connection with the site:

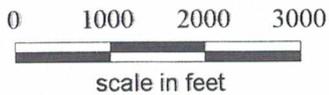
- Potential releases of hazardous substances or petroleum products to the environment associated with historical site use as a railroad terminus and roundhouse and as a coal storage facility;
- Past releases of hazardous substances to the abandoned septic system via the trench drain. Detection of tetrachloroethene in soil and groundwater indicates a past release of chemicals consistent with those used at the site; and
- Past and potential releases of hazardous substances to the on-site storm drain system via the trench drain. After the septic system was abandoned in 1996, the trench drain in the vehicle maintenance garage was reportedly connected directly to the storm drain.

APPENDIX 1

Figures



BASE MAP IS A PORTION OF THE FOLLOWING 7.5' X 15' USGS TOPOGRAPHIC QUADRANGLES: ASHBURNHAM, MA-NH, 1988



ASHBURNHAM HIGHWAY DEPT.
ASHBURNHAM, MASSACHUSETTS

SITE LOCATION MAP

TRC Boott Mills South
Foot of John Street
Lowell, Massachusetts 01852
978-970-5800

FIGURE
1

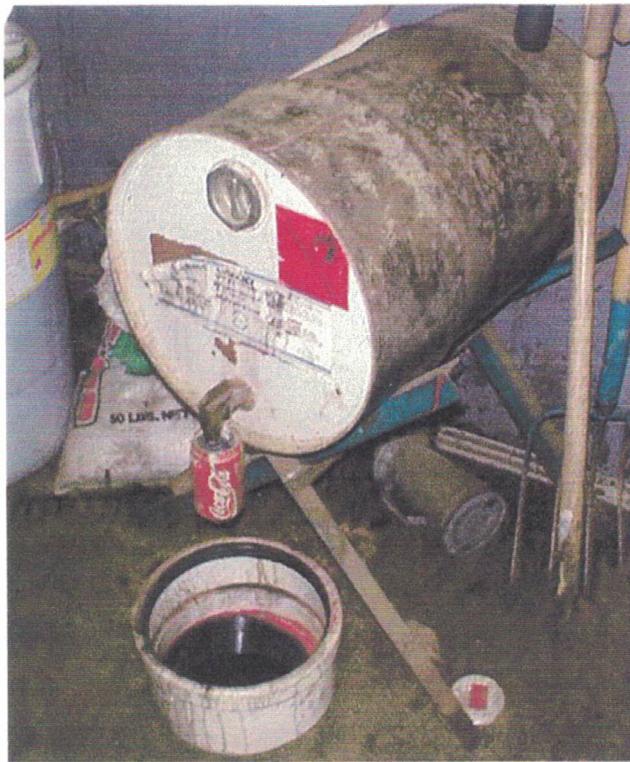
DRAWN: JEL
CHECKED: AS

SCALE: AS SHOWN
Date 8/21/01

3882517CENTRAL/ASHBURNHAM_TOPO

APPENDIX 2

Photographs



1) Drum of gasoline additive located in vehicle maintenance garage



2) Empty liquid calcium container located adjacent to two-vehicle garage.



3) Drums in vehicle maintenance garage containing motor oil, anti-freeze, heavy duty motor oil, hydraulic oil, windshield washer fluid, detergents and degreasing solvents.



4) Red two gallon container of diesel oil in vehicle maintenance garage – not labeled.



5) Pole mounted transformer located on east side of property near Maple Street entrance, looking southwest.



6) Cinder blocks located behind vehicle maintenance garage, looking east.



7) Scrap metal pile with old truck body, looking north.



8) Dumpster adjacent to empty salt shed, looking north.



9) Dumpster along southern property boundary, looking south towards Puffer Street.



10) Trench drain located in vehicle maintenance garage.

APPENDIX 3

Field Notes

PHASE I ENVIRONMENTAL SITE ASSESSMENT SITE VISIT CHECKLIST

Project No. 38825-0020
Site Visit Personnel Name: Elise Mazareas, Amy Stattel
Date of Walkthrough: 3/21/2003
Weather Conditions: 40's, foggy, showers on & off
Name and Position of Site Contact: Bob Fichtel
Phone Number: 978-353-0998
Present Owner: Town of Ashburnham
Present Occupant: Highway Department (DPW)
Present User (if different from occupant): _____

1.0 GENERAL SITE INFORMATION

A. Property Name: Highway Department Garage

B. Property Location:
Mailing Address: 17 Central St Ashburnham MA

County: Worcester

Coordinates: _____

C. Property Description (color photo(s) of main facility, include date of construction and remodeling, type of construction and materials, general condition, and number of stories for building(s) onsite):

5 Buildings on site - 1 one story office building - concrete
4 multiple vehicle garages - corrugated steel & concrete floors

% of Site Covered by Paving or other Impervious cover: ?%; looks paved but
% of Site Covered by Buildings: _____%
Site super sumps paved approx 8'
out from building (office).
Extensive sand cover

Property Size (square feet or acres): ~ 4 acres

Roads Adjoining the Property:

North: Ames

South: Puffer Street

East: Maple Avenue

West: Central Street

Onsite Roads or Parking Facilities: unnamed road bisects lot
parking in front of building.

No. of Buildings: 4 (5) plus 2 storage sheds

Building(s) size (square feet): _____

D. Type of Heat/Cooling in Building: office → propane, garages → fuel oil

Type of Sewage Disposal System: municipal (formerly septic? date)

E. Present Site Activities (describe operations & procedures): _____

vehicle storage & maintenance, storage of
salt, sand & gravel for roads.

F. Length of Current Operations: HW D has occupied the site
since 1938.

G. Hazardous Materials/Chemicals Used? in vehicle maintenance garage
anti-freeze, degreasers, motor oil, hydraulic oil,
gasoline additives etc.

(1) Raw material storage and handling (including solvents, paints, etc.).
Describe quantity, form of material, and storage facilities (show chemical
storage areas on Plot Plan) Take color photos: _____

* took pictures - (in vehicle maintenance garage)

(2) If product is hazardous, describe storage methods: _____
all drums stored + properly labeled. except
* white drum on shifts? (took picture) labeled. ? *valve*
drips?

(3) Hazardous Materials Generated – include quantity, concentration,
characteristics (i.e., ignitable, reactive, corrosive, EPA – toxic): _____

waste oil generated is picked up by Cyn Env.
on as need basis

Chemical Storage Practices: Good Average _____ Poor _____

Environmental Concerns (leaking or damaged drums, open containers, etc.):

above

(4) Hazardous material and/or hazardous waste disposal practices (e.g.,
drummed, sent to impoundment, recycled, treated onsite, disposed onsite) Take
color photos: see above

(5) Hazardous waste disposal—Onsite or Offsite (if onsite, take color photos):

(a) If onsite, does facility accept waste from other sources? _____

(b) If offsite:

Quantity of hazardous waste generated per month: _____

Average time stored: _____

EPA annual report available: _____

H. Sanitary/waste water disposal method: municipal

Any waste streams other than to sanitary sewer or municipal solid waste
system? _____

I. Any vendors used to transport, treat, store, or dispose of waste? _____

J. Any landscaping or pool-type chemicals used? Nope

K. Is Equipment or vehicle maintenance conducted onsite? yes

L. Above-ground Storage Tanks (take color photos of all ASTs onsite) took photos

Size (gal.) 1 500 , 1 330 , 1 275

Age: _____

Materials: propane , fuel oil , fuel oil

Material Stored: ↓ ↓ ↓

Condition: good

Corrosion Protection Method: _____

Use of Stored Material: heating purposes

Secondary Containment Facilities: yes , yes

Visual Evidence of Leak/Spill: no

Associated Underground Piping? (location, type, age, leaks) : _____

Located onsite map: _____

Has the tank leaked in the past? no reported leaks related to ASTs
(If yes, record in Section 4.0, Spill Incidents.)

M. Underground Storage Tanks (USTs) — removed in 93 & 98
(Take color photos of location and associated vent/fill pipes.)

Capacity (gal.) 1000 diesel fuel , 4000 gasoline

Age: _____

Construction materials: _____

Material Stored: above

Condition: _____

Leak Detection: yes

Corrosion Protection Method: _____

EPA/State Registered? yes

Permit or Registration Number: _____

Leak Test Report (date): _____

Visual Evidence of Leak/Spill: _____

Use of Stored Material: _____

Associated Underground Piping? (Location, type, age, leaks): _____

Located on site map: _____

Has the tank leaked in the past? _____

(If yes, record in Section 5, Spill Incidents.)

N. Recycling Units? (Locate on Plot Plan)

Possible PCB-Containing Transformers & Equipment _____

Transformer is new - no PCBs

O. Transformers (Photo and Locate on Plot Plan) took picture (by maple ave)

(1) How many? (Locate on Plot Plan) 1 Ownership? _____

ID# could not see, up utility pole

(2) Type (i.e., pad or pole-mounted)? pole mounted

(3) Records relating to PCB items: _____

(4) Inspect Area(s) for Spill/Leakage: _____

(5) Any Reported Spills? _____

(6) Non-PCB label present on transformer? _____

Hydraulic Equipment: _____

Type: _____

Location: _____

Evidence of Leakage? _____

PCB-Containing Hydraulic Fluid? Yes _____ No _____ Unknown _____

P. Pits and Sumps (Color Photo, Show Location on Plot Plan) *no*
(1) Location: _____
(2) Nature of Use: _____
(3) Type of Material Handled: _____
(4) Location or Site Map: _____

Q. Recent Spill Incidents (onsite) (Show Location on Plot Plan) *no*
Substance spilled: _____
Quantity (gal.) _____
Date: ___/___/___ Location: _____
Remedial Action: _____
Name and Address of Facility where contaminated soils or absorb pads, etc.
disposed of: _____

Remaining Contamination: _____

R. Other Known Soil or Water Contamination: _____

S. Groundwater Monitoring Programs
Name of Program Manager: _____
Type of Substances Monitored: _____
Current Status: _____

2.0 SITE OBSERVATIONS (WITH COLOR PHOTOS)

Limited conditions (e.g., locked doors, inaccessible areas, adjacent buildings, asphalt or paved areas covering spill sites, bodies of water, snow, rain) : _____

SNOW COVER

A. Surface Water Discharge(s)

Location: _____

Condition: _____

Permit Type: _____

B. Distressed Vegetation Areas

Location: None noted _____

Area (sq. ft.) _____

C. Any Evidence of Solid Waste Dumping or Disposal? dumpsters managed by Waste Management Inc.
* pile of scrap metal

D. Discolored Ponds or Flowing Waters? No _____

E. Onsite Wells (locate on Plot Plan): none observed
Springs or Cisterns Onsite? _____

Type: _____

Status (in use, dry, not used) _____

Date of Construction: _____

Well Logs Available: _____

Is Well Known to be Contaminated? _____

If Yes, List Type and Source of Contamination: _____

Groundwater Wells, Springs, or Cisterns onsite? _____

Well Depth (ft.) _____

F. Cesspools, Septic Tanks:

Location: former septic system (? date? possibly prior to 1996)

Status: _____

G. Abnormal Odors (gasoline, oil, etc.) no

H. Discolored Surface? Staining? no

I. Recent Soil disturbances: no

Fill Added: _____

Source of Fill: _____

Evidence of Dumping Hazardous Material, Debris, or Construction Material (photo): _____

J. Underground Utilities and Piping

(1) Location of Underground Utilities (if available): ~~no~~

(2) Location of Storm Drains and Sanitary Sewers: _____

K. Hydrogeology

(1) Direction and Quantity of Surface Water Discharge: S

(2) Depth of Groundwater (ft.): _____

(3) Probable Groundwater Flow Direction: S

(4) Visual Evidence of Run-on/Runoff: Yes _____ No _____

(5) Visual signs of Contaminated Run-on/Run-off: Yes _____ No _____

(6) Nearest Surface Water Body: Phillips Brook to East

(7) Source(s) of water for residents or other establishments in area: _____

municipal

(8) Topographic Conditions

Site: relatively flat

Surrounding Area: slight slope to S

3.0 PAST LAND USE

A. Previous Owners (give dates): Boston & Maine RR
Prior to 1938.

B. Previous Occupants or Users (give dates): above

C. Previous Site Activities (give dates): _____

Served as RR terminus & round house from mid
1870's to 1925.

D. Previous Spills, Releases, or Fires? (give dates, quantity, and location): _____

USTs info in EDR report.

(1) Substance Spilled: _____ Quantity (gal.) _____

Date: ___/___/___ Location: _____

Remaining Contamination: _____

(2) Substance Spilled: _____ Quantity (gal.) _____

Date: ___/___/___ Location: _____

Remaining Contamination: _____

Other Known Soil or Water Contamination: _____

4.0 SURROUNDING AREA

A. Adjacent Facilities Descriptions:

North: ~~mainly residential~~ Ames St. 2 parcels
the Garden Shed, local flour/gardening store
a residence

East: Maple Ave: a few residences
the Victorian Station Restaurant (SE of Subject prop)
also across Maple → old manufactory facility -
was a chair fact. → after RR made
RR cars.

South: Residences along Potter St.
Flo Annual across Potter (SE corner across St.)

West: Central St: ~~mainly~~ a few residences.
Northland Engineers, Sharpening Shop, Abrasive Stone,
Tennis courts.

B. Environmental concerns at Adjacent Properties

(Look for and ask client contact if adjacent properties use or store chemicals, [i.e., industrial establishments, service stations, dry cleaners, etc]. Types of chemical used or stored? How much? Are wastes handled and disposed onsite? History of spills or leaks [describe below]? Evidence of staining? Sheen? USTs or ASTs present?)

Descriptions:

North: no

East: no

South: ? Flo Chemical - down gradient

West: no

C. Spill Incidents (adjacent sites)

Site: ? Corner at Potter St (? 19)

Substance Spilled: _____ Quantity (gal.) very small

Date: / / Location: _____

Remedial Action: FD had no file (I was not sure of exact address) but noted that it was a very small spill that was easily cleaned up

Site: _____

Substance Spilled: _____ Quantity (gal.) _____

Date: / / Location: _____

Remedial Action: _____

Site: _____

Substance Spilled: _____ Quantity (gal.) _____

Date: / / Location: _____

Remedial Action: _____

Other adverse environmental conditions/past enforcement actions at adjacent sites: _____

Types of businesses surrounding the site within a ¼ mile radius (note number of gas stations, dry cleaners, etc. and their distance and direction from the site): _____

Mr. Mikes Mobile - Gas station located north of subject property on Main St.

5.0 ZONING

A. Zoning at the site: commercial & residential.

B. Description of allowed uses: _____

APPENDIX 4

Local Office and User Provided Information

Board of Selectmen
(978) 827-4104
Town Administrator
(978) 827-4104
Town Accountant
(978) 827-4106
Town Clerk
(978) 827-4102
Treasurer/Tax Collector
(978) 827-4102
Board of Assessors
(978) 827-4100
Land Use Office
(978) 827-4103

FAX: (978) 827-4105



TOWN OF ASHBURNHAM

*Town Hall, 32 Main Street
Ashburnham, Massachusetts 01430*

Cultural Council
Board of Health
Building Commission
Conservation Commission
Council on Aging
Electrical Inspector
Gas & Plumbing Inspector
Historical Commission
Municipal Planning
Parks & Recreation
Planning Board
Zoning Board of Appeals
Animal Control

March 27, 2003

Ms. Elise Mazareus
TRC Environmental Corporation
Boott Mill South
Foot of John Street
Lowell, MA 01852

Dear Ms. Mazareus:

The Highway Dept. facility (cinder block structure) was built in December of 1965.

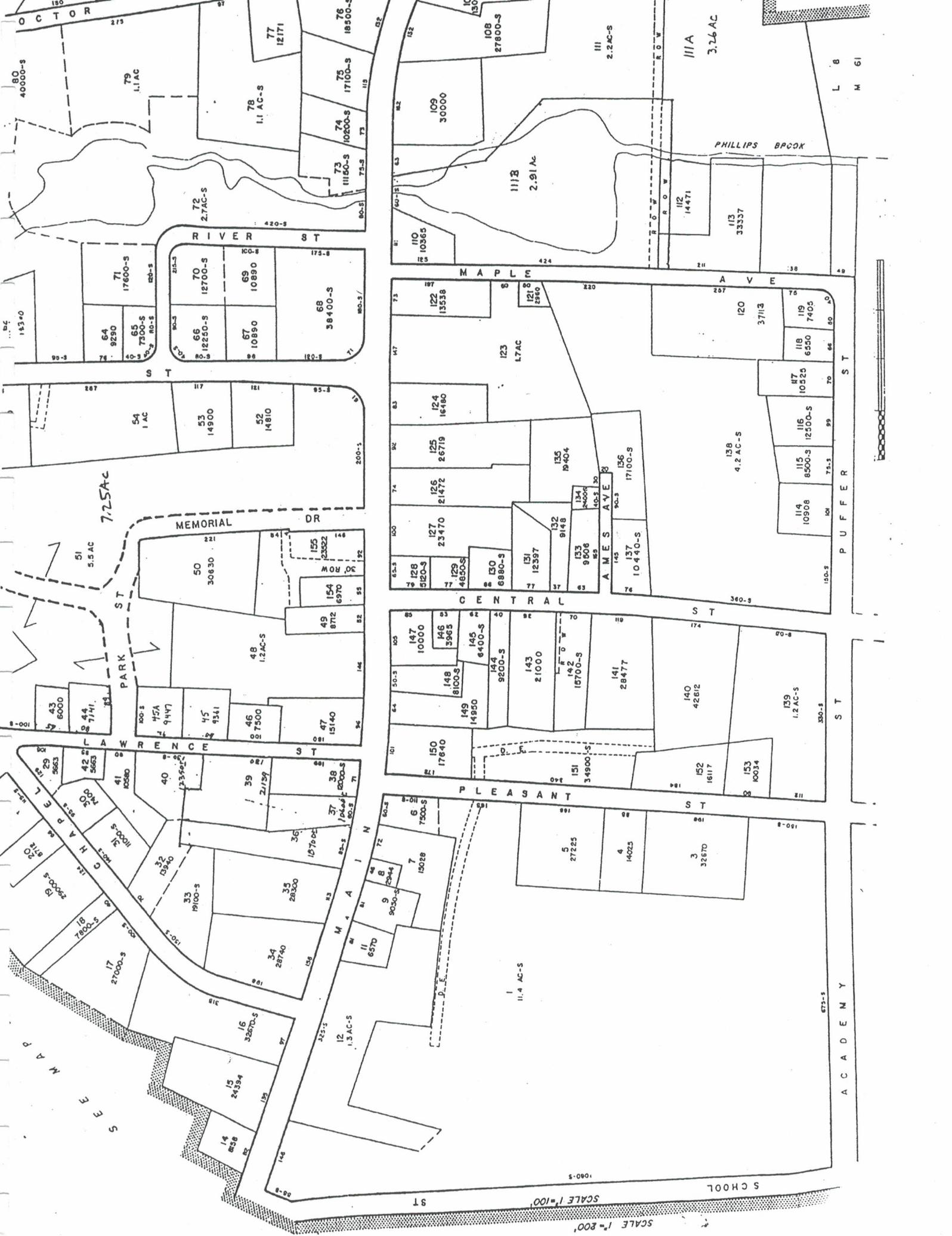
If I can be of any further assistance, please contact my office.

Sincerely,

Katie H. Nunez
Town Administrator

Owner ID: 2000 Tag #: 2 Card 2 of 2 Print Date: 03/21/2003

CURRENT OWNER		UTILITIES		STRT./ROAD		LOCATION	
ASHBURNHAM TOWN OF HIGHWAY DEPT GARAGE NA		2	Public Water	2	Paved	2	Suburban
ASHBURNHAM, MA 01430		3	Public Sewer				
Account # _____ PHOTO _____ GIS ID: _____ SUPPLEMENTAL DATA PRECINCT HEART FREEZE							
CURRENT ASSESSMENT		Code		Appraised Value		Assessed Value	
		9030		194,600		194,600	
		9030		193,700		193,700	
		9030		22,300		22,300	
VISION							
				301		ASHBURNHAM, MA	
RECORD OF OWNERSHIP		BK-VOL/PAGE		SALE DATE		SALE PRICE V.C.	
ASHBURNHAM TOWN OF						0	
EXEMPTIONS		Amount		Code		Description	
Type/Description							
Total:		410,600		Total:		404,800	
This signature acknowledges a visit by a Data Collector or Assessor							
APPRAISED VALUE SUMMARY Appraised Bldg. Value (Card) 67,200 Appraised XF (B) Value (Bldg) 0 Appraised OB (L) Value (Bldg) 0 Appraised Land Value (Bldg) 0 Special Land Value 0 Total Appraised Card Value 67,200 Total Appraised Parcel Value 410,600 Valuation Method: Cost/Market Valuation Net Total Appraised Parcel Value 410,600							
BUILDING PERMIT RECORD				VISIT/CHANGE HISTORY			
Permit ID	Issue Date	Type	Description	Amount	Insp. Date	% Comp.	Date Comp.
LAND LINE VALUATION SECTION				Notes-Adj/Special Pricing			
B#	Use Code	Description	Zone	D	Frontage	Depth	Units
2	9030	MUNICIPAL					0.01 SF
				Unit Price	I. Factor	S.I. C. Factor	Nbhd.
				0.00	1.00	0	1.00
				Adj.	Notes-Adj/Special Pricing	Adj. Unit Price	Land Value
				1.00		0.00	0
Total Card Land Units				0.00	SF	Parcel Total Land Area:	4.00 AC
						Total Land Value	0



DOCTOR

80 40000-S

79 1.1 AC

78 1.1 AC-S

77 12171

76 18500-S

75 17100-S

74 10200-S

73 11150-S

72 2.7 AC-S

108 27600-S

109 30000

111B 2.91 AC

110 10365

112 14471

113 33337

111A 3.26 AC

111 2.2 AC-S

112 14471

113 33337

108 27600-S

109 30000

111B 2.91 AC

110 10365

112 14471

113 33337

111A 3.26 AC

111 2.2 AC-S

112 14471

113 33337

108 27600-S

109 30000

111B 2.91 AC

110 10365

112 14471

113 33337

111A 3.26 AC

111 2.2 AC-S

112 14471

113 33337

108 27600-S

109 30000

111B 2.91 AC

110 10365

112 14471

113 33337

111A 3.26 AC

111 2.2 AC-S

112 14471

113 33337

108 27600-S

109 30000

111B 2.91 AC

110 10365

112 14471

113 33337

111A 3.26 AC

111 2.2 AC-S

112 14471

113 33337

108 27600-S

109 30000

111B 2.91 AC

110 10365

112 14471

113 33337

111A 3.26 AC

111 2.2 AC-S

112 14471

113 33337

108 27600-S

109 30000

111B 2.91 AC

110 10365

112 14471

113 33337

111A 3.26 AC

111 2.2 AC-S

112 14471

113 33337

108 27600-S

109 30000

111B 2.91 AC

110 10365

112 14471

113 33337

111A 3.26 AC

111 2.2 AC-S

112 14471

113 33337

108 27600-S

109 30000

111B 2.91 AC

110 10365

112 14471

113 33337

111A 3.26 AC

111 2.2 AC-S

112 14471

113 33337

71 17600-S

66 12250-S

67 10890

68 38400-S

69 10890

70 12700-S

71 17600-S

72 2.7 AC-S

73 11150-S

108 27600-S

109 30000

111B 2.91 AC

110 10365

112 14471

113 33337

111A 3.26 AC

111 2.2 AC-S

112 14471

113 33337

108 27600-S

109 30000

111B 2.91 AC

110 10365

112 14471

113 33337

111A 3.26 AC

111 2.2 AC-S

112 14471

113 33337

108 27600-S

109 30000

111B 2.91 AC

110 10365

112 14471

113 33337

111A 3.26 AC

111 2.2 AC-S

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113 33337

108 27600-S

109 30000

111B 2.91 AC

110 10365

112 14471

113 33337

111A 3.26 AC

111 2.2 AC-S

112 14471

113 33337

108 27600-S

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111B 2.91 AC

110 10365

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113 33337

111A 3.26 AC

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113 33337

108 27600-S

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110 10365

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111A 3.26 AC

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108 27600-S

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111B 2.91 AC

110 10365

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113 33337

111A 3.26 AC

111 2.2 AC-S

112 14471

113 33337

108 27600-S

109 30000

111B 2.91 AC

110 10365

112 14471

113 33337

111A 3.26 AC

111 2.2 AC-S

112 14471

113 33337

108 27600-S

109 30000

111B 2.91 AC

110 10365

112 14471

113 33337

111A 3.26 AC

111 2.2 AC-S

112 14471

113 33337

54 9290

53 14900

52 14810

51 5.5 AC

50 30830

49 8712

48 1.2 AC-S

47 15140

46 77500

108 27600-S

109 30000

111B 2.91 AC

110 10365

112 14471

113 33337

111A 3.26 AC

111 2.2 AC-S

112 14471

113 33337

108 27600-S

109 30000

111B 2.91 AC

110 10365

112 14471

113 33337

111A 3.26 AC

111 2.2 AC-S

112 14471

113 33337

108 27600-S

109 30000

111B 2.91 AC

110 10365

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111A 3.26 AC

111 2.2 AC-S

112 14471

113 33337

108 27600-S

109 30000

111B 2.91 AC

110 10365

112 14471

113 33337

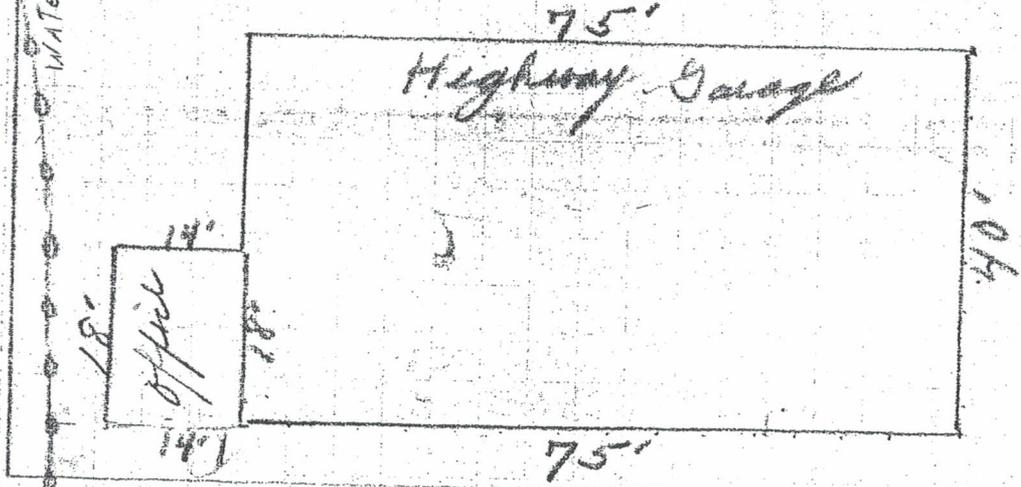
111A 3.26 AC

111 2.2 AC-S

112

Central St.

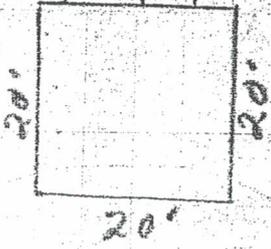
WATER MAIN 6"



DRIVE

500 gals
TANK

DISTRIBUTION
BOX



Garage

RECEIPT OF DISPOSAL OF UNDERGROUND STEEL STORAGE TANK

NAME AND ADDRESS

OF

APPROVED TANK YARD

APPROVED TANK YARD NO.

Tank Yard Ledger 502 CMR 3.03(4) Number:



I certify under penalty of law I have personally examined the underground steel storage tank delivered to this "approved tank yard" by firm, corporation or partnership Dave Perry Excavating and accepted same in conformance with Massachusetts Fire Prevention Regulation 502 CMR 3.00 Provisions for Approving Underground Steel Storage Tank dismantling yards. A valid permit was issued by LOCAL Head of Fire Department FDID# 27011 to transport this tank to this yard.

Name and official title of approved tank yard owner or owners authorized representative:

James Macarone
SIGNATURE

COO
TITLE

9-21-93
DATE SIGNED

This signed receipt of disposal must be returned to the local head of the fire department FDID# 27011 pursuant to 502 CMR 3:00. (EACH TANK MUST HAVE A RECEIPT OF DISPOSAL)



The Commonwealth of Massachusetts
Department of Public Safety
Division of Fire Prevention and Regulation

APPLICATION FOR PERMIT, AND PERMIT, FOR REMOVAL AND TRANSPORTATION TO APPROVED TANK YARD

FDID# 27011

Permit # 93-167

Date: 09/20 / 1993

Ashburnham
(City, Town or District)

Fee Paid: \$ 50.00

DIG SAFE NUMBER
933803001
Start Date SEP 17, 1993

In accordance with the provisions of Chapter 148, Sec. 38A, M.G.L.,

527 CMR 9.00 application is hereby made by: DAVE PERRY CONST

Street Address & City or Town: 59 Jewell Hill Rd Ashburnham MA 01501

Signature of Applicant: [Signature]

Applicants Printed Name: DAVE PERRY

For permission to remove and transport an underground storage tank from:

Owner: Roy Bros oil Street Address: 50 Main St Ashburnham

Firm transporting waste: Roy Bros oil State Lic. # MA00006857

Hazardous waste manifest # _____ E.P.A. # _____

Approved tank yard: Tomazelo Brothers #: 14901

Tank yard address: 207 MARSTON ST LAWRENCE MASS

Type of inert gas: CO2 UL tank #: _____

Tank capacity: 1000 GAL Substance last stored: #2 Fuel

Date of issue: 09/20 1993 Date of expiration: 09/20 / 1993

Signature/Title of officer granting permit: CHIEF R.H. YULI

TANK WAS REMOVED AT APPROXIMATELY 11:30 AM. ON 9/20/93. THE TANK
AS FOUND TO HAVE APPROXIMATELY 6 HOLES IN THE BOTTOM UP TO ONE INCH
IN DIAMETER THE GROUND BENEATH SHOWED SIGNS OF CONTAMINATION
- DIGGED FUEL. I HALTED OPERATIONS. I NOTIFIED THE HIGHWAY
SUPERINTENDANT AND D.E.P. (JOE SPANNO). MR. SPANNO TOLD ME THAT
THE TANK MAY BE DISPOSED OF. I TOOK PICTURES OF THE TANK PRIOR
TO ITS LEAVING THE SITE. MR. SPANNO ALSO SAID HE WOULD SEND
NOTICE OF RESPONSIBILITY TO BOTH THE TOWN OF ASHBURNHAM AND
ROY BROS. OIL CO. REGARDING CLEAN UP OF THE SITE. THE HIGHWAY SUPT.
AND I NOTIFIED THE TOWN ADMINISTRATOR OF THE PROBLEM. THE TOWN
ADMINISTRATOR HAS TAKEN RESPONSIBILITY FOR MITIGATING THE SITUATION.

Pat J. M. CHIEF.



Commonwealth of Massachusetts
 Department of Fire Services - Office of the State Fire Marshal
 RECEIPT OF DISPOSAL OF UNDERGROUND STEEL STORAGE TANK



NAME AND ADDRESS OF APPROVED TANK YARD

MASS TANK DISPOSAL
 Eastern Dr. Chicopee, MA 01013
 006-0008

APPROVED TANK YARD NO. _____ Tank Yard Ledger 502 CMR 3.03 (4) Number: 9800440

I certify under penalty of law I have personally examined the underground steel storage tank delivered to this "approved tank yard" by firm, corporation or partnership CYT Environmental and accepted same in conformance with Massachusetts Fire Prevention Regulation 502

CMR 3.00 Provisions for Approving Underground Steel Storage Tank dismantling yards. A valid permit was issued by LOCAL Head of Fire Department. FDID# 27011 to transport this tank to this yard.

Name and official title of approved tank yard owner or owners authorized representative:

[Signature]
SIGNATURE

Yard
TITLE

5/21/98
DATE SIGNED

This signed receipt of disposal must be returned to the local head of the fire department FDID# 27011 pursuant to 502 CMR 3.00.

THIS TANK MUST HAVE A RECEIPT OF DISPOSAL



APPLICATION and PERMIT

Fee: \$ 50 ⁰⁰/₁₀₀

for storage tank removal and transportation to approved tank disposal yard in accordance with the provisions of M.G.L. Chapter 148, Section 38A, 527 CMR 9.00, application is hereby made by:

Tank Owner

Tank Owner Name (please print) Town of Ashburnham *[Signature]*
 Address 17 Central ST Ashburnham Mass 01430
Street City State Zip

Removal Contractor

Company Name CYN ENVIRONMENTAL SERVICES
 Address 2382 BOSTON RD., WILBRAHAM, MA. 01095
 Signature (if applying for permit) _____
 IFCI Certified Other _____

Contamination Assessment

Co. or Individual _____
 Address _____
 Signature (if applying for permit) _____
 IFCI Certified LSP # _____ Other _____

Tank Information

Tank Location 17 Central ST Ashburnham
Street Address City
 Tank Capacity (gallons) 4000 Substance Last Stored Gas
 Tank Dimensions (diameter x length) 64" x 24'
 Remarks: _____

Disposal Information

Firm transporting waste CYN ENVIRONMENTAL SERVICES State Lic. # MA 40
 Hazardous waste manifest # MA 3165886 E.P.A. # MAD082303777
 Approved tank disposal yard MASS TANK DISPOSAL Tank yard # 006
 Type of inert gas DRY ICE, (CO2) Tank yard address BASKIN ROAD
CHICOPEE, MA.

Approvals

City or Town ASHBURNHAM FDID# 27011 Permit# 98-123
 Date of issue 5-21-98 Date of expiration 5-29-98
 Dig safe approval number: 982005417 Dig Safe Toll Free Tel. Number - 800-322-4844
 Signature / Title of Officer granting permit Capt R. Howell

After removal(s) send Form FP-290R signed by Local Fire Dept. to UST Regulatory Compliance Unit, One Ashburton Place, Room 1310, Boston, MA 02108-1618.

Notification for Underground Storage Tanks

2

Submit to:
LOCAL FIRE DEPARTMENT

FIRE DEPT.
I.D. Number

STATE USE ONLY

FIRE DEPT.
CERTIFICATION

Date Received

GENERAL INFORMATION

Notification is required by Federal law for all underground tanks that have been used to store regulated substances since January 1, 1974, that are in the ground as of May 8, 1986, or that are brought into use after May 8, 1986. The information requested is required by Section 9002 of the Resource Conservation and Recovery Act, (RCRA), as amended.

The primary purpose of this notification program is to locate and evaluate underground tanks that store or have stored petroleum or hazardous substances. It is expected that the information you provide will be based on reasonably available records, or, in the absence of such records, your knowledge, belief, or recollection.

Who Must Notify? Section 9002 of RCRA, as amended, requires that, unless exempted, owners of underground tanks that store regulated substances must notify designated State or local agencies of the existence of their tanks. Owner means—

(a) in the case of an underground storage tank in use on November 8, 1984, or brought into use after that date, any person who owns an underground storage tank used for the storage, use, or dispensing of regulated substances, and

(b) in the case of any underground storage tank in use before November 8, 1984, but no longer in use on that date, any person who owned such tank immediately before the discontinuation of its use.

What Tanks Are Included? Underground storage tank is defined as any one or combination of tanks that (1) is used to contain an accumulation of "regulated substances," and (2) whose volume (including connected underground piping) is 10% or more beneath the ground. Some examples are underground tanks storing: 1. gasoline, used oil, or diesel fuel, and 2. industrial solvents, pesticides, herbicides or fumigants.

What Tanks Are Excluded? Tanks removed from the ground are not subject to notification. Other tanks excluded from notification are:

1. farm or residential tanks of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes;
2. tanks used for storing heating oil for consumptive use on the premises where stored;
3. septic tanks;

4. pipeline facilities (including gathering lines) regulated under the Natural Gas Pipeline Safety Act of 1968, or the Hazardous Liquid Pipeline Safety Act of 1979, or which is an intrastate pipeline facility regulated under State laws;

5. surface impoundments, pits, ponds, or lagoons;

6. storm water or waste water collection systems;

7. flow-through process tanks;

8. liquid traps or associated gathering lines directly related to oil or gas production and gathering operations;

9. storage tanks situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

What Substances Are Covered? The notification requirements apply to underground storage tanks that contain regulated substances. This includes any substance defined as hazardous in section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), with the exception of those substances regulated as hazardous waste under Subtitle C of RCRA. It also includes petroleum, e.g., crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).

Where To Notify? Completed notification forms should be sent to the address given at the top of this page.

When To Notify? 1. Owners of underground storage tanks in use or that have been taken out of operation after January 1, 1974, but still in the ground, must notify by May 8, 1986. 2. Owners who bring underground storage tanks into use after May 8, 1986, must notify within 30 days of bringing the tanks into use.

Penalties: Any owner who knowingly fails to notify or submits false information shall be subject to a civil penalty not to exceed \$10,000 for each tank for which notification is not given or for which false information is submitted.

INSTRUCTIONS

Please type or print in ink all items except "signature" in Section V. This form must be completed for each location containing underground storage tanks. If more than 5 tanks are owned at this location, photocopy the reverse side, and staple continuation sheets to this form.

Indicate number of continuation sheets attached

0

I. OWNERSHIP OF TANK(S)

Owner Name (Corporation, Individual, Public Agency, or Other Entity)

Town of Ashburnham - Highway Dept.

Street Address

19 Central St., Ashburnham, MA.

County

Worcester

City

Ashburnham

State

MA.

ZIP Code

01430

Area Code Phone Number

617-827-4424

Type of Owner (Mark all that apply)

Current

State or Local Gov't

Private or Corporate

Former

Federal Gov't (GSA facility I.D. no. _____)

Ownership uncertain

II. LOCATION OF TANK(S)

(If same as Section I, mark box here)

Facility Name or Company Site Identifier, as applicable

Street Address or State Road, as applicable

County

City (nearest)

State

ZIP Code

Indicate number of tanks at this location

1

Mark box here if tank(s) are located on land within an Indian reservation or on other Indian trust lands

III. CONTACT PERSON AT TANK LOCATION

Name (If same as Section I, mark box here)

William Brennan Jr.

Job Title
Superintendent

Area Code Phone Number
617-827-4424

IV. TYPE OF NOTIFICATION

Mark box here only if this is an amended or subsequent notification for this location.

V. CERTIFICATION (Read and sign after completing Section VI.)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Name and official title of owner or owner's authorized representative

William Brennan Jr., Supt.

Signature

William Brennan Jr.

Date Signed

4/7/86

CONTINUE ON REVERSE SIDE

VI. DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for each tank at this location.)

Tank Identification No. (e.g., ABC-123), or Arbitrarily Assigned Sequential Number (e.g., 1,2,3...)	Tank No. 1	Tank No.	Tank No.	Tank No.	Tank No.
1. Status of Tank (Mark all that apply <input checked="" type="checkbox"/>) Currently in Use Temporarily Out of Use Permanently Out of Use Brought into Use after 5/8/86	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
2. Estimated Age (Years) Installed 5/11/84					
3. Estimated Total Capacity (Gallons) 4,000					
4. Material of Construction (Mark one <input checked="" type="checkbox"/>) Steel Concrete Fiberglass Reinforced Plastic Unknown Other, Please Specify	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
5. Internal Protection (Mark all that apply <input checked="" type="checkbox"/>) Cathodic Protection Interior Lining (e.g., epoxy resins) None Unknown Other, Please Specify	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6. External Protection (Mark all that apply <input checked="" type="checkbox"/>) Cathodic Protection Painted (e.g., asphaltic) Fiberglass Reinforced Plastic Coated None Unknown Other, Please Specify	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
7. Piping (Mark all that apply <input checked="" type="checkbox"/>) Bare Steel Galvanized Steel Fiberglass Reinforced Plastic Cathodically Protected Unknown Other, Please Specify	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
8. Substance Currently or Last Stored in Greatest Quantity by Volume (Mark all that apply <input checked="" type="checkbox"/>) a. Empty b. Petroleum Diesel Kerosene Gasoline (including alcohol blends) Used Oil Other, Please Specify c. Hazardous Substance Please Indicate Name of Principal CERCLA Substance OR Chemical Abstract Service (CAS) No. Mark box <input checked="" type="checkbox"/> if tank stores a mixture of substances d. Unknown	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
9. Additional Information (for tanks permanently taken out of service) a. Estimated date last used (mo/yr) b. Estimated quantity of substance remaining (gal.) c. Mark box <input checked="" type="checkbox"/> if tank was filled with inert material (e.g., sand, concrete)	/ <input type="checkbox"/> <input type="checkbox"/>	/ <input type="checkbox"/> <input type="checkbox"/>	/ <input type="checkbox"/> <input type="checkbox"/>	/ <input type="checkbox"/> <input type="checkbox"/>	/ <input type="checkbox"/> <input type="checkbox"/>

4

The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC SAFETY—DIVISION OF FIRE PREVENTION

APPLICATION FOR PERMIT TO MAINTAIN AN EXISTING/NEW UNDERGROUND STORAGE FACILITY

To: Head of Fire Department

ASHBURNHAM City or Town

April 14 19 86 Date

Application is hereby made for a permit to maintain an existing/new underground storage facility as required by 527CMR9.00: Permits.

Location of property: 19 Central St. Street address

Owner of property: Town of Ashburnham Full name of person, firm or corporation

Signature of owner or authorized representative: William Brennan Highway Sup

Fee: \$ None (M.G.L.A. Chapt. 148 Sec. 10A)

(Fire Department's Copy to be Filed with F.P.290 part 2)

Form F.P. 290 Part 4

F.P.6 REV



The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC SAFETY—DIVISION OF FIRE PREVENTION 1010 COMMONWEALTH AVENUE, BOSTON

17 April 19 84 (Date)

APPLICATION FOR PERMIT

To: HEAD OF FIRE DEPARTMENT Ashburnham City or Town

Sec. 38A In accordance with the provisions of Chapter 148, G.L. as provided in application is hereby made By

Name Zecco, Inc. 345 West Main St., Northboro, Ma. (Full name of person, firm or corporation)

Address (Street or P.O. Box) (City or Town)

State clearly purpose for which permit is requested for permission to Remove 4000 gallon gasoline tank from the premises located at the Ashburnham Highway Department, 19 Central St., Ashburnham, Ma. Replaced by 4000 gallon tank - Highland Tank #MH 7572 at

Name of competent operator Thomas Bombredi Cert. No. (If applicable)

Date issued—rejected 17 April 19 84 By Thomas Bombredi (Signature of applicant)

Notification for Underground Storage Tanks

2

Submit to:
LOCAL FIRE DEPARTMENT

FIRE DEPT.

I.D. Number

27011

STATE USE ONLY

FIRE DEPT. CERTIFICATION

Chief of Dept. Pity

Date Received

5-5-86

GENERAL INFORMATION

Notification is required by Federal law for all underground tanks that have been used to store regulated substances since January 1, 1974, that are in the ground as of May 8, 1986, or that are brought into use after May 8, 1986. The information requested is required by Section 9002 of the Resource Conservation and Recovery Act, (RCRA), as amended.

The primary purpose of this notification program is to locate and evaluate underground tanks that store or have stored petroleum or hazardous substances. It is expected that the information you provide will be based on reasonably available records, or, in the absence of such records, your knowledge, belief, or recollection.

Who Must Notify? Section 9002 of RCRA, as amended, requires that, unless exempted, owners of underground tanks that store regulated substances must notify designated State or local agencies of the existence of their tanks. Owner means--

(a) in the case of an underground storage tank in use on November 8, 1984, or brought into use after that date, any person who owns an underground storage tank used for the storage, use, or dispensing of regulated substances, and

(b) in the case of any underground storage tank in use before November 8, 1984, but no longer in use on that date, any person who owned such tank immediately before the discontinuation of its use.

What Tanks Are Included? Underground storage tank is defined as any one or combination of tanks that (1) is used to contain an accumulation of "regulated substances," and (2) whose volume (including connected underground piping) is 10% or more beneath the ground. Some examples are underground tanks storing: 1. gasoline, used oil, or diesel fuel, and 2. industrial solvents, pesticides, herbicides or fumigants.

What Tanks Are Excluded? Tanks removed from the ground are not subject to notification. Other tanks excluded from notification are:

1. farm or residential tanks of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes;
2. tanks used for storing heating oil for consumptive use on the premises where stored;
3. septic tanks;

4. pipeline facilities (including gathering lines) regulated under the Natural Gas Pipeline Safety Act of 1968, or the Hazardous Liquid Pipeline Safety Act of 1979, or which is an intrastate pipeline facility regulated under State laws;

5. surface impoundments, pits, ponds, or lagoons;

6. storm water or waste water collection systems;

7. flow-through process tanks;

8. liquid traps or associated gathering lines directly related to oil or gas production and gathering operations;

9. storage tanks situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

What Substances Are Covered? The notification requirements apply to underground storage tanks that contain regulated substances. This includes any substance defined as hazardous in section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), with the exception of those substances regulated as hazardous waste under Subtitle C of RCRA. It also includes petroleum, e.g., crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).

Where To Notify? Completed notification forms should be sent to the address given at the top of this page.

When To Notify? 1. Owners of underground storage tanks in use or that have been taken out of operation after January 1, 1974, but still in the ground, must notify by May 8, 1986. 2. Owners who bring underground storage tanks into use after May 8, 1986, must notify within 30 days of bringing the tanks into use.

Penalties: Any owner who knowingly fails to notify or submits false information shall be subject to a civil penalty not to exceed \$10,000 for each tank for which notification is not given or for which false information is submitted.

INSTRUCTIONS

Please type or print in ink all items except "signature" in Section V. This form must be completed for each location containing underground storage tanks. If more than 5 tanks are owned at this location, photocopy the reverse side, and staple continuation sheets to this form.

Indicate number of continuation sheets attached

I. OWNERSHIP OF TANK(S)

Owner Name (Corporation, Individual, Public Agency, or Other Entity)

Ray Bros. Oil Co. Inc.

Street Address

68 Center St

County

Worcester County

City State ZIP Code

South Ashburnham Ma 01466

Area Code Phone Number

617-827-5280

Type of Owner (Mark all that apply)

Current

State or Local Gov't

Private or Corporate

Former

Federal Gov't (GSA facility I.D. no.)

Ownership uncertain

II. LOCATION OF TANK(S)

(If same as Section I, mark box here)

Facility Name or Company Site Identifier, as applicable

Town of Ashburnham - Highway Dept

Street Address or State Road, as applicable

Central St

County

Worcester County

City (nearest)

Ashburnham

State

Ma

ZIP Code

01466

Indicate number of tanks at this location

Mark box here if tank(s) are located on land within an Indian reservation or on other Indian trust lands

III. CONTACT PERSON AT TANK LOCATION

Name (If same as Section I, mark box here)

William Brennan

Job Title

Head of Highway Dept

Area Code

617-827-4424

Phone Number

IV. TYPE OF NOTIFICATION

Mark box here only if this is an amended or subsequent notification for this location.

V. CERTIFICATION (Read and sign after completing Section VI.)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Name and official title of owner or owner's authorized representative

Marc A. Bingham Ass'y Mgr.

Signature

Marc A. Bingham

Date Signed

April 25, 1986

CONTINUE ON REVERSE SIDE

VI. DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for each tank at this location.)

Tank Identification No. (e.g., ABC-123), or Arbitrarily Assigned Sequential Number (e.g., 1,2,3...)	Tank No.	Tank No.	Tank No.	Tank No.	Tank No.
I. Status of Tank (Mark all that apply <input checked="" type="checkbox"/>) Currently in Use <input checked="" type="checkbox"/> Temporarily Out of Use <input type="checkbox"/> Permanently Out of Use <input type="checkbox"/> Brought into Use after 5/8/86 <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Estimated Age (Years)	<u>10</u>				
Estimated Total Capacity (Gallons)	<u>1000</u>				
Material of Construction (Mark one <input checked="" type="checkbox"/>) Steel <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Fiberglass Reinforced Plastic <input type="checkbox"/> Unknown <input type="checkbox"/> Other, Please Specify _____	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Internal Protection (Mark all that apply <input checked="" type="checkbox"/>) Cathodic Protection <input type="checkbox"/> Interior Lining (e.g., epoxy resins) <input type="checkbox"/> None <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> Other, Please Specify _____	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
External Protection (Mark all that apply <input checked="" type="checkbox"/>) Cathodic Protection <input type="checkbox"/> Painted (e.g., asphaltic) <input checked="" type="checkbox"/> Fiberglass Reinforced Plastic Coated <input type="checkbox"/> None <input type="checkbox"/> Unknown <input type="checkbox"/> Other, Please Specify _____	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Coating (Mark all that apply <input checked="" type="checkbox"/>) Bare Steel <input checked="" type="checkbox"/> Galvanized Steel <input type="checkbox"/> Fiberglass Reinforced Plastic <input type="checkbox"/> Cathodically Protected <input type="checkbox"/> Unknown <input type="checkbox"/> Other, Please Specify _____	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Substance Currently or Last Stored in Greatest Quantity by Volume (Mark all that apply <input checked="" type="checkbox"/>) a. Empty <input type="checkbox"/> b. Petroleum <input checked="" type="checkbox"/> Diesel <input checked="" type="checkbox"/> Kerosene <input type="checkbox"/> Gasoline (including alcohol blends) <input type="checkbox"/> Used Oil <input type="checkbox"/> Other, Please Specify _____ c. Hazardous Substance <input type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
Please Indicate Name of Principal CERCLA Substance OR Chemical Abstract Service (CAS) No. Mark box <input checked="" type="checkbox"/> if tank stores a mixture of substances d. Unknown <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Additional Information (for tanks permanently taken out of service) a. Estimated date last used (mo/yr) _____ Estimated quantity of substance remaining (gal.) _____ c. Mark box <input type="checkbox"/> if tank was filled with inert material (e.g., sand, concrete)	<input type="checkbox"/> <u>/</u> <input type="checkbox"/>	<input type="checkbox"/> <u>/</u> <input type="checkbox"/>	<input type="checkbox"/> <u>/</u> <input type="checkbox"/>	<input type="checkbox"/> <u>/</u> <input type="checkbox"/>	<input type="checkbox"/> <u>/</u> <input type="checkbox"/>

Tank Identification No. (e.g., ABC-123), or Arbitrarily Assigned Sequential Number (e.g., 1,2,3...)	Tank No. 1	Tank No.	Tank No.	Tank No.
1. Status of Tank (Mark all that apply <input checked="" type="checkbox"/>) Currently in Use <input checked="" type="checkbox"/> Temporarily Out of Use <input type="checkbox"/> Permanently Out of Use <input type="checkbox"/> Brought into Use after 5/8/86 <input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Estimated Age (Years) 3. Estimated Total Capacity (Gallons)	Installed 5/11/84			
4. Material of Construction (Mark one <input checked="" type="checkbox"/>) Steel <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Fiberglass Reinforced Plastic <input type="checkbox"/> Unknown <input type="checkbox"/> Other, Please Specify _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Internal Protection (Mark all that apply <input checked="" type="checkbox"/>) Cathodic Protection <input type="checkbox"/> Interior Lining (e.g., epoxy resins) <input type="checkbox"/> None <input type="checkbox"/> Unknown <input checked="" type="checkbox"/> Other, Please Specify _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
External Protection (Mark all that apply <input checked="" type="checkbox"/>) Cathodic Protection <input type="checkbox"/> Painted (e.g., asphaltic) <input checked="" type="checkbox"/> Fiberglass Reinforced Plastic Coated <input type="checkbox"/> None <input type="checkbox"/> Unknown <input type="checkbox"/> Other, Please Specify _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Finishing (Mark all that apply <input checked="" type="checkbox"/>) Bare Steel <input checked="" type="checkbox"/> Galvanized Steel <input type="checkbox"/> Fiberglass Reinforced Plastic <input type="checkbox"/> Cathodically Protected <input type="checkbox"/> Unknown <input type="checkbox"/> Other, Please Specify _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contents (Mark all that apply <input checked="" type="checkbox"/>) a. Empty <input type="checkbox"/> b. Petroleum <input type="checkbox"/> Diesel <input type="checkbox"/> Kerosene <input type="checkbox"/> Gasoline (including alcohol blends) <input checked="" type="checkbox"/> Used Oil <input type="checkbox"/> Other, Please Specify _____ c. Hazardous Substance <input type="checkbox"/> d. Unknown <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Indicate Name of Principal CERCLA Substance OR Chemical Abstract Service (CAS) No. Check <input checked="" type="checkbox"/> if tank stores a mixture of substances				
Information (for tanks permanently out of service) a. Estimated date last used (mo/yr) _____ b. Estimated quantity of substance remaining (gal.) _____ Check <input checked="" type="checkbox"/> if tank was filled with inert material (e.g., sand, concrete)				

VI. DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for each tank at this location.)

Tank Identification No. (e.g., ABC-123), or Arbitrarily Assigned Sequential Number (e.g., 1,2,3...)	Tank No. 1	Tank No. 2	Tank No. 3	Tank No.	Tank No.
1. Status of Tank (Mark all that apply <input type="checkbox"/>) Currently in Use <input checked="" type="checkbox"/> Temporarily Out of Use <input type="checkbox"/> Permanently Out of Use <input type="checkbox"/> Brought into Use after 5/8/86 <input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Estimated Age (Years)	15-20	15-20	15-20		
3. Estimated Total Capacity (Gallons)	4000	3000	4000		
4. Material of Construction (Mark one <input type="checkbox"/>) Steel <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Fiberglass Reinforced Plastic <input type="checkbox"/> Unknown <input type="checkbox"/> Other, Please Specify _____	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Internal Protection (Mark all that apply <input type="checkbox"/>) Cathodic Protection <input type="checkbox"/> Interior Lining (e.g., epoxy resins) <input checked="" type="checkbox"/> None <input type="checkbox"/> Unknown <input type="checkbox"/> Other, Please Specify _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. External Protection (Mark all that apply <input type="checkbox"/>) Cathodic Protection <input type="checkbox"/> Painted (e.g., asphaltic) <input type="checkbox"/> Fiberglass Reinforced Plastic Coated <input type="checkbox"/> None <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> Other, Please Specify _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Piping (Mark all that apply <input type="checkbox"/>) Bare Steel <input type="checkbox"/> Galvanized Steel <input checked="" type="checkbox"/> Fiberglass Reinforced Plastic <input type="checkbox"/> Cathodically Protected <input type="checkbox"/> Unknown <input type="checkbox"/> Other, Please Specify _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Substance Currently or Last Stored in Greatest Quantity by Volume (Mark all that apply <input type="checkbox"/>) a. Empty <input type="checkbox"/> b. Petroleum Diesel <input type="checkbox"/> Kerosene <input type="checkbox"/> Gasoline (including alcohol blends) <input checked="" type="checkbox"/> Used Oil <input type="checkbox"/> Other, Please Specify _____ c. Hazardous Substance <input type="checkbox"/> Please Indicate Name of Principal CERCLA Substance OR Chemical Abstract Service (CAS) No. Mark box <input type="checkbox"/> if tank stores a mixture of substances d. Unknown <input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Additional Information (for tanks permanently taken out of service) a. Estimated date last used (mo/yr) b. Estimated quantity of substance remaining (gal.) c. Mark box <input type="checkbox"/> if tank was filled with inert material (e.g., sand, concrete)	/	/	/	/	/



The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC SAFETY—DIVISION OF FIRE PREVENTION

1010 COMMONWEALTH AVENUE, BOSTON

ASHBURNHAM

3 MAY

19 83

(City or Town)

(Date)

APPLICATION FOR LICENSE

For the lawful use of the herein described building... or other structure..., application is hereby made in accordance with the provisions of Chapter 148 of the General Laws, for a license to use the land on which such building... or other structure... is/are or is/are to be situated, and only to such extent as shown on plot plan which is filed with and made a part of this application.

Location of land..... 19 CENTRAL STREET Nearest cross street..... PUFFER STREET
 Owner of land..... TOWN OF ASHBURNHAM Address..... MAIN ST., ASHBURNHAM
 Number of buildings or other structures to which this application applies.....
 Occupancy or use of such buildings.....
 Total capacity of tanks in gallons:—Aboveground..... Underground 1000 GALLONS
 Kind of fluid to be stored in tanks..... CLASS B DIESEL FUEL

Approved—Disapproved..... 3 MAY 19 83
 (Signature of Applicant) *Roland C. Johnson*
 (Head of Fire Dept.) *Arthur W. Bickford*
 (Address) *17 Care St Ashburnham Mass*



The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC SAFETY—DIVISION OF FIRE PREVENTION

1010 COMMONWEALTH AVENUE, BOSTON

ASHBURNHAM

3 MAY

19 83

(City or Town)

(Date)

LICENSE

In accordance with the provisions of Chapter 148 of the General Laws, a license is hereby granted to use the land herein described for the lawful use of the building... or other structure... which is/are or is/are to be situated thereon, and as described on the plot plan filed with the application for this license.

Location of land..... CENTRAL STREET Nearest cross street..... PUFFER STREET
 Owner of land..... TOWN OF ASHBURNHAM Address..... MAIN ST., ASHBURNHAM
 Number of buildings or other structures to which this license applies.....
 Occupancy or use of such buildings.....
 Total capacity of tanks in gallons:—Aboveground..... Underground 1000 GALLONS
 Kind of fluid to be stored in tanks..... CLASS B DIESEL FUEL
 Restrictions—If any:

Les P. Calletto
 (Signature of licensing authority)



The Commonwealth of Massachusetts
DEPARTMENT OF PUBLIC SAFETY—DIVISION OF FIRE PREVENTION
1010 COMMONWEALTH AVENUE, BOSTON

ASHBURNHAM
(City or Town)

3 MAY 19 83
(Date)

APPLICATION FOR LICENSE

For the lawful use of the herein described building... or other structure..., application is hereby made in accordance with the provisions of Chapter 148 of the General Laws, for a license to use the land on which such building... or other structure... is/are or is/are to be situated, and only to such extent as shown on plot plan which is filed with and made a part of this application.

Location of land... 19 CENTRAL STREET... Nearest cross street... PUFFER STREET
Owner of land... TOWN OF ASHBURNHAM... Address... MAIN ST., ASHBURNHAM
Number of buildings or other structures to which this application applies...
Occupancy or use of such buildings...
Total capacity of tanks in gallons:—Aboveground... Underground... 4000 GALLONS
Kind of fluid to be stored in tanks... CLASS A... GASOLINE

Approved—Disapproved... 3 MAY 19 83
Arthur W. Bickford (Head of Fire Dept.)
R. Land & H. Job (Signature of Applicant)
Cam St Ashburnham Mass (Address)



The Commonwealth of Massachusetts
DEPARTMENT OF PUBLIC SAFETY—DIVISION OF FIRE PREVENTION
1010 COMMONWEALTH AVENUE, BOSTON

ASHBURNHAM
(City or Town)

3 MAY 19 83
(Date)

LICENSE

In accordance with the provisions of Chapter 148 of the General Laws, a license is hereby granted to use the land herein described for the lawful use of the building... or other structure... which is/are or is/are to be situated thereon, and as described on the plot plan filed with the application for this license.

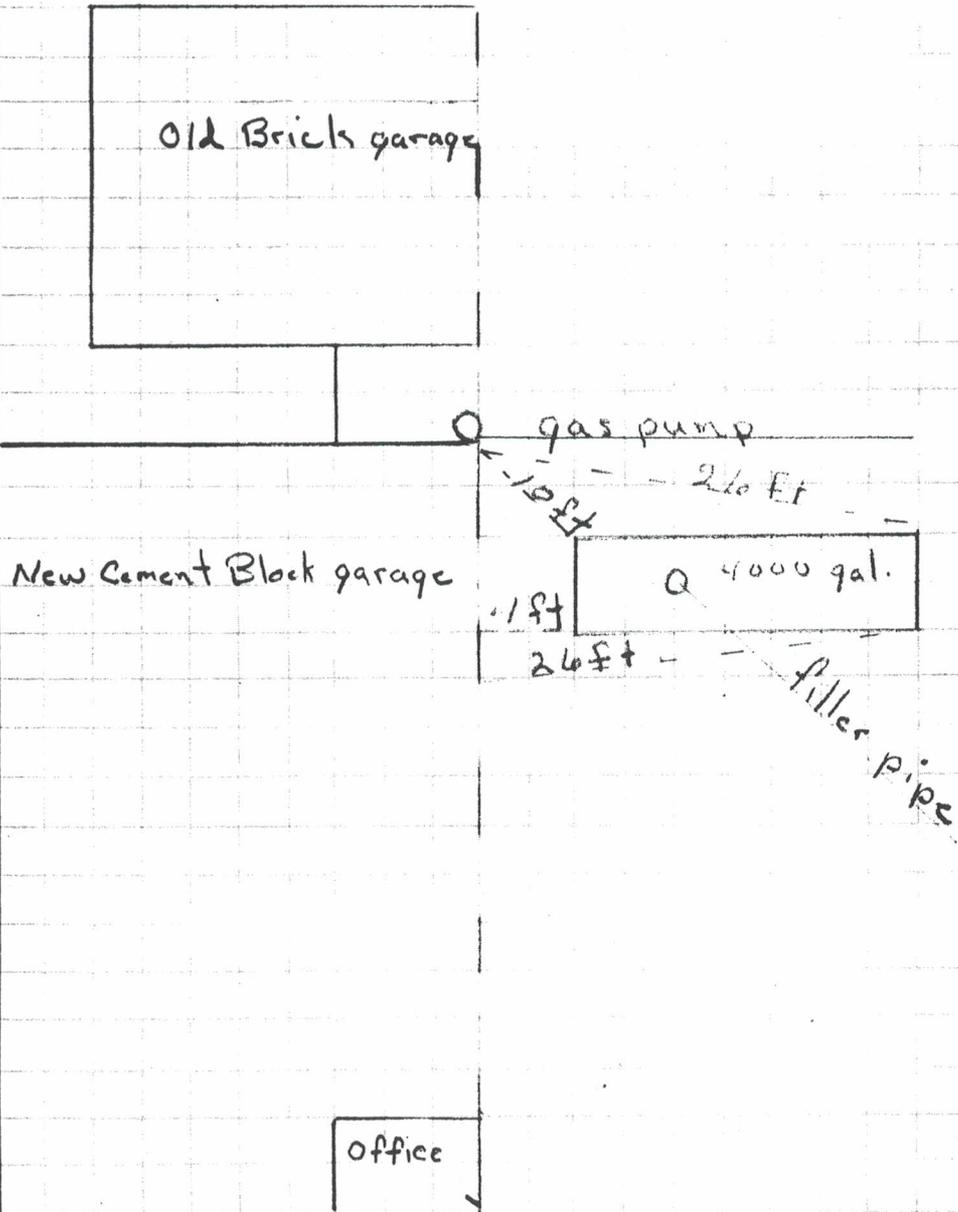
Location of land... CENTRAL STREET... Nearest cross street... PUFFER STREET
Owner of land... TOWN OF ASHBURNHAM... Address... MAIN STREET, ASHBURNHAM
Number of buildings or other structures to which this license applies...
Occupancy or use of such buildings...
Total capacity of tanks in gallons:—Aboveground... Underground... 4000 GALLONS
Kind of fluid to be stored in tanks... CLASS A... GASOLINE
Restrictions—If any:

Leo B. Collette
(Signature of licensing authority)

TO: Fire Dept

DATE 4/7/86

FROM: Highway Dept



H. R. PRESCOTT & SONS, INC.

WATER WORKS SUPPLIES FOR NEW ENGLAND

165 HARTWELL ST. WEST BOYLSTON, MASS.

Tel. 617 835-4431

REPRESENTATIVE

ROGER H. BROOKS
HUBBARDSTON ROAD
PRINCETON, MASSACHUSETTS
617-464-2385

RECEIVED APR 28 1995

April 27, 1995



Mr. Charles Matthews
Town Administrator
Town Hall
32 Main Street
Ashburnham, Massachusetts 01430

Handwritten initials: RP, RA, JM

Re: Proposal to Provide LSP Services and Closure Documentation for
UST Diesel Fuel Release Site, DPW Garage, 19 Central Street
DEP RTN: 2-10039
S E A Ref. No. 94139.02V

Dear Mr. Matthews:

On September 23, 1993, the Town of Ashburnham removed a 1,000 gallon Underground Storage Tank (UST) belonging to Roy Brothers, that was used to store diesel fuel, from the driveway at the Public Works Garage at 19 Central Street without adhering to the requirements of the Massachusetts Contingency Plan (MCP) which regulates such activities.

The Town received a letter on September 26, 1994 from MADEP indicating that, under the MCP, the Town needed to submit either a Response Action Outcome Statement (RAO) or a Tier Classification prior to October 1, 1994. Neither document was filed within the specified time. Failure to file resulted in the site being classified automatically as a Tier 1b site. Tier 1 sites receive increased DEP oversight as they are automatically considered seriously contaminated.

S E A was then contracted by the Town to assist in cleaning up and closing the site. Mr. Craig Blake of S E A, who left S E A in November of 1994, had written a letter to DEP detailing the status of the work (letter from Mr. C. E. Blake to Mr. Edmond Benoit, DEP, November 22, 1994). A copy is attached.

In my conversations with Mr. Frank Sciannameo of DEP's Central Regional Office, it is clear that the Town needs to follow the MCP which will require carrying out the following work. If there is no follow-up on the situation by the town, DEP has broad powers of enforcement.

S E A has provided services to date at no charge. Because of the extensive nature of the work required in the near future, we have developed and priced the attached Scope of Work.

Massachusetts Avenue
Bridgwater, MA 02139-4018
497-7800
(7) 497-7709.

ky Hill, CT
erry, NH

Mr. Charles Matthews
April 27, 1995
Page 2

Because I took over from Mr. Blake and arranged to have the contaminated soil removed from the Town yard under a Bill of Lading in December per the MCP, I am now listed as the LSP of Record and will continue to follow the case and direct the work if the Town approves the Scope of Work provided.

The purpose of this letter is to outline the remaining tasks necessary to fully comply with the Massachusetts Contingency Plan 310 CMR 40.000 as it relates to the release of diesel fuel from the underground storage tank located at the Department of Public Works Garage, 19 Central Street. The area impacted by the release of the diesel fuel was the former site of a leaking 1,000 gallon diesel fuel underground storage tank.

Scope of Services

The following Scope of Services has been developed to allow the Town to fully comply with the Massachusetts Contingency Plan (MCP) 310 CMR 40.000 and to provide the DEP with the appropriate closure documentation.

Task 1 - Phase I Initial Site Investigation Report

The Phase I Investigation Report will be prepared in accordance with the MCP and, therefore, must include the following information:

- ◆ General site information, including: DEP Release Tracking Number; geographical location of site (longitude and latitude); estimated residential population within a 1/2 mile radius; general description of surrounding land uses; number of institutions within 500 feet of the site; and a description of any natural resource areas (surface waters, wetlands, drinking water supplies, and other areas of critical environmental concern) within 500 feet of the site.
- ◆ Site map showing site boundaries, sampling points, monitoring wells and test pit locations.
- ◆ Disposal site history including: site operation and ownership history; description of known releases of oil or hazardous material at the site; general description of waste disposal practices at the site; and a listing of potentially responsible parties.

- ◆ Details of the subsurface investigation including: hydrogeological description of the site; documentation of test pit and soil boring/well locations; characterization of site topography; and depiction of estimated local groundwater flow direction.
- ◆ Summary of the available information on the nature and extent of contamination at the site, including: results of field screening activities; summary of the concentration of contamination found to date at the site; laboratory analytical reports; estimated vertical and horizontal extent of the contamination; and information concerning the presence of non-aqueous phase liquids.
- ◆ A discussion of known and potential contaminant pathways (air, soil, groundwater or surface water), known and potential routes of human exposure to contaminants present at the site, and the known and potential impacts of the contaminants to environmental receptors.
- ◆ An evaluation of whether additional remediation is needed to establish a condition of no significant risk.
- ◆ A summary of findings and conclusions as to recommended subsequent activities associated with the site.

In order to compile and summarize the required elements of a Phase I Report, S E A proposes to complete the following activities:

- A. Review readily available information concerning the environmental setting of the site, including: a review of DEP hydrologic and water resource files; DEP compliance files; a review of EPA files; a review of USGS topographic maps, aerial photographs, Town files and interviews of Town officials and residents familiar with the history of the site and the surrounding area.
- B. Summarize previously completed subsurface investigations of the site, including analytical results.
- C. Complete a site location detail plan. The resultant site plan will show the extent of excavation, sample locations, test pit location, and groundwater monitoring well locations.

Mr. Charles Matthews
April 27, 1995
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- D. Prepare and submit a Phase I Report Completion Statement to DEP including an LSP opinion as to the adequacy of the Phase I Investigation.
- E. Issue a notice to the public and town officials detailing how they can obtain copies of the Phase I report.
- F. Produce the Phase I Investigation Report.
- G. Manage the activities listed above, including scheduling and coordination.

Task 2 - Tier Classification

- A. Complete a Numerical Ranking System Scoresheet for the site in accordance with the MCP.
- B. Complete a comparison of existing conditions at the site with the MCP Tier I Inclusionary Criteria.
- C. Prepare and submit to DEP a Tier I or II Classification Submittal, including a LSP Tier Classification Opinion and a Tier Classification transmittal form.

Task 3 - Closure Documentation

- A. After completion and acceptance by the DEP of the Phase I Initial Site Assessment Report and Tier Classification, S E A will conduct a Method 1 Risk Assessment as required by the MCP. Based on the findings of the risk assessment, S E A will prepare a Response Action Outcome Statement which will detail response actions conducted to date and include a statement from a Licensed Site Professional (LSP) documenting that the required provisions of the MCP have been met.

Based on our understanding of actions completed to date (e.g. UST removal, soil excavation, and post excavation sampling) and based on our current understanding of site conditions, it appears that the site qualifies for a class "A-2 Response Action Outcome" with no further action required.



Mr. Charles Matthews
April 27, 1995
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Schedule

Upon authorization to proceed, S E A will initiate the work described above. A draft Phase I Initial Site Assessment Report will be prepared and submitted to Client for comment within five (5) weeks of Authorization to Proceed. A final Phase I report and Tier Classification will be submitted to DEP within two (2) weeks of submittal of the draft Phase I report. The Response Action Outcome Statement will be prepared and submitted to the Client with the Tier Classification.

Fee

S E A proposes to perform the indicated Scope of Services for the lump sum fee of Twenty One Thousand Dollars (\$21,000.00), which represents approximately 175 labor hours. Note: Included in this lump sum amount are roughly \$6,000.00 in fees to be paid directly to DEP.

If you have any questions concerning this proposal, please call me directly at (617) 498-4635.

Very truly yours,

S E A CONSULTANTS INC.

William J. Mallio
William J. Mallio, PhD, LSP

\\letters\ashburnh\closedoc.pro

- cc: William Brennan, Jr. w/encl.
- Mark Thompson, S E A w/encl.
- Anthony Zuena, S E A w/encl.
- Michael Flynn, S E A w/encl.



Notification for Underground Storage Tanks

2

Submit to:
LOCAL FIRE DEPARTMENT

FIRE DEPT.
I.D. Number
27011
Date Received
5-5-86

STATE USE ONLY
FIRE DEPT. CERTIFICATION
Chief [Signature]

GENERAL INFORMATION

Notification is required by Federal law for all underground tanks that have been used to store regulated substances since January 1, 1974, that are in the ground as of May 8, 1986, or that are brought into use after May 8, 1986. The information requested is required by Section 9002 of the Resource Conservation and Recovery Act, (RCRA), as amended.

The primary purpose of this notification program is to locate and evaluate underground tanks that store or have stored petroleum or hazardous substances. It is expected that the information you provide will be based on reasonably available records, or, in the absence of such records, your knowledge, belief, or recollection.

Who Must Notify? Section 9002 of RCRA, as amended, requires that, unless exempted, owners of underground tanks that store regulated substances must notify designated State or local agencies of the existence of their tanks. Owner means:

- (a) in the case of an underground storage tank in use on November 8, 1984, or brought into use after that date, any person who owns an underground storage tank used for the storage, use, or dispensing of regulated substances, and
- (b) in the case of any underground storage tank in use before November 8, 1984, but no longer in use on that date, any person who owned such tank immediately before the discontinuation of its use.

What Tanks Are Included? Underground storage tank is defined as any one or combination of tanks that (1) is used to contain an accumulation of "regulated substances," and (2) whose volume (including connected underground piping) is 10% or more beneath the ground. Some examples are underground tanks storing: 1. gasoline, used oil, or diesel fuel, and 2. industrial solvents, pesticides, herbicides or fumigants.

What Tanks Are Excluded? Tanks removed from the ground are not subject to notification. Other tanks excluded from notification are:

- 1. farm or residential tanks of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes;
- 2. tanks used for storing heating oil for consumptive use on the premises where stored;
- 3. septic tanks;

- 4. pipeline facilities (including gathering lines) regulated under the Natural Gas Pipeline Safety Act of 1968, or the Hazardous Liquid Pipeline Safety Act of 1979, or which is an intrastate pipeline facility regulated under State laws;
- 5. surface impoundments, pits, ponds, or lagoons;
- 6. storm water or waste water collection systems;
- 7. flow-through process tanks;
- 8. liquid traps or associated gathering lines directly related to oil or gas production and gathering operations;
- 9. storage tanks situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

What Substances Are Covered? The notification requirements apply to underground storage tanks that contain regulated substances. This includes any substance defined as hazardous in section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), with the exception of those substances regulated as hazardous waste under Subtitle C of RCRA. It also includes petroleum, e.g., crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).

Where To Notify? Completed notification forms should be sent to the address given at the top of this page.

When To Notify? 1. Owners of underground storage tanks in use or that have been taken out of operation after January 1, 1974, but still in the ground, must notify by May 8, 1986. 2. Owners who bring underground storage tanks into use after May 8, 1986, must notify within 30 days of bringing the tanks into use.

Penalties: Any owner who knowingly fails to notify or submits false information shall be subject to a civil penalty not to exceed \$10,000 for each tank for which notification is not given or for which false information is submitted.

INSTRUCTIONS

Please type or print in ink all items except "signature" in Section V. This form must be completed for each location containing underground storage tanks. If more than 5 tanks are owned at this location, photocopy the reverse side, and staple continuation sheets to this form.

Indicate number of continuation sheets attached

I. OWNERSHIP OF TANK(S)

Owner Name (Corporation, Individual, Public Agency, or Other Entity)

Ray Bros. Oil Co. Inc.

Street Address
68 Center St

County
Worcester County

State
ma

ZIP Code
01466

Phone Number
7-827-5280

Type of Owner (Mark all that apply)

Current State or Local Gov't Private or Corporate

Former Federal Gov't (GSA facility I.D. no.) Ownership uncertain

II. LOCATION OF TANK(S)

(If same as Section I, mark box here)

Facility Name or Company Site Identifier, as applicable

Town of Ashburnham - Highway Dept

Street Address or State Road, as applicable
Central St

County
Worcester County

City (nearest) State ZIP Code
Ashburnham ma 01466

Indicate number of tanks at this location

Mark box here if tank(s) are located on land within an Indian reservation or on other Indian trust lands

III. CONTACT PERSON AT TANK LOCATION

Name (If same as Section I, mark box here) Job Title

William Brennan Head of Highway Dept

Area Code Phone Number

617-827-4424

IV. TYPE OF NOTIFICATION

Mark box here only if this is an amended or subsequent notification for this location.

V. CERTIFICATION (Read and sign after completing Section VI.)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Name and official title of owner or owner's authorized representative

Marc A. Bingham Assy Mgr.

Signature

Marc A. Bingham

Date Signed

April 25, 1986

CONTINUE ON REVERSE SIDE

VI. DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for each tank at this location.)

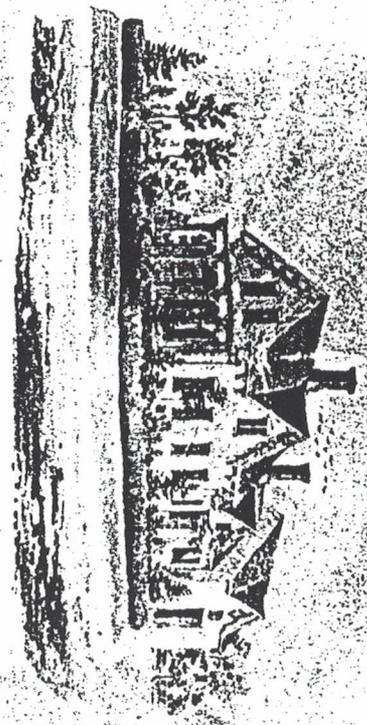
Tank Identification No. (e.g., ABC-123), or Arbitrarily Assigned Sequential Number (e.g., 1,2,3...)	Tank No.	Tank No.	Tank No.	Tank No.
1. Status of Tank (Mark all that apply <input type="checkbox"/>) Currently in Use <input checked="" type="checkbox"/> Temporarily Out of Use <input type="checkbox"/> Permanently Out of Use <input type="checkbox"/> Brought into Use after 5/8/86 <input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Estimated Age (Years)				
3. Estimated Total Capacity (Gallons)	1000			
4. Material of Construction (Mark one <input type="checkbox"/>) Steel <input type="checkbox"/> Concrete <input type="checkbox"/> Fiberglass Reinforced Plastic <input type="checkbox"/> Unknown <input type="checkbox"/> Other, Please Specify _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Internal Protection (Mark all that apply <input type="checkbox"/>) Cathodic Protection <input type="checkbox"/> Interior Lining (e.g., epoxy resins) <input type="checkbox"/> None <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> Other, Please Specify _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. External Protection (Mark all that apply <input type="checkbox"/>) Cathodic Protection <input type="checkbox"/> Painted (e.g., asphaltic) <input checked="" type="checkbox"/> Fiberglass Reinforced Plastic Coated <input type="checkbox"/> None <input type="checkbox"/> Unknown <input type="checkbox"/> Other, Please Specify _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Piping (Mark all that apply <input type="checkbox"/>) Bare Steel <input checked="" type="checkbox"/> Galvanized Steel <input type="checkbox"/> Fiberglass Reinforced Plastic <input type="checkbox"/> Cathodically Protected <input type="checkbox"/> Unknown <input type="checkbox"/> Other, Please Specify _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Substance Currently or Last Stored in Greatest Quantity by Volume (Mark all that apply <input type="checkbox"/>) a. Empty <input type="checkbox"/> b. Petroleum <input type="checkbox"/> Diesel <input checked="" type="checkbox"/> Kerosene <input type="checkbox"/> Gasoline (including alcohol blends) <input type="checkbox"/> Used Oil <input type="checkbox"/> Other, Please Specify _____ c. Hazardous Substance <input type="checkbox"/> Please Indicate Name of Principal CERCLA Substance _____ OR Chemical Abstract Service (CAS) No. _____ Mark box <input type="checkbox"/> if tank stores a mixture of substances d. Unknown <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Additional Information (for tanks permanently taken out of service) a. Estimated date last used (mo/yr) _____ b. Estimated quantity of substance remaining (gal.) _____ c. Mark box <input type="checkbox"/> if tank was filled with inert material (e.g., sand, concrete) <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

VI. DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for each tank at this location.)

Tank Identification No. (e.g., ABC-123), or Arbitrarily Assigned Sequential Number (e.g., 1,2,3...)	Tank No. 1	Tank No.	Tank No.	Tank No.
1. Status of Tank (Mark all that apply <input checked="" type="checkbox"/>) Currently in Use <input checked="" type="checkbox"/> Temporarily Out of Use <input type="checkbox"/> Permanently Out of Use <input type="checkbox"/> Brought into Use after 5/8/86 <input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Estimated Age (Years) Installed 5/11/84				
3. Estimated Total Capacity (Gallons) 4,000				
4. Material of Construction (Mark one <input checked="" type="checkbox"/>) Steel <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Fiberglass Reinforced Plastic <input type="checkbox"/> Unknown <input type="checkbox"/> Other, Please Specify _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Internal Protection (Mark all that apply <input checked="" type="checkbox"/>) Cathodic Protection <input type="checkbox"/> Interior Lining (e.g., epoxy resins) <input type="checkbox"/> None <input type="checkbox"/> Unknown <input checked="" type="checkbox"/> Other, Please Specify _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. External Protection (Mark all that apply <input checked="" type="checkbox"/>) Cathodic Protection <input type="checkbox"/> Painted (e.g., asphaltic) <input checked="" type="checkbox"/> Fiberglass Reinforced Plastic Coated <input type="checkbox"/> None <input type="checkbox"/> Unknown <input type="checkbox"/> Other, Please Specify _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Piping (Mark all that apply <input checked="" type="checkbox"/>) Bare Steel <input checked="" type="checkbox"/> Galvanized Steel <input type="checkbox"/> Fiberglass Reinforced Plastic <input type="checkbox"/> Cathodically Protected <input type="checkbox"/> Unknown <input type="checkbox"/> Other, Please Specify _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Substance Currently or Last Stored in Greatest Quantity by Volume (Mark all that apply <input checked="" type="checkbox"/>) a. Empty <input type="checkbox"/> b. Petroleum <input type="checkbox"/> Diesel <input type="checkbox"/> Kerosene <input type="checkbox"/> Gasoline (including alcohol blends) <input checked="" type="checkbox"/> Used Oil <input type="checkbox"/> Other, Please Specify _____ c. Hazardous Substance <input type="checkbox"/> Please Indicate Name of Principal CERCLA Substance OR Chemical Abstract Service (CAS) No. Mark box <input checked="" type="checkbox"/> if tank stores a mixture of substances d. Unknown <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional Information (for tanks permanently taken out of service) a. Estimated date last used (mo/yr) _____ b. Estimated quantity of substance remaining (gal.) _____ c. Mark box <input checked="" type="checkbox"/> if tank was filled with inert material (e.g., sand, concrete) <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

VI. DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for each tank at this location.)

Tank Identification No. (e.g., ABC-123), or Arbitrarily Assigned Sequential Number (e.g., 1,2,3...)	Tank No. 1	Tank No. 2	Tank No. 3	Tank No.
1. Status of Tank (Mark all that apply <input type="checkbox"/>) Currently in Use Temporarily Out of Use Permanently Out of Use Brought into Use after 5/8/86	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
2. Estimated Age (Years)	15-20	15-20	15-20	
3. Estimated Total Capacity (Gallons)	4000	3000	4000	
4. Material of Construction (Mark one <input type="checkbox"/>) Steel Concrete Fiberglass Reinforced Plastic Unknown Other, Please Specify	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
5. Internal Protection (Mark all that apply <input type="checkbox"/>) Cathodic Protection Interior Lining (e.g., epoxy resins) None Unknown Other, Please Specify	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6. External Protection (Mark all that apply <input type="checkbox"/>) Cathodic Protection Painted (e.g., asphaltic) Fiberglass Reinforced Plastic Coated None Unknown Other, Please Specify	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
7. Piping (Mark all that apply <input type="checkbox"/>) Bare Steel Galvanized Steel Fiberglass Reinforced Plastic Cathodically Protected Unknown Other, Please Specify	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Substance Currently or Last Stored Greatest Quantity by Volume (Mark all that apply <input type="checkbox"/>) a. Empty b. Petroleum Diesel Kerosene Gasoline (including alcohol blends) Used Oil Other, Please Specify c. Hazardous Substance	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Indicate Name of Principal CERCLA Substance OR Chemical Abstract Service (CAS) No. (Mark box <input type="checkbox"/> if tank stores a mixture of substances)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional Information (for tanks permanently out of service) a. Estimated date last used (mo/yr) Estimated quantity of substance remaining (gal.) (Mark box <input type="checkbox"/> if tank was filled with inert material (e.g., sand, concrete))	<input type="checkbox"/> /	<input type="checkbox"/> /	<input type="checkbox"/> /	<input type="checkbox"/> /



Residence of Ohio Whitney Esq.

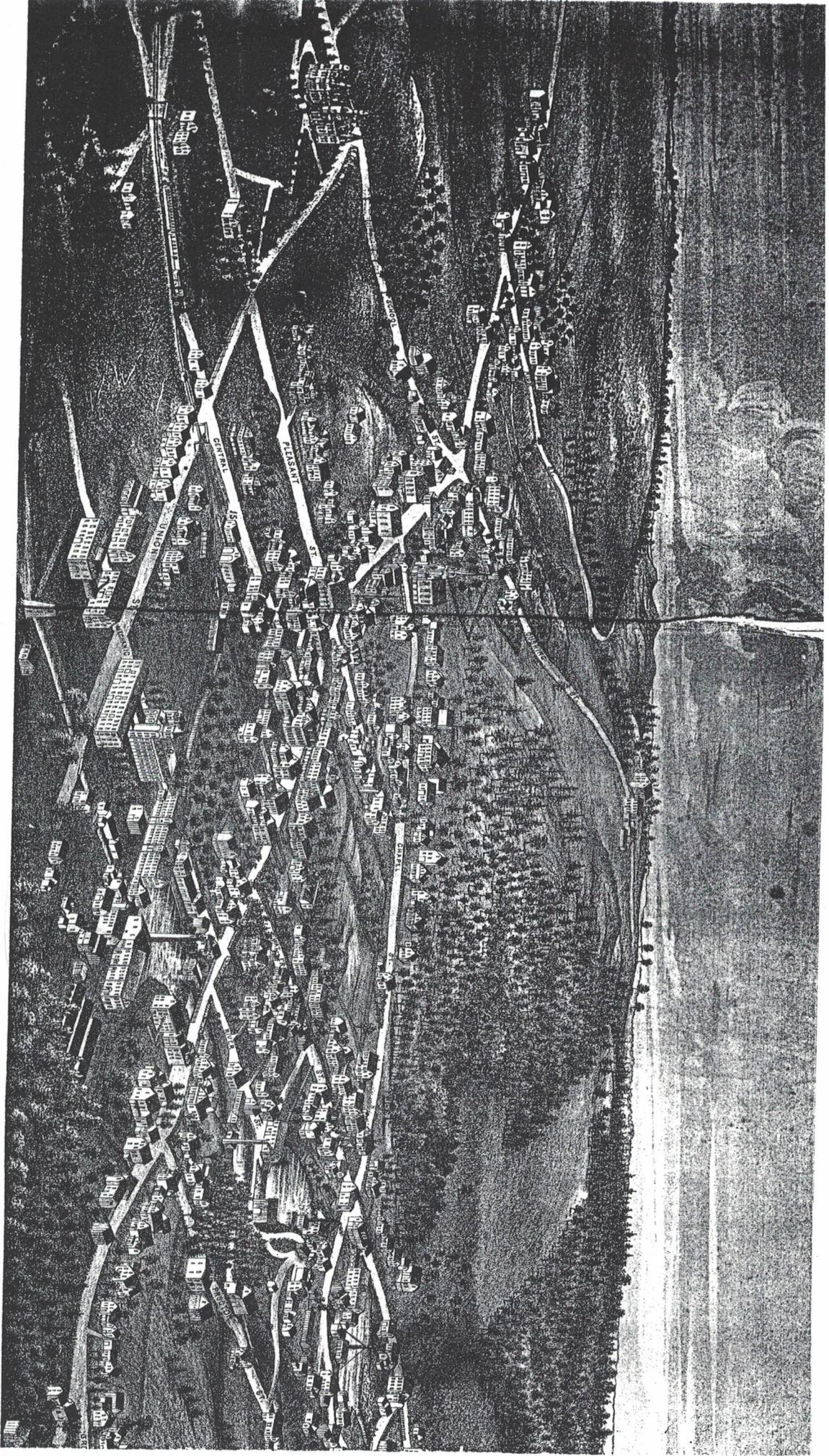
MAP
 OF THE TOWN OF
ASHBURNHAM
 WORCESTER Co.
 MASS.

From original Surveys by
G. M. HOPKINS, JR.

Published by
RICHARD CLARK

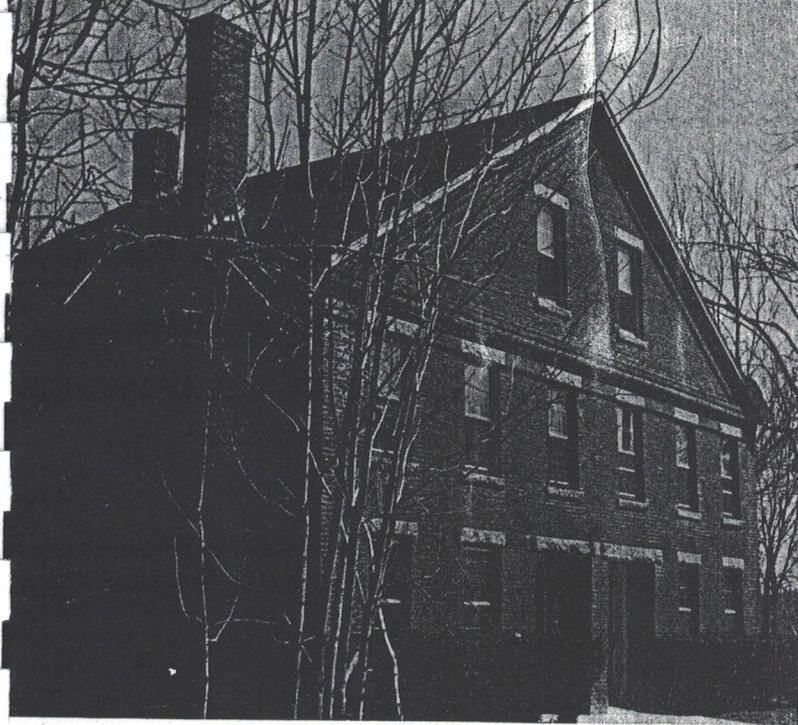
1855

Washburn & Co., Troy, N. Y.



COPYRIGHTED 1886 BY L. R. BURLEIGH.

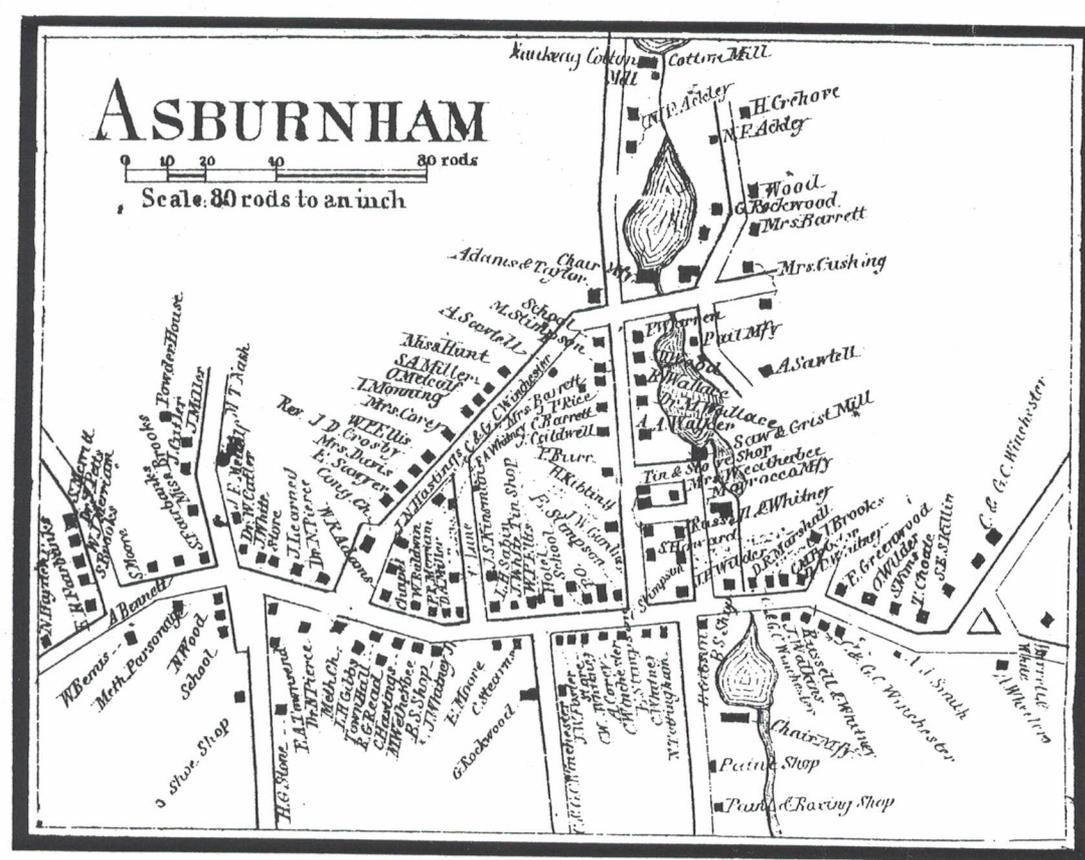
- 8. Central House, J. C. Stone, Prop.
- 10. Boston Chair Manufactory, G. Rockwood, Prop.
- 11. Top and Fall Factory, G. L. Noyes, Prop.
- 12. Cotton Factory, S. L. Noyes, Prop.
- 13. Richardson's Carriage Manf. and Repository.
- 14. Whitney's Printing House.
- 15. R. R. Depot.



Map shows
no development
as of 1857
"Focus on Old Houses
of Ashburnham"

#28 54 Water Street
John Bresnahan

This four apartment house was built for the Naukeag Cotton Mill which started in 1849 to house their workers. Next to own both was G. Blackburn and Company. At one time, Louise Gilligan owned the house. It is now owned by John Bresnahan, who does not live there himself.



Worcester Country 1857 map

LIBRARY
HEAT-FURN-LIGHTS-ELECTRIC.

MAIN 531

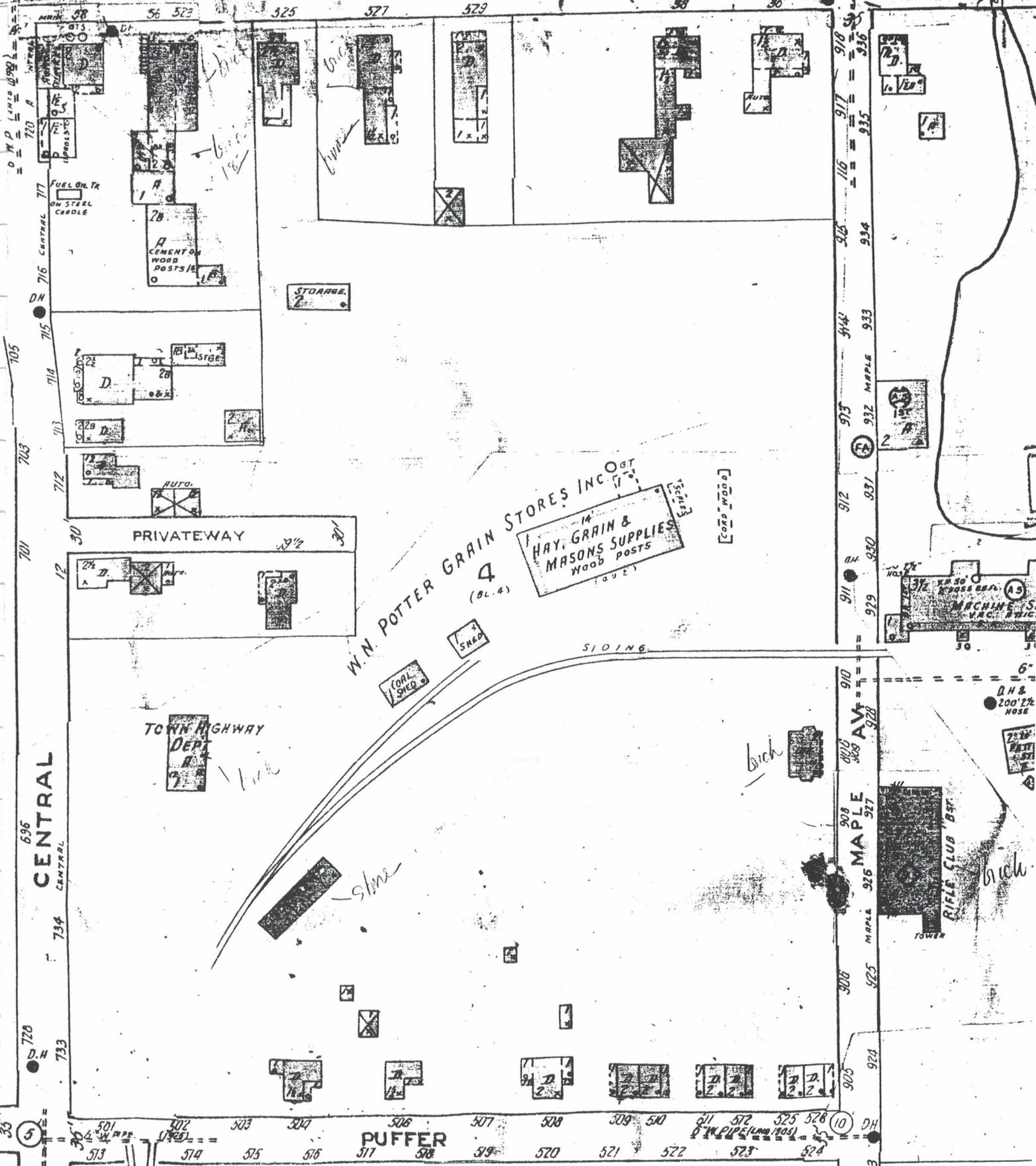
MAIN

505 506 507 508 509

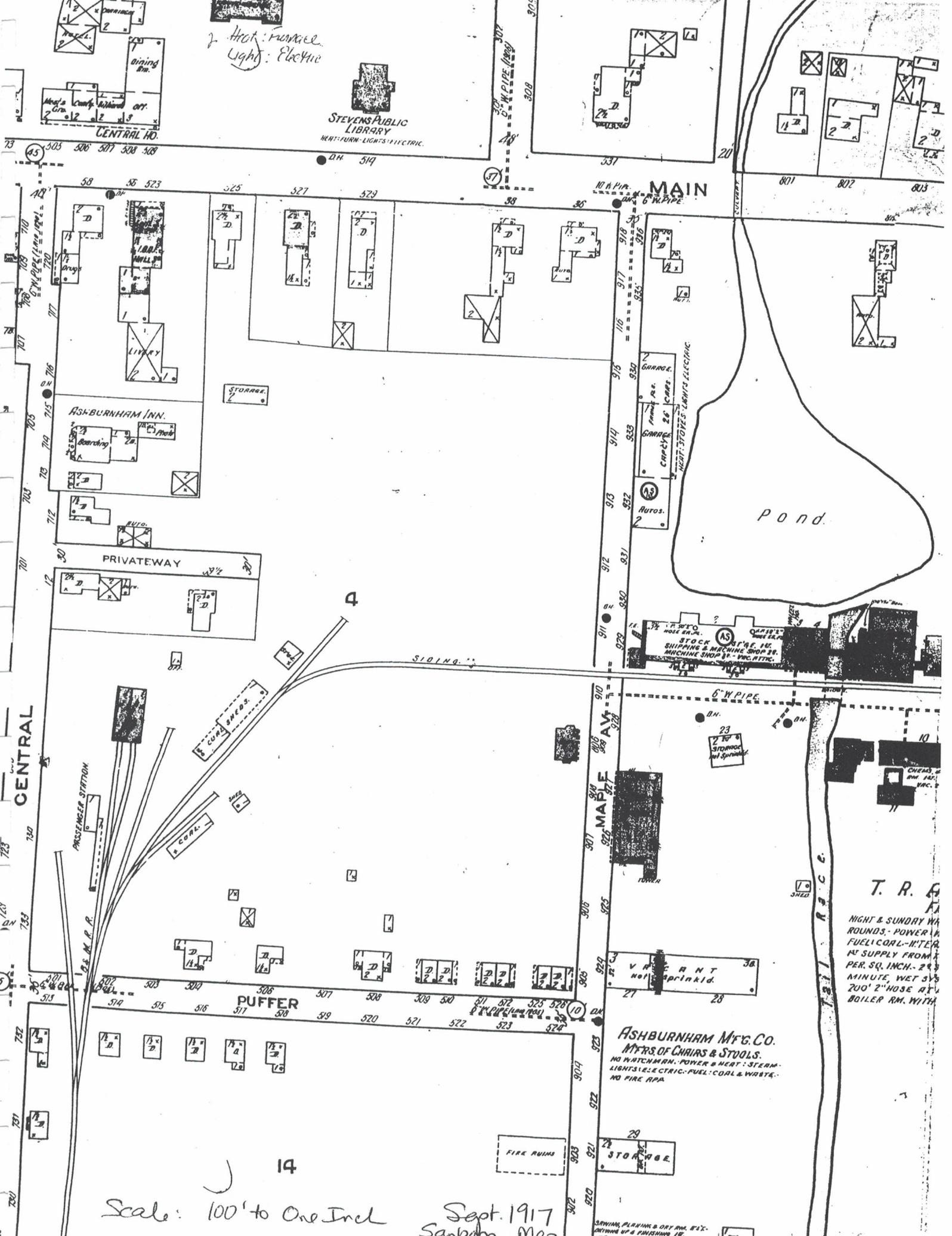
DH 514

57

N. H. PIPE



Sanborn Map
1917



Heat: Radiant
Light: Electric

STEVENS PUBLIC LIBRARY
HEAT: RADIANT LIGHTS: ELECTRIC.

CENTRAL HO.

MAIN

Pond

CENTRAL

MAPLE AV.

T. R. F.
NIGHT & SUNDAY WA
ROUNDS. POWER IN
FUEL: COAL - 12 TON
1/2 SUPPLY FROM
PER SQ. INCH - 2 1/2
MINUTE, WET 5/8
200' 2" HOSE AT
BOILER RM. WITH

PUFFER

ASHBURNHAM MFG. CO.
MFRS. OF CHAIRS & STOOLS.
NO WATCHMAN. POWER & HEAT: STEAM.
LIGHTS: ELECTRIC. FUEL: COAL & WASTE.
NO FIRE RPA.

14

Scale: 100' to One Inch

Sept. 1917
Sanborn Map

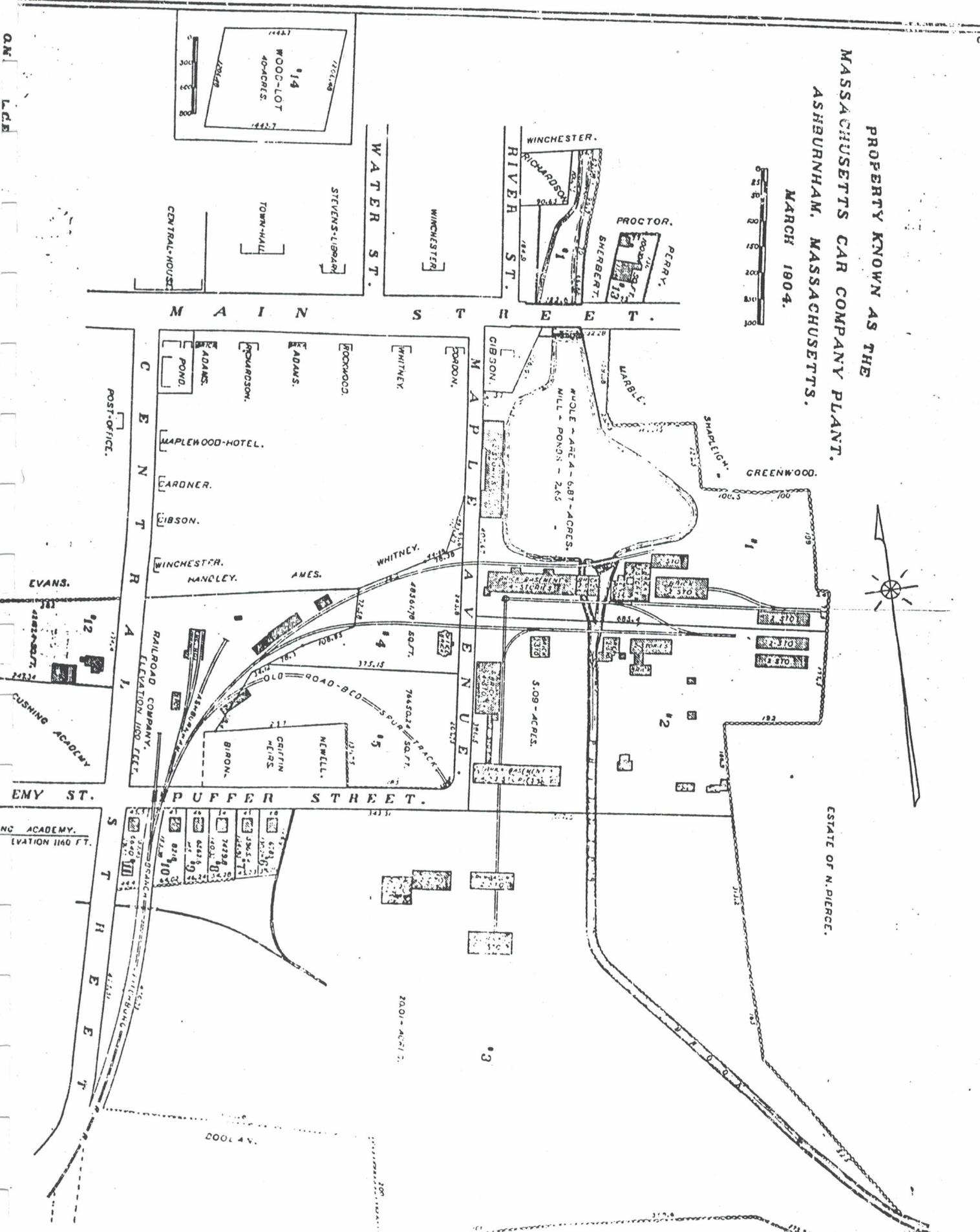
FIRE RUIN

STORAGE

SAWING PLANING & OIL ON 8 1/2' -
DRIVING UP & FINISHING

PROPERTY KNOWN AS THE
 MASSACHUSETTS CAR COMPANY PLANT.
 ASHBURNHAM, MASSACHUSETTS.

MARCH 1904.



ESTATE OF N. PIERCE.

WATER ST.

WINCHESTER ST.

M A I N S T R E E T.

M A P L E A V E.

C E N T R A L S T.

P U F F E R S T R E E T.

T H E E T.

200 L A V.

ON LGE

EVANS.

CUSHING ACADEMY

EMY ST.

NG ACADEMY. ELEVATION 1140 FT.

RAILROAD COMPANY, ELEVATION 100 FEET.

ADAMS.

ROCKWOOD.

WHITNEY.

POODON.

GIBSON.

WINCHESTER.

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MAPLEWOOD-HOTEL.

GARDNER.

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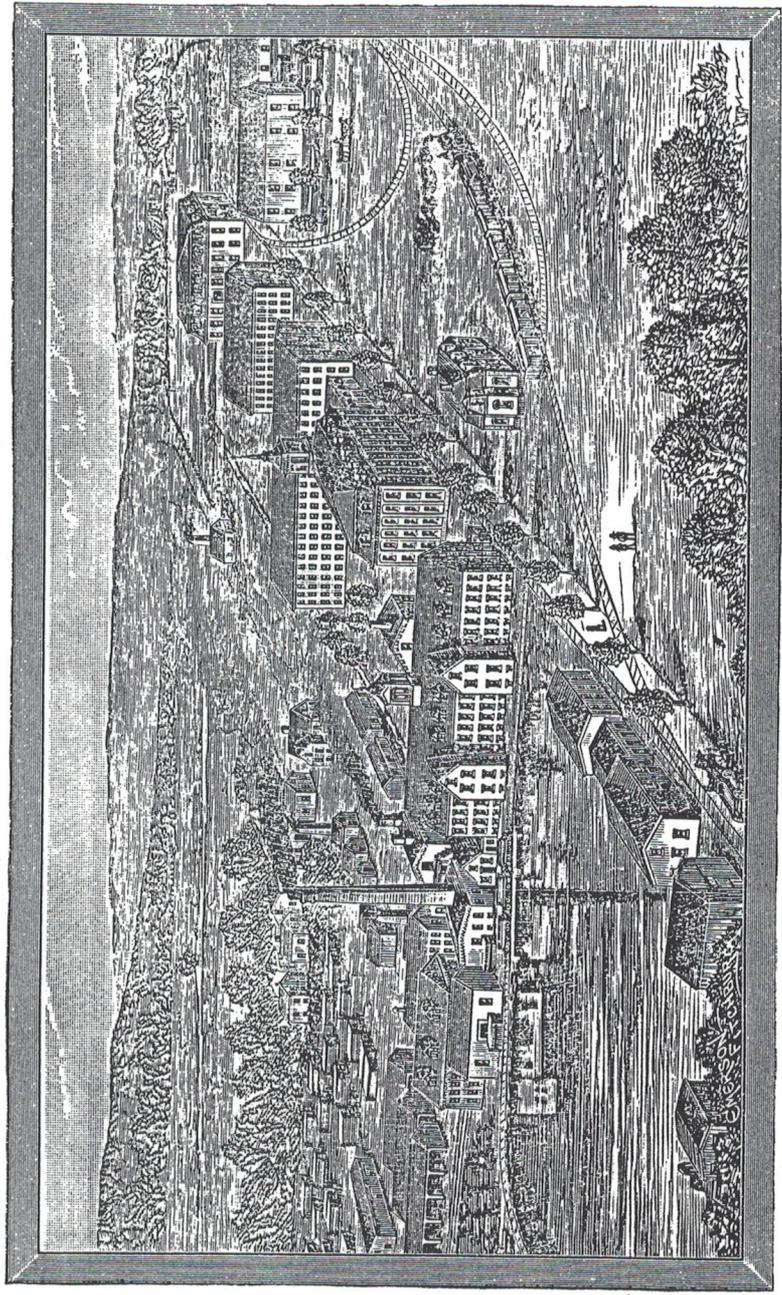
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Stearns
History
p. 413
Shows oper
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BOSTON CHAIR MANUFACTURING COMPANY.

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company
Adams wa
by F. S. C
Promin
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Whitney a
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machinery
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the growin
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business, h
the manufa
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mill of Mer
the depot.
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Irving E.
operations
erection of
works until

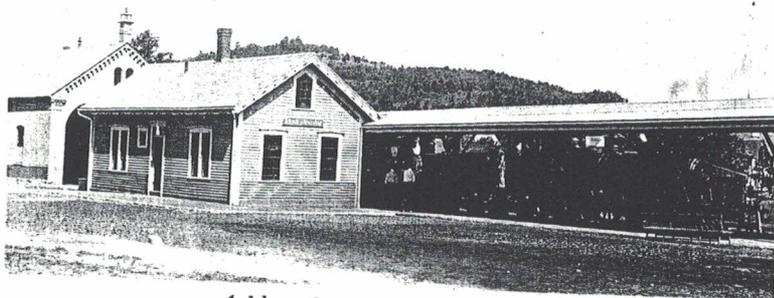
Holden
History

*South Ashburnham
Railroad Station*



By the mid-1870s Ashburnham's reverse magnetism began to irk some of its most prominent citizens. Since the great railroad builders had so scrupulously avoided the prosperous village a group of citizens organized the Ashburnham Railroad to carry tracks 2.7 miles from South Ashburnham to the central village. Subscriptions to the stock of this venture were sought, and obtained, from the public. The town of Ashburnham itself voted to spend 5 per cent of its tax valuation, \$48,000, on Ashburnham Railroad stock. Three individuals in Fitchburg and Boston subscribed \$11,500. The total capital stock issued and disposed of amounted to \$100,000.

Round
House
shown
behind
Depot



Ashburnham branch line depot

By January, 1874, when the four-month-old panic of 1873 was beginning to subside, the Ashburnham Railroad was completed with an engine house and turntable in the

ate seal to be hereto affixed by Arthur B. Nichols, a Vice President, thereunto duly authorized, this twelfth day of April in the year one thousand nine hundred and thirty-eight.

Boston And Maine Railroad

(Corporate seal)

By Arthur B Nichols Vice President
Commonwealth Of Massachusetts.

Suffolk, ss. Boston April 12, 1938. Then personally appeared the above named Arthur B. Nichols, a Vice President of said Boston and Maine Railroad, and acknowledged the foregoing instrument to be the free act and deed of said Boston and Maine Railroad, before me

Edward O. Woodward Notary Public. (Notarial seal)

My commission expires July 20, 1939

At a Meeting of the Board of Directors of Boston And Maine Railroad, duly called, notified and held on March 29, 1938, a quorum being present, the following action was taken: "Voted: to convey to inhabitants of the Town of Ashburnham a parcel of land with the buildings thereon, situated in Ashburnham, Massachusetts, containing about 2.21 acres, and being shown upon a blue print herewith submitted entitled 'Land in Ashburnham, Mass. Boston and Maine Railroad To Town of Ashburnham W. F. Cummings Asst. Chief Eng'r. Mar. 1938'; and Arthur B. Nichols, a Vice President of this Company, is hereby authorized, in its name and behalf, to execute, acknowledge and deliver a deed of the same."

Attest:

Arthur B Nichols Clerk.

(Corporate seal)

Received June 16, 1938 at 9 h. 45 m. A. M. Entered & Examined.

Ida Jean Lyon

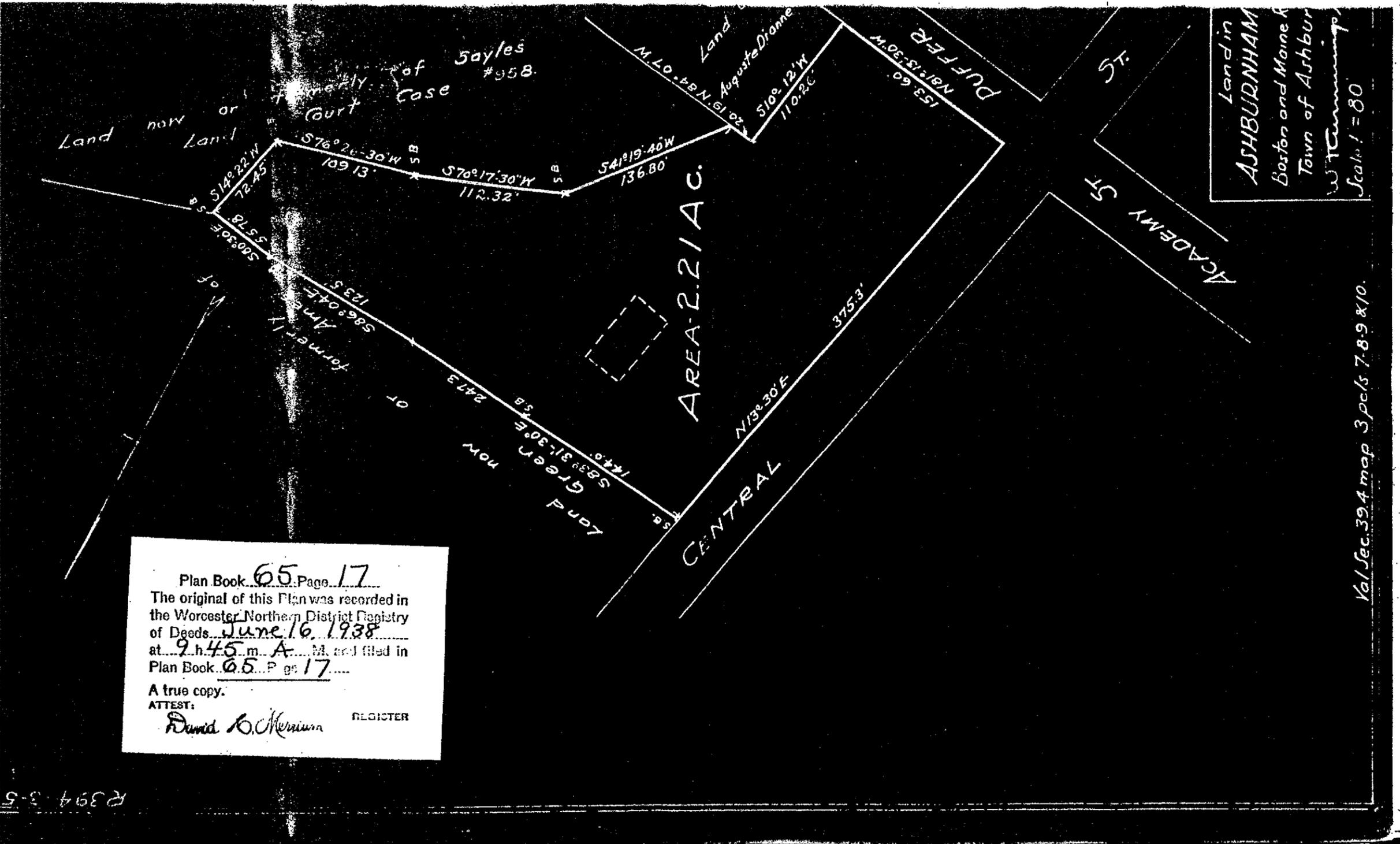
to

Burton W. Prince

et ux.

M.

I, Ida Jean Lyon of Ashburnham, Worcester County, Massachusetts, being unmarried, for consideration paid, GRANT to Burton W. Prince and Annie W. Prince, husband and wife, of Ashburnham, Massachusetts with MORTGAGE COVENANTS, to secure the payment of Four thousand Dollars in one years with 6% per centum interest per annum payable semi-annually, as provided in a note of even date, the land in said Ashburnham, Worcester County, Massachusetts, bounded and described as follows; Beginning on the north line of the County Road; so called at the intersection of the Rindge Road, so called; thence westerly to a corner of land now or formerly



Land now or formerly of **Soyles** #958
 Court Case
 N 10° 19' 40" W 136.80'
 S 76° 17' 30" W 112.32'
 S 76° 24' 30" W 109.13'
 S 14° 22' W 72.45'
 S 50° 30' E 55.78'

Land now or formerly of **Green**
 N 13° 30' E 375.3'
 N 81° 15' 30" W 153.60'
PUFFER
CENTRAL
ACADEMY ST.

Land in
ASHBURNHAM
 Boston and Maine R.
 Town of Ashbur
 W. Cummings
 Scale: 1" = 80'

Plan Book 65 Page 17
 The original of this Plan was recorded in
 the Worcester Northern District Registry
 of Deeds June 16, 1938
 at 9 h. 45 m. A. M. and filed in
 Plan Book 65 Page 17
 A true copy.
 ATTEST:
 David B. Merriam REGISTER

Vol. Sec. 39.4 map 3 pcls 7.89 & 10.

R394 3-5

122

544

Highway
Area

IN WITNESS WHEREOF I have hereunto set my hand and affixed my notarial seal.

Warren G. Lawson Notary Public (Notarial seal)

My commission expires Oct. 28, 1938.

Received June 16, 1938 at 9 h. 45 m. A. M. Entered & Examined.

Boston and Maine

Railroad

to

Inhabitants of

the Town

of Ashburnham

Revenue Stamp

\$1.00

(canceled)

KNOW ALL MEN BY THESE PRESENTS that the Boston and Maine Railroad, a corporation duly established under the laws of the Commonwealth of Massachusetts, in consideration of one dollar and other valuable considerations paid by the Inhabitants of the Town of Ashburnham, a municipal corporation duly established by law in the County of Worcester and said Commonwealth, the receipt whereof is hereby acknowledged, does hereby GIVE, BARGAIN, SELL and CONVEY unto the said Inhabitants of the Town of Ashburnham, its successors and assigns, forever, a certain piece or parcel of land, with the buildings thereon, situated in Ashburnham in the County and Commonwealth aforesaid, bounded and described as follows: Beginning on Central Street, at Puffer Street, thence running North 13 ° 30 ' East by said Central Street three hundred seventy-five and three tenths (375.3) feet to land now or formerly of Green; thence turning and running by said land now or formerly of Green and by land now or formerly of Ames on three courses, as follows: South 83 ° 31 ' 30 " East two hundred forty-seven and three tenths (247.3) feet, South 86 ° 4 ' East one hundred twenty-three and five tenths (123.5) feet and South 80 ° 30 ' East fifty-five and seventy-eight hundredths (55.78) feet to land now or formerly of Sayles; thence turning and running by said last named land on four courses, as follows: South 14 ° 22 ' West seventy-two and forty-five hundredths (72.45) feet, South 76 ° 26 ' 30 " West one hundred nine and thirteen hundredths (109.13) feet, South 70 ° 17 ' 30 " West one hundred twelve and thirty-two hundredths (112.32) feet and South 41 ° 19 ' 40 " West one hundred thirty-six and eight tenths (136.8) feet to land of Auguste Dionne; thence turning and running by said last named land North 84 ° 7 ' West twenty and nineteen hundredths (20.19) feet and South 10 ° 12 ' West one hundred ten and twenty-six hundredths (110.26) feet to said Puffer Street; thence turning and running North 81 ° 13 ' 30 " West by said Puffer Street one hundred

three and six tenths (153.6) feet to the point of beginning, be all of said measurements more or less; said parcel containing about two and twenty-one hundredths (2.21) acres, and being shown on a plan marked "Land in Ashburnham, Mass. Boston and Maine Railroad To Town of Ashburnham W. F. Cummings Asst. Chief Eng'r. Mar. 1938", to be recorded herewith, a copy of which is hereto attached, to which reference is hereby made for a further description of the premises hereby conveyed. Said premises are conveyed subject to the taxes assessed as of January 1, 1938, which the grantee assumes and agrees to hold the grantor free from all liability therefor, and subject also to a lease from Boston and Maine Railroad to Leslie A. Nims dated March 1, 1922, to another lease from said Railroad to W. N. Potter and Sons, Inc. dated June 16, 1937, and to the terms of an agreement between said Railroad and said W. N. Potter and Sons, Inc. dated May 31, 1928, and for the consideration aforesaid the said Railroad does hereby

A S S I G N,
T R A N S F E R and S E T O V E R unto the grantee, its successors and assigns, all its rights under said leases and said agreement and all benefits to be derived therefrom. In part consideration for this conveyance and by the acceptance of this deed, the grantee agrees to assume the obligation to erect and maintain a suitable fence on the Easterly end of the Northerly side of said premises on the line described as running South 80 ° 30 ' East fifty-five and seventy-eight hundredths (55.78) feet, and does hereby release and discharge said Boston and Maine Railroad, its successors and assigns, of all obligations to maintain the drain pipe and catch basins referred to in the agreement between the grantor and the grantee dated October 21, 1932, and agrees to indemnify and save harmless the grantor, its successors and assigns, of and from any and all claims for damages which may result from the failure of the drainage system which was the subject of said agreement.

T O H A V E And T O H O L D the above described premises, with all the privileges and appurtenances thereto belonging, to the said Inhabitants of the Town of Ashburnham, its successors and assigns, to their own use and behoof forever.

I N W I T N E S S W H E R E O F the said Boston and Maine Railroad has caused these presents to be executed and its corpor-

APPENDIX 5

**ASTM Radius Report
With
Sanborn® Fire Insurance Maps**



The EDR Radius Map with GeoCheck[®]

**Ashburnham Highway Department
17 Central Street
Ashburnham, MA 01430**

Inquiry Number: 00946525.2r

March 24, 2003

The Source For Environmental Risk Management Data

**3530 Post Road
Southport, Connecticut 06890**

Nationwide Customer Service

**Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com**

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR). The report meets the government records search requirements of ASTM Standard Practice for Environmental Site Assessments, E 1527-00. Search distances are per ASTM standard or custom distances requested by the user.

TARGET PROPERTY INFORMATION

ADDRESS

17 CENTRAL STREET
ASHBURNHAM, MA 01430

COORDINATES

Latitude (North): 42.633800 - 42° 38' 1.7"
Longitude (West): 71.909600 - 71° 54' 34.6"
Universal Transverse Mercator: Zone 19
UTM X (Meters): 261424.5
UTM Y (Meters): 4724040.5

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property: 2442071-F8 ASHBURNHAM, MA NH
Source: USGS 7.5 min quad index

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following government records. For more information on this property see page 5 of the attached EDR Radius Map report:

<u>Site</u>	<u>Database(s)</u>	<u>EPA ID</u>
HIGHWAY DEPT GARAGE 17 CENTRAL ST ASHBURNHAM, MA	LUST Release	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the ASTM E 1527-00 search radius around the target property for the following databases:

FEDERAL ASTM STANDARD

NPL..... National Priority List
Proposed NPL..... Proposed National Priority List Sites
CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP..... CERCLIS No Further Remedial Action Planned
CORRACTS..... Corrective Action Report
RCRIS-TSD..... Resource Conservation and Recovery Information System
RCRIS-LQG..... Resource Conservation and Recovery Information System
ERNS..... Emergency Response Notification System

FEDERAL ASTM SUPPLEMENTAL

CONSENT..... Superfund (CERCLA) Consent Decrees

EXECUTIVE SUMMARY

ROD	Records Of Decision
Delisted NPL	National Priority List Deletions
FINDS	Facility Index System/Facility Identification Initiative Program Summary Report
HMIRS	Hazardous Materials Information Reporting System
MLTS	Material Licensing Tracking System
MINES	Mines Master Index File
NPL Liens	Federal Superfund Liens
PADS	PCB Activity Database System
RAATS	RCRA Administrative Action Tracking System
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
SSTS	Section 7 Tracking Systems
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

STATE OR LOCAL ASTM SUPPLEMENTAL

AST	Aboveground Storage Tank Database
MA Spills	Historical Spill List

EDR PROPRIETARY HISTORICAL DATABASES

Coal Gas	Former Manufactured Gas (Coal Gas) Sites
-----------------------	--

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. EDR's definition of a site with an elevation equal to the target property includes a tolerance of +/- 10 feet. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property (by more than 10 feet). Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

FEDERAL ASTM STANDARD

RCRIS: The Resource Conservation and Recovery Act database includes selected information on sites that generate, store, treat, or dispose of hazardous waste as defined by the Act. The source of this database is the U.S. EPA.

A review of the RCRIS-SQG list, as provided by EDR, and dated 09/09/2002 has revealed that there are 2 RCRIS-SQG sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
<i>ETHAN ALLEN INC WHITNEY DIV</i>	<i>14 PLEASANT ST</i>	<i>0 - 1/8 W</i>	<i>B5</i>	<i>8</i>
<i>CUSHING ACADEMY</i>	<i>39 SCHOOL ST</i>	<i>1/8 - 1/4 WSW</i>	<i>10</i>	<i>14</i>

EXECUTIVE SUMMARY

STATE ASTM STANDARD

SHWS: Non Leaking Underground Storage Tank sites within the Releases Database.

A review of the SHWS list, as provided by EDR, has revealed that there are 8 SHWS sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
<i>NO LOCATION AID</i>	<i>19 PUFFER ST</i>	<i>0 - 1/8 SSE</i>	<i>4</i>	<i>7</i>
<i>ROY BROTHERS OIL CO.</i>	<i>7 CENTRAL ST.</i>	<i>0 - 1/8 N</i>	<i>7</i>	<i>10</i>
<i>RESIDENCE</i>	<i>41 WATER ST</i>	<i>1/4 - 1/2 NNE</i>	<i>11</i>	<i>15</i>
<i>ROY BROTHERS OIL&PROPANE</i>	<i>88 MAIN ST</i>	<i>1/4 - 1/2 NW</i>	<i>12</i>	<i>16</i>
<i>SAKKINER PROPERTY</i>	<i>37 CASHMAN HILL RD</i>	<i>1/2 - 1 SSW</i>	<i>14</i>	<i>18</i>
<i>NO LOCATION AID</i>	<i>19 COREY HALL RD</i>	<i>1/2 - 1 W</i>	<i>15</i>	<i>19</i>
<u>Lower Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
<i>BOUTWELLS GARAGE</i>	<i>73 FITCHBURG RD</i>	<i>1/2 - 1 E</i>	<i>D16</i>	<i>20</i>
<i>BOUTWELLS GARARGE</i>	<i>73 FITCHBURG RD</i>	<i>1/2 - 1 E</i>	<i>D17</i>	<i>22</i>

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Department of Environmental Protection's Solid Waste Facility Database/Transfer Stations.

A review of the SWF/LF list, as provided by EDR, has revealed that there is 1 SWF/LF site within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
<i>ASHBURNHAM DUMP</i>	<i>WILLIAMS RD/CENTER ST(R)</i>	<i>1/4 - 1/2 SSW</i>	<i>13</i>	<i>17</i>

LUST: Sites within the Releases Database that have a UST listed as its source.

A review of the LUST list, as provided by EDR, and dated 01/29/2003 has revealed that there are 2 LUST sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
<i>NO LOCATION AID</i>	<i>19 CENTRAL ST</i>	<i>0 - 1/8 NW</i>	<i>A2</i>	<i>6</i>
<i>MR MIKES MINI MART NO 17</i>	<i>47 MAIN ST</i>	<i>1/8 - 1/4 N</i>	<i>C8</i>	<i>11</i>

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Protection's Summary Listing of all the Tanks Registered in the State of Massachusetts.

A review of the UST list, as provided by EDR, and dated 02/03/2003 has revealed that there are 3 UST sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
<i>HIGHWAY DEPT</i>	<i>19 CENTRAL ST</i>	<i>0 - 1/8 NW</i>	<i>A3</i>	<i>7</i>
<i>WHITNEY DIVISION OF ETHAN ALLE</i>	<i>14 PLEASANT ST</i>	<i>0 - 1/8 W</i>	<i>B6</i>	<i>9</i>
<i>MR MIKE'S MOBIL</i>	<i>47 MAIN ST</i>	<i>1/8 - 1/4 N</i>	<i>C9</i>	<i>13</i>

EXECUTIVE SUMMARY

Release: MA Release Tracking Database.

A review of the Release list, as provided by EDR, and dated 01/29/2003 has revealed that there are 10 Release sites within approximately 1 mile of the target property.

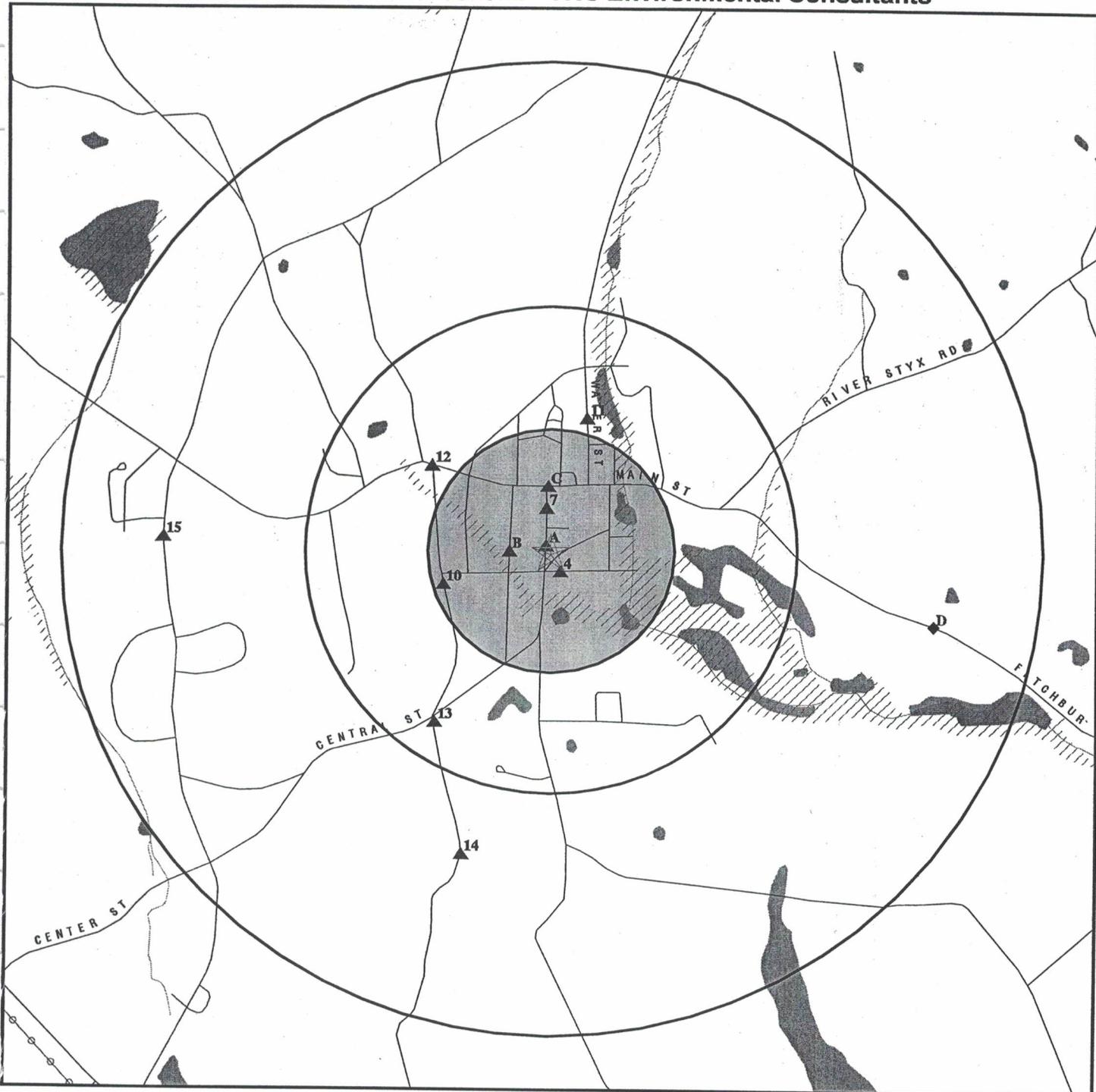
<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
NO LOCATION AID	19 CENTRAL ST	0 - 1/8 NW	A2	6
NO LOCATION AID	19 PUFFER ST	0 - 1/8 SSE	4	7
ROY BROTHERS OIL CO.	7 CENTRAL ST.	0 - 1/8 N	7	10
MR MIKES MINI MART NO 17	47 MAIN ST	1/8 - 1/4 N	C8	11
RESIDENCE	41 WATER ST	1/4 - 1/2 NNE	11	15
ROY BROTHERS OIL & PROPANE	88 MAIN ST	1/4 - 1/2 NW	12	16
SAKKINER PROPERTY	37 CASHMAN HILL RD	1/2 - 1 SSW	14	18
NO LOCATION AID	19 COREY HALL RD	1/2 - 1 W	15	19
<u>Lower Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
BOUTWELLS GARAGE	73 FITCHBURG RD	1/2 - 1 E	D16	20
BOUTWELLS GARARGE	73 FITCHBURG RD	1/2 - 1 E	D17	22

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

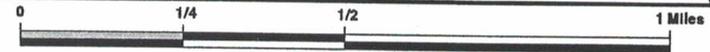
<u>Site Name</u>	<u>Database(s)</u>
LAKE WAMPANOAG	SHWS, Release
ROY BROS OIL CO BULK OIL AREA	SHWS, Release
SIMONDS RECREATIONAL AREA	SHWS, Release
SIMONDS RECREATION AREA	SHWS, Release
NO LOCATION AID	SHWS, Release
LAKE WATATIC RECREATIONAL AREA	SHWS, Release
UNCONFIRMED SITE	CERCLIS, FINDS, TRIS
NORTH BROOKFIELD LANDFILL	SWF/LF
UNCONFIRMED SITE	SWF/LF
BELL ATLANTIC	SWF/LF
ASHBURNHAM MS CTL OFFICE AT&T	UST
ALANS AUTO BODY	RCRIS-SQG, FINDS
ASHBURNHAM	RCRIS-SQG, FINDS
	FINDS

OVERVIEW MAP - 00946525.2r - TRC Environmental Consultants



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Coal Gasification Sites
- ▨ National Priority List Sites
- ▩ Landfill Sites

- Power transmission lines
- Oil & Gas pipelines
- ▨ 100-year flood zone
- ▩ 500-year flood zone
- Wetlands
- ▨ Areas of Critical Environmental Concern



TARGET PROPERTY: Ashburnham Highway Department
ADDRESS: 17 Central Street
CITY/STATE/ZIP: Ashburnham MA 01430
LAT/LONG: 42.6338 / 71.9096

CUSTOMER: TRC Environmental Consultants
CONTACT: Elise Mazareas
INQUIRY #: 00946525.2r
DATE: March 24, 2003 10:21 am

MAP FINDINGS SUMMARY

<u>Database</u>	<u>Target Property</u>	<u>Search Distance (Miles)</u>	<u>< 1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>> 1</u>	<u>Total Plotted</u>
<u>FEDERAL ASTM STANDARD</u>								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
CERCLIS		0.500	0	0	0	NR	NR	0
CERC-NFRAP		0.250	0	0	NR	NR	NR	0
CORRACTS		1.000	0	0	0	0	NR	0
RCRIS-TSD		0.500	0	0	0	NR	NR	0
RCRIS Lg. Quan. Gen.		0.250	0	0	NR	NR	NR	0
RCRIS Sm. Quan. Gen.		0.250	1	1	NR	NR	NR	2
ERNS		TP	NR	NR	NR	NR	NR	0
<u>STATE ASTM STANDARD</u>								
State Haz. Waste		1.000	2	0	2	4	NR	8
State Landfill		0.500	0	0	1	NR	NR	1
LUST	X	0.500	1	1	0	NR	NR	2
UST		0.250	2	1	NR	NR	NR	3
Release	X	1.000	3	1	2	4	NR	10
<u>FEDERAL ASTM SUPPLEMENTAL</u>								
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
Delisted NPL		1.000	0	0	0	0	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
HMIRS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
NPL Liens		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
<u>STATE OR LOCAL ASTM SUPPLEMENTAL</u>								
AST		TP	NR	NR	NR	NR	NR	0
MA Spills		TP	NR	NR	NR	NR	NR	0
<u>EDR PROPRIETARY HISTORICAL DATABASES</u>								
Coal Gas		1.000	0	0	0	0	NR	0

NOTES:

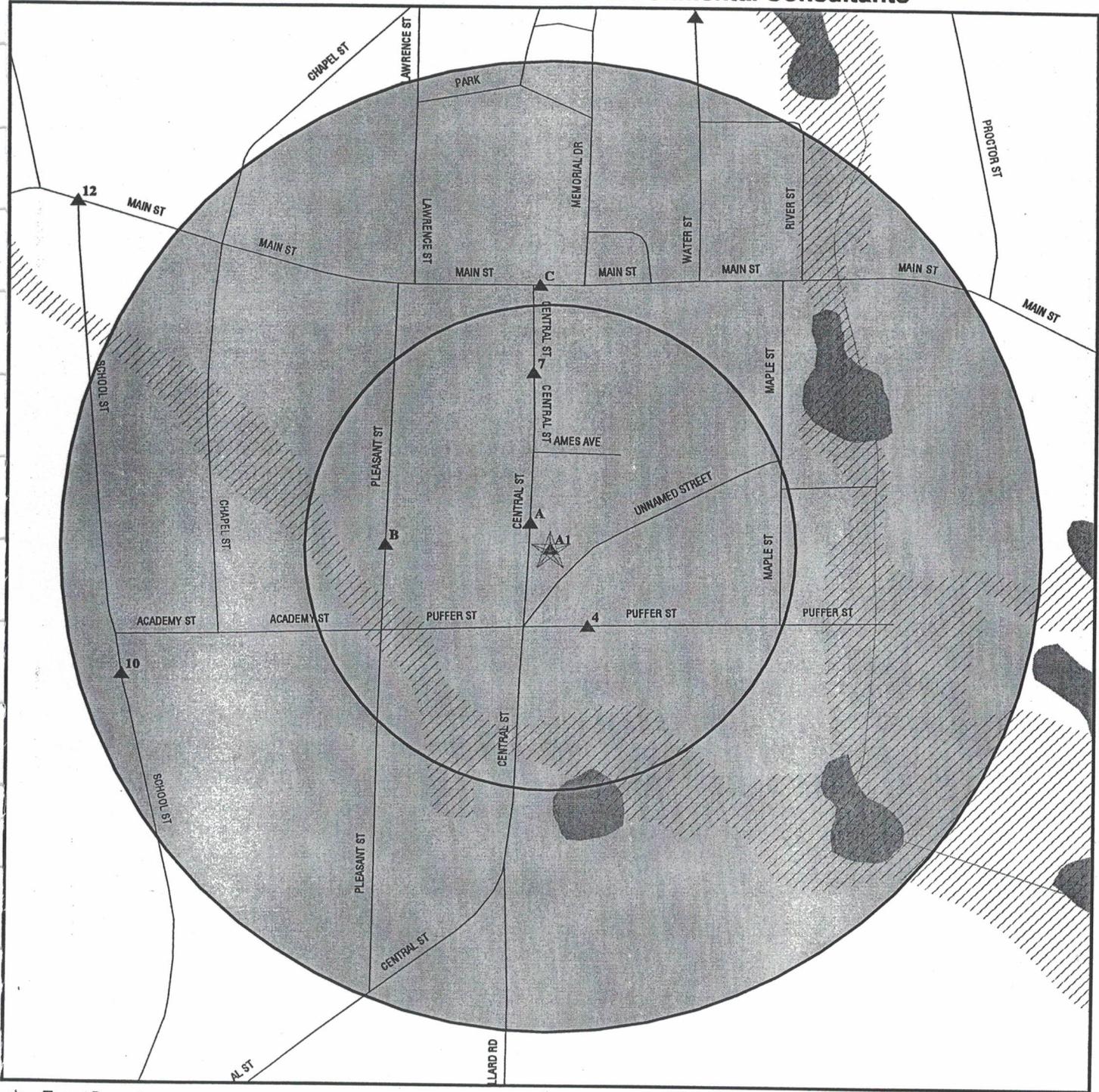
AQUIFLOW - see EDR Physical Setting Source Addendum

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

DETAIL MAP - 00946525.2r - TRC Environmental Consultants



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Coal Gasification Sites
- ⌂ Sensitive Receptors
- ⚡ National Priority List Sites
- ⚡ Landfill Sites

- ⚡ Power transmission lines
- ⚡ Oil & Gas pipelines
- ▨ 100-year flood zone
- ▨ 500-year flood zone
- Wetlands
- ▨ Areas of Critical Environmental Concern



TARGET PROPERTY: ADDRESS: CITY/STATE/ZIP: LAT/LONG:	Ashburnham Highway Department 17 Central Street Ashburnham MA 01430 42.6338 / 71.9096	CUSTOMER: CONTACT: INQUIRY #: DATE:	TRC Environmental Consultants Elise Mazareas 00946525.2r March 24, 2003 10:21 am
--	--	--	---

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

Coal Gas Site Search: No site was found in a search of Real Property Scan's ENVIROHAZ database.

A1
Target
Property
HIGHWAY DEPT GARAGE
17 CENTRAL ST
ASHBURNHAM, MA

LUST
Release
S103249550
N/A

Site 1 of 3 in cluster A

LUST:

Facility ID: 2-0012224
Site Status: Response Action Outcome
Source Type: UST
Release Town: ASHBURNHAM
Notification Date : 05/21/1998
Category : 72 HR
Associated ID : -
Status Date : 02/18/1999
Phase : Not reported

MA RELEASE:

Facility ID: 2-0012224
Facility Status: Response Action Outcome
Status Date: 02/18/1999
Phase: Not reported
Notification: 05/21/1998
Category: 72 HR
Official City: ASHBURNHAM
Action:
Date: 07/13/1998
Type: RNF
Status: REPORT
Response Action Outcome:
Activity Use Limitaion:
LSP Number: Not reported
Action:
Date: 05/21/1998
Type: Release
Status: REPORT
Response Action Outcome:
Activity Use Limitaion:
LSP Number: Not reported
Action:
Date: 02/18/1999
Type: Immediate Response
Status: Completion Statement Received
Response Action Outcome:
Activity Use Limitaion:
LSP Number: 8104
Action:
Date: 02/18/1999
Type: Response Action Outcome
Status: Fee Received
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.
Activity Use Limitaion:
LSP Number: 8104
Chemical Released:
Chemical: GASOLINE

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

HIGHWAY DEPT GARAGE (Continued)

S103249550

Amount: 130, parts per million
Chemical Released:
Chemical: UNKNOWN CHEMICAL OF UNKNOWN TYPE
Amount: 130, parts per million
Location Type: MUNICIPAL
Source Type: UST
ASC Release Tracking Number: Not reported

A2
NW
< 1/8
89 ft.
Higher

NO LOCATION AID
19 CENTRAL ST
ASHBURNHAM, MA
Site 2 of 3 in cluster A

LUST S102083952
Release N/A

LUST:

Facility ID: 2-0010039
Site Status: Response Action Outcome
Source Type: UST
Release Town: ASHBURNHAM
Notification Date: 10/01/1993
Category: 72 HR
Associated ID: -
Status Date: 04/16/1996
Phase: PHASE II

MA RELEASE:

Facility ID: 2-0010039
Facility Status: Response Action Outcome
Status Date: 04/16/1996
Phase: PHASE II
Notification: 10/01/1993
Category: 72 HR
Official City: ASHBURNHAM
Action:
Date: 10/01/1993
Type: Release
Status: REPORT
Response Action Outcome:
Activity Use Limitaion:
LSP Number: Not reported

Action:

Date: 10/01/1993
Type: Immediate Response
Status: IRA Assessment Only
Response Action Outcome:

Activity Use Limitaion:

LSP Number: Not reported

Action:

Date: 04/16/1996
Type: Response Action Outcome
Status: RAO Statement Received

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Activity Use Limitaion:

LSP Number: 4966

Action:

Date: 04/16/1996
Type: Phase I
Status: Completion Statement Received

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

NO LOCATION AID (Continued)

S102083952

Response Action Outcome:
Activity Use Limitation:
LSP Number: 4966
Chemical Released:
Chemical: DIESEL FUEL
Amount: Not reported
Location Type: DPW YARD
MUNICIPAL
Source Type: UST
ASC Release Tracking Number: Not reported

**A3
NW
< 1/8
89 ft.
Higher**

**HIGHWAY DEPT
19 CENTRAL ST
ASHBURNHAM, MA 01430**

**UST U000225066
N/A**

Site 3 of 3 in cluster A

UST:
Facility ID: 281.00000
Tank ID: 1.00000
Tank Status: Removed
Tank Useage: Not reported
Capacity: 4000.0000
Owner: TOWN OF ASHBURNHAM
Owner Address: 19 CENTRAL ST
ASHBURNHAM, MA 01430
Serial Number: Not reported
Aboveground: No
Contents: Gasoline
Tank Material: Steel
Tank Contents: Not reported
Tank Leak Detection: Not reported
Pipe Leak Detection: Not reported

**4
SSE
< 1/8
234 ft.
Higher**

**NO LOCATION AID
19 PUFFER ST
ASHBURNHAM, MA 01430**

**SHWS S102084344
Release N/A**

SHWS:
Facility ID: 2-0010620
Site Status: Response Action Outcome
Source Type: PIPE
Release Town: ASHBURNHAM
Notification Date : 01/12/1995
Category : TWO HR
Associated ID : -
Status Date : 01/11/1996
Phase : Not reported

MA RELEASE:
Facility ID: 2-0010620
Facility Status: Response Action Outcome
Status Date: 01/11/1996
Phase: Not reported
Notification: 01/12/1995
Category: TWO HR
Official City: ASHBURNHAM

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

NO LOCATION AID (Continued)

S102084344

Action:
Date: 01/12/1995
Type: Release
Status: REPORT
Response Action Outcome:
Activity Use Limitaion:
LSP Number: Not reported
Action:
Date: 07/31/1995
Type: Immediate Response
Status: Completion Statement Received
Response Action Outcome:
Activity Use Limitaion:
LSP Number: 8104
Action:
Date: 03/17/1995
Type: RNF
Status: REPORT
Response Action Outcome:
Activity Use Limitaion:
LSP Number: Not reported
Action:
Date: 12/18/1995
Type: Release Abatement Measure
Status: Completion Statement Received
Response Action Outcome:
Activity Use Limitaion:
LSP Number: 8104
Action:
Date: 01/12/1996
Type: Response Action Outcome
Status: Fee Received
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.
Activity Use Limitaion: NONE
LSP Number: Not reported
Chemical Released:
Chemical: FUEL OIL #2
Amount: 100, gallons
Chemical Released:
Chemical: FUEL OIL #2
Amount: Not reported
Location Type: RESIDENTIAL
Source Type: PIPE
ASC Release Tracking Number: Not reported

B5
West
< 1/8
443 ft.
Higher
ETHAN ALLEN INC WHITNEY DIV
14 PLEASANT ST
ASHBURNHAM, MA 01430
Site 1 of 2 in cluster B

RCRIS-SQG 1000704474
FINDS MAD055743280

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

ETHAN ALLEN INC WHITNEY DIV (Continued)

1000704474

RCRIS:

Owner: INTERCO CORPORATION
(508) 827-5951
EPA ID: MAD055743280
Contact: HERMAN WENDELL
(508) 827-5951

Classification: Small Quantity Generator
Used Oil Recyc: No
TSDF Activities: Not reported

Violation Status: Violations exist

Regulation Violated: Not reported
Area of Violation: GENERATOR-ALL REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 02/26/1986
Actual Date Achieved Compliance: 02/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/07/1986
Penalty Type: Not reported

Regulation Violated: Not reported
Area of Violation: GENERATOR-ALL REQUIREMENTS (OVERSIGHT)
Date Violation Determined: 02/26/1986
Actual Date Achieved Compliance: 02/06/1987

Enforcement Action: WRITTEN INFORMAL
Enforcement Action Date: 03/07/1986
Penalty Type: Not reported

There are 2 violation record(s) reported at this site:

<u>Evaluation</u>	<u>Area of Violation</u>	<u>Date of Compliance</u>
Compliance Evaluation Inspection	GENERATOR-ALL REQUIREMENTS (OVERSIGHT)	19870206
	GENERATOR-ALL REQUIREMENTS (OVERSIGHT)	19870206

CT MANIFEST

Additional detail is available in CT MANIFEST. Please contact your EDR Account Executive for more information.

FINDS:

Other Pertinent Environmental Activity Identified at Site:
Facility Registry System (FRS)
Resource Conservation and Recovery Act Information system (RCRAINFO)

**B6
West
< 1/8
443 ft.
Higher**

**WHITNEY DIVISION OF ETHAN ALLEN
14 PLEASANT ST
ASHBURNHAM, MA 01430
Site 2 of 2 in cluster B**

**UST U003000573
N/A**

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

WHITNEY DIVISION OF ETHAN ALLEN (Continued)

U003000573

UST:
Facility ID: 283.00000
Tank ID: 1.00000
Tank Status: Removed
Tank Useage: Not reported
Capacity: 2000.0000
Owner: WHITNEY DIVISION OF ETHAN ALLE
Owner Address: 14 PLEASANT ST
SOUTH ASHBURNHAM, MA 01466
Serial Number: Not reported
Aboveground: No
Contents: Not reported
Tank Material: Steel
Tank Contents: Not reported
Tank Leak Detection: Not reported
Pipe Leak Detection: Not reported

7
North
< 1/8
480 ft.
Higher

ROY BROTHERS OIL CO.
7 CENTRAL ST.
ASHBURNHAM, MA 01430

SHWS S101037907
Release N/A
MA Spills

SHWS:
Facility ID: 2-0011406
Site Status: Response Action Outcome
Source Type: Not reported
Release Town: ASHBURNHAM
Notification Date : 09/19/1996
Category : 120 DY
Associated ID : -
Status Date : 01/17/1997
Phase : Not reported

MA RELEASE:
Facility ID: 2-0011406
Facility Status: Response Action Outcome
Status Date: 01/17/1997
Phase: Not reported
Notification: 09/19/1996
Category: 120 DY
Official City: ASHBURNHAM
Action:
Date: 01/17/1997
Type: Response Action Outcome
Status: RAO Statement Received
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Activity Use Limitaion: NONE
LSP Number: 7541

Action:
Date: 09/19/1996
Type: RNF
Status: REPORT
Response Action Outcome:
Activity Use Limitaion:
LSP Number: Not reported
Action:
Date: 09/23/1996

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

ROY BROTHERS OIL CO. (Continued)

S101037907

Type: Release Abatement Measure
Status: Fee Received
Response Action Outcome:
Activity Use Limitaion:
LSP Number: 7541
Chemical Released:
Chemical: FUEL OIL #2
Amount: 78.5, micrograms per liter
Chemical Released:
Chemical: FUEL OIL #4
Amount: 18200, micrograms per kilogram
Location Type: Not reported
Source Type: Not reported
ASC Release Tracking Number: Not reported

MA Spills:

Facility ID:	0000	Spill ID:	C90-0739
Staff Lead:	SALVADORE, D	Date Entered:	Not reported
Last Entered:	01/29/1991	First Response:	11/19/1990
Spill Date:	11/19/1990	Report Date:	11/19/1990
Spill Time:	07:30	Report Time:	08:45
Case Closed:	YES	Mat Type:	PETROLEUM
Virgin Waste:	VIRGIN	Contam Soil:	Not reported
Env Impact:	Not reported	Other Impact:	Not reported
Material:	#2 FUEL OIL	PCB Lev (ppm):	NONE
Other Material:	Not reported	Qty Actual:	UNKNOWN -----
CAS No:	Not reported	Other Source:	Not reported
Qty Reported:	10-50 GALLONS	Other Incdnt:	Not reported
Source:	PIPE/HOSE/LINE	Contractor:	NOT USED
Incident:	RUPTURE	LUST Elig:	NO
Cleanup Type:	---	Notify Date:	Not reported
Referral:	NO	Category:	Not reported
Notifier:	MARK BINGHAM	Capacity:	Not reported
Notif Tel:	Not reported		
Report Prep:	Not reported		
Days/Close:	1		
Chemical:	Not reported		
Quantity:	Not reported		

C8 MR MIKES MINI MART NO 17
North 47 MAIN ST
1/8-1/4 ASHBURNHAM, MA
715 ft.
Higher Site 1 of 2 in cluster C

LUST S103545559
Release N/A

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

MR MIKES MINI MART NO 17 (Continued)

S103545559

LUST:

Facility ID: 2-0012477
Site Status: Response Action Outcome
Source Type: UST
Release Town: ASHBURNHAM
Notification Date : 10/29/1998
Category : 72 HR
Associated ID : -
Status Date : 03/13/2002
Phase : PHASE III

MA RELEASE:

Facility ID: 2-0012477
Facility Status: Response Action Outcome
Status Date: 03/13/2002
Phase: PHASE III
Notification: 10/29/1998
Category: 72 HR
Official City: ASHBURNHAM
Action:
Date: 11/29/2001
Type: Phase II
Status: Completion Statement Received
Response Action Outcome:
Activity Use Limitaion:
LSP Number: 9749

Action:
Date: 10/29/1998
Type: Release
Status: REPORT
Response Action Outcome:
Activity Use Limitaion:
LSP Number: Not reported

Action:
Date: 12/14/1998
Type: Immediate Response
Status: Completion Statement Received
Response Action Outcome:
Activity Use Limitaion:
LSP Number: 4141

Action:
Date: 12/14/1998
Type: RNF
Status: REPORT
Response Action Outcome:
Activity Use Limitaion:
LSP Number: Not reported

Action:
Date: 11/03/1999
Type: Tier Classification
Status: Tier 2 Classification
Response Action Outcome:
Activity Use Limitaion:
LSP Number: 4141

Action:
Date: 11/03/1999
Type: Phase I

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

MR MIKES MINI MART NO 17 (Continued)

S103545559

Status: Completion Statement Received
Response Action Outcome:
Activity Use Limitaion:
LSP Number: 4141
Action:
Date: 06/28/2002
Type: Response Action Outcome
Status: TSAUD
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.
Activity Use Limitaion: N
LSP Number: Not reported
Chemical Released:
Chemical: GASOLINE
Amount: 200, parts per million
Location Type: COMMERCIAL
Source Type: UST
ASC Release Tracking Number: Not reported

C9
North
1/8-1/4
715 ft.
Higher

MR MIKE'S MOBIL
47 MAIN ST
ASHBURNHAM, MA 01430

UST U003000589
N/A

Site 2 of 2 in cluster C

UST:
Facility ID: 288.00000
Tank ID: 1.00000
Tank Status: Removed
Tank Useage: MV
Capacity: 4000.0000
Owner: PETERBOROUGH OIL CO INC
Owner Address: PO BOX 787
LEOMINSTER, MA 01453
Serial Number: Not reported
Aboveground: No
Contents: Gasoline
Tank Material: Steel
Tank Contents: 1 Wall
Tank Leak Detection:A
Pipe Leak Detection: Not reported

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

MR MIKE'S MOBIL (Continued)

U003000589

Facility ID: 288.00000
Tank ID: 2.00000
Tank Status: Removed
Tank Useage: MV
Capacity: 3000.0000
Owner: PETERBOROUGH OIL CO INC
Owner Address: PO BOX 787
LEOMINSTER, MA 01453
Serial Number: Not reported
Aboveground: No
Contents: Gasoline
Tank Material: Steel
Tank Contents: 1 Wall
Tank Leak Detection:A
Pipe Leak Detection: Not reported

Facility ID: 288.00000
Tank ID: 3.00000
Tank Status: Removed
Tank Useage: MV
Capacity: 4000.0000
Owner: PETERBOROUGH OIL CO INC
Owner Address: PO BOX 787
LEOMINSTER, MA 01453
Serial Number: Not reported
Aboveground: No
Contents: Gasoline
Tank Material: Steel
Tank Contents: 1 Wall
Tank Leak Detection:A
Pipe Leak Detection: Not reported

10
WSW
1/8-1/4
1203 ft.
Higher

CUSHING ACADEMY
39 SCHOOL ST
ASHBURNHAM, MA 01430

RCRIS-SQG 1000241689
FINDS MAD069917391
FTTS

FTTS Insp:
Region: 1000241689
Inspected Date: AEA
Insp Number: AEA
Violation occurred: ETTLINGER
Inspector: US
Investigation Type: T
Facility Function: 19900531RI009 1
Investig Reason: Not reported
Legislation Code: 01

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

CUSHING ACADEMY (Continued)

1000241689

RCRIS:

Owner: Not reported
EPA ID: MAD069917391
Contact: RAYMOND LEMIEUX
(508) 827-5911
Classification: Small Quantity Generator
Used Oil Recyc: No
TSDf Activities: Not reported
Violation Status: No violations found

NY MANIFEST

Additional detail is available in NY MANIFEST. Please contact your EDR Account Executive for more information.

FINDS:

Other Pertinent Environmental Activity Identified at Site:
AIRS Facility System (AIRS/AFS)
Facility Registry System (FRS)
National Compliance Database (NCDB)
Resource Conservation and Recovery Act Information system (RCRAINFO)

**11
NNE
1/4-1/2
1492 ft.
Higher**

**RESIDENCE
41 WATER ST
ASHBURNHAM, MA**

**SHWS S104941771
Release N/A**

SHWS:

Facility ID: 2-0013649
Site Status: Response Action Outcome
Source Type: PIPE
Release Town: ASHBURNHAM
Notification Date : 01/12/2001
Category : TWO HR
Associated ID : -
Status Date : 06/26/2001
Phase : Not reported

MA RELEASE:

Facility ID: 2-0013649
Facility Status: Response Action Outcome
Status Date: 06/26/2001
Phase: Not reported
Notification: 01/12/2001
Category: TWO HR
Official City: ASHBURNHAM
Action:
Date: 01/12/2001
Type: Release
Status: REPORT
Response Action Outcome:
Activity Use Limitaion:
LSP Number: Not reported
Action:
Date: 01/12/2001
Type: Immediate Response Action - DEP Lead
Status: Oral Approval of Plan
Response Action Outcome:
Activity Use Limitaion:

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

RESIDENCE (Continued)

S104941771

LSP Number: Not reported
Action:
Date: 11/19/2001
Type: Response Action Outcome
Status: Action Audited
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.
Activity Use Limitaion:
LSP Number: 7022
Action:
Date: 06/26/2001
Type: RNF
Status: REPORT
Response Action Outcome:
Activity Use Limitaion:
LSP Number: Not reported
Chemical Released:
Chemical: FUEL OIL #2
Amount: 50, gallons
Location Type: RESIDENTIAL
Source Type: PIPE
ASC Release Tracking Number: Not reported

12
NW
1/4-1/2
1583 ft.
Higher

ROY BROTHERS OIL&PROPANE
88 MAIN ST
ASHBURNHAM, MA 01430

SHWS S104941767
Release N/A

SHWS:
Facility ID: 2-0013631
Site Status: Response Action Outcome
Source Type: TANKER
Release Town: ASHBURNHAM
Notification Date : 12/26/2000
Category : TWO HR
Associated ID : -
Status Date : 02/09/2001
Phase : Not reported

MA RELEASE:
Facility ID: 2-0013631
Facility Status: Response Action Outcome
Status Date: 02/09/2001
Phase: Not reported
Notification: 12/26/2000
Category: TWO HR
Official City: ASHBURNHAM
Action:
Date: 12/26/2000
Type: Release
Status: REPORT
Response Action Outcome:
Activity Use Limitaion:
LSP Number: Not reported
Action:
Date: 12/26/2000
Type: Immediate Response
Status: Oral Approval of Plan

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

ROY BROTHERS OIL&PROPANE (Continued)

S104941767

Response Action Outcome:
Activity Use Limitaion:
LSP Number: 8762
Action:
Date: 02/09/2001
Type: RNF
Status: REPORT
Response Action Outcome:
Activity Use Limitaion:
LSP Number: Not reported
Action:
Date: 02/09/2001
Type: Response Action Outcome
Status: RAO Statement Received
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Activity Use Limitaion: NONE
LSP Number: 8762
Chemical Released:
Chemical: FUEL OIL #2
Amount: 10, gallons
Location Type: RESIDENTIAL
Source Type: TANKER
ASC Release Tracking Number: Not reported

13
SSW
1/4-1/2
2230 ft.
Higher

ASHBURNHAM DUMP
WILLIAMS RD/CENTER ST(RTE 101)
ASHBURNHAM, MA 01430

SWF/LF S102518409
N/A

LF:

Site Type: MSW landfill; may take or have taken MSW, in addition may take or have taken woodwaste, C&D, sludge, ash or other solid waste. SL includes open or burning dumps used to dispose of MSW
Facility Id: SL0011.003
Operator: TOWN OF ASHBURNHAM
Operator Addr: 32 MAIN ST
ASHBURNHAM, MA 01430
Operator Phone: (978)827-4104
Contact: Not reported
Owner: TOWN OF ASHBURNHAM
Owner Contact: Not reported
Owner Addr: 32 MAIN ST
ASHBURNHAM, MA 01430
ASHBURNHAM, MA 01430
Owner Contact: Not reported
Owner Phone: (978)827-4104
Owner Type: MUNICIPAL
Facility Contact: Not reported
Facility Status: Inactive
Capacity Year: 0.00000
ID Number: SL
Site Lined: Not Lined
Capping: Not Capped
Days of Operation: 0.00000
Facility Status: I
Base Case or Projected Closing Date: 1977
Acres Assigned by Board of Health: 5.00000
Facility Phone: Not reported
Region: Central
Capacity Cert: / /
Assign Date: / /
Closure Date: / /

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

ASHBURNHAM DUMP (Continued)

S102518409

DEQE Plan Approved Acreage: 0.00000
DEQE Approved Daily Tonnage Limit: 0.00000
Leachate Collection System in Place: Not reported
Year SW Permitted for Handling/Disposal OR Actually Handled/Disposed (Tons):
1990 : 0.00000
1991 : 0.00000
1992 : 0.00000
1993 : 0.00000
1994 : 0.00000
1995 : 0.00000
1996 : 0.00000
1997 : 0.00000
1998 : 0.00000
1999 : 0.00000
2000 : 0.00000
Release Tracking # : Not reported
Physical Loc of Site : Not reported
Annual Tons for 2001 : 0.00000
Date Landfill Opened: 0.00000
Date of operational Approval, Granted by DEP: / /
Is There An Operation Plan: Not reported
Operation Type: MUNICIPAL
Has DEP verified that Site Exists: Yes
Site Approval Date Granted by DEP: / /
Interim Wellhead Protection Area: Not reported
General Note: Not reported

14
SSW
1/2-1
3430 ft.
Higher

SAKKINER PROPERTY
37 CASHMAN HILL RD
ASHBURNHAM, MA 01430

SHWS S105199084
Release N/A

SHWS:

Facility ID: 2-0013987
Site Status: Response Action Outcome
Source Type: AST
Release Town: ASHBURNHAM
Notification Date : 09/12/2001
Category : TWO HR
Associated ID : -
Status Date : 11/14/2001
Phase : Not reported

MA RELEASE:

Facility ID: 2-0013987
Facility Status: Response Action Outcome
Status Date: 11/14/2001
Phase: Not reported
Notification: 09/12/2001
Category: TWO HR
Official City: ASHBURNHAM
Action:
Date: 09/12/2001
Type: Release
Status: REPORT
Response Action Outcome:
Activity Use Limitaion:
LSP Number: Not reported

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

SAKKINER PROPERTY (Continued)

S105199084

Action:
Date: 09/13/2001
Type: Immediate Response
Status: Oral Approval of Plan
Response Action Outcome:
Activity Use Limitaion:
LSP Number: Not reported
Action:
Date: 11/14/2001
Type: RNF
Status: REPORT
Response Action Outcome:
Activity Use Limitaion:
LSP Number: Not reported
Action:
Date: 11/14/2001
Type: Response Action Outcome
Status: RAO Statement Received
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.
Activity Use Limitaion: NONE
LSP Number: 8762
Chemical Released:
Chemical: FUEL OIL #2
Amount: 10, gallons
Location Type: RESIDENTIAL
Source Type: AST
ASC Release Tracking Number: Not reported

15
West
1/2-1
4180 ft.
Higher

NO LOCATION AID
19 COREY HALL RD
ASHBURNHAM, MA

SHWS S103383172
Release N/A

SHWS:
Facility ID: 2-0012273
Site Status: Response Action Outcome
Source Type: AST
Release Town: ASHBURNHAM
Notification Date : 06/28/1998
Category : TWO HR
Associated ID : -
Status Date : 11/06/1998
Phase : Not reported

MA RELEASE:
Facility ID: 2-0012273
Facility Status: Response Action Outcome
Status Date: 11/06/1998
Phase: Not reported
Notification: 06/28/1998
Category: TWO HR
Official City: ASHBURNHAM
Action:
Date: 06/28/1998
Type: Release
Status: REPORT
Response Action Outcome:

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

NO LOCATION AID (Continued)

S103383172

Activity Use Limitaion:
LSP Number: Not reported
Action:
Date: 06/28/1998
Type: Immediate Response
Status: Oral Approval of Plan
Response Action Outcome:
Activity Use Limitaion:
LSP Number: Not reported
Action:
Date: 09/14/1998
Type: RNF
Status: REPORT
Response Action Outcome:
Activity Use Limitaion:
LSP Number: Not reported
Action:
Date: 09/14/1998
Type: Immediate Response
Status: Written Plan Received
Response Action Outcome:
Activity Use Limitaion:
LSP Number: 6215
Action:
Date: 11/06/1998
Type: Response Action Outcome
Status: RAO Statement Received
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.
Activity Use Limitaion:
LSP Number: 5121
Chemical Released:
Chemical: FUEL OIL #2
Amount: 150, gallons
Location Type: RESIDENTIAL
Source Type: AST
ASC Release Tracking Number: Not reported

D16 BOUTWELLS GARAGE
East 73 FITCHBURG RD
1/2-1 ASHBURNHAM, MA 01430
4190 ft.
Lower Site 1 of 2 in cluster D

RCRIS-SQG 1000422887
SHWS MAD981205958
FINDS
Release
UST

RCRIS:
Owner: RICHARD BOUTWELL
(617) 555-1212
EPA ID: MAD981205958
Contact: RICHARD BOUTWELL
(508) 827-4755
Classification: Small Quantity Generator
Used Oil Recyc: No
TSDF Activities: Not reported

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

BOUTWELLS GARAGE (Continued)

1000422887

Violation Status: No violations found

FINDS:

Other Pertinent Environmental Activity Identified at Site:
Facility Registry System (FRS)
Resource Conservation and Recovery Act Information system (RCRAINFO)

SHWS:

Facility ID: 2-0014629
Site Status: Unclassified Waste Site
Source Type: UNKNOWN
Release Town: ASHBURNHAM
Notification Date : 01/16/2003
Category : 72 HR
Associated ID : -
Status Date : 01/16/2003
Phase : Not reported

MA RELEASE:

Facility ID: 2-0014629
Facility Status: Unclassified Waste Site
Status Date: 01/16/2003
Phase: Not reported
Notification: 01/16/2003
Category: 72 HR
Official City: ASHBURNHAM

Action:

Date: 01/16/2003
Type: Release
Status: REPORT

Response Action Outcome:

Activity Use Limitaion:
LSP Number: 9749

Action:

Date: 01/16/2003
Type: Immediate Response
Status: IRA Assessment Only

Response Action Outcome:

Activity Use Limitaion:
LSP Number: 9749

Chemical Released:

Chemical: UNKNOWN CHEMICAL OF TYPE - HAZARDOUS MATERIAL
Amount: 6.5, parts per billion
Location Type: COMMERCIAL
Source Type: UNKNOWN
ASC Release Tracking Number: Not reported

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

BOUTWELLS GARAGE (Continued)

1000422887

UST:

Facility ID: 40448.000
Tank ID: 1.00000
Tank Status: In Use
Tank Useage: MV
Capacity: 8000.0000
Owner: RICHARD BOUTWELL
Owner Address: 73 FITCHBURG RD
ASHBURNHAM, MA 01430
Serial Number: Not reported
Aboveground: No
Contents: Gasoline
Tank Material: Cathodic
Tank Contents: 2 Walls
Tank Leak Detection:A
Pipe Leak Detection: I

Facility ID: 40448.000
Tank ID: 2.00000
Tank Status: In Use
Tank Useage: MV
Capacity: 8000.0000
Owner: RICHARD BOUTWELL
Owner Address: 73 FITCHBURG RD
ASHBURNHAM, MA 01430
Serial Number: DUAL 4K/4K
Aboveground: No
Contents: Gasoline/D
Tank Material: Cathodic
Tank Contents: 2 Walls
Tank Leak Detection:A
Pipe Leak Detection: I

D17
East
1/2-1
4190 ft.
Lower

BOUTWELLS GARARGE
73 FITCHBURG RD
ASHBURNHAM, MA
Site 2 of 2 in cluster D

SHWS S103249548
Release N/A

SHWS:

Facility ID: 2-0012222
Site Status: TIER1C
Source Type: UNKNOWN
Release Town: ASHBURNHAM
Notification Date : 05/12/1998
Category : TWO HR
Associated ID : -
Status Date : 05/12/1999
Phase : PHASE III

MA RELEASE:

Facility ID: 2-0012222
Facility Status: TIER1C
Status Date: 05/12/1999
Phase: PHASE III
Notification: 05/12/1998
Category: TWO HR
Official City: ASHBURNHAM
Action:

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

Site

Database(s)
EDR ID Number
EPA ID Number

BOUTWELLS GARARGE (Continued)

S103249548

Date: 05/12/1998
Type: Release
Status: REPORT
Response Action Outcome:
Activity Use Limitaion:
LSP Number: Not reported
Action:
Date: 09/10/1998
Type: RNF
Status: REPORT
Response Action Outcome:
Activity Use Limitaion:
LSP Number: Not reported
Action:
Date: 07/30/2002
Type: Immediate Response
Status: TSAUD
Response Action Outcome:
Activity Use Limitaion:
LSP Number: 9749
Action:
Date: 08/27/1999
Type: Tier Classification
Status: PEREFF
Response Action Outcome:
Activity Use Limitaion:
LSP Number: 4141
Action:
Date: 05/12/1999
Type: Phase I
Status: Completion Statement Received
Response Action Outcome:
Activity Use Limitaion:
LSP Number: 4141
Action:
Date: 02/05/2002
Type: Phase II
Status: Completion Statement Received
Response Action Outcome:
Activity Use Limitaion:
LSP Number: 9749
Chemical Released:
Chemical: BENZENE
Amount: 38.3, parts per billion
Location Type: RESIDENTIAL
Source Type: UNKNOWN
ASC Release Tracking Number: Not reported

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
ASHBURNHAM	1005491419	ASHBURNHAM	ASHBURNHAM	01430	FINDS
ASHBURNHAM	S104847306	LAKE WAMPANOAG	69 BROGAN RD	01430	SHWS, Release
ASHBURNHAM	1000690817	ASHBURNHAM MS CTL OFFICE AT&T	BYFIELD RD	01430	RCRIS-SQG, FINDS
ASHBURNHAM	S103042992	ROY BROS OIL CO BULK OIL AREA	GARDNER RD	01430	SHWS, Release
ASHBURNHAM	1000816824	LAKE WATATIC RECREATIONAL AREA	LAKE SHORE DRIVE	01430	CERCLIS, FINDS, TRIS
ASHBURNHAM	S102083985	SIMONDS RECREATIONAL AREA	LAKE SHORE DR	01430	SHWS, Release
ASHBURNHAM	S105199032	SIMONDS RECREATION AREA	LAKE SHORE DRIVE LAKE WANATIC	01430	SHWS, Release
ASHBURNHAM	S103545481	NO LOCATION AID	LAWRENCE ST	01430	SHWS, Release
ASHBURNHAM	U003655634	BELL ATLANTIC	PLEASANT ST	01430	UST
ASHBURNHAM	S101394914	UNCONFIRMED SITE	TUCKERMAN RD	01430	SWF/LF
ASHBURNHAM	1004717458	ALANS AUTO BODY	WINCHENDON RD RTE 12	01430	RCRIS-SQG, FINDS
WORCESTER COUNTY	S103250222	NORTH BROOKFIELD LANDFILL	BRADSHAW ST	01430	SWF/LF
WORCESTER COUNTY	S105038291	UNCONFIRMED SITE	DAVIDSON RD		SWF/LF

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Elapsed ASTM days: Provides confirmation that this EDR report meets or exceeds the 90-day updating requirement of the ASTM standard.

FEDERAL ASTM STANDARD RECORDS

NPL: National Priority List

Source: EPA
Telephone: N/A

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 01/29/03
Date Made Active at EDR: 03/04/03
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 02/04/03
Elapsed ASTM days: 28
Date of Last EDR Contact: 02/04/03

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 8
Telephone: 303-312-6774

EPA Region 4
Telephone 404-562-8033

Proposed NPL: Proposed National Priority List Sites

Source: EPA
Telephone: N/A

Date of Government Version: 01/29/03
Date Made Active at EDR: 03/04/03
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 02/04/03
Elapsed ASTM days: 28
Date of Last EDR Contact: 02/04/03

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

Source: EPA
Telephone: 703-413-0223

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 12/13/02
Date Made Active at EDR: 01/15/03
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 12/26/02
Elapsed ASTM days: 20
Date of Last EDR Contact: 12/26/02

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Source: EPA
Telephone: 703-413-0223

As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/13/02
Date Made Active at EDR: 01/15/03
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 12/26/02
Elapsed ASTM days: 20
Date of Last EDR Contact: 12/26/02

CORRACTS: Corrective Action Report

Source: EPA
Telephone: 800-424-9346

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 01/15/03
Date Made Active at EDR: 03/04/03
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 01/21/03
Elapsed ASTM days: 42
Date of Last EDR Contact: 03/10/03

RCRIS: Resource Conservation and Recovery Information System

Source: EPA/NTIS
Telephone: 800-424-9346

Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

Date of Government Version: 09/09/02
Date Made Active at EDR: 10/28/02
Database Release Frequency: Varies

Date of Data Arrival at EDR: 09/24/02
Elapsed ASTM days: 34
Date of Last EDR Contact: 03/07/03

ERNS: Emergency Response Notification System

Source: National Response Center, United States Coast Guard
Telephone: 202-260-2342

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/01
Date Made Active at EDR: 07/15/02
Database Release Frequency: Annually

Date of Data Arrival at EDR: 07/02/02
Elapsed ASTM days: 13
Date of Last EDR Contact: 01/27/03

FEDERAL ASTM SUPPLEMENTAL RECORDS

BRS: Biennial Reporting System

Source: EPA/NTIS
Telephone: 800-424-9346

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/99
Database Release Frequency: Biennially

Date of Last EDR Contact: 03/17/03
Date of Next Scheduled EDR Contact: 06/16/03

CONSENT: Superfund (CERCLA) Consent Decrees

Source: EPA Regional Offices
Telephone: Varies

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: N/A
Database Release Frequency: Varies

Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

ROD: Records Of Decision

Source: EPA
Telephone: 703-416-0223

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 01/09/03
Database Release Frequency: Annually

Date of Last EDR Contact: 01/07/03
Date of Next Scheduled EDR Contact: 04/07/03

DELISTED NPL: National Priority List Deletions

Source: EPA
Telephone: N/A

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 01/29/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 02/04/03
Date of Next Scheduled EDR Contact: 05/05/03

FINDS: Facility Index System/Facility Identification Initiative Program Summary Report

Source: EPA
Telephone: N/A

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 01/14/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/06/03
Date of Next Scheduled EDR Contact: 04/07/03

HMIRS: Hazardous Materials Information Reporting System

Source: U.S. Department of Transportation
Telephone: 202-366-4555

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 11/30/02
Database Release Frequency: Annually

Date of Last EDR Contact: 01/23/03
Date of Next Scheduled EDR Contact: 04/21/03

MLTS: Material Licensing Tracking System

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/16/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/06/03
Date of Next Scheduled EDR Contact: 04/07/03

MINES: Mines Master Index File

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959

Date of Government Version: 09/10/02
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 01/03/03
Date of Next Scheduled EDR Contact: 03/31/03

NPL LIENS: Federal Superfund Liens

Source: EPA
Telephone: 205-564-4267

Federal Superfund Liens. Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner receives notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/15/91
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 02/27/03
Date of Next Scheduled EDR Contact: 05/26/03

PADS: PCB Activity Database System

Source: EPA
Telephone: 202-564-3887

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 12/12/02
Database Release Frequency: Annually

Date of Last EDR Contact: 02/10/03
Date of Next Scheduled EDR Contact: 05/12/03

RAATS: RCRA Administrative Action Tracking System

Source: EPA
Telephone: 202-564-4104

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/95
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 03/10/03
Date of Next Scheduled EDR Contact: 06/09/03

TRIS: Toxic Chemical Release Inventory System

Source: EPA
Telephone: 202-260-1531

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/00
Database Release Frequency: Annually

Date of Last EDR Contact: 12/26/02
Date of Next Scheduled EDR Contact: 03/24/03

TSCA: Toxic Substances Control Act

Source: EPA
Telephone: 202-260-5521

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/98
Database Release Frequency: Every 4 Years

Date of Last EDR Contact: 03/06/03
Date of Next Scheduled EDR Contact: 06/09/03

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

Source: EPA
Telephone: 202-564-2501

Date of Government Version: 01/28/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/26/02
Date of Next Scheduled EDR Contact: 03/24/03

SSTS: Section 7 Tracking Systems

Source: EPA
Telephone: 202-564-5008

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/00
Database Release Frequency: Annually

Date of Last EDR Contact: 01/21/03
Date of Next Scheduled EDR Contact: 04/21/03

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
Source: EPA/Office of Prevention, Pesticides and Toxic Substances

Telephone: 202-564-2501

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/28/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/26/02
Date of Next Scheduled EDR Contact: 03/24/03

STATE OF MASSACHUSETTS ASTM STANDARD RECORDS

SHWS: Site Transition List

Source: Department of Environmental Protection

Telephone: 617-292-5990

Non leaking underground storage tank sites within the Releases Database.

Date of Government Version: 01/29/03
Date Made Active at EDR: 03/04/03
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 02/10/03
Elapsed ASTM days: 22
Date of Last EDR Contact: 02/10/03

SWF/LF: Solid Waste Facility Database/Transfer Stations

Source: Department of Environmental Protection

Telephone: 617-292-5989

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 01/06/03
Date Made Active at EDR: 02/14/03
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 02/03/03
Elapsed ASTM days: 11
Date of Last EDR Contact: 02/03/03

LUST: Site Transition List

Source: Department of Environmental Protection

Telephone: 617-292-5990

Sites within the Releases Database that have a UST listed as its source.

Date of Government Version: 01/29/03
Date Made Active at EDR: 03/04/03
Database Release Frequency: Varies

Date of Data Arrival at EDR: 02/10/03
Elapsed ASTM days: 22
Date of Last EDR Contact: 02/10/03

UST: Summary Listing of all the Tanks Registered in the State of Massachusetts

Source: Department of Fire Services, Office of the Public Safety

Telephone: 978-567-3715

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 02/03/03
Date Made Active at EDR: 03/13/03
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 02/18/03
Elapsed ASTM days: 23
Date of Last EDR Contact: 02/18/03

RELEASE: Reportable Releases

Source: Department of Environmental Protection

Telephone: 617-292-5990

Contains information on all releases of oil and hazardous materials that have been reported to DEP

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 01/29/03
Date Made Active at EDR: 03/04/03
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 02/10/03
Elapsed ASTM days: 22
Date of Last EDR Contact: 02/10/03

STATE OF MASSACHUSETTS ASTM SUPPLEMENTAL RECORDS

AST: Aboveground Storage Tank Database
Source: Department of Public Safety
Telephone: 978-567-3715
Registered Aboveground Storage Tanks.

Date of Government Version: 02/03/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 02/18/03
Date of Next Scheduled EDR Contact: 05/19/03

MA SPILLS: Historical Spill List

Source: Department of Environmental Protection
Telephone: 617-292-5720

The Spills Database was the release notification tracking system for spills that occurred prior to October 1, 1993. This information should be considered to be primarily of historical interest since all of the listed spills have either been cleaned up or assigned new tracking numbers and moved to the Reportable Releases or Sites Transition List databases.

Date of Government Version: 09/30/93
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 07/29/94
Date of Next Scheduled EDR Contact: N/A

EDR PROPRIETARY HISTORICAL DATABASES

Former Manufactured Gas (Coal Gas) Sites: The existence and location of Coal Gas sites is provided exclusively to EDR by Real Property Scan, Inc. ©Copyright 1993 Real Property Scan, Inc. For a technical description of the types of hazards which may be found at such sites, contact your EDR customer service representative.

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OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

Oil/Gas Pipelines/Electrical Transmission Lines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines and electrical transmission lines.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

STREET AND ADDRESS INFORMATION

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GEOCHECK® - PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

ASHBURNHAM HIGHWAY DEPARTMENT
17 CENTRAL STREET
ASHBURNHAM, MA 01430

TARGET PROPERTY COORDINATES

Latitude (North):	42.633801 - 42° 38' 1.7"
Longitude (West):	71.909599 - 71° 54' 34.6"
Universal Transverse Mercator:	Zone 19
UTM X (Meters):	261424.5
UTM Y (Meters):	4724040.5

EDR's GeoCheck Physical Setting Source Addendum has been developed to assist the environmental professional with the collection of physical setting source information in accordance with ASTM 1527-00, Section 7.2.3. Section 7.2.3 requires that a current USGS 7.5 Minute Topographic Map (or equivalent, such as the USGS Digital Elevation Model) be reviewed. It also requires that one or more additional physical setting sources be sought when (1) conditions have been identified in which hazardous substances or petroleum products are likely to migrate to or from the property, and (2) more information than is provided in the current USGS 7.5 Minute Topographic Map (or equivalent) is generally obtained, pursuant to local good commercial or customary practice, to assess the impact of migration of recognized environmental conditions in connection with the property. Such additional physical setting sources generally include information about the topographic, hydrologic, hydrogeologic, and geologic characteristics of a site, and wells in the area.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata. EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

USGS TOPOGRAPHIC MAP ASSOCIATED WITH THIS SITE

Target Property: 2442071-F8 ASHBURNHAM, MA NH
Source: USGS 7.5 min quad index

GENERAL TOPOGRAPHIC GRADIENT AT TARGET PROPERTY

Target Property: General East

Source: General Topographic Gradient has been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County
WORCESTER, MA

FEMA Flood
Electronic Data
YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 2502900016B

Additional Panels in search area:
2502900017B
2502900018B
2502900019B

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property
WEST HALF OF ASHBURNHAM

NWI Electronic
Data Coverage
YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

AQUIFLOW®

Search Radius: 2.000 Miles.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
Not Reported		

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Paleozoic
System:	Devonian
Series:	Devonian
Code:	De (decoded above as Era, System & Series)

GEOLOGIC AGE IDENTIFICATION

Category: Eugeosynclinal Deposits

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	PERU
Soil Surface Texture:	extremely stony - loam
Hydrologic Group:	Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.
Soil Drainage Class:	Moderately well drained. Soils have a layer of low hydraulic conductivity, wet state high in the profile. Depth to water table is 3 to 6 feet.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: MODERATE

Depth to Bedrock Min: > 60 inches

Depth to Bedrock Max: > 60 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Permeability Rate (in/hr)	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	6 inches	extremely stony - loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COURSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 2.00 Min: 0.60	Max: 6.00 Min: 3.60
2	6 inches	22 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COURSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 2.00 Min: 0.60	Max: 6.00 Min: 3.60
3	22 inches	65 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COURSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 0.60 Min: 0.06	Max: 6.00 Min: 3.60

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: unweathered bedrock
muck

Surficial Soil Types: unweathered bedrock
muck

Shallow Soil Types: No Other Soil Types

Deeper Soil Types: unweathered bedrock
muck

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

ADDITIONAL ENVIRONMENTAL RECORD SOURCES

According to ASTM E 1527-00, Section 7.2.2, "one or more additional state or local sources of environmental records may be checked, in the discretion of the environmental professional, to enhance and supplement federal and state sources... Factors to consider in determining which local or additional state records, if any, should be checked include (1) whether they are reasonably ascertainable, (2) whether they are sufficiently useful, accurate, and complete in light of the objective of the records review (see 7.1.1), and (3) whether they are obtained, pursuant to local, good commercial or customary practice." One of the record sources listed in Section 7.2.2 is water well information. Water well information can be used to assist the environmental professional in assessing sources that may impact groundwater flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
1	423759071543801	0 - 1/8 Mile SSW
A3	423810071544901	1/8 - 1/4 Mile NW
4	423754071541801	1/4 - 1/2 Mile ESE
A5	423811071545701	1/4 - 1/2 Mile WNW
6	423743071543801	1/4 - 1/2 Mile South
7	423821071543201	1/4 - 1/2 Mile North
8	423840071550101	1/2 - 1 Mile NNW
9	423811071553401	1/2 - 1 Mile WNW
10	423822071533601	1/2 - 1 Mile ENE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

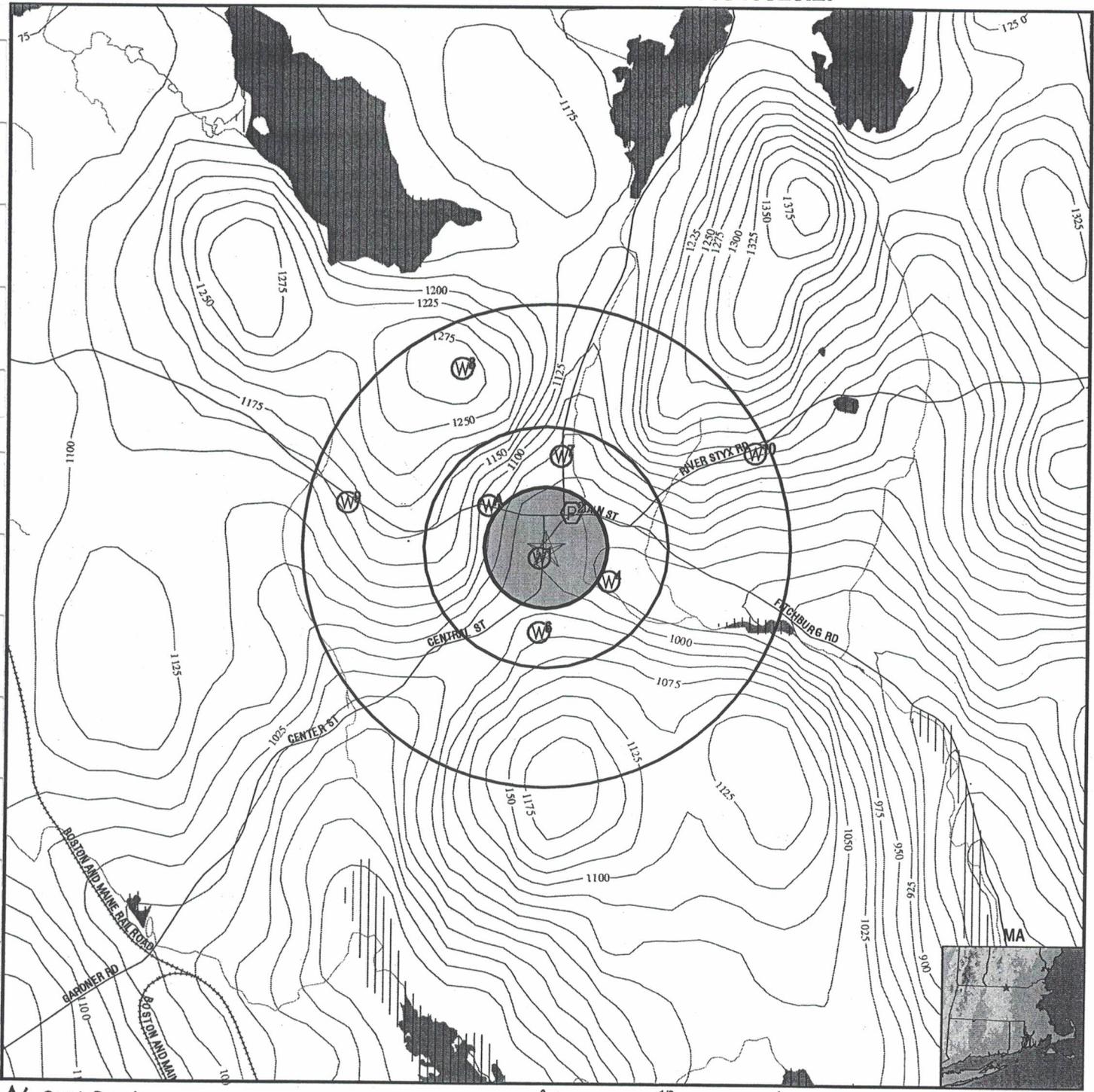
<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
2	MA2011002	1/8 - 1/4 Mile NE

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 00946525.2r



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Potentially Productive Aquifers
- Not Potentially Productive Aquifers
- DEP Approved Zone IIs
- EPA Designated Sole Source Aquifers

TARGET PROPERTY:	Ashburnham Highway Department	CUSTOMER:	TRC Environmental Consultants
ADDRESS:	17 Central Street	CONTACT:	Elise Mazareas
CITY/STATE/ZIP:	Ashburnham MA 01430	INQUIRY #:	00946525.2r
LAT/LONG:	42.6338 / 71.9096	DATE:	March 24, 2003 10:21 am

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

1
SSW
0 - 1/8 Mile
Higher

FED USGS 423759071543801

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1963	County:	Worcester
Altitude:	985.00 ft.	State:	Massachusetts
Well Depth:	10.00 ft.	Topographic Setting:	Valley flat
Depth to Water Table:	Not Reported	Prim. Use of Site:	Test
Date Measured:	03011963	Prim. Use of Water:	Unused

2
NE
1/8 - 1/4 Mile
Higher

FRDS PWS MA2011002

PWS ID: MA2011002 PWS Status: Active
Date Initiated: 9003 Date Deactivated: Not Reported
PWS Name: TRUSTEES CAMP SPLIT ROCK
 STOWELL ROAD
 ASHBURNHAM, MA 01430

Addressee / Facility: Mailing
 NASHUA VALLEY BOY SCOUT ASSOC
 P O BOX 128
 LANCASTER, MA 01423

Facility Latitude:	42 38 09	Facility Longitude:	071 54 29
City Served:	Not Reported		
Treatment Class:	Treated	Population:	00000025

PWS currently has or had major violation(s) or enforcement: Yes

Violations information not reported.

ENFORCEMENT INFORMATION:

System Name:	CAMP SPLIT ROCK		
Violation Type:	Monitoring, Regular		
Contaminant:	NITRITE		
Compliance Period:	1995-04-01 - 1995-06-30	Analytical Value:	00000000.00
Violation ID:	9600001V	Enforcement ID:	9600003
Enforcement Date:	1996-04-22	Enf. Action:	State Formal NOV Issued

A3
NW
1/8 - 1/4 Mile
Higher

FED USGS 423810071544901

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1963	County:	Worcester
Altitude:	1055.00 ft.	State:	Massachusetts
Well Depth:	8.00 ft.	Topographic Setting:	Hillside (slope)
Depth to Water Table:	Not Reported	Prim. Use of Site:	Test
Date Measured:	Not Reported	Prim. Use of Water:	Unused

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

4
ESE
1/4 - 1/2 Mile
Lower

FED USGS 423754071541801

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1963	County:	Worcester
Altitude:	949.00 ft.	State:	Massachusetts
Well Depth:	10.00 ft.	Topographic Setting:	Valley flat
Depth to Water Table:	Not Reported	Prim. Use of Site:	Test
Date Measured:	Not Reported	Prim. Use of Water:	Unused

A5
WNW
1/4 - 1/2 Mile
Higher

FED USGS 423811071545701

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1963	County:	Worcester
Altitude:	1100.00 ft.	State:	Massachusetts
Well Depth:	8.00 ft.	Topographic Setting:	Hillside (slope)
Depth to Water Table:	Not Reported	Prim. Use of Site:	Test
Date Measured:	Not Reported	Prim. Use of Water:	Unused

6
South
1/4 - 1/2 Mile
Higher

FED USGS 423743071543801

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1963	County:	Worcester
Altitude:	1030.00 ft.	State:	Massachusetts
Well Depth:	10.00 ft.	Topographic Setting:	Hillside (slope)
Depth to Water Table:	Not Reported	Prim. Use of Site:	Test
Date Measured:	05011963	Prim. Use of Water:	Unused

7
North
1/4 - 1/2 Mile
Higher

FED USGS 423821071543201

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1963	County:	Worcester
Altitude:	1035.00 ft.	State:	Massachusetts
Well Depth:	8.00 ft.	Topographic Setting:	Hillside (slope)
Depth to Water Table:	Not Reported	Prim. Use of Site:	Test
Date Measured:	Not Reported	Prim. Use of Water:	Unused

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

8		
NNW		FED USGS
1/2 - 1 Mile		423840071550101
Higher		

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1962	County:	Worcester
Altitude:	1315.00 ft.	State:	Massachusetts
Well Depth:	345.00 ft.	Topographic Setting:	Hilltop
Depth to Water Table:	18.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	05011962	Prim. Use of Water:	Domestic

9		
WNW		FED USGS
1/2 - 1 Mile		423811071553401
Higher		

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1966	County:	Worcester
Altitude:	1195.00 ft.	State:	Massachusetts
Well Depth:	205.00 ft.	Topographic Setting:	Hillside (slope)
Depth to Water Table:	20.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	09011966	Prim. Use of Water:	Domestic

10		
ENE		FED USGS
1/2 - 1 Mile		423822071533601
Higher		

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	Not Reported	County:	Worcester
Altitude:	1150.00 ft.	State:	Massachusetts
Well Depth:	Not Reported	Topographic Setting:	Hillside (slope)
Depth to Water Table:	Not Reported	Prim. Use of Site:	Withdrawal of water
Date Measured:	Not Reported	Prim. Use of Water:	Domestic

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for WORCESTER County: 1

- Note: Zone 1 indoor average level > 4 pCi/L.
- : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
- : Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 01430

Number of sites tested: 1

<u>Area</u>	<u>Average Activity</u>	<u>% <4 pCi/L</u>	<u>% 4-20 pCi/L</u>	<u>% >20 pCi/L</u>
Living Area - 1st Floor	Not Reported	Not Reported	Not Reported	Not Reported
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	1.700 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the national Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

ADDITIONAL ENVIRONMENTAL RECORD SOURCES

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: In November 1971 the United States Geological Survey (USGS) implemented a national water resource information tracking system. This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on more than 900,000 wells, springs, and other sources of groundwater.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STATE RECORDS

Massachusetts Geographic Information System (MassGIS) Datalayers

Source: Executive Office of Environmental Affairs

Public Water Supply Database: The Public Water Supply datalayer contains the locations of public community surface and groundwater supply sources and public non-community supply sources as defined in 310 CMR 22.00.

Areas of Critical Environmental Concern Datalayer: The Areas of Critical Environmental Concern (ACEC) datalayer shows the location of areas that have been designated ACECs by the Secretary of Environmental Affairs. ACEC designation requires greater environmental review of certain kinds of proposed development under state jurisdiction within the ACEC boundaries. The ACEC Program is administered by the Department of Environmental Management (DEM) on behalf of the Secretary of Environmental Affairs. The Massachusetts Coastal Zone Management (MCZM) Office managed the original Coastal ACEC Program from 1978 to 1993, and continues to play a key role in monitoring coastal ACECs. Procedures for ACEC designation and the general policies governing the effects of designation are contained in the ACEC regulations (301 CMR 12.00). The ACEC datalayer has been compiled by MCZM and DEM and includes both coastal and inland areas.

EPA Designated Sole Source Aquifers Datalayer: The Sole Source Aquifer datalayer was compiled by the Department of Environmental Protection (DEP) Division of Water Supply (DWS). Seven Sole Source Aquifers have been designated by the US Environmental Protection Agency (EPA) for Massachusetts. A Sole Source Aquifer (SSA) is an aquifer designated by US EPA as the sole or principal source of drinking water for a given aquifer service area; that is, an aquifer which is needed to supply 50% or more of the drinking water for that area and for which there are no reasonably available alternative sources should that aquifer become contaminated. The aquifers were defined by a EPA hydrogeologist.

Aquifers Datalayer: MassGIS produced an aquifer datalayer composed of 20 individual panels, generally based on the boundaries of the major drainage basins. Areas of high and medium yield were mapped. This datalayer includes polygon attribute coding to help in the identification of areas in which cleanup of hazardous waste sites must meet drinking water standards, as defined in the Massachusetts Contingency Plan (MCP) (310 CMR 40.00000).

DEP Approved Zone IIs Datalayer: The Department of Environmental Protection (DEP) approved Zone IIs datalayer was compiled by the DEP Division of Water Supply (DWS). The database contains 281 approved Zone IIs statewide. As stated in 310 CMR 22.02, a Zone II is "that area of an aquifer which contributes water to a well under the most severe pumping and recharge conditions that can be realistically anticipated (180 days of pumping at safe yield, with no recharge from precipitation.) It is bounded by the groundwater divides which result from pumping the well and by the contact of the aquifer with less permeable materials such as till or bedrock. In some cases, streams or lakes may act as recharge boundaries. In all cases, Zone IIs shall extend up gradient to its point of intersection with prevailing hydrogeologic boundaries (a groundwater flow divide, a contact with till or bedrock, or a recharge boundary)." These data are used in association with the Public Water Supplies datalayer. The following describes certain unique features of this association.

- Any proposed new well which will pump at least 100,000 gallons per day must have a Zone II delineation completed and approved by DEP prior to the well coming on line.
- Additionally, a new source may not be on-line yet, but other, older wells may fall within its Zone II boundary.
- Further, existing wells must have a Zone II delineated as a condition of receiving a water withdrawal permit under the Water Management Act.

RADON

Area Radon Information

Source: USGS

Telephone: 303-202-4210

The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones

Source: EPA

Telephone: 202-564-9370

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Epicenters: World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration

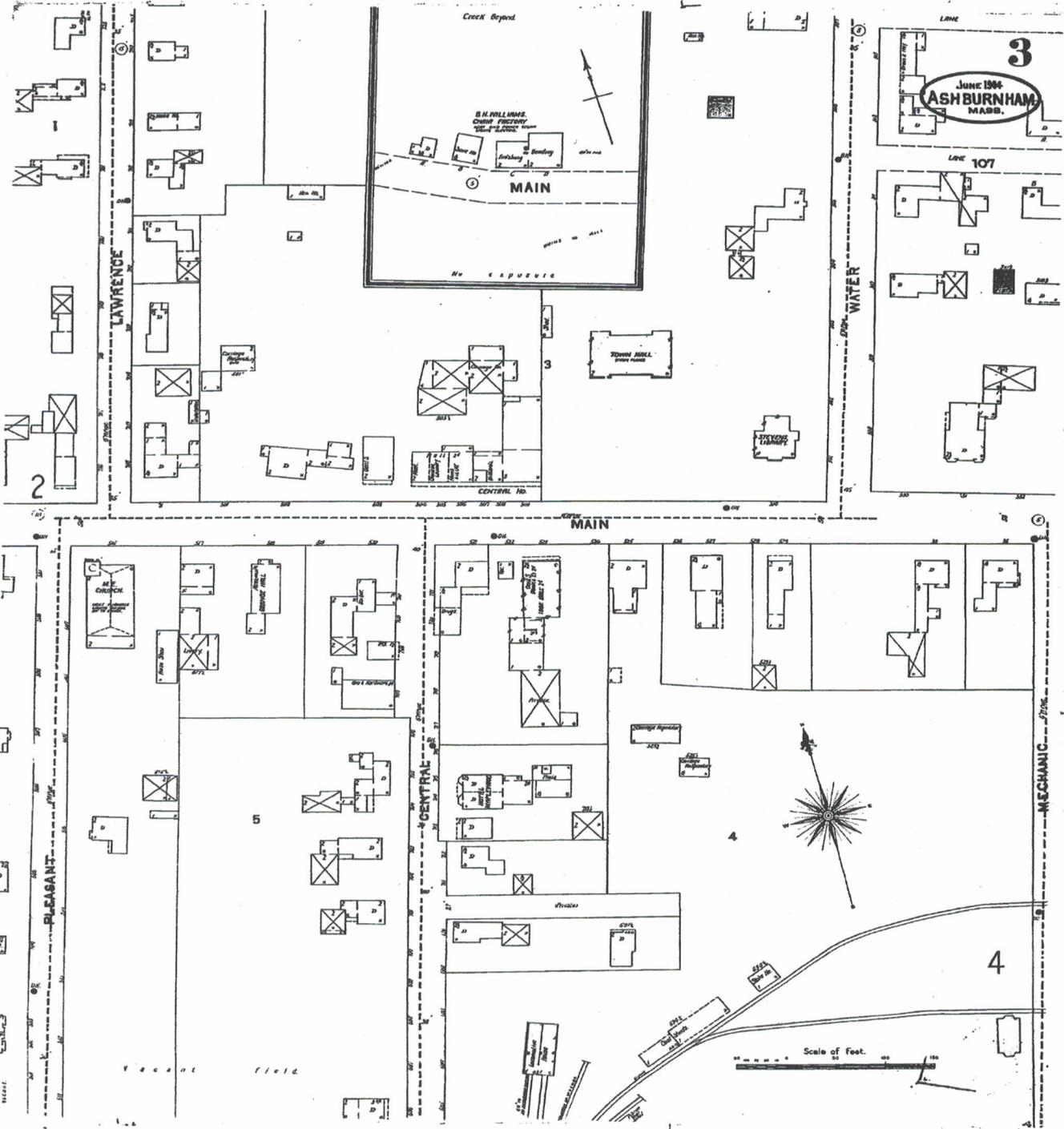


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Year EDR Research Associate

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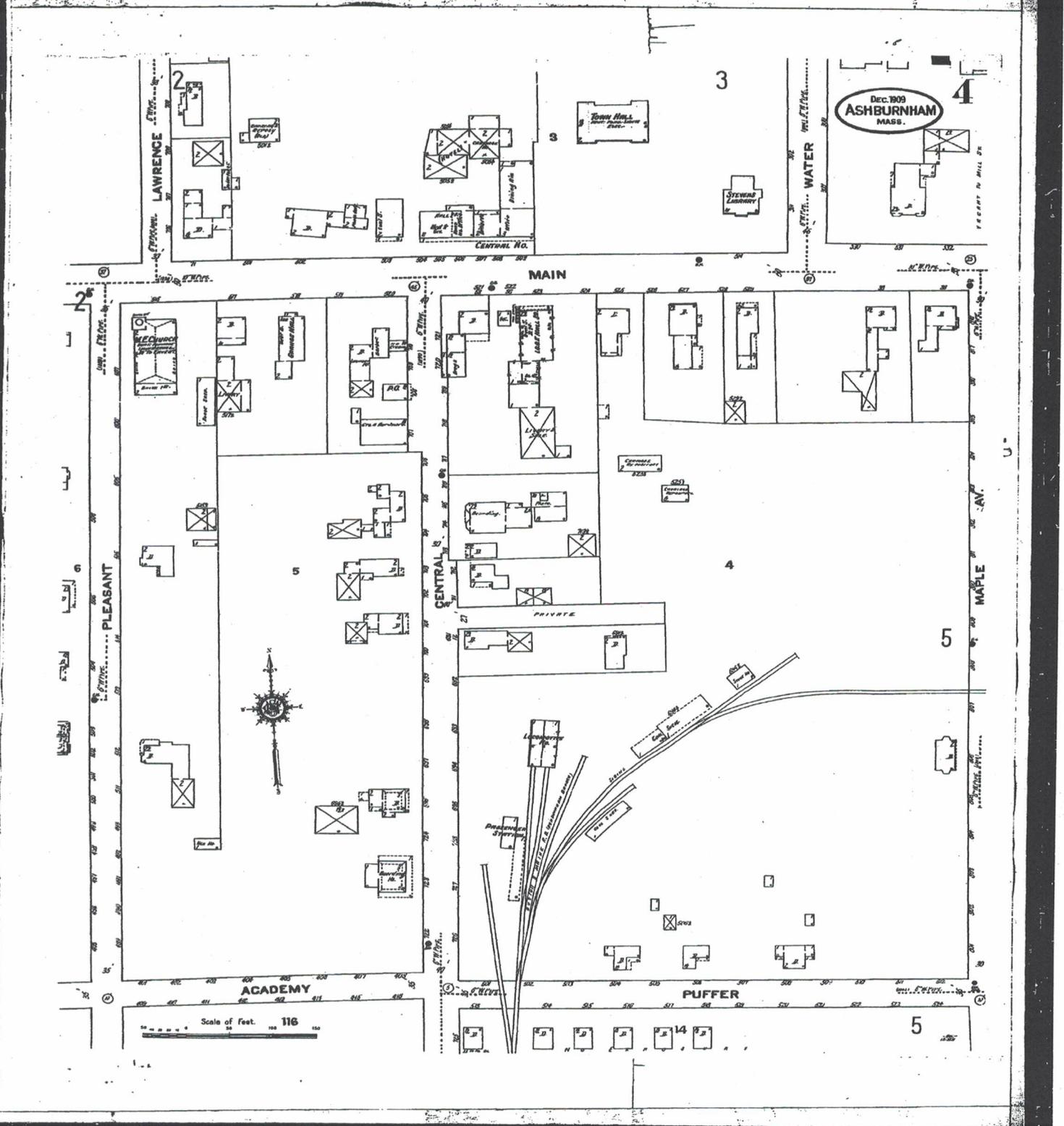


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APPENDIX 6

Prior Environmental Site Assessments

**THE MASSACHUSETTS CONTINGENCY PLAN
310 CMR 40.0000**

**RESPONSE ACTION OUTCOME (RAO) STATEMENT
310 CMR 40.1000
and
310 CMR 40.0427: IMMEDIATE RESPONSE ACTION (IRA)
COMPLETION REPORT**

Site Location:

**17 Central Street
Ashburnham, MA 01430
Release Tracking Number (RT#) 2-12224**

RAO Statement and Report Prepared For:

**Town of Ashburnham
Highway Department
17 Central Street
Ashburnham, MA 01430**

RAO Statement and Report Prepared By:



**W. E. Kuriger Associates
90 Atlantic Avenue
Fitchburg, MA 01420
William E. Kuriger, Ph.D., L.S.P. 8104**

February 12, 1999

**THE MASSACHUSETTS CONTINGENCY PLAN
310 CMR 40.0000**

**RESPONSE ACTION OUTCOME (RAO) STATEMENT
310 CMR 40.1000**

Site Location:

**17 Central Street
Ashburnham, MA 01430
Release Tracking Number (RT#) 2-12224**

RAO Statement and Report Prepared For:

**Town of Ashburnham
Highway Department
17 Central Street
Ashburnham, MA 01430**

RAO Statement and Report Prepared By:



**W. E. Kuriger Associates
90 Atlantic Avenue
Fitchburg, MA 01420
William E. Kuriger, Ph.D., L.S.P. 8104**

February 12, 1999

Section 1

40.1056: (1)(a) Disposal Site Name, Address and Release Tracking Number (RT#)

Ashburnham Highway Department Garage, 17 Central Street, Ashburnham, MA 01430, RT# 2-12224.

40.1056: (1)(b) Class of the RAO

The Class of the RAO is A-2 as defined at 40.1036: (2). A permanent solution has been achieved and the level of oil in the environment has been reduced to levels that approach but are not absolute background; and one or more Activity and Use Limitations are not required to maintain a level of No Significant Risk.

40.1056: (1)(c) Risk Characterization

40.1056: (1)(c) Method 1 Risk Characterizations

40.0904: Site Information Required for Risk Characterization

(1) Physical Characteristics

The general location of the property, which consists of the Ashburnham Highway Department garage is shown in Figure 1, which is a copy of a portion of the U.S.G.S. Map of the Ashburnham quadrangle. The scale is one inch equals about 2,083 feet. The site is located in a commercial and residential zoned area of Ashburnham. The address of the property is 17 Central Street. Town water and sewer service the buildings at the property.

Figure 2 shows the outline of the property boundaries. The property is bordered by Central Street to the west, Maple Avenue to the east, and Puffer Street to the south. In February, 1999, commercial land use existed to the north and east, and residential land use to the west and south. To the north, about 600 feet at the corner of Main Street and Central Street and upgradient is a Mobil gasoline station. In the past, a heating oil storage facility of Roy Bros. Inc., Ashburnham, MA, that included above ground storage tanks, was present on the parcel of land to the north, upgradient and adjacent to the Highway Department property.

The property consists of 4.2 acres of land that extends from Central Street to Maple Avenue, to Puffer Street, with several buildings and sheds. The disposal site includes a small (less than 1,000 square feet) portion of the property. Figure 2A shows the location of the disposal site relative to the property. The land of the site is level to slightly sloping towards the south and southeast. The land elevations are from about 303 meters (994 feet) above sea level in the

northwest corner of the property, to about 300 meters (984 feet) in the southwest portions of the property.

Based on land elevations, existing monitoring well measurements (MW-1 and MW-2 SEA), the presence of streams to the east and south, and the findings of S.E.A. consultants from monitoring well data and observations during activities associated with RTN 2-10039, an adjacent disposal site discovered during the removal of a diesel fuel underground storage tank (UST) in 1993, the direction of groundwater flow at the site is from the north to the south and southeast.

Soils and Bedrock

The soils at the disposal site observed during excavation and removal of the 4,000 gallon gasoline UST included sand and some gravel. The U. S. Soil Conservation Service mapped the soils in the area of the property as Allagash series soils, which are deep, fine sandy loam to gravely loamy fine sand, well drained soils on glacial outwash plains, terraces and kames.

Bedrock was not encountered during excavations at the disposal site. During installation of MW-1 SEA and MW-2 SEA bedrock was reported at depths of 9.25 feet and 14.00 feet respectively.

Water Resources

There are no surface water bodies at the property that includes the disposal site. A tributary to Phillips Brook is located about 500 feet to the south, and Phillips Brook is located about 900 feet to the east of the disposal site. Phillips Brook is classified as a Class B water in 314 CMR 4:00: MASSACHUSETTS SURFACE WATER QUALITY STANDARDS. Class B waters are designated as a habitat for fish, other aquatic life, and wildlife, and for primary and secondary contact recreation. There are no Class A surface waters, which are designated as sources of public water supply, within a 2,000-foot radius of the site.

There are no wetlands or Areas of Critical Concern in the vicinity of the site. There are no or habitats of State-listed rare wetlands wildlife or vernal pools as delineated in the 1998 edition of the Atlas of Estimated Habitats of State-Listed Rare Wetlands Wildlife in the vicinity of the site.

Figure 3 is a copy of a portion of the MassGIS Aquifer Resources map that includes the disposal site. There are no medium or high yield potentially productive aquifers or public or private water supplies in the vicinity of the site. Municipally provided drinking water serves the downtown area of Ashburnham which includes the disposal site and residences to the west, east and south. At this time, private drinking water wells provide drinking water for most of the residents outside of the downtown area (beyond ½ mile radius) of Ashburnham.

(2) Extent of Release

The release was discovered during the removal of a 4,000-gallon single walled, steel, corrosion protected gasoline underground storage tank (UST) on May 21, 1998. Excavation, UST cleaning, venting, and removal were conducted by Cyn Environmental, Inc., Stoughton, MA. Upon removal of the UST, petroleum vapors and black stained soils under and around the UST were encountered.

The UST appeared to be in good condition, with the exception of small amounts of corrosion along the top seam at the south end of the tank. The UST removed was installed in 1984, 14 years ago. The UST was installed to replace a previous gasoline and/or diesel UST that had leaked. Some of the contamination encountered in 1994 during the removal of an adjacent 1,000 gallon diesel UST and in 1998 during the removal of the 4,000 gallon gasoline UST could have been due to the previous UST.

Figures 2 and 2A show the approximate location of the former UST's at the site. Upon completion of the UST removal the excavation measured about 15 wide X 24 feet long. Groundwater was observed at a depth of about 7.6 feet below the surface at MW-1. The gasoline UST removed in May, 1998 measured 24 feet long X 6.0 feet in diameter.

The release may have been from a combination of gasoline and/or diesel spillage from the two UST's recently (1993 and 1998) removed, (1,000 gallon diesel UST that was removed on September 23, 1993 that was located adjacent to and east of the gasoline UST) and the previously mentioned prior UST. The diesel UST was removed and remediation undertaken and an RAO and Phase I report prepared by S.E.A. Consultants under RTN 2-10039.

Upon removal of the 4,000 gallon gasoline UST on May 21, 1998, total volatile organic readings were made with the Jar Headspace Method via an Hnu photo-ionization meter Model PI-101 calibrated for direct reading of benzene. Data of Total Volatile Organics from Hnu readings are listed in Table 1.

Table 1. Jar Volatile Headspace Photoionization Readings Obtained After Removal of the Gasoline UST.

Soil Location	Hnu Reading [parts per million (ppm) in air]
North	50
South	90
East	110
West	50
Bottom*	130
Background	1.0

*Bottom - soils that were located under the UST.

The readings over 100 ppm v/v in air required notification to the Department of Environmental Protection (DEP) within 72 hours per The Massachusetts Contingency Plan at 310 CMR: 40.0313: (2).

William Brennan, Superintendent of the Highway Department reported the release to Kevin Daoust of the DEP May 21, 1998, within 72 hours of first learning of the release and data results from the volatile headspace readings. An Immediate Release Action Plan was outlined to Mr. Daoust by William E. Kuriger, Ph.D., L.S.P. that included removal of contaminated soils and assessment.

Soil samples were collected from the sides and bottom of the excavation on May 21, 1998. A summary of the results is included in Table 2. Elevated levels of Aliphatic/Aromatic Extractable Petroleum Hydrocarbon (EPH) Compounds that were over MCP Reportable Concentrations were found in the Bottom sample. Table 2 lists those classes of EPH components and the MCP RCS-1 Reportable Concentrations.

Table 2. Results for Soil Samples Taken on May 21, 1998 and Analyzed for Volatile Petroleum Hydrocarbons (VPH) and Extractable Petroleum Hydrocarbons (EPH).

VPH					
Parameter	North	South	East	West	Bottom
mg/kg					
C9-C12	88	74	110	ND	180
C9-C10 Aromatics	44	35	55	ND	96
ug/kg					
Benzene	ND	190	ND	ND	ND
Toluene	230	340	ND	ND	600
Ethylbenzene	230	ND	550	ND	430
m,p-Xylenes	1700	550	2700	ND	1500
o-Xylene	380	ND	650	ND	740
Naphthalene	4400	4600	5900	680	8300

Methyl-tert-butylether	ND	210	570	ND	ND
------------------------	----	-----	-----	----	----

ND = Not Detected

EPH					
Parameter	North	South	East	West	Bottom
mg/kg					
C9-C18 Aliphatics	1,000	550	950	ND	3,400
C19-C36 Aliphatics	280	160	310	ND	970
C11-C22 Aromatics	540	260	510	ND	1,800
ug/kg					
Anthracene	ND	ND	360	ND	ND
Fluoranthene	ND	470	300	ND	ND
Fluorene	660	ND	390	ND	1600
2-Methylnaphthalene	1200	ND	2700	ND	4600
Naphthalene	ND	ND	540	ND	ND
Phenanthrene	1100	650	760	ND	2100
Pyrene	ND	350	290	ND	ND

ND = Not Detected

Table 3. Bottom Sample Results for EPH Analysis, Collected on May 21, 1998.

Aliphatic/Aromatics	Result (mg/kg)	MCP RCS-1 Standard
C9-C18	3,400	1,000
C19-C36	970	2,500
C11-C22	1,800	200

The volatile petroleum hydrocarbon (VPH) analysis also showed naphthalene levels consistently over the RCS-1 standard of 4.00 mg/kg (4,000 ug/kg).

The IRA included contaminated soil removals conducted on September 22, 1998. The length and width and depth of the excavation were increased and deepened to remove areas of contamination found when soils were sampled on May 21, 1998. Following excavation, soil samples were taken from the excavation. Table 2 lists the results of analyses.

Table 4. Soil Samples Taken on September 22, 1998 for Volatile Petroleum Hydrocarbons (VPH) and Extractable Petroleum Hydrocarbons (EPH).

VPH					
Parameter	North	South	East	West	Bottom
C5-C8 Aliphatics	ND	170 (mg/kg)	17 (mg/kg)	ND	3.5(mg/kg)
C9-C12 Aliphatics	ND	200	65	ND	4.3
C9-C10 Aromatics	ND	120	33	ND	1.0
Toluene	ND (mg/kg)	0.47 (mg/kg)	ND (mg/kg)	ND (mg/kg)	ND(mg/kg)
Ethylbenzene	ND	0.39	ND	ND	ND
m,p-Xylenes	ND	1.6	0.17	ND	ND
o-Xylene	ND	1.4	ND	ND	ND
Naphthalene	ND	2.8	0.92	ND	ND

EPH					
Parameter	North	South	East	West	Bottom
C9-C18 Aliphatics	ND	49	ND	ND	ND
C19-C36 Aliphatics	ND	28	ND	ND	ND
C11-C22 Aromatics	ND	55	ND	ND	ND
2-Methylnaphthalene	ND	0.17	ND	ND	ND
Pyrene	ND	0.17	ND	ND	ND

ND = Not Detectable

The results for C5-C8 aliphatics and C9-C10 aromatic hydrocarbons were slightly higher than S-1/GW-2 risk characterization standards in the South wall, but were not "hot spots" when compared to data from the Bottom and East walls. None of the EPH data for hydrocarbons exceeded S-1/GW-2 standards.

The excavated soils were analyzed for parameters required for disposal at an asphalt batching plant. The results of analysis are presented in Table 4.

Table 5. Composite Sample Analysis for Contaminated Soil Pile, Collected on September 22, 1998 .

Parameter	Soil Pile
Benzene	0.1 (mg/kg)
n-Butylbenzene	1.2

sec-Butylbenzene	0.25
Ethylbenzene	0.11
Isopropylbenzene	0.11
4-Isopropyltoluene	0.38
Naphthalene	0.67
n-Propylbenzene	0.15
Tetrachloroethene	0.72
Toluene	0.22
1,2,4-Trimethylbenzene	1.5
1,3,5-Trimethylbenzene	0.99
m,p-Xylenes	0.35
o-Xylene	0.98
Methyl-t-butyl ether	0.68
TPH by IR #1	890 (mg/kg)
TPH by IR #2	1,000 (mg/kg)
Total Chromium	5.67 (mg/kg)
Total Lead	18.6
TCLP Lead	0.032
pH	6.80
Flash Point	ND
Reactivity	ND
PCB's	ND

ND = Not Detected

On September 28, 1998, groundwater in MW-1, installed in the center of the excavation, was purged of three well volumes and sampled into appropriate sample bottles for VPH and EPH analysis. Table 4 lists the results of the analysis.

Table 6. Water Sample Collected from Monitoring Well MW-1 on September 28, 1998 and Tested for Volatile Petroleum Hydrocarbons (VPH), and Extractable Petroleum Hydrocarbons (EPH).

Volatile Petroleum Hydrocarbons		
Parameter	MW-1	GW-2
C5-C8 Aliphatics	0.29 (mg/L)	1 (mg/L)
C9-C12 Aliphatics	0.67	1
C9-C10 Aromatics	3.5	5
Ethylbenzene	0.014 (mg/L)	30 (mg/L)

m,p-Xylene	0.064	6
Naphthalene	0.034	6
Extractable Petroleum Hydrocarbons		
C9-C18 Aliphatics	0.6 (mg/L)	1
C19-C36 Aliphatics	0.8	N/A
C11-C22 Aromatics	1.7	50
2-Methylnaphthalene	0.013 (mg/L)	10

N/A = Not Applicable

None of the results exceeded GW-2 standards.

40.0904: (2)(b) Background Concentrations

The property and disposal site area were used as a railroad station and repair facility in the 1800's and early 1900's. Currently, numerous vehicles are stored at the property for use by the Highway Department.

Background concentrations of oil at and in the vicinity of the disposal site may exist due to residues that are incidental to the normal operation of motor vehicles, and residues from railroad operations in the past. Coal ash previously buried at the site could also contribute to background TPH levels in subsurface soils.

40.0904: (2)(c) Migration pathways

Possible migration pathways from the disposal site include possible residual gasoline vapors from soils and groundwater reaching indoor air in the garage and in the buildings.

Groundwater is also a likely migration pathway since groundwater is present at the property and moves through the disposal site at depths where contaminants were present.

Soils are also a possible migration pathway if contact occurs with contaminated soils.

40.0904: (3) Characterization of the Oil and/or Hazardous Material

(a) Physical Characteristics of Oil at the Site

Gasoline and Diesel Fuel

Gasoline

Gasoline is a fuel product that consists typically of hydrocarbons in the range of C4 to C12 with a boiling range of 50 to 200 degrees C. Some of the gasoline at the disposal site was possibly greater than 20 years old, and therefore probably contained some lead as an anti-knock compound.

Benzene, toluene, ethylbenzene benzene and xylene and similar chemicals compose 10-20% of gasoline. Other aromatics make up 39% and aliphatic compounds 49-62%.

Diesel Fuel

Heating oil and diesel fuel are both similar in composition. They are less volatile than gasoline and consist of hydrocarbons having a size range of C9 to C11 through C20.

Diesel fuel has a boiling range of 163 to 357 degrees C.

Aliphatic hydrocarbons compose up to 64% of the total hydrocarbon content of #2 heating oil, alkenes about 1-2%, and aromatics up to 35%.

40.0904: (3)(b) Environmental Fate and Transport Characteristics

Larger chain length petroleum compounds are less mobile, more stable, have lower volatility, may bio-accumulate and may degrade over time in the environment. As an example, fluoranthene is less mobile, more stable and has lower volatility than benzene.

Volatile compounds, which are found in gasoline and in diesel fuel, are more mobile, less stable, have higher volatility, do not bioaccumulate and will degrade and move through the environment more quickly.

The two contaminants identified at the disposal sites are gasoline and diesel fuel. Gasoline would be expected to be more mobile into groundwater and air than diesel fuel, although diesel fuel can also migrate in air and groundwater.

40.0921: Identification of Human Receptors

Current Use

The disposal site is located in a commercial and residential neighborhood, where adults and children are present. The current use of the property is for commercial use. Adults use the property that includes the disposal site. Children are not typically present at the disposal site, but may visit or walk through the property.

Reasonably Foreseeable Uses

The reasonably foreseeable use of the property where the disposal site is located is commercial use. The abutting properties are used for commercial and residential purposes. The reasonable foreseeable use of the property is continued use for the Ashburnham Highway Department.

40.0922: Identification of Environmental Receptors

The property and disposal site are located in a rural urban setting, near the center of Ashburnham. There are trees, lawns and urban animals such as gray squirrels and birds in the neighborhood.

Habitats such as Areas of Critical Environmental Concern, habitats of rare wetlands wildlife and/or certified vernal pools are not present at the site, as mapped by the Massachusetts Natural Heritage Atlas, 1997-98 edition.

Portions of Phillips Brook are located about 500 feet to the west of the disposal site, and about 1,000 feet to the east.

40.0923: Identification of Site Activities and Uses

At the current time the property is used for Municipal, commercial-like purposes. Employees use the parking lot area at the disposal site to park cars and trucks. Children do not play in or at the disposal site area and around the building. Normal use of the property for parking cars, walking and working would not encounter contamination of the disposal site, which exists below the surface.

Site activities and uses that could result in exposure to residual contaminated soils and/or groundwater would include utility repair or construction activities on the land at depths of from about 5.0 feet and below the surface and deeper.

Groundwater was encountered at depths from 7.0 feet to almost 9.0 feet below the surface. Groundwater could be encountered during construction work at depths of from 7.0 and below the surface, depending on the time of year and rainfall. Normal commercial use of the site would

not encounter groundwater from the disposal site. Excavation activities during utility repair or development activities below ground could encounter groundwater.

Drinking water and sewerage disposal are provided by the Town of Ashburnham. There are no private drinking water wells or sewerage disposal facilities at or in the neighborhood of the disposal site at this time, although in the past (within 5 years) private drinking water wells existed.

40.0923: (1) Site Activities and Uses that Could Result in Exposure to Contaminated Soils Include: ←

1. Construction activities that take place in the sub-surface soils of the disposal site greater than 3.0 feet below the surface including construction of foundations, installation or repair of utilities, and any other activity that requires excavation work in sub-surface soils.

Site activities and uses that could result in exposure to groundwater include:

1. Construction activities that dig deep enough into the soils 7.0 feet deep in the disposal site.

Site activities and uses that could occur in the foreseeable future include further development of the land through expansion of the existing buildings.

Municipal use is considered the likely future use in the future.

40.0923: (2) Current Site Activities and Uses ←

The property and disposal site is currently used for Municipal, commercial-like use. The building is used by employees and visitors, whom may park their cars in the parking lot of the property. Current normal site activities by workers would not result in exposure to contaminants that are below the surface.

Construction in sub-surface grades or utility repair could occur at the disposal sites and property. These activities could result in potential exposure of construction workers to residual heating oil-contaminated soils.

40.0923: (3) Reasonably Foreseeable Site Activities and Uses ←

At the current time the property is used by the Town of Ashburnham Highway Department. Normal day to day use of the property includes visitation from people who would go and conduct business, and workers that would walk and work over the land of the disposal site.

Reasonably foreseeable site activities and uses that could result in exposures to human receptors oil contamination include construction or utility repair in sub-surface soils.

The groundwater at the site is not considered a reasonably foreseeable source of drinking water since it is not in a category GW-1.

40.0923: (4) Activity and Use Limitations (AUL) and Prohibitions ←

None are required.

40.0924: Identification of Exposure Points ←

Exposure points are:

1. Subsurface soils with residual contamination.
2. Groundwater.

(a). There are no "hot spots" based on the definition at 40.0006 including 40.0006 Hot Spot

40.0925: Identification of Exposure Point Pathways ←

Based on the presence of residual oil contamination greater than 3.0 feet and deeper beneath the land surface of the disposal site, exposure point pathways would include those activities that required digging into the ground.

Exposure point pathways at the property include:

1. Ingestion of soils and groundwater during excavation activities at the disposal site. Construction, excavation activities or utility line repairs are examples.
2. Dermal contact with oil contaminated soils during construction, excavation activities or utility line repairs.
3. Inhalation of particulates and oil vapors in air during construction, excavation activities or utility line repairs.
4. Inhalation of oil vapors by residents of the apartment building from vapors that enter the basement of the house.

40.0926: Identification of Exposure Point Concentrations

Exposure point concentrations were calculated using guidance provided in the DEP's Guidance for Disposal Site Risk Characterization July, 1995. Exposure Point Concentrations were calculated based on presence of the hydrocarbon category or individual chemical in samples. Only those samples that contained each hydrocarbon class and chemical were used in the calculation of the exposure point concentrations. Non detects were not included in the average value calculations.

Soils

Table 7. Exposure Point Concentrations from Soil Samples Taken on September 22, 1998 for Volatile Petroleum Hydrocarbons (VPH) and Extractable Petroleum Hydrocarbons (EPH).

VPH	
Parameter	Exposure Point Concentrations
C5-C8 Aliphatics	63.5(mg/kg)
C9-C12 Aliphatics	89.8
C9-C10 Aromatics	51.3
Toluene	0.47 (mg/kg)
Ethylbenzene	0.39
m,p-Xylenes	0.89
o-Xylene	1.40
Naphthalene	1.86
EPH	
Parameter	Exposure Point Concentrations
C9-C18 Aliphatics	49 (mg/kg)
C19-C36 Aliphatics	48
C11-C22 Aromatics	55
2-Methylnaphthalene	0.17
Pyrene	0.17

ND = Not Detectable

Groundwater

The exposure point concentrations are data obtained from analysis of groundwater from MW-1, collected on September 28, 1998 (VPH) and (EPH). The only other reported chemical found previously in MW-1 SEA and MW-2 SEA was tetrachloroethene at a very low level below Method 1, GW-2 standards.

Table 8. Water Sample Collected from Monitoring Well MW-1 on September 28, 1998 and Tested for Volatile Petroleum Hydrocarbons (VPH), and Extractable Petroleum Hydrocarbons (EPH).

Volatile Petroleum Hydrocarbons		
Parameter	MW-1	GW-2
C5-C8 Aliphatics	0.29 (mg/L)	1 (mg/L)
C9-C12 Aliphatics	0.67	1
C9-C10 Aromatics	3.5	5
Ethylbenzene	0.014 (mg/L)	30 (mg/L)
m,p-Xylene	0.064	6
Naphthalene	0.034	6
Extractable Petroleum Hydrocarbons		
C9-C18 Aliphatics	0.6 (mg/L)	1 (mg/L)
C19-C36 Aliphatics	0.8	N/A
C11-C22 Aromatics	1.7	50
2-Methylnaphthalene	0.013 (mg/L)	10

N/A = Not Applicable

Background Levels of Oil and Hazardous Materials

Based on the analytical results, the levels of VPH and EPH are above background levels expected (non detect) if the disposal site was not present. Therefore, the analytical results indicate that "Background", as defined at 310 CMR 40.0006: Background has not been achieved in the soils and groundwater at the site.

40.0930: Identification of Site Groundwater and Soil Categories

Groundwater Category

Groundwater at the disposal sites does not meet GW-1 risk characterization criteria as specified in 310 CMR 40.0932:(4). Although private drinking water wells were present in the vicinity of the disposal site in the past, presently, residences within 500 feet of the disposal site are connected to and use the Municipal drinking water supply based on information supplied by the Highway Department superintendent, William Brennen. The applicable groundwater category is GW-2 per 40.0932:(6) because groundwater at the disposal sites is located within 30 feet of an existing occupied building or structure and the average annual depth to groundwater is less than 15 feet.

Groundwater was encountered at the disposal site in the excavations at a depth of about 12.0 feet deep on September 22, 1998. Groundwater in MW-1, established in the excavation, was measured at a depth of 7.6 feet on September 28, 1998.

The groundwater at the disposal site also meets the criteria for GW-3, since groundwater from the site ultimately discharges to Phillips Brook to the south and east.

Soil Category

The **Frequency of Use** by children who may visit the property that includes the disposal site is low. Frequency of use by adults is high since adults work at the property on a daily basis.

Intensity of Use is low by adults and children since the disposal site residual contaminated soils are 5.0 or more feet below the surface. There is a low probability that activities at the surface that disturb soils will reach contaminated soils 5.0 feet or more below the surface. Typical activities at the disposal site portion of the property, which is parking area for the office and garage, will be walked over and driven over. Gardening, digging or recreational sports will not take place.

The Accessibility of the soils are **Potentially Accessible** since the contaminated soils are between depths of seven - 16 feet below the surface.

The soils at the site meet the S-2 criteria listed in 40.0933: (6)(b)(1) because the soil is potentially accessible and a child's frequency use is low and intensity of use is low.

The soils under the buildings near the disposal site at the garage and office building meet the S-3 criteria per 40.0933: (7)(c) because the soils are isolated under the surface.

40.0940: Methods for Characterizing Risk of Harm

Method 1 Risk Characterization was used to characterize risks at the site per 310 CMR 40.0942: (1).

40.0960: Characterization of Risk to Safety

The responsible party has taken actions in order to protect people from conditions at the disposal site, which are related to the releases of petroleum products. There are no open excavations at the property at this time. There are no opportunities for visitors or others to come in contact with contaminated soils or groundwater at the site other than retrieving groundwater from the monitoring wells.

As a review of current conditions related to safety at the site:

1. There are no rusted or corroded drums or containers, open pits, lagoons or other dangerous structures at the site related to the release of petroleum products in the disposal site.
2. There is no threat of fire or explosion from the residual petroleum materials.
3. There are no materials related to the releases at the site that exhibit the characteristics of corrosively, reactivity or flammability described in 310 CMR 40.0347.

Based on observations at the disposal site, a condition of no significant risk of harm to safety exists.

40.0970: Risk Characterization Method 1

Assessments of the disposal sites have shown that the presence of petroleum contaminants are limited to sub-surface soils and groundwater, therefore a Method 1 Risk Characterization is appropriate for the disposal site.

40.0973: (1) Current and Reasonably Foreseeable Site Activity and Use

See section 40.0923

40.0973: (2) Groundwater and Soil Categories

See sections 40.0932 and 40.0933

40.0973: (3) Exposure Points

See section 40.0924

40.0973: (4)(5)(6) Method 1 Risk Characterizations

Table 9 is a comparative table for the Method 1 Risk Characterizations. The applicable Method 1 Soil standards are S-2 respectively and Groundwater standards are GW-2 and GW-3.

The Exposure Point Concentrations identified were compared to Method 1 standards for the S-1/GW-2 category.

Table 9. Method 1 Risk Characterization Exposure Point Concentrations. Method 1, S-1/GW-2 Standards are used for Comparison.

VPH		
Parameter	Exposure Point Concentrations	Method 1: S-1/GW-2
C5-C8 Aliphatics	63.5 (mg/kg)	100 (mg/kg)
C9-C12 Aliphatics	89.8	1000
C9-C10 Aromatics	51.3	100
Toluene	0.47 (mg/kg)	500
Ethylbenzene	0.39	500
m,p-Xylenes	0.89	500
o-Xylene	1.40	500
Naphthalene	1.86	100

EPH		
Parameter	Exposure Point Concentrations	Method 1: S-2/GW-1
C9-C18 Aliphatics	49 (mg/kg)	1000 (mg/kg)
C19-C36 Aliphatics	48	2500
C11-C22 Aromatics	55	800
2-Methylnaphthalene	0.17	500
Pyrene	0.17	700

* Each exposure point concentration consists of an average of laboratory results AB19092 through AB19096 (9/22/98). For each class of aliphatics and aromatics, and each individual chemical, the average is composed of only those samples that contained the class of chemical or individual chemical. Therefore, non-detect values were not used unless all samples were non detect, and then, a comparison was not necessary.

Method 1 - Revisions to the Massachusetts Contingency Plan 310 CMR 40.000, October 31, 1997.

Table 10. A Comparative of Exposure Point Concentrations Table for Method 1 Risk Characterizations for Groundwater. Method 1 GW-2 Standards were used for Comparison.

Volatile Petroleum Hydrocarbons		
Parameter	MW-1	GW-2
C5-C8 Aliphatics	0.29 (mg/L)	1 (mg/L)
C9-C12 Aliphatics	0.67	1
C9-C10 Aromatics	3.5	5
Ethylbenzene	0.014 (mg/L)	30 (mg/L)
m,p-Xylene	0.064	6
Naphthalene	0.034	6
Extractable Petroleum Hydrocarbons		
C9-C18 Aliphatics	0.6 (mg/L)	1 (mg/L)
C19-C36 Aliphatics	0.8	N/A
C11-C22 Aromatics	1.7	50
2-Methylnaphthalene	0.013 (mg/L)	10

40.0973: (7)(8) Condition of No Significant Risk

A condition of no significant risk of harm to health, public welfare and the environment exists at the disposal site based on the findings that no exposure point concentration is greater than the applicable MCP, S-1/GW-2 and GW-3 Method 1 soil and groundwater standards.

40.1056: (1)(d) Relationship of RAO to Other RAO's; Additional Response Actions Statement

The disposal site for RTN 2-12224 is adjacent to and encompasses portions of the previously described disposal site under RTN 2-10039.

40.1056: (1)(e) Class C RAO Status

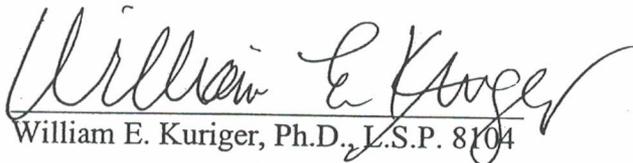
Not Applicable

40.1056: (1)(f) RAO Based of Implementation of an Activity and Use Limitation

Not Applicable

40.1056: (1)(g) Licensed Site Professional Opinion Regarding RAO Class Requirements

It is my opinion that the requirements for a Class A-2 RAO specified in 310 CMR 40.1000 have been met at the site.


William E. Kuriger, Ph.D., L.S.P. 8104



Section 2

40.1056: (2)(a) Description of the Location of the Disposal Site and Boundaries

Figure 2 shows location of the disposal site relative to the property boundaries and the buildings that are present within the property. Figure 2 is based on the Ashburnham Assessors map for the property. Figure 2A shows the location of the disposal site relative to office and garage building in the west side of the property. The description of the boundaries of the disposal site are listed below.

Description of Disposal Site Boundaries (Direction angles are approximate)

The northeast corner of the disposal site is located 5.0 feet off the southeast corner of the garage and office building, east 125° southeast. The disposal site then extends 23 feet to the west parallel to the building in the direction west 270°; then 28 feet south 184°; then about 23 feet to the east 95° southeast; then about 28 feet north 4° to the beginning point.

The depth of the excavation extended to 12-14 feet below the surface.

40.1056: (2)(b) Demonstration that Uncontrolled Sources, per 310 CMR 40.1003(5) have been Eliminated or Controlled

The gasoline UST and associated plumbing were potential uncontrolled sources of the release, although evidence exists that suggests the previous UST, present before 1984, may have been responsible for the release. Following removal of the UST, the residual uncontrolled source of the release of gasoline were contaminated soils and groundwater under the UST.

The contaminated soils were removed from the disposal site on September 22, 1998.

The contaminated soils were transported to American Reclamation Corporation (AMREC) 130 Sturbridge Road, Charlton, MA for recycling into asphalt on December 29, 1998. A total of 104.23 tons (69.49 cubic yards) of contaminated soils were transported to AMREC from the disposal site. The soils were transported to AMREC by Jack Spuria of Spuria & Sons Inc.

Therefore, the uncontrolled sources of the release were eliminated.

40.1056: (2)(c) Supporting Information the Conclusion of No Significant Risk

The supporting information for the conclusion of no significant risk includes the analytical data obtained from soil samples and groundwater and the Method 1 Risk Characterization.

40.1056: (2)(d) Class C Response Action Outcomes

Not Applicable

40.1056: (2)(e) Feasibility Evaluation Pursuant to 310 CMR 40.0860

The levels of residual oil in the disposal site approach but are not at background levels of non detect for TPH, VPH and EPH. A significant reduction in the levels of oil was achieved by excavation of contaminated soils. A total of about 104 tons (69 cubic yards) of oil contaminated soils were removed from the disposal site. The average concentrations of residual petroleum contamination are below Method 1 standards.

The levels of VPH and EPH were significantly reduced in the bottom of the excavation. Groundwater at three monitoring wells, one installed in September, 1998 (MW-1) in the center of the gasoline UST excavation and two sampled and tested in 1994 by SEA (MW-1 SEA and MW-2 SEA) contain low (under Method 1 Standards for GW-2 at MW-1) or no levels of petroleum compounds (MW-1 SEA and MW-2 SEA). Thus, the residual levels of petroleum in the soils and groundwater from the gasoline UST excavation would not be expected to contribute significant levels of contaminants to groundwater on or off the property.

Therefore, it is not necessarily feasible to attempt to restore to absolute background the soils and groundwater at the disposal sites. It also appears the reduction of petroleum contamination in soils in the disposal sites will preclude contribution and inter-media transfer of TPH to uncontaminated soils and groundwater. Per 40.0860: (6) I conclude that the incremental cost of conducting further remedial actions would be disproportionate to the incremental benefit of risk reduction.

40.1056: (2)(f) Copy of Activity and Use Limitations

Not Applicable

40.1056: (2)(g) Activity and Use Limitation Opinion

Not Applicable

40.1056: (2)(h) Description of any Operation, Maintenance, and/or Monitoring Required

No remedial system or other structure or devices will be used at the disposal site. No operation, maintenance or monitoring of the site will be required as a continuing remediation measure at the disposal site.

40.1056: (2)(i) Class C RAO Permanent Solution Statement

Not Applicable

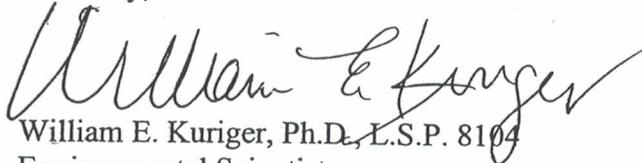
Section 3

40.1056: (3) RAO Fee

An RAO Fee of \$750.00 is required for the disposal site since the RAO Statement has been submitted greater than 120 days after the discovery of the release. A copy of the check is appended to this report.

Should you need any further information regarding the RAO please let me know.

Sincerely,



William E. Kuriger, Ph.D., L.S.P. 8104
Environmental Scientist
Professional Wetland Scientist 000383
Licensed Site Professional 8104



**THE MASSACHUSETTS CONTINGENCY PLAN
310 CMR 40.0000**

**310 CMR 40.0427: IMMEDIATE RESPONSE ACTION
(IRA) COMPLETION REPORT**

Site Location:

**Ashburnham Highway Department Garage
17 Central Street
Ashburnham, MA 01430**

IRA Completion Report Prepared For:

**Town of Ashburnham
Highway Department Garage
17 Central Street
Ashburnham, MA 01430**

IRA Completion Report Prepared By:



**W. E. Kuriger Associates
90 Atlantic Avenue
Fitchburg, MA 01420
William E. Kuriger, Ph.D., L.S.P. 8104**

February 12, 1999

310 CMR 40.0427: (4)(a) Description of Release; Site Conditions and Surrounding Receptors

The description of the release, the site conditions and the surrounding receptors were described in section 40.0424: of the IRA Plan submitted on July 10, 1998 and are also found in the attached Response Action Outcome (RAO) Report dated February 12, 1999.

310 CMR 40.0427: (4)(b) Description of the Work Completed

During the removal of a 4,000 gallon gasoline underground storage tank (UST) on May 21, 1998 at the Town of Ashburnham Highway Department Garage, petroleum vapors as measured with an Hnu photoionization based meter and black stained soils under and around the UST were encountered. Analysis of soils in the field determined that levels of volatile petroleum hydrocarbons were greater than the MCP, 72-hour reportable limit of 100 parts per million (ppm) in the UST excavation. The release was reported and an oral IRA Plan outlined to the DEP representative.

An IRA Plan was prepared and submitted to the Department of Environmental Protection on July 10, 1998. The IRA included the removal of contaminated soils and sampling and testing of soils and groundwater after contaminated soil removal.

An IRA Status Report was submitted on September 17, 1998. On September 22, 1998 contaminated soil removals were conducted. Laborers, a backhoe, and a dump truck from the Ashburnham Highway Department were used for the excavation of contaminated soils. The excavation extended to groundwater, which was about 8.0 feet below the surface, and then extended to 12-14 feet deep. The surface area that was dug was about 28 feet long X 23 feet wide. The contaminated soils were stockpiled at the Highway Department yard on and covered with 6 mil polyplastic.

The Jar Headspace Method via an HNU photo-ionization Model PI- 101 was used to determine the extent of contaminated soils. After completion of soil removal soil samples were taken from the north, south, east, west, and bottom of the excavation. After sampling the excavation was filled and a monitoring well (MW-1) was installed in the center of the excavation for groundwater sampling.

The contaminated soils were transported to American Reclamation Corporation (AMREC) 130 Sturbridge Road, Charlton, MA for recycling into asphalt on December 29, 1998. A total of 104.23 tons (69.49 cubic yards) of contaminated soils were transported to AMREC from the disposal site. The soils were transported to AMREC by Spuria & Sons Inc., South Ashburnham, MA.

310 CMR 40.0427: (4)(c) All Investigatory and Monitoring Data Obtained During Implementation of IRA

Laboratory analysis results are appended to this report. Table 1 shows the results of soil analysis from samples collected at the side walls and bottom of the excavation after UST removal.

Table 1. Results for Soil Samples Taken on May 21, 1998 and Analyzed for Volatile Petroleum Hydrocarbons (VPH) and Extractable Petroleum Hydrocarbons (EPH).

VPH					
Parameter	North	South	East	West	Bottom
mg/kg					
C9-C12 Aliphatics	88	74	110	ND	180
C9-C10 Aromatics	44	35	55	ND	96
ug/kg					
Benzene	ND	190	ND	ND	ND
Toluene	230	340	ND	ND	600
Ethylbenzene	230	ND	550	ND	430
m,p-Xylenes	1700	550	2700	ND	1500
o-Xylene	380	ND	650	ND	740
Naphthalene	4400	4600	5900	680	8300
Methyl-tert-butylether	ND	210	570	ND	ND

ND = Not Detected

EPH					
Parameter	North	South	East	West	Bottom
mg/kg					
C9-C18 Aliphatics	1,000	550	950	ND	3,400
C19-C36 Aliphatics	280	160	310	ND	970
C11-C22 Aromatics	540	260	510	ND	1,800
ug/kg					
Anthracene	ND	ND	360	ND	ND
Fluoranthene	ND	470	300	ND	ND
Fluorene	660	ND	390	ND	1600
2-Methylnaphthalene	1200	ND	2700	ND	4600
Naphthalene	ND	ND	540	ND	ND
Phenanthrene	1100	650	760	ND	2100
Pyrene	ND	350	290	ND	ND

ND = Not Detected

The VPH data for naphthalene in the Bottom sample and the results of EPH data for C9-C18 aliphatics in the Bottom sample, and C11-C22 aromatics for all samples except West exceeded RCS-1 reportable concentrations and S-1 risk characterization standards.

Additional contaminated soils were removed per the IRA Plan on September 22, 1998. Following contaminated soil removal soil samples were again collected from the excavation. Table 2 lists the results of the analyses.

Table 2: Soil Samples Taken on September 22, 1998 for Volatile Petroleum Hydrocarbons (VPH) and Extractable Petroleum Hydrocarbons (EPH).

VPH					
Parameter	North	South	East	West	Bottom
C5-C8 Aliphatics	ND	170 (mg/kg)	17 (mg/kg)	ND	3.5(mg/kg)
C9-C12 Aliphatics	ND	200	65	ND	4.3
C9-C10 Aromatics	ND	120	33	ND	1.0
Toluene	ND (mg/kg)	0.47 (mg/kg)	ND (mg/kg)	ND (mg/kg)	ND(mg/kg)
Ethylbenzene	ND	0.39	ND	ND	ND
m,p-Xylenes	ND	1.6	0.17	ND	ND
o-Xylene	ND	1.4	ND	ND	ND
Naphthalene	ND	2.8	0.92	ND	ND

EPH					
Parameter	North	South	East	West	Bottom
C9-C18 Aliphatics	ND	49	ND	ND	ND
C19-C36 Aliphatics	ND	28	ND	ND	ND
C11-C22 Aromatics	ND	55	ND	ND	ND
2-Methylnaphthalene	ND	0.17	ND	ND	ND
Pyrene	ND	0.17	ND	ND	ND

ND = Not Detectable

The results for C5-C8 aliphatics and C9-C10 aromatic hydrocarbons were slightly higher than S-1/GW-2 risk characterization standards in the South wall, but were not "hot spots" when compared to data from the Bottom and East walls. None of the EPH data for hydrocarbons exceeded S-1/GW-2 standards.

Table 3. Results of Analyses of Samples from Soil Pile, Collected on September 22, 1998 for Volatile Organic, Total Hydrocarbons (TPH), Metals, and pH.

Parameter	Soil Pile
Benzene	0.1 (mg/kg)
n-Butylbenzene	1.2
sec-Butylbenzene	0.25
Ethylbenzene	0.11
Isopropylbenzene	0.11
4-Isopropyltoluene	0.38
Naphthalene	0.67
n-Propylbenzene	0.15
Tetrachloroethene	0.72
Toluene	0.22
1,2,4-Trimethylbenzene	1.5
1,3,5-Trimethylbenzene	0.99
m,p-Xylenes	0.35
o-Xylene	0.98
Methyl-t-butyl ether	0.68
TPH by IR #1	890 (mg/kg)
TPH by IR #2	1,000 (mg/kg)
Total Chromium	5.67 (mg/kg)
Total Lead	18.6
TCLP Lead	0.032
pH	6.80
Flash Point	ND
Reactivity	ND
PCB's	ND

ND = Not Detected

On September 28, 1998, groundwater in MW-1, located in the center of the excavation, was purged of three well volumes and sampled into appropriate sample bottles for VPH and EPH analysis. Table 4 lists the results of the analysis.

Table 4. Water Sample Collected from Monitoring Well MW-1 on September 28, 1998 and Tested for Volatile Petroleum Hydrocarbons (VPH), and Extractable Petroleum Hydrocarbons (EPH).

Volatile Petroleum Hydrocarbons		
Parameter	MW-1	GW-2
C5-C8 Aliphatics	0.29 (mg/L)	1 (mg/L)
C9-C12 Aliphatics	0.67	1
C9-C10 Aromatics	3.5	5
Ethylbenzene	0.014 (mg/L)	30 (mg/L)
m,p-Xylene	0.064	6
Naphthalene	0.034	6
Extractable Petroleum Hydrocarbons		
C9-C18 Aliphatics	0.6 (mg/L)	1
C19-C36 Aliphatics	0.8	N/A
C11-C22 Aromatics	1.7	50
2-Methylnaphthalene	0.013 (mg/L)	10

N/A = Not Applicable

None of the results exceeded GW-2 standards.

310 CMR 40.0427: (4)(d) Findings and Conclusions of IRA

The findings and conclusions of the IRA were that:

1. One 4,000 gasoline UST and 104.23 tons of petroleum contaminated soils were removed from the disposal site.
2. To the extent possible, without jeopardizing the structural integrity of the Highway Department building, excavation removed petroleum contaminated soils that were adjacent to and under the gasoline and a former diesel UST's.
3. At this time the source of the release has been controlled and site conditions have been stabilized.
4. The residual oil contaminated soils and groundwater that exist at the site are at levels that approach but that are not at background levels.

The site has been stabilized and at this time, and based on present site conditions and use Imminent Hazards to health, safety, public welfare and the environment are not present.

310 CMR 40.0427: (4)(e) Details and Documentation on Management of Remediation Waste

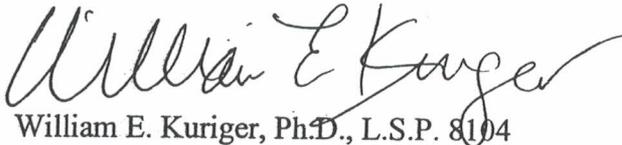
A copy of the Bill of Lading that was used to transport oil contaminated soils to the American Reclamation Corporation, Charlton, MA is appended to this report.

310 CMR 40.0427: (4)(f) Ongoing Activities

At this time no ongoing activities are taking place at the disposal site.

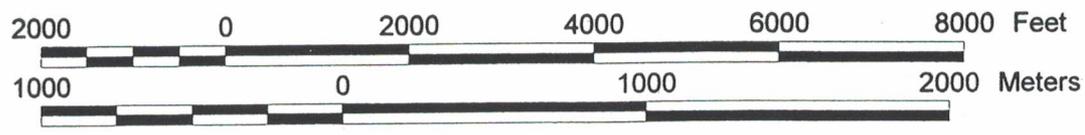
Should you need any further information regarding the site please let me know.

Sincerely,



William E. Kuriger, Ph.D., L.S.P. 8104
Environmental Scientist
Licensed Site Professional



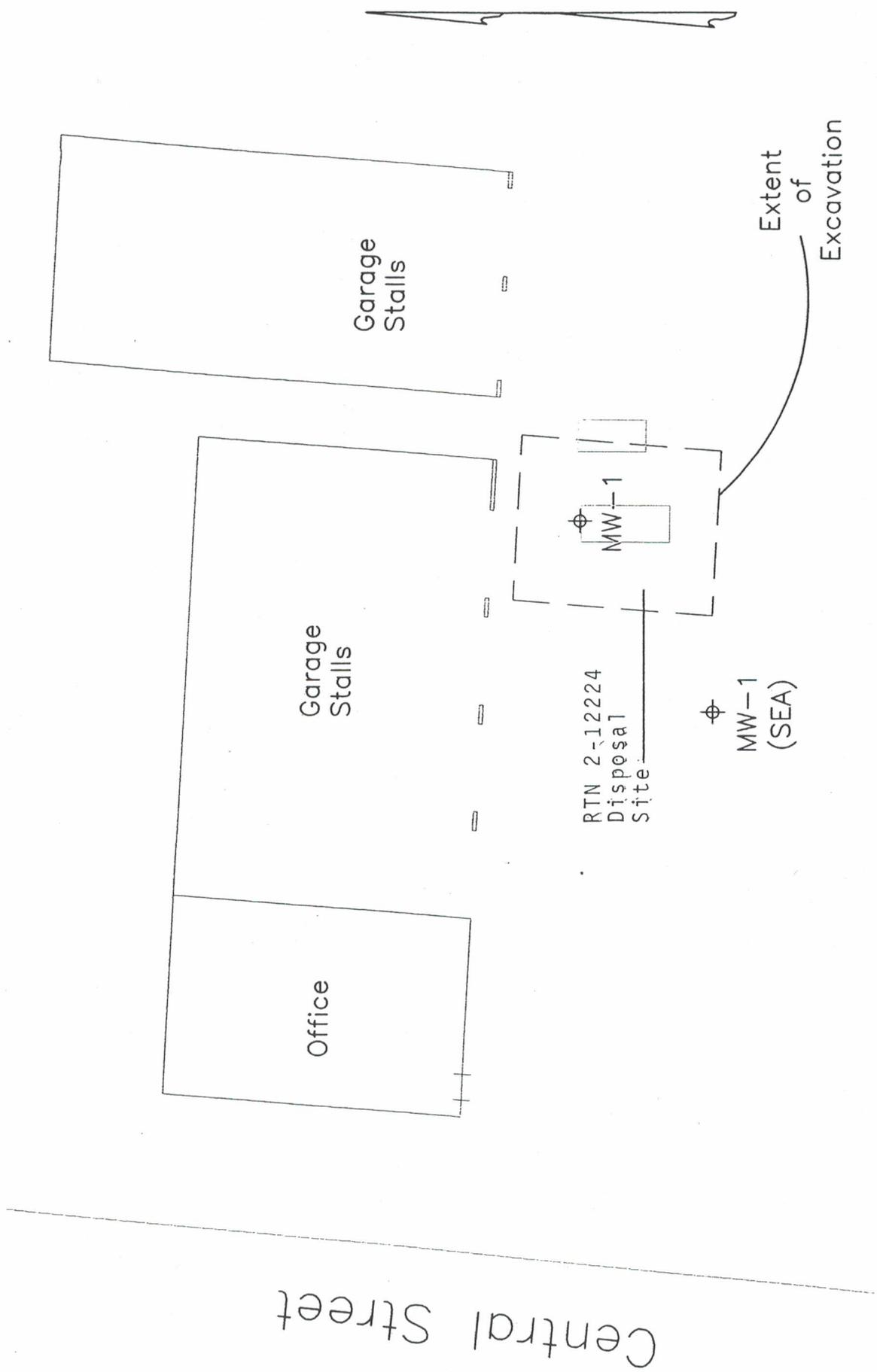


**USGS Map
19 Central St., Ashburnham, MA**

APPROVALS	DATE	TITLE	 W. E. Kuriger Associates	DWG NAME ashburn.apr
DRAWN R. W. Collette	6/9/98			FIGURE NO. 1
CHECKED W. E. Kuriger	1/26/99			
REVISED R. W. Collette	1/26/99	SCALE 1:25,000	DATE 1/26/99	



APPROVALS		DATE	TITLE	DWG NAME
DRAWN	R.W. Collette	2/10/99	17 CENTRAL ST., ASHBURNHAM, MA W.E. KURIGER ASSOCIATES	ashburn2.dwg FIGURE NO. 2A
CHECKED	W. E. Kuriger	2/10/99		
REVISED				
SCALE			DATE	
Approx. 1" = 20'			2/10/99	



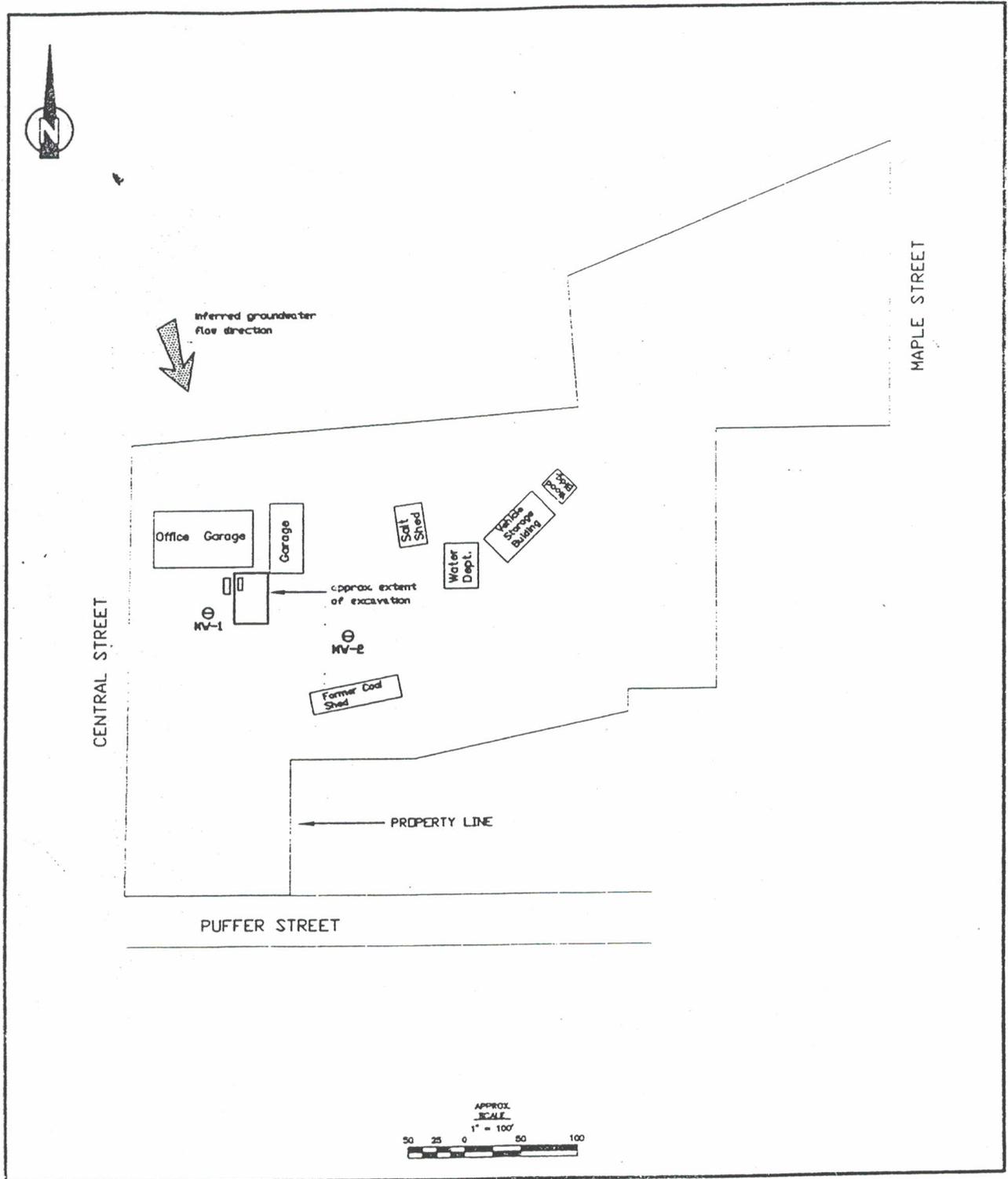


Figure 2-1
 Disposal Site Map

RTN: 2-10039

LEGEND

⊕ approx. monitoring well location (sampled)

Table 5.2

Summary of Analytical Data for Water from Previous Study

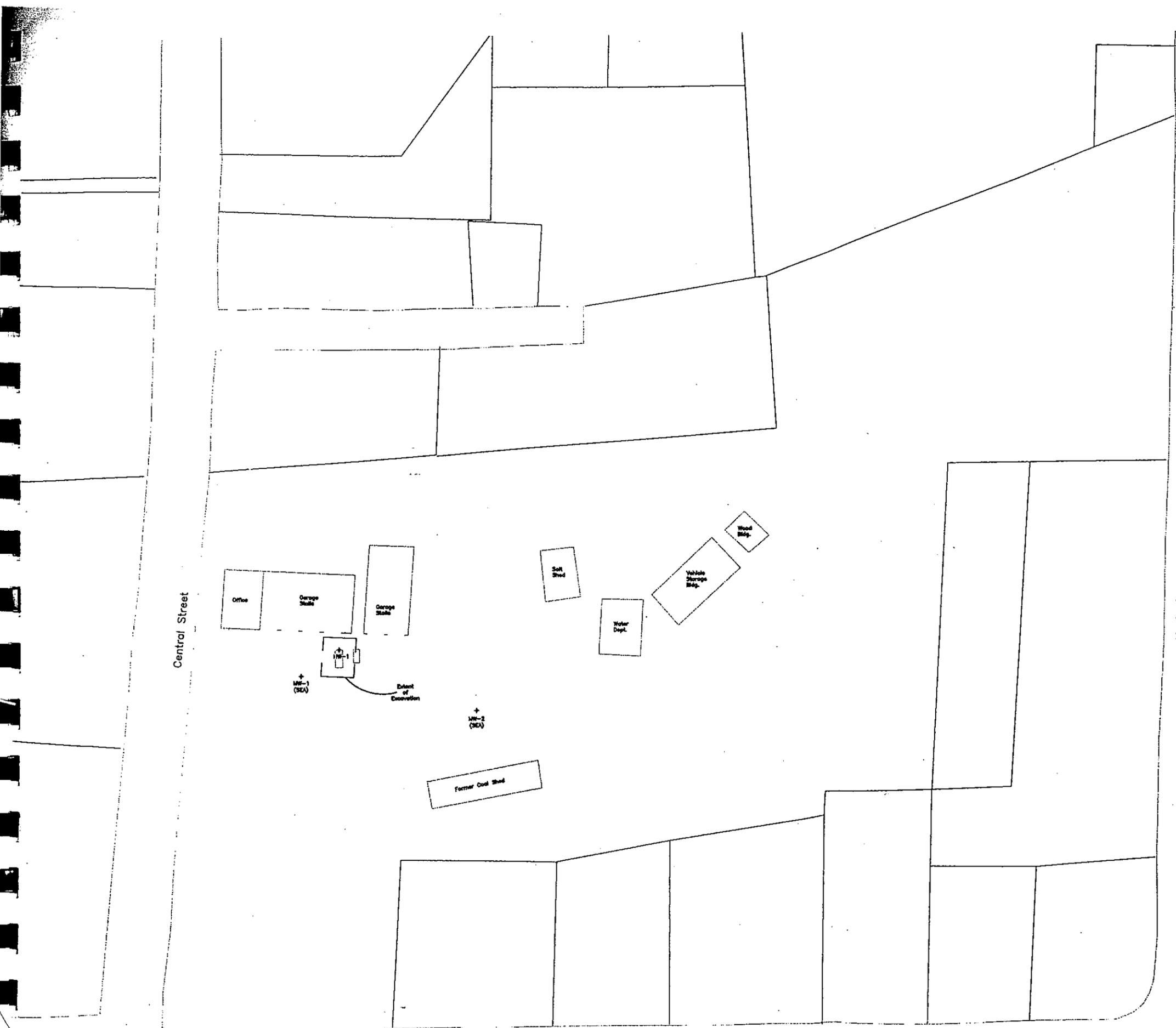
Sampling Date: 9/24/93

1,000-Gallon Diesel UST
19 Central Street
Ashburnham, Massachusetts

(Source: Environmental Products & Services, Inc. October 8, 1993 report)

Sample ID	Sample Location	Depth of Sample (inches)	Compounds Detected
632E & E1	Water at bottom of excavation	64"	30 ug/l benzene 40 ug/l toluene 10 ug/l ethylbenzene 70 ug/l xylene <50 ug/l MTBE ¹

Note: ¹MTBE = methyl tertiary butyl ether



Central Street

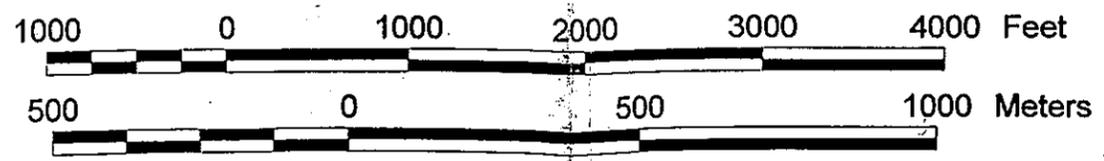
Puffer Street

Maple Ave.

APPROVED	DATE
REVISED	DATE
DATE	DATE
DATE	DATE

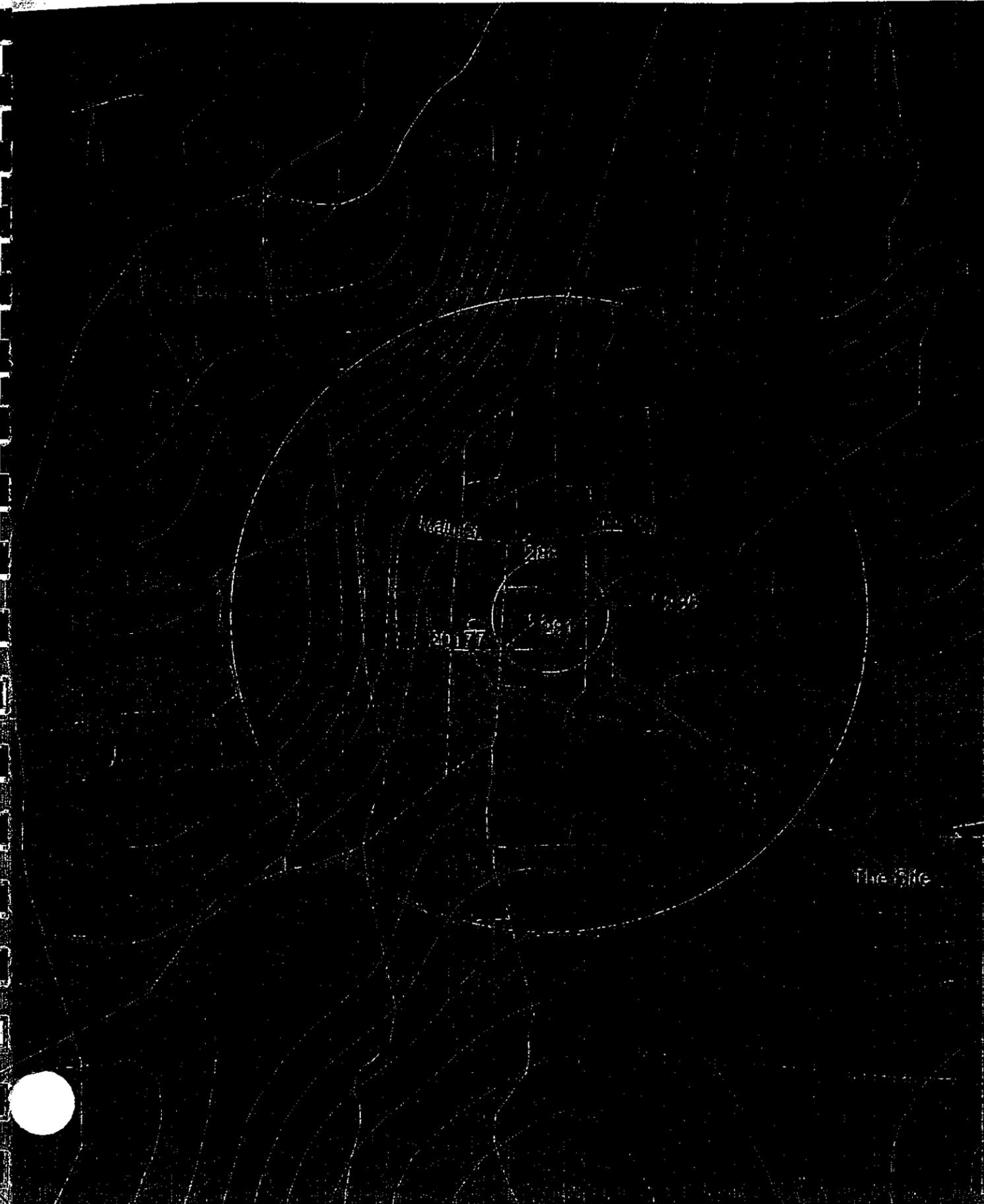
281	HIGHWAY DEPT	19	CENTRAL ST	ASHBURNHAM
285	FLO CHEMICAL CORP.	27	MAPLE AVE	ASHBURNHAM
288	MR MIKE'S MOBIL	0	MAIN ST	ASHBURNHAM
20177	NEW ENGLAND TELEPHONE	0	PLEASANT ST	ASHBURNHAM

- ▲ Public Water Supply-DEP
- Underground Storage Tanks
- Town Line
- Transmission Lines
- Trains
- 30' Contours
- Hydrography
- Roads
- Solid Waste Facilities
- Interim Wellhead Protection Area
- Community Interim Wellhead Protection Area
- Zone IIs
- Aquifer - PPA
- ▨ 1-NPDWSA
- Aquifer
- 0
- 1 - Pond
- 2 - High Yield
- 3 - Medium Yield



MassGIS Aquifer Datalayers
19 Central St., Ashburnham, MA

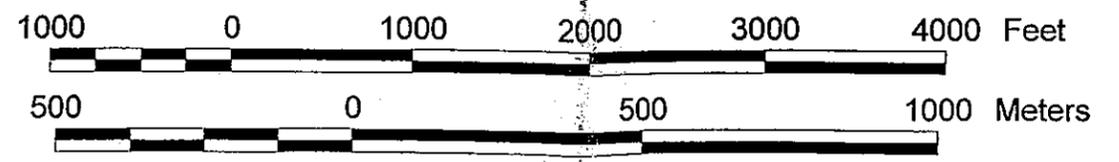
APPROVALS	DATE	TITLE	DWG NAME ashburn.apr
DRAWN R. W. Collette	6/5/98	W. E. Kuriger Associates	FIGURE NO. 3
CHECKED W. E. Kuriger	1/26/99		
REVISED R. W. Collette	1/26/99		
SCALE 1:12,000		DATE 6/5/98	





- ∨ Half-Mile Radius
- ▲ Public Water Supply-DEP
- Underground Storage Tanks
- ∨ Town Line
- ∨ Transmission Lines
- ∨ Trains
- ∨ 30' Contours
- ∨ Hydrography
- ∨ Roads
- Solid Waste Facilities
- Interim Wellhead Protection Area
- Community Interim Wellhead Protection Area
- Zone IIs

- Land Use
- 1 - Cropland
 - 2 - Pasture
 - 3 - Forest
 - 4 - Wetland
 - 5 - Mining
 - 6 - Open Land
 - 7 - Participation Recreation
 - 8 - Spectator Recreation
 - 9 - Water Based
 - 10 - Res. Multi-Family
 - 11 - Res. <1/4 Acre Lots
 - 12 - Res. 1/4 - 1/2 Acre Lots
 - 13 - Res. >1/2 Acre Lots
 - 15 - Comm. Gen. Urban, Shopping Ctr.
 - 16 - Industrial
 - 17 - Urban Open
 - 18 - Transportation
 - 19 - Waste Disposal
 - 20 - Water
 - 21 - Woody Perennial



MassGIS Land Use Datalayers
19 Central St., Ashburnham, MA

APPROVALS		DATE	TITLE	DWG NAME
DRAWN		1/26/99		ashburn.apr
CHECKED		1/26/99		FIGURE NO.
REVISIED			SCALE	DATE
			1:12,000	1/26/99
				4

W. E. Kuriger Associates

Table 5.8

Summary of Analytical Results for Groundwater

Sampling Date: 10/19/94

1,000-Gallon Diesel UST
19 Central Street
Ashburnham, Massachusetts

Well Designation	Well Location	Volatile Organic Compounds	Polynuclear Aromatic Hydrocarbons	MCP Standard ¹
MW-1	50 ft. West of Former Diesel UST	ND ²	NT ³	3,000 ug/L (Tetrachloroethene)
MW-2	Southeast of Former Diesel UST	13 ug/l Tetrachloroethene	ND	3,000 ug/L (Tetrachloroethene)

Notes:

¹ MCP Standards were taken from the minimum of soil type of S-2 or S-3 and groundwater type of GW-2 or GW-3.

² ND = Not Detected at or below instrument detection limit.

³ NT = Not Tested

Master to DEP 1/20/99



Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup BWSC-012A

BILL OF LADING (pursuant to 310 CMR 40.0030)

Release Tracking Number*: 2-12224

A. LOCATION OF SITE OR DISPOSAL SITE WHERE REMEDIATION WASTE WAS GENERATED:

Release Name (optional): Ashburnham Highway Department Garage
Street: 17 Central Street
City/Town: Ashburnham
Date/Period of Generation: 09/22/98 to 09/22/98
Location Aid: Main Street
Zip Code: 01430

*Note: If this Bill of Lading is the result of a Limited Removal Action (LRA) taken prior to Notification, a Release Tracking Number is not needed.

B. PERSON CONDUCTING RESPONSE ACTION ASSOCIATED WITH BILL OF LADING:

Name of Organization: Ashburnham Highway Department
Name of Contact: William Brennan
Street: 17 Central Street
City/Town: Ashburnham State: MA
Title: Superintendent
Telephone: 978-827-4120 Zip Code: 01430

C. RELATIONSHIP TO RELEASE OR THREAT OF RELEASE OF PERSON CONDUCTING RESPONSE ACTION ASSOCIATED WITH BILL OF LADING:

- (check one/specify)
[X] RP Specify (circle one): Owner Operator Generator Transporter Other RP: Representative
[] PRP Specify (circle one): Owner Operator Generator Transporter Other PRP:
[] Fiduciary/Secured Lender
[] Agency/Public Utility on a Right of Way
[] Other Person:

If an owner and/or operator is not conducting the response action associated with the Bill of Lading, provide on an attachment the name, contact person, address and telephone number, including any area code and extension, for each, if known.

D. TRANSPORTER/Common Carrier INFORMATION:

Transporter/Common Carrier Name: Spuria + Sons, Inc.
Contact Person: Jack Spuria
Street: One Gardner Road
City/Town: South Ashburnham State: MA
Title: Owner
Telephone: 978-827-5069 Zip Code: 01430

E. RECEIVING FACILITY/TEMPORARY STORAGE LOCATION:

Operator/Facility Name: American Reclamation Corporation
Contact Person: William McCambridge
Street: 130 Sturbridge Street
City/Town: Charlton State: MA
Title: General Manager
Telephone: 508-248-3777 Zip Code: 01507

- Type of Facility: (check one)
[X] Asphalt Batch/Cold Mix [] Landfill/Disposal [] Incinerator
[] Asphalt Batch/Hot Mix [] Landfill/Daily Cover [] Temporary Storage
[] Thermal Processing [] Landfill/Structural Fill [] Other:

Division of Hazardous Waste/Class A Permit #: 100300 Division of Solid Waste Management Permit #: EPA Identification #: MAD982201055

Usual/Anticipated Period of Temporary Storage (specify dates if applicable): ___/___/___ to ___/___/___

Person for Temporary Storage (if applicable):



Release Tracking Number:

2 - 12224

BILL OF LADING (pursuant to 310 CMR 40.0030)

II. RECEIVING FACILITY/TEMPORARY STORAGE LOCATION (continued):

Temporary Storage Address:
 Street: _____
 City/Town: _____ State: _____ Zip Code: _____

III. DESCRIPTION OF REMEDIATION WASTE:

(check all that apply)

Contaminated Media (circle all that apply): Soil Groundwater Surface Water Other: _____

Contaminated Debris (circle all that apply): Demolition/Construction Waste Vegetation/Organic Materials
 Inorganic Absorbant Materials Other: _____

Non-hazardous Uncontainerized Waste (circle all that apply): Non-aqueous Phase Liquid Other: _____

Non-hazardous Containerized Waste (circle all that apply): Tank Bottoms/Sludges Containers Drums
 Engineered Impoundments Other: _____

Type of Contamination (circle all that apply): Gasoline Diesel Fuel #2 Oil #4 Oil #6 Oil Waste Oil
 Kerosene Jet Fuel Other: _____

Estimated Volume of Materials: Cubic Yards: <200 Tons: <300 Other: _____

Contaminant Source (check one/specify): Transportation Accident Underground Storage Tank Other: _____

Response Action Associated with Bill of Lading (circle one): Immediate Response Action Release Abatement Measure
 Utility-Related Abatement Measure Limited Removal Action (LRA) Comprehensive Response Action
 Other (specify): _____

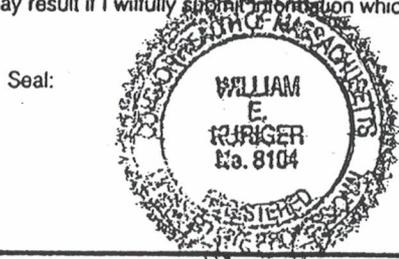
Remediation Waste Characterization/Support Documentation attached:
 Site History Information Sampling and Analytical Methods and Procedures Laboratory Data Field Screening Data
 If supporting documentation is not appended, provide an attachment stating the date and in connection with what document such information was previously submitted to DEP.

IV. LICENSED SITE PROFESSIONAL (LSP) OPINION:

Name of Organization: W. F. Kuriger Associates
 LSP Name: William E. Kuriger Title: Environmental Scientist
 Telephone: 978-343-0921 Ext. _____

I have personally examined and am familiar with the information contained on and submitted with this form. Based on this information, it is my opinion that the testing and assessment actions undertaken were adequate to characterize the Remediation Waste, in accordance with 310 CMR 40.0030, and that the facility or location can accept remediation wastes with the characteristics described in this submittal. I am aware that significant penalties including, but not limited to, possible fines and imprisonment may result if I wilfully submit information which I know to be false, inaccurate, or materially incomplete.

Signature: William E. Kuriger
 Date: 11/21/98
 License Number: 8104

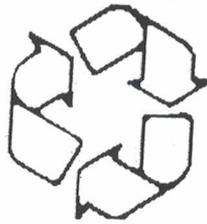


V. CERTIFICATION OF PERSON CONDUCTING RESPONSE ACTION ASSOCIATED WITH THIS BILL OF LADING:

I certify under penalties of law that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this certification, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained herein is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for wilfully submitting false, inaccurate, or incomplete information.

Signature: William Brennan Date: 12/28/98
 Name of Person (print): William Brennan

AMERICAN RECLAMATION CORP.
50 STURBRIDGE ROAD
CHARLTON MA 01507



Ticket No : 000023540
Date : 12/29/98

RECYCLED PRODUCTS CONTAIN
REGULATED RECYCLABLE MATERIALS

Customer : ASHBU
ASHBURNHAM HIGHWAY DEPARTMENT
CENTRAL STREET
ASHBURNHAM MA 01430

Order No : P981155
ASHBURNHAM HIGHWAY DEPT.

SPURIA Truck Out-bound
DIL1 CONTAMINATED SOIL

Gross 101100 lb Scale 02 Inbound 09:11
Tare 33420 lb Scale 02 Outbound 09:24

Net 67680 lb
33.8400 tn

Price/tn

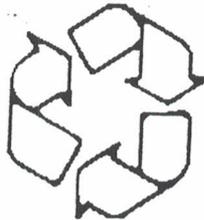
DRIVER HIGH MASTER (CIS)

Pete Jelenak

MARKS ASHBURNHAM, MA

Material \$
Delivery \$
Misc \$
Tax \$
Total \$

AMERICAN RECLAMATION CORP.
50 STURBRIDGE ROAD
CHARLTON MA 01507



Ticket No : 000023571
Date : 12/29/98

RECYCLED PRODUCTS CONTAIN
REGULATED RECYCLABLE MATERIALS

Customer : ASHBU
ASHBURNHAM HIGHWAY DEPARTMENT
CENTRAL STREET
ASHBURNHAM MA 01430

Order No : P981155
ASHBURNHAM HIGHWAY DEPT.

Truck Out-bound
1 CONTAMINATED SOIL

Gross 106580 lb Scale 02 Inbound 12:18
Tare 33340 lb Scale 02 Outbound 12:32

Net 73240 lb
36.6200 tn

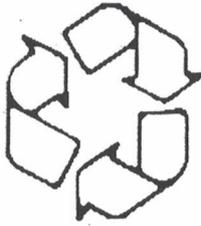
Price/tn

DRIVER HIGH MASTER (CIS)

Pete Jelenak

MARKS ASHBURNHAM, MA

Material \$
Delivery \$
Misc \$
Tax \$
Total \$



CAN RECLAMATION CORP.
 STURBRIDGE ROAD
 LTON MA 01507

Ticket No : 000023600
 Date : 12/29/98

RECYCLED PRODUCTS CONTAIN
 REGULATED RECYCLABLE MATERIALS

mer : ASHBU
 RHAM HIGHWAY DEPARTMENT
 ENTRAL STREET
 RHAM MA 01430

Order No : P981155
 ASHBURNHAM HIGHWAY DEPT.

Truck Out-bound	Gross	100900 lb	Scale	02 Inbound	15:15
	Tare	33360 lb	Scale	02 Outbound	15:26
1 CONTAMINATED SOIL	Net	67540 lb			
/tn		33.7700 tn			

	Material \$
	Delivery \$
MASTER (CIS)	Misc \$
ER <i>Pete Golaner</i>	Tax \$
IRKS ASHBURNHAM, MA	Total \$



Massachusetts Department of Environmental Protection **BWSC-012B**
 Bureau of Waste Site Cleanup **ASABU**

BILL OF LADING (pursuant to 310 CMR 40.0030)
LOG SHEET 1 **OF**

Release Tracking Number:
2 - 12224

I. LOAD INFORMATION:

LOAD 1: Signature of Transporter Representative:

Pete G. Galante
 Date of Shipment: 12/29/98 Time of Shipment: 8:00 (circle one) am/pm
 Truck/Tractor Registration: 22686 Trailer Registration (if any): 61635

Receiving Facility/Temporary Storage Representative:

Amrec WSM
 Date of Receipt: 12/29/98 Time of Receipt: 9:11
 (circle one) am/pm
 Load Size (cu. yds./tons): 33.84

LOAD 2: Signature of Transporter Representative:

Pete G. Galante
 Date of Shipment: 12/29/98 Time of Shipment: 11:00 (circle one) am/pm
 Truck/Tractor Registration: 22686 Trailer Registration (if any): 61635

Receiving Facility/Temporary Storage Representative:

Amrec WSM
 Date of Receipt: 12/29/98 Time of Receipt: 12:18
 (circle one) am/pm
 Load Size (cu. yds./tons): 36.62

LOAD 3: Signature of Transporter Representative:

Pete Galante
 Date of Shipment: 12/29/98 Time of Shipment: 2:00 (circle one) am/pm
 Truck/Tractor Registration: 22686 Trailer Registration (if any): 61635

Receiving Facility/Temporary Storage Representative:

Amrec WSM
 Date of Receipt: 12/29/98 Time of Receipt: 3:15
 (circle one) am/pm
 Load Size (cu. yds./tons): 33.77

LOAD 4: Signature of Transporter Representative:

Date of Shipment: / / Time of Shipment: : (circle one) am/pm
 Truck/Tractor Registration: Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt: / / Time of Receipt: :
 (circle one) am/pm
 Load Size (cu. yds./tons):

LOAD 5: Signature of Transporter Representative:

Date of Shipment: / / Time of Shipment: : (circle one) am/pm
 Truck/Tractor Registration: Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt: / / Time of Receipt: :
 (circle one) am/pm
 Load Size (cu. yds./tons):

LOAD 6: Signature of Transporter Representative:

Date of Shipment: / / Time of Shipment: : (circle one) am/pm
 Truck/Tractor Registration: Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt: / / Time of Receipt: :
 (circle one) am/pm
 Load Size (cu. yds./tons):

LOAD 7: Signature of Transporter Representative:

Date of Shipment: / / Time of Shipment: : (circle one) am/pm
 Truck/Tractor Registration: Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt: / / Time of Receipt: :
 (circle one) am/pm
 Load Size (cu. yds./tons):

LOG SHEET VOLUME INFORMATION:

Total Volume This Page (cu yds./tons): 104.23

Total Carried Forward (cu.yds./tons):

Total Carried Forward and This Page(cu yds./tons):



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC-012C

Release Tracking Number:

BILL OF LADING (pursuant to 310 CMR 40.0030)
SUMMARY SHEET

2-12224

**ACKNOWLEDGEMENT OF RECEIPT OF REMEDIATION WASTE AT RECEIVING FACILITY OR
TEMPORARY STORAGE LOCATION:**

Receiving Facility/Temporary
Location Representative (print): W.M. Cambridge
Signature: W.M. Cambridge

Title: Manager
Date: 12/29/98

**ACKNOWLEDGEMENT OF SHIPMENT AND RECEIPT OF REMEDIATION WASTE BY PERSON
CONDUCTING RESPONSE ACTION ASSOCIATED WITH THIS BILL OF LADING:**

I certify under penalties of law that I have personally examined and am familiar with the information contained in this submittal, including any
all documents accompanying this certification, and that, based on my inquiry of those individuals immediately responsible for obtaining
information, the material information contained herein is, to the best of my knowledge and belief, true, accurate and complete. I am aware
there are significant penalties, including, but not limited to, possible fines and imprisonment, for wilfully submitting false, inaccurate, or
incomplete information.

Signature: William Brennan Jr.
Name of Person (print): William Brennan Jr.

Date: 1/21/99



RESPONSE ACTION OUTCOME (RAO) STATEMENT &
DOWNGRADIENT PROPERTY STATUS TRANSMITTAL FORM

Release Tracking
Number

2 - 12224

Pursuant to 310 CMR 40.0180 (Subpart B), 40.0580 (Subpart E) & 40.1056 (Subpart J)

A. SITE OR DOWNGRADIENT PROPERTY LOCATION:

Site Name: (optional) Ashburnham Highway Department

Street: 17 Central Street Location Aid: Main Street

City/Town: Ashburnham ZIP Code: 01430

Check here if this Site location is Tier Classified. If a Tier I Permit has been issued, state the Permit Number: _____

Related Release Tracking Numbers that this Form Addresses: 2-10039

If submitting an RAO Statement, you must document the location of the Site or the location and boundaries of the Disposal Site subject to this Statement. If submitting an RAO Statement for a PORTION of a Disposal Site, you must document the location and boundaries for both the portion subject to this submittal and, to the extent defined, the entire Disposal Site. If submitting a Downgradient Property Status Submittal, you must provide a site plan of the property subject to the submittal and, to the extent defined, the Disposal Site.

B. THIS FORM IS BEING USED TO: (check all that apply)

Submit a Response Action Outcome (RAO) Statement (complete Sections A, B, C, D, E, F, H, I, J and L).

Check here if this is a revised RAO Statement. Date of Prior Submittal: _____

Check here if any Response Actions remain to be taken to address conditions associated with any of the Releases whose Release Tracking Numbers are listed above. This RAO Statement will record only an RAO-Partial Statement for those Release Tracking Numbers.

Specify Affected Release Tracking Numbers: _____

Submit an optional Phase I Completion Statement supporting an RAO Statement or Downgradient Property Status Submittal (complete Sections A, B, H, I, J, and L).

Submit a Downgradient Property Status Submittal (complete Sections A, B, G, H, I, J and K).

Check here if this is a revised Downgradient Property Status Submittal. Date of Prior Submittal: _____

Submit a Termination of a Downgradient Property Status Submittal (complete Sections A, B, I, J and L).

Submit a Periodic Review Opinion evaluating the status of a Temporary Solution (complete Sections A, B, H, I, J and L).

Specify one: For a Class C RAO For a Waiver Completion Statement indicating a Temporary Solution

Provide Submittal Date of RAO Statement or Waiver Completion Statement: _____

You must attach all supporting documentation required for each use of form indicated, including copies of any Legal Notices and Notices to Public Officials required by 310 CMR 40.1400.

C. DESCRIPTION OF RESPONSE ACTIONS: (check all that apply)

Assessment and/or Monitoring Only

Removal of Contaminated Soils

Re-use, Recycling or Treatment

On Site Off Site Est. Vol.: 69 cubic yards

Describe: 104.23 tons

Landfill Cover Disposal Est. Vol.: _____ cubic yards

Removal of Drums, Tanks or Containers

Describe 4,000 gallon gasoline UST removed

Removal of Other Contaminated Media

Specify Type and Volume: _____

Other Response Actions

Describe: _____

Deployment of Absorbant or Contaminant Materials

Temporary Covers or Caps

Bioremediation

Soil Vapor Extraction

Structure Venting System

Product or NAPL Recovery

Groundwater Treatment Systems

Air Sparging

Temporary Water Supplies

Temporary Evacuation or Relocation of Residents

Fencing and Sign Posting

SECTION C IS CONTINUED ON THE NEXT PAGE.



RESPONSE ACTION OUTCOME (RAO) STATEMENT &
DOWNGRADE PROPERTY STATUS TRANSMITTAL FORM

Release Tracking
Number

2 - 12224

Pursuant to 310 CMR 40.0180 (Subpart B), 40.0580 (Subpart E) & 40.1056 (Subpart J)

C. DESCRIPTION OF RESPONSE ACTIONS: (continued)

Check here if any Response Action(s) that serve as the basis for this RAO Statement involve the use of Innovative Technologies. (DEP is interested in using this information to create an Innovative Technologies Clearinghouse.)

Describe
Technologies:

D. TRANSPORT OF REMEDIATION WASTE: (if Remediation Waste was sent to an off-site facility, answer the following questions)

Name of Facility: American Reclamation Corporation

Town and State: Charlton, MA

Quantity of Remediation Waste Transported to: 104.23 tons

Date:

E. RESPONSE ACTION OUTCOME CLASS:

Specify the Class of Response Action Outcome that applies to the Site or Disposal Site. Select **ONLY** one Class:

Class A-1 RAO: Specify one of the following:

Contamination has been reduced to background levels.

A Threat of Release has been eliminated.

Class A-2 RAO: You **MUST** provide justification that reducing contamination to background levels is infeasible.

Class A-3 RAO: You **MUST** provide both an implemented Activity and Use Limitation (AUL) and justification that reducing contamination to background levels is infeasible.

If applicable, provide the earlier of the AUL expiration date or date the design life of the remedy will end: _____

Class B-1 RAO: Specify one of the following:

Contamination is consistent with background levels

Contamination is **NOT** consistent with background levels.

Class B-2 RAO: You **MUST** provide an implemented AUL.

If applicable, provide the AUL expiration date: _____

Class C RAO: Check here if you will conduct post-RAO Operation, Maintenance and Monitoring at the Site.

Specify One: Passive Operation and Maintenance

Monitoring Only

Active Operation and Maintenance (defined at 310 CMR 40.0006)

F. RESPONSE ACTION OUTCOME INFORMATION:

If an RAO Compliance Fee is required, check here to certify that the fee has been submitted. You **MUST** attach a photocopy of the payment.

Check here if submitting one or more AULs. You must attach an AUL Transmittal Form (BWSC-113) and a copy of each implemented AUL related to this RAO Statement. Specify the type of AUL(s) below: (required for all Class A-3 RAOs and Class B-2 RAOs)

Notice of Activity and Use Limitation

Grant of Environmental Restriction

Number of AULs
attached: _____

Specify the Risk Characterization Method(s) used to achieve the RAO described above and all Soil and Groundwater Categories applicable to the Site.

More than one Soil Category and more than one Groundwater Category may apply at a Site.
Be sure to check off all APPLICABLE categories, even if more stringent soil and groundwater standards were met.

Risk Characterization Method(s)
Used:

Method 1

Method 2

Method 3

Soil Category(ies) Applicable:

S-1

S-2

S-3

Groundwater Category(ies) Applicable:

GW-1

GW-2

GW-3

> When submitting any Class A-1 RAO or a Class B-1 RAO where contamination is consistent with background levels, do NOT specify a Risk Characterization Method.

> When submitting any Class A-2 RAO or a Class B-1 RAO where contamination is NOT consistent with background levels, you cannot use an AUL to maintain a level of no significant risk. Therefore, you must meet S-1 Soil Standards, if using Risk Characterization Method 1.



RESPONSE ACTION OUTCOME (RAO) STATEMENT &
DOWNGRAIDENT PROPERTY STATUS TRANSMITTAL FORM

Release Tracking
Number

2 - 12224

Pursuant to 310 CMR 40.0180 (Subpart B), 40.0580 (Subpart E) & 40.1056 (Subpart J)

G. DOWNGRAIDENT PROPERTY STATUS SUBMITTAL:

- If a Downgradient Property Status Submittal Compliance Fee is required, check here to certify that the fee has been submitted. You **MUST** attach a photocopy of the payment.
- Check here if a Release(s) of Oil or Hazardous Material(s), other than that which is the subject of this submittal, has occurred at this property.

Release Tracking
Number(s):

Check here if the Releases identified above require further Response Actions pursuant to 310 CMR 40.0000.

Required documentation for a Downgradient Property Status Submittal includes, but is not limited to, copies of notices provided to owners and operators of both upgradient and downgradient abutting properties and of any known or suspected source properties.

H. LSP OPINION:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and (iii) the provisions of 309 CMR 4.03(5), to the best of my knowledge, information and belief,

> if Section B indicates that a Downgradient Property Status Submittal is being provided, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in 310 CMR 40.0183(2)(b), and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B indicates that either an RAO Statement, Phase I Completion Statement and/or Periodic Review Opinion is being provided, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you **MUST** attach a statement identifying the applicable provisions thereof.

LSP Name: William E. Kuriger, Ph.D. LSP #: 8104 Stamp:

Telephone: 978-343-0921 Ext.: _____

FAX: 978-342-5065

Signature: *William E. Kuriger*

Date: 02/16/99



I. PERSON MAKING SUBMITTAL:

Name of Organization: Town of Ashburnham Highway Department

Name of Contact: William Brennan Jr. Title: Superintendent

Street: 17 Central Street

City/Town: Ashburnham State: MA ZIP Code: 01430

Telephone: 978-827-4120 Ext.: _____ FAX: _____ (optional)

J. RELATIONSHIP TO SITE OF PERSON MAKING SUBMITTAL: (check one)

RP or PRP Specify: Owner Operator Generator Transporter Other RP or PRP:

Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

Any Other Person Submitting This Form Specify Representative



**RESPONSE ACTION OUTCOME (RAO) STATEMENT &
DOWNGRADIENT PROPERTY STATUS TRANSMITTAL FORM**

Release Tracking
Number

2 - 12224

Pursuant to 310 CMR 40.0180 (Subpart B), 40.0580 (Subpart E) & 40.1056 (Subpart J)

K. CERTIFICATION OF PERSON SUBMITTING DOWNGRADIENT PROPERTY STATUS SUBMITTAL:

I, _____, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form; (ii) that, based on my inquiry of the/those individual(s) immediately responsible for obtaining the information, the material information contained herein is, to the best of my knowledge, information and belief, true, accurate and complete; (iii) that, to the best of my knowledge, information and belief, I/the person(s) or entity(ies) on whose behalf this submittal is made satisfy(ies) the criteria in 310 CMR 40.0183(2); (iv) that I/the person(s) or entity(ies) on whose behalf this submittal is made have provided notice in accordance with 310 CMR 40.0183(5); and (v) that I am fully authorized to make this attestation on behalf of the person(s) or entity(ies) legally responsible for this submittal. I/the person(s) or entity(ies) on whose behalf this submittal is made is/are aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

By: _____ Title: _____
(signature)

For _____ Date: _____
(print name of person or entity recorded in Section I)

Enter address of the person providing certification, if different from address recorded in Section I:

Street: _____
City/Town: _____ State _____ ZIP Code: _____
Telephone: _____ Ext. _____ FAX: (optional) _____

L. CERTIFICATION OF PERSON MAKING SUBMITTAL:

If you are completing only a Downgradient Property Status Submittal, you do not need to complete this section of the form.

I, William Brennan Jr., attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form; (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

By: William Brennan Jr. Title: Superintendent
(signature)

For Town of Ashburnham Highway Department Date: 2/16/99
(print name of person or entity recorded in Section I)

Enter address of the person providing certification, if different from address recorded in Section I:

Street: _____
City/Town: _____ State _____ ZIP Code: _____
Telephone: _____ Ext. _____ FAX: (optional) _____

YOU MUST COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE, AND YOU MAY INCUR ADDITIONAL COMPLIANCE FEES.



**IMMEDIATE RESPONSE ACTION (IRA)
TRANSMITTAL FORM**

Release Tracking
Number

2 - 12224

Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart

A. RELEASE OR THREAT OF RELEASE LOCATION:

Release Name: Ashburnham Highway Department
(optional)

Street: 17 Central Street Location Aid: Main Street

City/Town: Ashburnham ZIP Code: 01430

- Check here if a Tier Classification Submittal has been provided to DEP for this Release Tracking Number.
- Check here if this location is Adequately Regulated, pursuant to 310 CMR 40.0110-0114.
- Specify Program: CERCLA HSWA Corrective Action Solid Waste Management RCRA State Program (21C Facilities)

Related Release Tracking Numbers That This IRA

Addresses:

B. THIS FORM IS BEING USED TO: (check all that apply)

- Submit an IRA Plan (complete Sections A, B, C, D, E, H, I, J and K).
 Check here if this IRA Plan is an update or modification of a previously approved written IRA Plan. Date Submitted: _____
- Submit an Imminent Hazard Evaluation (complete Sections A, B, C, F, H, I, J and K).
- Submit an IRA Status Report (complete Sections A, B, C, E, H, I, J and K).
- Submit a Request to Terminate an Active Remedial System and/or Terminate a Continuing Response Action(s) Taken to Address an Imminent Hazard (complete Sections A, B, C, D, E, H, I, J and K).
- Submit an IRA Completion Statement (complete Sections A, B, C, D, E, G, H, I, J and K).

You must attach all supporting documentation required for each use of form indicated, including copies of any Legal Notices and Notices to Public Officials required by 310 CMR 40.1400.

C. RELEASE OR THREAT OF RELEASE CONDITIONS THAT WARRANT

- IRA Identify Media and Receptors Affected: (check all that apply)
- Air Groundwater Surface Water Sediments Soil
 - Wetland Storm Drain Paved Surface Private Well Public Water Supply Zone 2 Residence
 - School Unknown Other Specify _____

Identify Conditions That Require IRA, Pursuant to 310 CMR 40.0412: (check all that apply)

- 72 Hour Reporting Condition(s) Substantial Release Migration Other Condition(s)

Describe Total volatile headspace levels greater than 100 ppm under UST after removal.

- Identify Oils and Hazardous Materials Released: (check all that apply)
- Oils Chlorinated Solvents Heavy Metals
 - Others Specify: _____

D. DESCRIPTION OF RESPONSE ACTIONS: (check all that apply)

- Assessment and/or Monitoring Only
- Excavation of Contaminated Soils
- Re-use, Recycling or Treatment
 - On Site Off Site Est. Vol.: 69 cubic yards
 - Describe 104 tons
- Store On Site Off Site Est. Vol.: _____ cubic yards
- Landfill Cover Disposal Est. Vol.: _____ cubic yards
- Removal of Drums, Tanks or Containers
 - Describe 4,000 gallon gasoline UST.
- Deployment of Absorbent or Containment Materials
- Temporary Covers or Caps
- Bioremediation
- Soil Vapor Extraction
- Structure Venting System
- Product or NAPL Recovery
- Groundwater Treatment Systems
- Air Sparging
- Temporary Water Supplies

SECTION D IS CONTINUED ON THE NEXT PAGE.



**IMMEDIATE RESPONSE ACTION (IRA)
TRANSMITTAL FORM**

Release Tracking
Number
2 - 12224

Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

D. DESCRIPTION OF RESPONSE ACTIONS (continued):

Removal of Other Contaminated Media

Temporary Evacuation or Relocation of Residents

Specify Type and Volume: _____

Fencing and Sign Posting

Other Response Actions Describe _____

Check here if this IRA involves the use of Innovative Technologies (DEP is interested in using this information to aid in creating an Innovative Technologies Clearinghouse).

Describe Technologies: _____

E. TRANSPORT OF REMEDIATION WASTE: (if Remediation Waste has been sent to an off-site facility, answer the following questions)

Name of Facility: American Reclamation Corporation

Town and State: Charlton, MA

Quantity of Remediation Waste Transported to Date: 104 tons

F. IMMINENT HAZARD EVALUATION SUMMARY: (check one of the following)

Based upon an evaluation, an Imminent Hazard exists in connection with this Release or Threat of Release.

Based upon an evaluation, an Imminent Hazard does not exist in connection with this Release or Threat of Release.

Based upon an evaluation, it is unknown whether an Imminent Hazard exists in connection with this Release or Threat of Release, and further assessment activities will be undertaken.

Based upon an evaluation, it is unknown whether an Imminent Hazard exists in connection with this Release or Threat of Release. However, response actions will address those conditions that could pose an Imminent Hazard.

G. IRA COMPLETION STATEMENT:

Check here if future response actions addressing this Release or Threat of Release will be conducted as part of the Response Actions planned for a Site that has already been Tier Classified under a different Release Tracking Number, or a Site that is identified on the Transition List as described in 310 CMR 40.0600 (i. e., a Transition Site, which includes Sites with approved Waivers). These additional response actions must occur according to the deadlines applicable to the earlier Release Tracking Number (i. e., Site ID Number).

State Release Tracking Number (i. e., Site ID Number) of Tier Classified Site or Transition Site: _____

If any Remediation Waste will be stored, treated, managed, recycled or reused at the site following submission of the IRA Completion Statement, you must submit either a Release Abatement Measure (RAM) Plan or a Phase IV Remedy Implementation Plan, along with the appropriate transmittal form, as an attachment to the IRA Completion Statement.

H. LSP OPINION:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and (iii) the provisions of 309 CMR 4.03(5), to the best of my knowledge, information and belief,

> if Section B of this form indicates that an **Immediate Response Action Plan** is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B of this form indicates that an **Imminent Hazard Evaluation** is being submitted, this Imminent Hazard Evaluation was developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and the assessment activity(ies) undertaken to support this Imminent Hazard Evaluation complies(y) with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000;

> if Section B of this form indicates that an **Immediate Response Status Report** is being submitted, the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B of this form indicates that an **Immediate Response Action Completion Statement or a Request to Terminate an Active Remedial System and/or Terminate a Continuing Response Action(s) Taken to Address an Imminent Hazard** is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal.

SECTION H IS CONTINUED ON THE NEXT PAGE.



IMMEDIATE RESPONSE ACTION (IRA)
TRANSMITTAL FORM

Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking
Number
2 - 12224

H. LSP Opinion (continued):

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

LSP Name: William E. Kuriger, Ph.D LSP #: 8104 Stamp:

Telephone 978-343-0921 Ext: _____

FAX: 978-342-5065
(optional)

Signature: *William E. Kuriger*

Date: 02/15/99



I. PERSON UNDERTAKING IRA:

Name of Organization: Town of Ashburnham Highway Department

Name of Contact: William Brennan Jr. Title: Superintendent

Street: 17 Central Street

City/Town: Ashburnham State MA ZIP Code: 01430

Telephone: 978-827-4120 Ext.: _____ FAX: _____
(optional)

Check here if there has been a change in the person undertaking the IRA.

J. RELATIONSHIP TO RELEASE OR THREAT OF RELEASE OF PERSON UNDERTAKING IRA: (check one)

RP or PRP Specify Owner Operator Generator Transporter Other RP or PRP: _____

Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

Any Other Person Undertaking IRA Specify Representative
Relationship: _____

K. CERTIFICATION OF PERSON UNDERTAKING IRA:

I, William Brennan, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

By: *William Brennan Jr.* Title: Superintendent
(signature)

For Town of Ashburnham Date: 2/16/99
(print name of person or entity recorded in Section I)

Enter address of the person providing certification, if different from address recorded in Section I:

Street: _____

City/Town: _____ State _____ ZIP Code: _____

Telephone: _____ Ext. _____ FAX: _____
(optional)

YOU MUST COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.



**Ashburnham Highway,
Water & Sewer Departments
17 Central Street
Ashburnham, MA 01430
(978)-827-4120**

January 21, 1999

Commonwealth of Massachusetts
DEP-BWSC
627 Main St.
Worcester, MA 01608

Dear DEP:

Please attach these pages 3-7 to the original copies mailed to you on January 20, 1999.

Sorry for the inconvenience.

Thank you.

A handwritten signature in cursive script, appearing to read "William Brennan, Jr.", is written over the typed name.

William Brennan, Jr., Supt.
Ashburnham Highway Dept.



SPECTRUM ANALYTICAL, INC.

Massachusetts Certification M-MA 138
Connecticut Approval # PH 0777
Rhode Island # 98 & Maine # n/a
New Hampshire ID # 2538
New York ID #11393
Florida HRS87448

*W.E. Kuriger Associates
90 Atlantic Avenue
Fitchburg, MA 01420*

June 4, 1998

Attn: W.E. Kuriger

Client Project No.: _____ **Location: Ashburnham Highway Dept - MA**

<u>Lab ID No.</u>	<u>Client ID</u>	<u>Analysis Requested</u>
AB06635	NORTH	Extractable Oil Hydrocarbons Volatile Petroleum Hydrocarbons
AB06636	SOUTH	Extractable Oil Hydrocarbons Volatile Petroleum Hydrocarbons
AB06637	EAST	Extractable Oil Hydrocarbons Volatile Petroleum Hydrocarbons
AB06638	WEST	Extractable Oil Hydrocarbons Volatile Petroleum Hydrocarbons
AB06639	BOTTOM	Extractable Oil Hydrocarbons Volatile Petroleum Hydrocarbons

Authorized by

Hanibal Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: NORTH
Lab ID No.: AB06635

Location: Ashburnham Highway Dept - MA
Client Job No.:

Matrix: Soil
Collected: 05/21/98 by KURIGER
Received on 05/22/98 by MBR
QC and Data Review by

Preservative: Refrigeration, Methanol
Container: 2 VOA Vials
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Volatile Petroleum Hydrocarbons

MA DEP Modified EPA Methods 8021/8015/8240

Parameter for AB06635	Results	MDL	Extracted	Analyzed	Analyst
Aliphatics/Aromatics (mg/Kg)					
C5-C8 Aliphatics	Not detected	28.6	05/21/98	05/26/98	SN
C9-C12 Aliphatics	88	28.6	05/21/98	05/26/98	SN
C9-C10 Aromatics	44	28.6	05/21/98	05/26/98	SN
Targeted VPH Analytes (ug/Kg)					
Benzene	Not detected	143.0	05/21/98	05/26/98	SN
Toluene	230	143.0	05/21/98	05/26/98	SN
Ethylbenzene	230	143.0	05/21/98	05/26/98	SN
m,p-Xylenes	1,700	143.0	05/21/98	05/26/98	SN
o-Xylene	380	143.0	05/21/98	05/26/98	SN
Naphthalene	4,400	143.0	05/21/98	05/26/98	SN
Methyl-tert-butylether	Not detected	143.0	05/21/98	05/26/98	SN
Surrogate Recovery (%)					
2,5-Dibromotoluene(%SR)	93		05/21/98	05/26/98	SN
% Solids	86.3	0.1	05/27/98	05/27/98	KS

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: SOUTH
Lab ID No.: AB06636

Location: Ashburnham Highway Dept - MA
Client Job No.:

Matrix: Soil
Collected: 05/21/98 by KURIGER
Received on 05/22/98 by MBR
QC and Data Review by

Preservative: Refrigeration, Methanol
Container: 2 VOA Vials
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Volatile Petroleum Hydrocarbons

MA DEP Modified EPA Methods 8021/8015/8240

Parameter for AB06636	Results	MDL	Extracted	Analyzed	Analyst
Aliphatics/Aromatics (mg/Kg)					
C5-C8 Aliphatics	Not detected	32.4	05/21/98	05/26/98	SN
C9-C12 Aliphatics	74	32.4	05/21/98	05/26/98	SN
C9-C10 Aromatics	35	32.4	05/21/98	05/26/98	SN
Targeted VPH Analytes (ug/Kg)					
Benzene	190	162.0	05/21/98	05/26/98	SN
Toluene	340	162.0	05/21/98	05/26/98	SN
Ethylbenzene	Not detected	162.0	05/21/98	05/26/98	SN
m,p-Xylenes	550	162.0	05/21/98	05/26/98	SN
o-Xylene	Not detected	162.0	05/21/98	05/26/98	SN
Naphthalene	4,600	162.0	05/21/98	05/26/98	SN
Methyl-tert-butylether	210	162.0	05/21/98	05/26/98	SN
Surrogate Recovery (%)					
2,5-Dibromotoluene(%SR)	94		05/21/98	05/26/98	SN
% Solids	88.7	0.1	05/27/98	05/27/98	KS

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: EAST
Lab ID No.: AB06637

Location: Ashburnham Highway Dept - MA
Client Job No.:

Matrix: Soil
Collected: 05/21/98 by KURIGER
Received on 05/22/98 by MBR
QC and Data Review by

Preservative: Refrigeration, Methanol
Container: 2 VOA Vials
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Volatile Petroleum Hydrocarbons

MA DEP Modified EPA Methods 8021/8015/8240

Parameter for AB06637	Results	MDL	Extracted	Analyzed	Analyst
Aliphatics/Aromatics (mg/Kg)					
C5-C8 Aliphatics	Not detected	35.4	05/21/98	05/26/98	SN
C9-C12 Aliphatics	110	35.4	05/21/98	05/26/98	SN
C9-C10 Aromatics	55	35.4	05/21/98	05/26/98	SN
Targeted VPH Analytes (ug/Kg)					
Benzene	Not detected	177.0	05/21/98	05/26/98	SN
Toluene	Not detected	177.0	05/21/98	05/26/98	SN
Ethylbenzene	550	177.0	05/21/98	05/26/98	SN
m,p-Xylenes	2,700	177.0	05/21/98	05/26/98	SN
o-Xylene	650	177.0	05/21/98	05/26/98	SN
Naphthalene	5,900	177.0	05/21/98	05/26/98	SN
Methyl-tert-butylether	570	177.0	05/21/98	05/26/98	SN
Surrogate Recovery (%)					
2,5-Dibromotoluene(%SR)	86		05/21/98	05/26/98	SN
% Solids	86.7	0.1	05/27/98	05/27/98	KS

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: WEST
Lab ID No.: AB06638

Location: Ashburnham Highway Dept - MA
Client Job No.:

Matrix: Soil
Collected: 05/21/98 by KURIGER
Received on 05/22/98 by MBR
QC and Data Review by

Preservative: Refrigeration, Methanol
Container: 2 VOA Vials
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Volatile Petroleum Hydrocarbons

MA DEP Modified EPA Methods 8021/8015/8240

Parameter for AB06638	Results	MDL	Extracted	Analyzed	Analyst
Aliphatics/Aromatics (mg/Kg)					
C5-C8 Aliphatics	Not detected	34.2	05/21/98	05/26/98	SN
C9-C12 Aliphatics	Not detected	34.2	05/21/98	05/26/98	SN
C9-C10 Aromatics	Not detected	34.2	05/21/98	05/26/98	SN
Targeted VPH Analytes (ug/Kg)					
Benzene	Not detected	171.0	05/21/98	05/26/98	SN
Toluene	Not detected	171.0	05/21/98	05/26/98	SN
Ethylbenzene	Not detected	171.0	05/21/98	05/26/98	SN
m,p-Xylenes	Not detected	171.0	05/21/98	05/26/98	SN
o-Xylene	Not detected	171.0	05/21/98	05/26/98	SN
Naphthalene	680	171.0	05/21/98	05/26/98	SN
Methyl-tert-butylether	Not detected	171.0	05/21/98	05/26/98	SN
Surrogate Recovery (%)					
2,5-Dibromotoluene(%SR)	74		05/21/98	05/26/98	SN
% Solids	84.8	0.1	05/27/98	05/27/98	KS

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: **BOTTOM**
Lab ID No.: **AB06639**

Location: **Ashburnham Highway Dept - MA**
Client Job No.:

Matrix: Soil
Collected: 05/21/98 by KURIGER
Received on 05/22/98 by MBR
QC and Data Review by

Preservative: Refrigeration, Methanol
Container: 2 VOA Vials
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Volatile Petroleum Hydrocarbons

MA DEP Modified EPA Methods 8021/8015/8240

Parameter for AB06639	Results	MDL	Extracted	Analyzed	Analyst
Aliphatics/Aromatics (mg/Kg)					
C5-C8 Aliphatics	Not detected	66.0	05/21/98	05/26/98	SN
C9-C12 Aliphatics	180	66.0	05/21/98	05/26/98	SN
C9-C10 Aromatics	96	66.0	05/21/98	05/26/98	SN
Targeted VPH Analytes (ug/Kg)					
Benzene	Not detected	330.0	05/21/98	05/26/98	SN
Toluene	600	330.0	05/21/98	05/26/98	SN
Ethylbenzene	430	330.0	05/21/98	05/26/98	SN
m,p-Xylenes	1,500	330.0	05/21/98	05/26/98	SN
o-Xylene	740	330.0	05/21/98	05/26/98	SN
Naphthalene	8,300	330.0	05/21/98	05/26/98	SN
Methyl-tert-butylether	Not detected	330.0	05/21/98	05/26/98	SN
Surrogate Recovery (%)					
2,5-Dibromotoluene(%SR)	98		05/21/98	05/26/98	SN
% Solids	85.6	0.1	05/27/98	05/27/98	KS

Spectrum Analytical, Inc. Laboratory Report Supplement

References

- Methods for the Determination of Organic Compounds in Drinking Water. EPA-600/4-88/039. EMSL 1988.
- Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. EMSL 1983.
- Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater. EPA 600/4-82-057. EMSL 1982.
- Test Methods for Evaluating Solid Waste. Physical/Chemical Methods. EPA SW-846. 1986.
- Standard Methods for the Examination of Water and Wastes. APHA-AWWA-WPCF. 16th Edition. 1985.
- Standard Methods for Comparison of Waterborne Petroleum Oils by Gas Chromatography. ASTM D 3328. 1982.
- Oil Spill Identification System. U.S. Coast Guard CG-D-52-77. 1977.
- Handbook for Analytical Quality Control in Water and Wastewater Laboratories. EPA 600/4-79-019. EMSL 1979.
- Choosing Cost-Effective QA/QC (Quality Assurance/Quality Control) Programs for Chemical Analyses. EPA 600/4-85/056. EMSL 1985.

Report Notations

Not Detected, Not Det, ND or nd	=	<i>The compound was not detected at a concentration equal to or above the established method detection limit.</i>
NC	=	<i>Not Calculated</i>
MCL	=	<i>EPA Maximum Contamination Level</i>
VOA	=	<i>Volatile Organic Analysis</i>
BFB	=	<i>4-Bromofluorobenzene (an EPA 624 Surrogate)</i>
p-DFB	=	<i>1,4-Difluorobenzene (an EPA 624 Surrogate)</i>
CLB-d5	=	<i>Chlorobenzene-d5 (an EPA 624 Surrogate)</i>
BCP	=	<i>2-Bromo-1-chloropropane (an EPA 601 Surrogate)</i>
TFT	=	<i>a, a, a-Trifluorotoluene (an EPA 602 Surrogate)</i>
Decachlorobiphenyl	=	<i>(an EPA 608/8080 Surrogate)</i>

Definitions

Surrogate Recovery = The recovery (expressed as a percent) of a non method analyte (see surrogates listed above) added to the sample for the purpose of monitoring system performance.

Matrix Spike Recovery = The recovery (expressed as a percent) of method analytes added to the sample for the purpose of determining any effect of sample composition on analyte recovery.

Laboratory Replicate = Two sample aliquots taken in the analytical laboratory and analyzed separately with identical procedures. Analyses of laboratory duplicates give a measure of the precision associated with laboratory procedures, but not with sample collection, preservation, or storage procedures.

Field Duplicate = Two separate samples collected at the same time and place under identical circumstances and treated exactly the same throughout field and laboratory procedures. Analysis of Field duplicates give a measure of the precision associated with sample collection, preservation and storage, as well as with laboratory procedures.

Relative Percent Difference (%RPD) = The precision measurement obtained on duplicate/replicate analyses. %RPD is calculated as:

$$\%RPD = \frac{(\text{value1} - \text{value2}) * 100\%}{\text{ave. value}}$$

CHAIN OF CUSTODY RECORD



Page 1 of 1

PROJECT NO.:	REPORT TO: <u>W.E. Kungur Associates</u>
SITE NAME: <u>Ashburnham Highway Dept.</u>	
LOCATION: <u>Ashburnham</u> STATE <u>MA</u>	ADDRESS: <u>90 Atlantic Avenue</u>
REFERENCE QUOTE NUMBER (RQN):	CITY <u>Fitchburg</u> STATE <u>MA</u> ZIP <u>01420</u>
PURCHASE ORDER NO.:	INVOICE TO: <u>SAME</u>
PROJECT Mgr: <u>W.E. Kungur</u>	
SAMPLER(s): <u>W.E. Kungur</u>	CITY STATE ZIP

SAMPLE TYPE & MATRIX CODES:				CONTAINERS	VOC's	SVOC's	TPH	METALS	OTHER																												
1 = 4°C 2 = HCl 3 = H ₂ SO ₄ 4 = HNO ₃ 5 = OTHER <u>Asph</u>								1 - Soluble 2 - Total 3 - TCLP																													
C = COMPOSITE G = GRAB																																					
1 = AQUEOUS 3 = SLUDGE 5 = OTHER 2 = SOIL 4 = SEDIMENT																																					
LAB USE ONLY	SAMPLE I.D.	DATE	TIME	MATRIX	SAMPLE TYPE	PRESERVATIVE	# 40 ml VOA VIALS	# OF AMBER GLASS LITERS	# OF PLASTIC LITERS	# OF GLASS SOIL JARS	1-601/8010	2-602/8020	1-502/8021	2-524	1-624/8240	2-8260	1-MTBE	2-KETONES	1-8270	2-BN	3-PAHS	1-PCBS	2-PEST (608/8080)	1-GC(8100M)	2-GC(8015M)	1-VPF	2-EPA	3-ID	1-IR(418.1)	2-OIL/GREASE	PP13	RCRA8	As, Cd, Cr, Hg, Pb	1-PH	2-FLASH	3-REACT	
AA06635	NORTH	5/21/98	11:30	2	C	5	2																														
AA06636	SOUTH		11:10																																		
AA06637	EAST		11:20																																		
AA06638	WEST		11:25																																		
AA06639	BOTTOM		11:00																																		

RELINQUISHED BY: <u>William Kungur</u>	RECEIVED BY: <u>[Signature]</u>	DATE: <u>5-21-98</u>	TIME: <u>1:30</u>
		DATE: <u>5-22-98</u>	TIME: <u>3:40</u>

SPECIAL INSTRUCTIONS: _____

SPECIAL HANDLING: Return Sample after Analysis
 Dispose of Sample after 60 days
 Standard TAT 7 to 10 Business days
 Special TAT - 24 hr - 48 hr - 72 hr - 5 b. days
 • TAT begins when sample is received at test facility.
 • TAT for samples rec'd after 3 pm will begin on the next business day.
 • All TAT's are subject to laboratory approval and customer consent.

Fax results when available to (978) 342-5065

DATE RESULTS NEEDED: _____

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: NORTH
Lab ID No.: AB06635

Location: Ashburnham Highway Dept - MA
Client Job No.:

Matrix: Soil
Collected: 05/21/98 by KURIGER
Received on 05/22/98 by MBR
QC and Data Review by

Preservative: Refrigeration
Container: 1 Glass Soil Jar
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Extractable Petroleum Hydrocarbons

MA DEP Modified EPA 8270/8100

Parameter for AB06635	Results	MDL	Extracted	Analyzed	Analyst
Aliphatics/Aromatics(mg/Kg)					
C9 - C18 Aliphatics	1,000	66	05/26/98	05/30/98	MB
C19- C36 Aliphatics	280	66	05/26/98	05/30/98	MB
C11- C22 Aromatics	540	66	05/26/98	05/30/98	MB
Targeted PAH's Analytes (ug/Kg)					
Acenaphthene	Not detected	568.0	05/26/98	05/30/98	MB
Acenaphthylene	Not detected	568.0	05/26/98	05/30/98	MB
Anthracene	Not detected	568.0	05/26/98	05/30/98	MB
Benzo (a) anthracene	Not detected	568.0	05/26/98	05/30/98	MB
Benzo (b) fluoranthene	Not detected	568.0	05/26/98	05/30/98	MB
Benzo (k) fluoranthene	Not detected	568.0	05/26/98	05/30/98	MB
Benzo (a) pyrene	Not detected	568.0	05/26/98	05/30/98	MB
Benzo (g,h,i) perylene	Not detected	568.0	05/26/98	05/30/98	MB
Chrysene	Not detected	568.0	05/26/98	05/30/98	MB
Dibenz (a,h) anthracene	Not detected	568.0	05/26/98	05/30/98	MB
Fluoranthene	Not detected	568.0	05/26/98	05/30/98	MB
Fluorene	660	568.0	05/26/98	05/30/98	MB
Indeno (1,2,3-cd) pyrene	Not detected	568.0	05/26/98	05/30/98	MB
2-Methylnaphthalene	1,200	568.0	05/26/98	05/30/98	MB
Naphthalene	Not detected	568.0	05/26/98	05/30/98	MB
Phenanthrene	1,100	568.0	05/26/98	05/30/98	MB
Pyrene	Not detected	568.0	05/26/98	05/30/98	MB
Surrogate Recovery(%)					
1-Chloro-octadecane(%SR)	87		05/26/98	05/30/98	MB
Ortho-Terphenyl(%SR)	98		05/26/98	05/30/98	MB
% Solids	86.3	0.1	05/27/98	05/27/98	KS

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: SOUTH
Lab ID No.: AB06636

Location: Ashburnham Highway Dept - MA
Client Job No.:

Matrix: Soil
Collected: 05/21/98 by KURIGER
Received on 05/22/98 by MBR
QC and Data Review by

Preservative: Refrigeration
Container: 1 Glass Soil Jar
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Extractable Petroleum Hydrocarbons

MA DEP Modified EPA 8270/8100

Parameter for AB06636	Results	MDL	Extracted	Analyzed	Analyst
Aliphatics/Aromatics(mg/Kg)					
C9 - C18 Aliphatics	550	43.6	05/26/98	05/30/98	MB
C19- C36 Aliphatics	160	43.6	05/26/98	05/30/98	MB
C11- C22 Aromatics	260	43.6	05/26/98	05/30/98	MB
Targeted PAH's Analytes (ug/Kg)					
Acenaphthene	Not detected	218.0	05/26/98	05/30/98	MB
Acenaphthylene	Not detected	218.0	05/26/98	05/30/98	MB
Anthracene	Not detected	218.0	05/26/98	05/30/98	MB
Benzo (a) anthracene	Not detected	218.0	05/26/98	05/30/98	MB
Benzo (b) fluoranthene	Not detected	218.0	05/26/98	05/30/98	MB
Benzo (k) fluoranthene	Not detected	218.0	05/26/98	05/30/98	MB
Benzo (a) pyrene	Not detected	218.0	05/26/98	05/30/98	MB
Benzo (g,h,i) perylene	Not detected	218.0	05/26/98	05/30/98	MB
Chrysene	Not detected	218.0	05/26/98	05/30/98	MB
Dibenz (a,h) anthracene	Not detected	218.0	05/26/98	05/30/98	MB
Fluoranthene	470	218.0	05/26/98	05/30/98	MB
Fluorene	Not detected	218.0	05/26/98	05/30/98	MB
Indeno (1,2,3-cd) pyrene	Not detected	218.0	05/26/98	05/30/98	MB
2-Methylnaphthalene	Not detected	218.0	05/26/98	05/30/98	MB
Naphthalene	Not detected	218.0	05/26/98	05/30/98	MB
Phenanthrene	650	218.0	05/26/98	05/30/98	MB
Pyrene	350	218.0	05/26/98	05/30/98	MB
Surrogate Recovery(%)					
1-Chloro-octadecane(%SR)	88		05/26/98	05/30/98	MB
Ortho-Terphenyl(%SR)	88		05/26/98	05/30/98	MB
% Solids	88.7	0.1	05/27/98	05/27/98	KS

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: EAST
Lab ID No.: AB06637

Location: Ashburnham Highway Dept - MA
Client Job No.:

Matrix: Soil
Collected: 05/21/98 by KURIGER
Received on 05/22/98 by MBR
QC and Data Review by

Preservative: Refrigeration
Container: 1 Glass Soil Jar
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Extractable Petroleum Hydrocarbons

MA DEP Modified EPA 8270/8100

Parameter for AB06637	Results	MDL	Extracted	Analyzed	Analyst
Aliphatics/Aromatics(mg/Kg)					
C9 - C18 Aliphatics	950	46.2	05/26/98	05/30/98	MB
C19- C36 Aliphatics	310	46.2	05/26/98	05/30/98	MB
C11- C22 Aromatics	510	46.2	05/26/98	05/30/98	MB
Targeted PAH's Analytes (ug/Kg)					
Acenaphthene	Not detected	231.0	05/26/98	05/30/98	MB
Acenaphthylene	Not detected	231.0	05/26/98	05/30/98	MB
Anthracene	360	231.0	05/26/98	05/30/98	MB
Benzo (a) anthracene	Not detected	231.0	05/26/98	05/30/98	MB
Benzo (b) fluoranthene	Not detected	231.0	05/26/98	05/30/98	MB
Benzo (k) fluoranthene	Not detected	231.0	05/26/98	05/30/98	MB
Benzo (a) pyrene	Not detected	231.0	05/26/98	05/30/98	MB
Benzo (g,h,i) perylene	Not detected	231.0	05/26/98	05/30/98	MB
Chrysene	Not detected	231.0	05/26/98	05/30/98	MB
Dibenz (a,h) anthracene	Not detected	231.0	05/26/98	05/30/98	MB
Fluoranthene	300	231.0	05/26/98	05/30/98	MB
Fluorene	390	231.0	05/26/98	05/30/98	MB
Indeno (1,2,3-cd) pyrene	Not detected	231.0	05/26/98	05/30/98	MB
2-Methylnaphthalene	2,700	231.0	05/26/98	05/30/98	MB
Naphthalene	540	231.0	05/26/98	05/30/98	MB
Phenanthrene	760	231.0	05/26/98	05/30/98	MB
Pyrene	290	231.0	05/26/98	05/30/98	MB
Surrogate Recovery(%)					
1-Chloro-octadecane(%SR)	126		05/26/98	05/30/98	MB
Ortho-Terphenyl(%SR)	86		05/26/98	05/30/98	MB
% Solids	86.7	0.1	05/27/98	05/27/98	KS

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: WEST
Lab ID No.: AB06638

Location: Ashburnham Highway Dept - MA
Client Job No.:

Matrix: Soil
Collected: 05/21/98 by KURIGER
Received on 05/22/98 by MBR
QC and Data Review by

Preservative: Refrigeration
Container: 1 Glass Soil Jar
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Extractable Petroleum Hydrocarbons

MA DEP Modified EPA 8270/8100

Parameter for AB06638	Results	MDL	Extracted	Analyzed	Analyst
Aliphatics/Aromatics(mg/Kg)					
C9 - C18 Aliphatics	Not detected	39.2	05/26/98	05/30/98	MB
C19- C36 Aliphatics	Not detected	39.2	05/26/98	05/30/98	MB
C11- C22 Aromatics	Not detected	39.2	05/26/98	05/30/98	MB
Targeted PAH's Analytes (ug/Kg)					
Acenaphthene	Not detected	196.0	05/26/98	05/30/98	MB
Acenaphthylene	Not detected	196.0	05/26/98	05/30/98	MB
Anthracene	Not detected	196.0	05/26/98	05/30/98	MB
Benzo (a) anthracene	Not detected	196.0	05/26/98	05/30/98	MB
Benzo (b) fluoranthene	Not detected	196.0	05/26/98	05/30/98	MB
Benzo (k) fluoranthene	Not detected	196.0	05/26/98	05/30/98	MB
Benzo (a) pyrene	Not detected	196.0	05/26/98	05/30/98	MB
Benzo (g,h,i) perylene	Not detected	196.0	05/26/98	05/30/98	MB
Chrysene	Not detected	196.0	05/26/98	05/30/98	MB
Dibenz (a,h) anthracene	Not detected	196.0	05/26/98	05/30/98	MB
Fluoranthene	Not detected	196.0	05/26/98	05/30/98	MB
Fluorene	Not detected	196.0	05/26/98	05/30/98	MB
Indeno (1,2,3-cd) pyrene	Not detected	196.0	05/26/98	05/30/98	MB
2-Methylnaphthalene	Not detected	196.0	05/26/98	05/30/98	MB
Naphthalene	Not detected	196.0	05/26/98	05/30/98	MB
Phenanthrene	Not detected	196.0	05/26/98	05/30/98	MB
Pyrene	Not detected	196.0	05/26/98	05/30/98	MB
Surrogate Recovery(%)					
1-Chloro-octadecane(%SR)	71		05/26/98	05/30/98	MB
Ortho-Terphenyl(%SR)	85		05/26/98	05/30/98	MB
% Solids	84.8	0.1	05/27/98	05/27/98	KS

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: **BOTTOM**
 Lab ID No.: **AB06639**

Location: **Ashburnham Highway Dept - MA**
 Client Job No.:

Matrix: Soil
 Collected: 05/21/98 by KURIGER
 Received on 05/22/98 by MBR
 QC and Data Review by

Preservative: Refrigeration
 Container: 1 Glass Soil Jar
 Condition of Sample as Received: Satisfactory
 Delivered by: Courier

Extractable Petroleum Hydrocarbons

MA DEP Modified EPA 8270/8100

Parameter for AB06639	Results	MDL	Extracted	Analyzed	Analyst
Aliphatics/Aromatics(mg/Kg)					
C9 - C18 Aliphatics	3,400	132	05/26/98	05/30/98	MB
C19- C36 Aliphatics	970	132	05/26/98	05/30/98	MB
C11- C22 Aromatics	1,800	132	05/26/98	05/30/98	MB
Targeted PAH's Analytes (ug/Kg)					
Acenaphthene	Not detected	1560.0	05/26/98	05/30/98	MB
Acenaphthylene	Not detected	1560.0	05/26/98	05/30/98	MB
Anthracene	Not detected	1560.0	05/26/98	05/30/98	MB
Benzo (a) anthracene	Not detected	1560.0	05/26/98	05/30/98	MB
Benzo (b) fluoranthene	Not detected	1560.0	05/26/98	05/30/98	MB
Benzo (k) fluoranthene	Not detected	1560.0	05/26/98	05/30/98	MB
Benzo (a) pyrene	Not detected	1560.0	05/26/98	05/30/98	MB
Benzo (g,h,i) perylene	Not detected	1560.0	05/26/98	05/30/98	MB
Chrysene	Not detected	1560.0	05/26/98	05/30/98	MB
Dibenz (a,h) anthracene	Not detected	1560.0	05/26/98	05/30/98	MB
Fluoranthene	Not detected	1560.0	05/26/98	05/30/98	MB
Fluorene	1,600	1560.0	05/26/98	05/30/98	MB
Indeno (1,2,3-cd) pyrene	Not detected	1560.0	05/26/98	05/30/98	MB
2-Methylnaphthalene	4,600	1560.0	05/26/98	05/30/98	MB
Naphthalene	Not detected	1560.0	05/26/98	05/30/98	MB
Phenanthrene	2,100	1560.0	05/26/98	05/30/98	MB
Pyrene	Not detected	1560.0	05/26/98	05/30/98	MB
Surrogate Recovery(%)					
1-Chloro-octadecane(%SR)	69		05/26/98	05/30/98	MB
Ortho-Terphenyl(%SR)	61		05/26/98	05/30/98	MB
% Solids	85.6	0.1	05/27/98	05/27/98	KS



SPECTRUM ANALYTICAL, INC.

Massachusetts Certification M-MA 138
Connecticut Approval # PH 0777
Rhode Island # 98 & Maine # n/a
New Hampshire ID # 2538
New York ID #11393
Florida HRS87448

*W.E. Kuriger Associates
90 Atlantic Avenue
Fitchburg, MA 01420*

October 5, 1998

Attn: William Kuriger

Client Project No.:

Location: Ashburnham Highway Dept - MA

<u>Lab ID No.</u>	<u>Client ID</u>	<u>Analysis Requested</u>
AB19092	NORTH	Volatile Petroleum Hydrocarbons Extractable Oil Hydrocarbons
AB19093	SOUTH	Volatile Petroleum Hydrocarbons Extractable Oil Hydrocarbons
AB19094	EAST	Volatile Petroleum Hydrocarbons Extractable Oil Hydrocarbons
AB19095	WEST	Volatile Petroleum Hydrocarbons Extractable Oil Hydrocarbons
AB19096	BOTTOM	Volatile Petroleum Hydrocarbons Extractable Oil Hydrocarbons
AB19097	SOILPILE	EPA Method 8260
AB19098	SOILPL#1	TPH by IR
AB19099	SOILPILE	Total Arsenic Total Cadmium Total Chromium Total Lead Total Mercury TCLP Lead
AB19100	SOILPL#2	TPH by IR
AB19101	SOILPILE	pH Flash Point Reactivity - Cyanide/Sulfide Free Liquids

Authorized by

Hanibal Tayeh
President/Laboratory Director

ENVIRONMENTAL ANALYSES

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: NORTH
Lab ID No.: AB19092

Location: Ashburnham Highway Dept - MA
Client Job No.:

Matrix: Soil
Collected: 09/22/98 by KURIGER
Received on 09/24/98 by MBR
QC and Data Review by NB

Preservative: Refrigeration
Container: 1 Glass Soil Jar
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Volatile Petroleum Hydrocarbons

MA DEP Method Modified EPA 8021/8015/8260

Parameter for AB19092	Results	MDL	Extracted	Analyzed	Analyst
Aliphatics/Aromatics(mg/Kg)					
C5-C8 Aliphatics	Not detected	2.745	09/22/98	10/03/98	CLD
C9-C12 Aliphatics	Not detected	0.915	09/22/98	10/03/98	CLD
C9-C10 Aromatics	Not detected	0.915	09/22/98	10/03/98	CLD
Targeted VPH Analytes (ug/Kg)					
Benzene	Not detected	183.0	09/22/98	10/03/98	CLD
Toluene	Not detected	183.0	09/22/98	10/03/98	CLD
Ethylbenzene	Not detected	183.0	09/22/98	10/03/98	CLD
m,p-Xylenes	Not detected	183.0	09/22/98	10/03/98	CLD
o-Xylene	Not detected	183.0	09/22/98	10/03/98	CLD
Naphthalene	Not detected	183.0	09/22/98	10/03/98	CLD
Methyl-tert-butylether	Not detected	183.0	09/22/98	10/03/98	CLD
Surrogate Recovery (%)					
2,5-Dibromotoluene(%SR)	107		09/22/98	10/03/98	CLD
Carbon Chain Dilution Factor	1		09/22/98	10/03/98	CLD
Target Analytes Dilution Factor	1		09/22/98	10/03/98	CLD
% Solids	85.7	0.1	09/29/98	09/29/98	MP

I attest that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge, true, accurate, complete and all QA/QC procedures were followed as outlined in the above referenced method.

10/09/98



Lab Director/President Initial's

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: NORTH
Lab ID No.: AB19092

Location: Ashburnham Highway Dept - MA
Client Job No.:

Matrix: Soil
Collected: 09/22/98 by KURIGER
Received on 09/24/98 by MBR
QC and Data Review by NB

Preservative: Refrigeration
Container: 1 Glass Soil Jar
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Extractable Petroleum Hydrocarbons

MA DEP Modified EPA 8270/8100

Parameter for AB19092	Results	MDL	Extracted	Analyzed	Analyst
Aliphatics/Aromatics(mg/Kg)					
C9 - C18 Aliphatics	Not detected	33	09/29/98	10/05/98	MBK
C19- C36 Aliphatics	Not detected	33	09/29/98	10/05/98	MBK
C11- C22 Aromatics	Not detected	33	09/29/98	10/05/98	MBK
Targeted PAH's Analytes (ug/Kg)					
Acenaphthene	Not detected	143.0	09/29/98	10/05/98	MBK
Acenaphthylene	Not detected	143.0	09/29/98	10/05/98	MBK
Anthracene	Not detected	143.0	09/29/98	10/05/98	MBK
Benzo (a) anthracene	Not detected	143.0	09/29/98	10/05/98	MBK
Benzo (b) fluoranthene	Not detected	143.0	09/29/98	10/05/98	MBK
Benzo (k) fluoranthene	Not detected	143.0	09/29/98	10/05/98	MBK
Benzo (a) pyrene	Not detected	143.0	09/29/98	10/05/98	MBK
Benzo (g,h,i) perylene	Not detected	143.0	09/29/98	10/05/98	MBK
Chrysene	Not detected	143.0	09/29/98	10/05/98	MBK
Dibenz (a,h) anthracene	Not detected	143.0	09/29/98	10/05/98	MBK
Fluoranthene	Not detected	143.0	09/29/98	10/05/98	MBK
Fluorene	Not detected	143.0	09/29/98	10/05/98	MBK
Indeno (1,2,3-cd) pyrene	Not detected	143.0	09/29/98	10/05/98	MBK
2-Methylnaphthalene	Not detected	143.0	09/29/98	10/05/98	MBK
Naphthalene	Not detected	143.0	09/29/98	10/05/98	MBK
Phenanthrene	Not detected	143.0	09/29/98	10/05/98	MBK
Pyrene	Not detected	143.0	09/29/98	10/05/98	MBK
Surrogate Recovery(%)					
1-Chloro-octadecane(%SR)	45		09/29/98	10/05/98	MBK
Ortho-Terphenyl(%SR)	59		09/29/98	10/05/98	MBK
Carbon Chain Dilution Factor	1		09/29/98	10/05/98	MBK
Target Analytes Dilution Factor	1		09/29/98	10/05/98	MBK
% Solids	85.7	0.1	09/29/98	09/29/98	MP

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10/09/98

Lab Director/President Initial's

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: **SOUTH**
Lab ID No.: **AB19093**

Location: **Ashburnham Highway Dept - MA**
Client Job No.:

Matrix: Soil
Collected: 09/22/98 by KURIGER
Received on 09/24/98 by MBR
QC and Data Review by NB

Preservative: Refrigeration
Container: 1 Glass Soil Jar
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Volatile Petroleum Hydrocarbons

MA DEP Method Modified EPA 8021/8015/8260

Parameter for AB19093	Results	MDL	Extracted	Analyzed	Analyst
Aliphatics/Aromatics(mg/Kg)					
C5-C8 Aliphatics	170	2.370	09/22/98	10/03/98	CLD
C9-C12 Aliphatics	200	0.790	09/22/98	10/03/98	CLD
C9-C10 Aromatics	120	0.790	09/22/98	10/03/98	CLD
Targeted VPH Analytes (ug/Kg)					
Benzene	Not detected	158.0	09/22/98	10/03/98	CLD
Toluene	470	158.0	09/22/98	10/03/98	CLD
Ethylbenzene	390	158.0	09/22/98	10/03/98	CLD
m,p-Xylenes	1,600	158.0	09/22/98	10/03/98	CLD
o-Xylene	1,400	158.0	09/22/98	10/03/98	CLD
Naphthalene	2,800	158.0	09/22/98	10/03/98	CLD
Methyl-tert-butylether	Not detected	200.0	09/22/98	10/03/98	CLD
Surrogate Recovery (%)					
2,5-Dibromotoluene(%SR)	122		09/22/98	10/03/98	CLD
Carbon Chain Dilution Factor	1		09/22/98	10/03/98	CLD
Target Analytes Dilution Factor	1		09/22/98	10/03/98	CLD
% Solids	93.2	0.1	09/29/98	09/29/98	MP

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10/09/98

Lab Director/President Initial's

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: SOUTH
Lab ID No.: AB19093

Location: Ashburnham Highway Dept - MA
Client Job No.:

Matrix: Soil
Collected: 09/22/98 by KURIGER
Received on 09/24/98 by MBR
QC and Data Review by NB

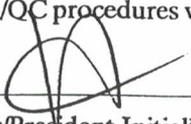
Preservative: Refrigeration
Container: 1 Glass Soil Jar
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Extractable Petroleum Hydrocarbons

MA DEP Modified EPA 8270/8100

Parameter for AB19093	Results	MDL	Extracted	Analyzed	Analyst
Aliphatics/Aromatics(mg/Kg)					
C9 - C18 Aliphatics	49	33.0	09/29/98	10/06/98	MBK
C19- C36 Aliphatics	48	33.0	09/29/98	10/06/98	MBK
C11- C22 Aromatics	55	33.0	09/29/98	10/06/98	MBK
Targeted PAH's Analytes (ug/Kg)					
Acenaphthene	Not detected	165.0	09/29/98	10/06/98	MBK
Acenaphthylene	Not detected	165.0	09/29/98	10/06/98	MBK
Anthracene	Not detected	165.0	09/29/98	10/06/98	MBK
Benzo (a) anthracene	Not detected	165.0	09/29/98	10/06/98	MBK
Benzo (b) fluoranthene	Not detected	165.0	09/29/98	10/06/98	MBK
Benzo (k) fluoranthene	Not detected	165.0	09/29/98	10/06/98	MBK
Benzo (a) pyrene	Not detected	165.0	09/29/98	10/06/98	MBK
Benzo (g,h,i) perylene	Not detected	165.0	09/29/98	10/06/98	MBK
Chrysene	Not detected	165.0	09/29/98	10/06/98	MBK
Dibenz (a,h) anthracene	Not detected	165.0	09/29/98	10/06/98	MBK
Fluoranthene	Not detected	165.0	09/29/98	10/06/98	MBK
Fluorene	Not detected	165.0	09/29/98	10/06/98	MBK
Indeno (1,2,3-cd) pyrene	Not detected	165.0	09/29/98	10/06/98	MBK
2-Methylnaphthalene	170	165.0	09/29/98	10/06/98	MBK
Naphthalene	Not detected	165.0	09/29/98	10/06/98	MBK
Phenanthrene	Not detected	165.0	09/29/98	10/06/98	MBK
Pyrene	170	165.0	09/29/98	10/06/98	MBK
Surrogate Recovery(%)					
1-Chloro-octadecane(%SR)	80		09/29/98	10/06/98	MBK
Ortho-Terphenyl(%SR)	57		09/29/98	10/06/98	MBK
Carbon Chain Dilution Factor	1		09/29/98	10/06/98	MBK
Target Analytes Dilution Factor	1		09/29/98	10/06/98	MBK
% Solids	93.2	0.1	09/29/98	09/29/98	MP

I attest that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge, true, accurate, complete and all QA/QC procedures were followed as outlined in the above referenced method.


Lab Director/President Initial's

10/09/98

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: EAST
Lab ID No.: AB19094

Location: Ashburnham Highway Dept - MA
Client Job No.:

Matrix: Soil
Collected: 09/22/98 by KURIGER
Received on 09/24/98 by MBR
QC and Data Review by NB

Preservative: Refrigeration
Container: 1 Glass Soil Jar
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Volatile Petroleum Hydrocarbons

MA DEP Method Modified EPA 8021/8015/8260

Parameter for AB19094	Results	MDL	Extracted	Analyzed	Analyst
Aliphatics/Aromatics(mg/Kg)					
C5-C8 Aliphatics	17	2.565	09/22/98	10/03/98	CLD
C9-C12 Aliphatics	65	0.855	09/22/98	10/03/98	CLD
C9-C10 Aromatics	33	0.855	09/22/98	10/03/98	CLD
Targeted VPH Analytes (ug/Kg)					
Benzene	Not detected	171.0	09/22/98	10/03/98	CLD
Toluene	Not detected	171.0	09/22/98	10/03/98	CLD
Ethylbenzene	Not detected	171.0	09/22/98	10/03/98	CLD
m,p-Xylenes	170	171.0	09/22/98	10/03/98	CLD
o-Xylene	Not detected	171.0	09/22/98	10/03/98	CLD
Naphthalene	920	171.0	09/22/98	10/03/98	CLD
Methyl-tert-butylether	Not detected	171.0	09/22/98	10/03/98	CLD
Surrogate Recovery (%)					
2,5-Dibromotoluene(%SR)	90		09/22/98	10/03/98	CLD
Carbon Chain Dilution Factor	1		09/22/98	10/03/98	CLD
Target Analytes Dilution Factor	1		09/22/98	10/03/98	CLD
% Solids	87.5	0.1	09/29/98	09/29/98	MP

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10/09/98

Lab Director/President Initial's

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: EAST
Lab ID No.: AB19094

Location: Ashburnham Highway Dept - MA
Client Job No.:

Matrix: Soil
Collected: 09/22/98 by KURIGER
Received on 09/24/98 by MBR
QC and Data Review by NB

Preservative: Refrigeration
Container: 1 Glass Soil Jar
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Extractable Petroleum Hydrocarbons

MA DEP Modified EPA 8270/8100

Parameter for AB19094	Results	MDL	Extracted	Analyzed	Analyst
Aliphatics/Aromatics(mg/Kg)					
C9 - C18 Aliphatics	Not detected	33.0	09/29/98	10/06/98	MBK
C19- C36 Aliphatics	Not detected	33.0	09/29/98	10/06/98	MBK
C11- C22 Aromatics	Not detected	33.0	09/29/98	10/06/98	MBK
Targeted PAH's Analytes (ug/Kg)					
Acenaphthene	Not detected	155.0	09/29/98	10/06/98	MBK
Acenaphthylene	Not detected	155.0	09/29/98	10/06/98	MBK
Anthracene	Not detected	155.0	09/29/98	10/06/98	MBK
Benzo (a) anthracene	Not detected	155.0	09/29/98	10/06/98	MBK
Benzo (b) fluoranthene	Not detected	155.0	09/29/98	10/06/98	MBK
Benzo (k) fluoranthene	Not detected	155.0	09/29/98	10/06/98	MBK
Benzo (a) pyrene	Not detected	155.0	09/29/98	10/06/98	MBK
Benzo (g,h,i) perylene	Not detected	155.0	09/29/98	10/06/98	MBK
Chrysene	Not detected	155.0	09/29/98	10/06/98	MBK
Dibenz (a,h) anthracene	Not detected	155.0	09/29/98	10/06/98	MBK
Fluoranthene	Not detected	155.0	09/29/98	10/06/98	MBK
Fluorene	Not detected	155.0	09/29/98	10/06/98	MBK
Indeno (1,2,3-cd) pyrene	Not detected	155.0	09/29/98	10/06/98	MBK
2-Methylnaphthalene	Not detected	155.0	09/29/98	10/06/98	MBK
Naphthalene	Not detected	155.0	09/29/98	10/06/98	MBK
Phenanthrene	Not detected	155.0	09/29/98	10/06/98	MBK
Pyrene	Not detected	155.0	09/29/98	10/06/98	MBK
Surrogate Recovery(%)					
1-Chloro-octadecane(%SR)	72		09/29/98	10/06/98	MBK
Ortho-Terphenyl(%SR)	43		09/29/98	10/06/98	MBK
Carbon Chain Dilution Factor	1		09/29/98	10/06/98	MBK
Target Analytes Dilution Factor	1		09/29/98	10/06/98	MBK
% Solids	87.5	0.1	09/29/98	09/29/98	MP

I attest that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge, true, accurate, complete and all QA/QC procedures were followed as outlined in the above referenced method.

10/09/98

Lab Director/President Initial's

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: WEST
Lab ID No.: AB19095

Location: Ashburnham Highway Dept - MA
Client Job No.:

Matrix: Soil
Collected: 09/22/98 by KURIGER
Received on 09/24/98 by MBR
QC and Data Review by NB

Preservative: Refrigeration
Container: 1 Glass Soil Jar
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Volatile Petroleum Hydrocarbons

MA DEP Method Modified EPA 8021/8015/8260

Parameter for AB19095	Results	MDL	Extracted	Analyzed	Analyst
Aliphatics/Aromatics(mg/Kg)					
C5-C8 Aliphatics	Not detected	0.714	09/22/98	10/03/98	SN
C9-C12 Aliphatics	Not detected	0.238	09/22/98	10/03/98	SN
C9-C10 Aromatics	Not detected	0.238	09/22/98	10/03/98	SN
Targeted VPH Analytes (ug/Kg)					
Benzene	Not detected	47.6	09/22/98	10/03/98	SN
Toluene	Not detected	47.6	09/22/98	10/03/98	SN
Ethylbenzene	Not detected	47.6	09/22/98	10/03/98	SN
m,p-Xylenes	Not detected	47.6	09/22/98	10/03/98	SN
o-Xylene	Not detected	47.6	09/22/98	10/03/98	SN
Naphthalene	Not detected	47.6	09/22/98	10/03/98	SN
Methyl-tert-butylether	Not detected	47.6	09/22/98	10/03/98	SN
Surrogate Recovery (%)					
2,5-Dibromotoluene(%SR)	114		09/22/98	10/03/98	SN
Carbon Chain Dilution Factor	1		09/22/98	10/03/98	SN
Target Analytes Dilution Factor	1		09/22/98	10/03/98	SN
% Solids	93.5	0.1	09/29/98	09/29/98	MP

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10/09/98

Lab Director/President Initial's

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: WEST
Lab ID No.: AB19095

Location: Ashburnham Highway Dept - MA
Client Job No.:

Matrix: Soil
Collected: 09/22/98 by KURIGER
Received on 09/24/98 by MBR
QC and Data Review by NB

Preservative: Refrigeration
Container: 1 Glass Soil Jar
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Extractable Petroleum Hydrocarbons

MA DEP Modified EPA 8270/8100

Parameter for AB19095	Results	MDL	Extracted	Analyzed	Analyst
Aliphatics/Aromatics(mg/Kg)					
C9 - C18 Aliphatics	Not detected	33	09/29/98	10/06/98	MBK
C19- C36 Aliphatics	Not detected	33	09/29/98	10/06/98	MBK
C11- C22 Aromatics	Not detected	33	09/29/98	10/06/98	MBK
Targeted PAH's Analytes (ug/Kg)					
Acenaphthene	Not detected	143.0	09/29/98	10/06/98	MBK
Acenaphthylene	Not detected	143.0	09/29/98	10/06/98	MBK
Anthracene	Not detected	143.0	09/29/98	10/06/98	MBK
Benzo (a) anthracene	Not detected	143.0	09/29/98	10/06/98	MBK
Benzo (b) fluoranthene	Not detected	143.0	09/29/98	10/06/98	MBK
Benzo (k) fluoranthene	Not detected	143.0	09/29/98	10/06/98	MBK
Benzo (a) pyrene	Not detected	143.0	09/29/98	10/06/98	MBK
Benzo (g,h,i) perylene	Not detected	143.0	09/29/98	10/06/98	MBK
Chrysene	Not detected	143.0	09/29/98	10/06/98	MBK
Dibenz (a,h) anthracene	Not detected	143.0	09/29/98	10/06/98	MBK
Fluoranthene	Not detected	143.0	09/29/98	10/06/98	MBK
Fluorene	Not detected	143.0	09/29/98	10/06/98	MBK
Indeno (1,2,3-cd) pyrene	Not detected	143.0	09/29/98	10/06/98	MBK
2-Methylnaphthalene	Not detected	143.0	09/29/98	10/06/98	MBK
Naphthalene	Not detected	143.0	09/29/98	10/06/98	MBK
Phenanthrene	Not detected	143.0	09/29/98	10/06/98	MBK
Pyrene	Not detected	143.0	09/29/98	10/06/98	MBK
Surrogate Recovery(%)					
1-Chloro-octadecane(%SR)	89		09/29/98	10/06/98	MBK
Ortho-Terphenyl(%SR)	73		09/29/98	10/06/98	MBK
Carbon Chain Dilution Factor	1		09/29/98	10/06/98	MBK
Target Analytes Dilution Factor	1		09/29/98	10/06/98	MBK
% Solids	93.5	0.1	09/29/98	09/29/98	MP

I attest that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge, true, accurate, complete and all QA/QC procedures were followed as outlined in the above referenced method.

Lab Director/President Initial's

10/09/98

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: **BOTTOM**

Lab ID No.: **AB19096**

Location: **Ashburnham Highway Dept - MA**

Client Job No.:

Matrix: Soil
Collected: 09/22/98 by KURIGER
Received on 09/24/98 by MBR
QC and Data Review by NB

Preservative: Refrigeration
Container: 1 Glass Soil Jar
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Volatile Petroleum Hydrocarbons

MA DEP Method Modified EPA 8021/8015/8260

Parameter for AB19096	Results	MDL	Extracted	Analyzed	Analyst
Aliphatics/Aromatics(mg/Kg)					
C5-C8 Aliphatics	3.5	1.018	09/22/98	10/03/98	SN
C9-C12 Aliphatics	4.3	0.340	09/22/98	10/03/98	SN
C9-C10 Aromatics	1.0	0.340	09/22/98	10/03/98	SN
Targeted VPH Analytes (ug/Kg)					
Benzene	Not detected	67.9	09/22/98	10/03/98	SN
Toluene	Not detected	67.9	09/22/98	10/03/98	SN
Ethylbenzene	Not detected	67.9	09/22/98	10/03/98	SN
m,p-Xylenes	Not detected	67.9	09/22/98	10/03/98	SN
o-Xylene	Not detected	67.9	09/22/98	10/03/98	SN
Naphthalene	Not detected	67.9	09/22/98	10/03/98	SN
Methyl-tert-butylether	Not detected	67.9	09/22/98	10/03/98	SN
Surrogate Recovery (%)					
2,5-Dibromotoluene(%SR)	115		09/22/98	10/03/98	SN
Carbon Chain Dilution Factor	1		09/22/98	10/03/98	SN
Target Analytes Dilution Factor	1		09/22/98	10/03/98	SN
% Solids	87.1	0.1	09/29/98	09/29/98	MP

I attest that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge, true, accurate, complete and all QA/QC procedures were followed as outlined in the above referenced method.

10/09/98

Lab Director/President Initial's

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: BOTTOM

Lab ID No.: AB19096

Location: Ashburnham Highway Dept - MA

Client Job No.:

Matrix: Soil
Collected: 09/22/98 by KURIGER
Received on 09/24/98 by MBR
QC and Data Review by NB

Preservative: Refrigeration
Container: 1 Glass Soil Jar
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Extractable Petroleum Hydrocarbons

MA DEP Modified EPA 8270/8100

Parameter for AB19096	Results	MDL	Extracted	Analyzed	Analyst
Aliphatics/Aromatics (mg/Kg)					
C9 - C18 Aliphatics	Not detected	33	09/29/98	10/06/98	MBK
C19- C36 Aliphatics	Not detected	33	09/29/98	10/06/98	MBK
C11- C22 Aromatics	Not detected	33	09/29/98	10/06/98	MBK
Targeted PAH's Analytes (ug/Kg)					
Acenaphthene	Not detected	147.0	09/29/98	10/06/98	MBK
Acenaphthylene	Not detected	147.0	09/29/98	10/06/98	MBK
Anthracene	Not detected	147.0	09/29/98	10/06/98	MBK
Benzo (a) anthracene	Not detected	147.0	09/29/98	10/06/98	MBK
Benzo (b) fluoranthene	Not detected	147.0	09/29/98	10/06/98	MBK
Benzo (k) fluoranthene	Not detected	147.0	09/29/98	10/06/98	MBK
Benzo (a) pyrene	Not detected	147.0	09/29/98	10/06/98	MBK
Benzo (g,h,i) perylene	Not detected	147.0	09/29/98	10/06/98	MBK
Chrysene	Not detected	147.0	09/29/98	10/06/98	MBK
Dibenz (a,h) anthracene	Not detected	147.0	09/29/98	10/06/98	MBK
Fluoranthene	Not detected	147.0	09/29/98	10/06/98	MBK
Fluorene	Not detected	147.0	09/29/98	10/06/98	MBK
Indeno (1,2,3-cd) pyrene	Not detected	147.0	09/29/98	10/06/98	MBK
2-Methylnaphthalene	Not detected	147.0	09/29/98	10/06/98	MBK
Naphthalene	Not detected	147.0	09/29/98	10/06/98	MBK
Phenanthrene	Not detected	147.0	09/29/98	10/06/98	MBK
Pyrene	Not detected	147.0	09/29/98	10/06/98	MBK
Surrogate Recovery(%)					
1-Chloro-octadecane(%SR)	51		09/29/98	10/06/98	MBK
Ortho-Terphenyl(%SR)	60		09/29/98	10/06/98	MBK
Carbon Chain Dilution Factor	1		09/29/98	10/06/98	MBK
Target Analytes Dilution Factor	1		09/29/98	10/06/98	MBK
% Solids	87.1	0.1	09/29/98	09/29/98	MP

I attest that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge, true, accurate, complete and all QA/QC procedures were followed as outlined in the above referenced method.

10/09/98

Lab Director/President Initial's

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: SOILPILE
Lab ID No.: AB19097

Location: Ashburnham Highway Dept - MA
Client Job No.:

Matrix: Soil
Collected: 09/23/98 by KURIGER
Received on 09/24/98 by MBR
QC and Data Review by AM

Preservative: Refrigeration
Container: 2 Glass Soil Jars
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Volatile Organics

EPA Method 8260

Parameter for AB19097	Result (ug/Kg)	MDL	Extracted	Analyzed	Analyst
Benzene	110	63.0	09/25/98	10/05/98	CH
Bromobenzene	Not detected	63.0	09/25/98	10/05/98	CH
Bromochloromethane	Not detected	63.0	09/25/98	10/05/98	CH
Bromodichloromethane	Not detected	63.0	09/25/98	10/05/98	CH
Bromoform	Not detected	63.0	09/25/98	10/05/98	CH
n-Butylbenzene	1,200	63.0	09/25/98	10/05/98	CH
sec-Butylbenzene	250	63.0	09/25/98	10/05/98	CH
tert-Butylbenzene	Not detected	63.0	09/25/98	10/05/98	CH
Carbon tetrachloride	Not detected	63.0	09/25/98	10/05/98	CH
Chlorobenzene	Not detected	63.0	09/25/98	10/05/98	CH
Chloroform	Not detected	63.0	09/25/98	10/05/98	CH
2-Chlorotoluene	Not detected	63.0	09/25/98	10/05/98	CH
4-Chlorotoluene	Not detected	63.0	09/25/98	10/05/98	CH
1,2-Dibromo-3-chloropropane	Not detected	63.0	09/25/98	10/05/98	CH
Dibromochloromethane	Not detected	63.0	09/25/98	10/05/98	CH
1,2-Dibromoethane (EDB)	Not detected	63.0	09/25/98	10/05/98	CH
Dibromomethane	Not detected	63.0	09/25/98	10/05/98	CH
1,2-Dichlorobenzene	Not detected	63.0	09/25/98	10/05/98	CH
1,3-Dichlorobenzene	Not detected	63.0	09/25/98	10/05/98	CH
1,4-Dichlorobenzene	Not detected	63.0	09/25/98	10/05/98	CH
1,1-Dichloroethane	Not detected	63.0	09/25/98	10/05/98	CH
1,2-Dichloroethane	Not detected	63.0	09/25/98	10/05/98	CH
1,1-Dichloroethene	Not detected	63.0	09/25/98	10/05/98	CH
cis-1,2-Dichloroethene	Not detected	63.0	09/25/98	10/05/98	CH
trans-1,2-Dichloroethene	Not detected	63.0	09/25/98	10/05/98	CH
1,2-Dichloropropane	Not detected	63.0	09/25/98	10/05/98	CH
1,3-Dichloropropane	Not detected	63.0	09/25/98	10/05/98	CH
2,2-Dichloropropane	Not detected	63.0	09/25/98	10/05/98	CH

Parameter for AB19097	Result (ug/Kg)	MDL	Extracted	Analyzed	Analyst
1,1-Dichloropropene	Not detected	63.0	09/25/98	10/05/98	CH
cis-1,3-Dichloropropene	Not detected	63.0	09/25/98	10/05/98	CH
trans-1,3-Dichloropropene	Not detected	63.0	09/25/98	10/05/98	CH
Ethylbenzene	110	63.0	09/25/98	10/05/98	CH
Hexachlorobutadiene	Not detected	63.0	09/25/98	10/05/98	CH
Isopropylbenzene	110	63.0	09/25/98	10/05/98	CH
4-Isopropyltoluene	380	63.0	09/25/98	10/05/98	CH
Methylene chloride	Not detected	63.0	09/25/98	10/05/98	CH
Naphthalene	670	63.0	09/25/98	10/05/98	CH
n-Propylbenzene	150	63.0	09/25/98	10/05/98	CH
Styrene	Not detected	63.0	09/25/98	10/05/98	CH
1,1,1,2-Tetrachloroethane	Not detected	63.0	09/25/98	10/05/98	CH
1,1,2,2-Tetrachloroethane	Not detected	63.0	09/25/98	10/05/98	CH
Tetrachloroethene	720	63.0	09/25/98	10/05/98	CH
Toluene	220	63.0	09/25/98	10/05/98	CH
1,2,3-Trichlorobenzene	Not detected	63.0	09/25/98	10/05/98	CH
1,2,4-Trichlorobenzene	Not detected	63.0	09/25/98	10/05/98	CH
1,1,1-Trichloroethane	Not detected	63.0	09/25/98	10/05/98	CH
1,1,2-Trichloroethane	Not detected	63.0	09/25/98	10/05/98	CH
Trichloroethene	Not detected	63.0	09/25/98	10/05/98	CH
Trichlorofluoromethane	Not detected	63.0	09/25/98	10/05/98	CH
1,2,3-Trichloropropane	Not detected	63.0	09/25/98	10/05/98	CH
1,2,4-Trimethylbenzene	1,500	63.0	09/25/98	10/05/98	CH
1,3,5-Trimethylbenzene	990	63.0	09/25/98	10/05/98	CH
m,p-Xylenes	350	126.0	09/25/98	10/05/98	CH
o-Xylene	98	63.0	09/25/98	10/05/98	CH
Methyl-t-butyl ether	68	63.0	09/25/98	10/05/98	CH
BFB Surrogate Recovery (%)	114		09/25/98	10/05/98	CH
p-DFB Surrogate Recovery (%)	91		09/25/98	10/05/98	CH
CLB-d5 Surrogate Recovery (%)	112		09/25/98	10/05/98	CH
% Solids	89.3	0.1	09/28/98	09/28/98	JK

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: SOILPL#1
Lab ID No.: AB19098

Location: Ashburnham Highway Dept - MA
Client Job No.:

Matrix: Soil
Collected: 09/23/98 by KURIGER
Received on 09/24/98 by MBR
QC and Data Review by AM

Preservative: Refrigeration
Container: 1 Glass Soil Jar
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Total Hydrocarbons by IR

EPA Method 418.1

Parameter	Result (mg/Kg)	MDL	Extracted	Analyzed	Analyst
TPH by IR	890	40	10/02/98	10/05/98	GM
% Solids	90.9	0.1	10/02/98	10/02/98	GM

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: SOILPL#2
Lab ID No.: AB19100

Location: Ashburnham Highway Dept - MA
Client Job No.:

Matrix: Soil
Collected: 09/23/98 by KURIGER
Received on 09/24/98 by MBR
QC and Data Review by AM

Preservative: Refrigeration
Container: 1 Glass Soil Jar
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Total Hydrocarbons by IR

EPA Method 418.1

Parameter	Result (mg/Kg)	MDL	Extracted	Analyzed	Analyst
TPH by IR	1000	40	10/02/98	10/05/98	GM
% Solids	91.1	0.1	10/02/98	10/02/98	GM

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: SOILPILE
Lab ID No: AB19099

Location: Ashburnham Highway Dept - MA
Client Job No:

Matrix: Soil
Collected: 09/23/98 by KURIGER
Received on 09/24/98 by MBR
QC and Data Review by NB

Preservative: Refrigeration
Container: 1 Glass Soil Jar
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Metals

Parameter	Result (mg/Kg)	MDL	Method	Digested	Analyzed	Analyst
Total Arsenic	nd	0.900	EPA 200.7	10/01/98	10/05/98	DMM
Total Cadmium	nd	0.900	EPA 200.7	10/01/98	10/05/98	DMM
Total Chromium	5.67	0.900	EPA 200.7	10/01/98	10/05/98	DMM
Total Lead	18.6	0.450	EPA 200.7	10/01/98	10/05/98	DMM
Total Mercury	nd	0.218	EPA 245.1	10/01/98	10/05/98	JM
TCLP Lead	0.032	0.010	E 1311/200.7	09/28/98	10/02/98	CR

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: **SOILPILE**
Lab ID No: **AB19101**

Location: **Ashburnham Highway Dept - MA**
Client Job No:

Matrix: Soil
Collected: 09/23/98 by KURIGER
Received on 09/24/98 by MBR
QC and Data Review by AM

Preservative: Refrigeration
Container: 1 Glass Soil Jar
Condition of Sample as Received: Satisfactory
Delivered by: Courier

pH

SW846/9045

Parameter	Result	Temp (Deg C)	Analyzed	Analyst
pH	6.80	19	09/24/98	CR

SPECTRUM ANALYTICAL, INC.
Laboratory Report (Subcontracted Analyses)

Client ID: **SOILPILE**
Lab ID No: **AB19101**

Location: **Ashburnham Highway Dept - MA**
Client Job No:

Matrix: Soil
Collected: 09/23/98 by KURIGER
Received on 09/24/98 by MBR
QC and Data Review by AM

Preservative: Refrigeration
Container: 1 Glass Soil Jar
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Flash Point, Reactivity

SW846 1010/SW846 7.3

Parameter	Result	MDL	Units	Analyzed	Analyst
Flash Point	>200	200	degree F	10/02/98	CR
Reactivity(SW846-7.3)	Negative		mg/Kg	09/26/98	PL
Reactivity Cyanide	Not detected	0.54	mg/Kg	09/26/98	PL
Reactivity Sulfide	Not detected	0.54	mg/Kg	09/26/98	PL
% Solids	nc	0.1	%	10/02/98	CR

SPECTRUM ANALYTICAL, INC.
Laboratory Report(Subcontracted Analysis)

Client ID: **SOILPILE**
Lab ID No: **AB19101**

Location: **Ashburnham Highway Dept - MA**
Client Job No.:

Matrix: Soil
Collected: 09/23/98 by KURIGER
Received on 09/24/98 by MBR
QC and Data Review by AM

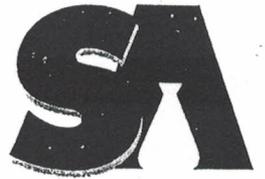
Preservative: Refrigeration
Container : 1 Glass Soil Jar
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Free Liquids Analysis

SW 846 9095

Parameter	Result	Extracted	Analyzed	Analyst
Free Liquids	Absent	10/02/98	10/02/98	CR

CHAIN OF CUSTODY RECORD



SPECTRUM ANALYTICAL

Page 1 of 1

PROJECT NO.: _____ REPORT TO: W.S. Krueger Associates

SITE NAME: Cashburnham Highway Department

LOCATION: Cashburnham STATE Ma ADDRESS: 90 Atlantic Ave.

REFERENCE QUOTE NUMBER (RQN): _____ CITY Fitchburg STATE Ma ZIP 01420

PURCHASE ORDER NO.: _____ INVOICE TO: Same

PROJECT Mgr: Bill Krueger

SAMPLER(S): W.S. Krueger Associates CITY _____ STATE _____ ZIP _____

SAMPLE TYPE & MATRIX CODES: 1=4°C 2=HCl 3=H₂SO₄ 4=HNO₃ 5=OTHER Methanol

G = COMPOSITE G = GRAB

AQUEOUS 3 = SLUDGE 5 = OTHER
SOIL 4 = SEDIMENT

LAB USE ONLY	SAMPLE I.D.	DATE	TIME	MATRIX	SAMPLE TYPE	PRESERVATIVE	# 40 ml VOA VIALS	# OF AMBER GLASS LITERS	# OF PLASTIC LITERS	# OF GLASS SOIL JARS	CONTAINERS	VOC's	SVOC's	TPH	METALS	OTHER
19092	North	1/23/98	2:30	2	G	5	2				1-601/8010 2-602/8020	2-524			1 - Soluble Total TCLP	3-REAG
19093	South		2:20				2				1-502/8021	2-8260				Free liquid
19094	East		2:40				2				1-624/8240	2-KETONES				
19095	West		2:10				2				1-MTBE	2-BN 3-PAHS				
19096	Bottom		2:00				2				1-PCBS 2-PEST (608/8080)	2-GC(8015M)				
19097	North		2:30								1-GC(8100M) 2-GC(8015M)	3-ID				
19098	South		2:20								1-VPH 12-EPH	2-OIL/GREASE				
19099	East		2:40								1-R(418.7)	PPT3				
19095	West		2:10								RCRAB					
19096	Bottom		2:00								(As, Cd, Cr, Hg, Pb)					
19097	Soil Pile	9/23/98	9:00				2									
19098	Soil Pile #1		9:05													
19099	Soil Pile		9:10													
19100	Soil Pile #2		9:15													
19101	Soil Pile		9:20													

RELINQUISHED BY: W.S. Krueger Associates RECEIVED BY: 145 W.S. Krueger DATE: 9/23/98 TIME: 12:00

MW Christina 9/24/98 4:10

SPECIAL INSTRUCTIONS: Samples cold

SPECIAL HANDLING: Return Sample after Analysis Dispose of Sample after 60 days Standard TAT to 10 Business days Special TAT - 24 hr - 48 hr - 72 hr - 5 b. days

• TAT begins when sample is received at test facility.
• TAT for samples rec'd after 3 pm will begin on the next business day.
• All TAT's are subject to laboratory approval and customer consent.

DATE RESULTS NEEDED: _____

Fax results when available to (978) 342-5065



SPECTRUM ANALYTICAL, INC.

Massachusetts Certification M-MA 138
Connecticut Approval # PH 0777
Rhode Island # 98 & Maine # n/a
New Hampshire ID # 2538
New York ID #11393
Florida HRS87448

*W.E. Kuriger Associates
90 Atlantic Avenue
Fitchburg, MA 01420*

October 19, 1998

Attn: William Kuriger

Client Project No.:

Location: Ashburnham Highway Dept - MA

Lab ID No.

Client ID

Analysis Requested

AB19099

SOILPILE

Modified SW846 8082

Authorized by

Hanibal Tayeh

President/Laboratory Director

ENVIRONMENTAL ANALYSES

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: SOILPILE
Lab ID No: AB19099

Location: Ashburnham Highway Dept - MA
Client Job No:

Matrix: Soil
Collected: 09/23/98 by KURIGER
Received on 09/24/98 by MBR
QC and Data Review by DDR

Preservative: Refrigeration
Container: 1 Glass Soil Jar
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Polychlorinated Biphenyls (PCB's)

Modified SW846 8081/8082

Parameter	Result (ug/Kg)	MDL	Extracted	Analyzed	Analyst
PCB-1016	Not detected	250	10/15/98	10/16/98	TG
PCB-1221	Not detected	250	10/15/98	10/16/98	TG
PCB-1232	Not detected	250	10/15/98	10/16/98	TG
PCB-1242	Not detected	250	10/15/98	10/16/98	TG
PCB-1248	Not detected	250	10/15/98	10/16/98	TG
PCB-1254	Not detected	250	10/15/98	10/16/98	TG
PCB-1260	Not detected	250	10/15/98	10/16/98	TG
Decachlorobiphenyl (%)	90		10/15/98	10/16/98	TG
% Solids	91.4	0.1	10/01/98	10/02/98	YV

Spectrum Analytical, Inc.

Laboratory Report Supplement

References

- Methods for the Determination of Organic Compounds in Drinking Water. EPA-600/4-88/039. EMSL 1988.
- Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. EMSL 1983.
- Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater. EPA 600/4-82-057. EMSL 1982.
- Test Methods for Evaluating Solid Waste. Physical/Chemical Methods. EPA SW-846. 1986.
- Standard Methods for the Examination of Water and Wastes. APHA-AWWA-WPCF. 16th Edition. 1985.
- Standard Methods for Comparison of Waterborne Petroleum Oils by Gas Chromatography. ASTM D 3328. 1982.
- Oil Spill Identification System. U.S. Coast Guard CG-D-52-77. 1977.
- Handbook for Analytical Quality Control in Water and Wastewater Laboratories. EPA 600/4-79-019. EMSL 1979.
- Choosing Cost-Effective QA/QC (Quality Assurance/Quality Control) Programs for Chemical Analyses. EPA 600/4-85/056. EMSL 1985.

Report Notations

Not Detected,	=	<i>The compound was not detected at a concentration equal to or above the established method detection limit.</i>
Not Det, ND or nd	=	
NC	=	<i>Not Calculated</i>
MCL	=	<i>EPA Maximum Contamination Level</i>
VOA	=	<i>Volatile Organic Analysis</i>
BFB	=	<i>4-Bromofluorobenzene</i> (An EPA 624 Surrogate)
p-DFB	=	<i>1,4-Difluorobenzene</i> (An EPA 624 Surrogate)
CLB-d5	=	<i>Chlorobenzene-d5</i> (An EPA 624 Surrogate)
BCP	=	<i>2-Bromo-1-chloropropane</i> (An EPA 601 Surrogate)
TFT	=	<i>a,a,a-Trifluorotoluene</i> (An EPA 602 Surrogate)
Decachlorobiphenyl	=	<i>(an EPA 608/8080 Surrogate)</i>

Definitions

Surrogate Recovery = The recovery (expressed as a percent) of a non-method analyte (see surrogates listed above) added to the sample for the purpose of monitoring system performance.

Matrix Spike Recovery = The recovery (expressed as a percent) of method analytes added to the sample for the purpose of determining any effect of sample composition on analyte recovery.

Laboratory Replicate = Two sample aliquots taken in the analytical laboratory and analyzed separately with identical procedures. Analyses of laboratory duplicates give a measure of the precision associated with laboratory procedures, but not with sample collection, preservation, or storage procedures.

Field Duplicate = Two separate samples collected at the same time and place under identical circumstances and treated exactly the same throughout field and laboratory procedures. Analysis of Field duplicates give a measure of the precision associated with sample collection, preservation and storage, as well as with laboratory procedures.

Relative Percent Difference (% RPD) = The precision measurement obtained on duplicate/replicate analyses. %RPD is calculated as:

$$\%RPD = \frac{(\text{value1} - \text{value2})}{\text{ave. value}} * 100\%$$



SPECTRUM ANALYTICAL, INC.

Massachusetts Certification M-MA 138
Connecticut Approval # PH 0777
Rhode Island # 98 & Maine # n/a
New Hampshire ID # 2538
New York ID #11393
Florida HRS87448

*W.E. Kuriger Associates
90 Atlantic Avenue
Fitchburg, MA 01420*

October 14, 1998

Attn: W.E. Kuriger

Client Project No.:

Location: Ashburnham Highway Dept. - MA

Lab ID No.

Client ID

Analysis Requested

AB20191

MW-1

*Extractable Oil Hydrocarbons
Volatile Petroleum Hydrocarbons*

Authorized by

Hanibal Tayer
President/Laboratory Director

ENVIRONMENTAL ANALYSES

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: MW-1
Lab ID No.: AB20191

Location: Ashburnham Highway Dept. - MA
Client Job No.:

Matrix: Water
Collected: 09/28/98 by KURIGER
Received on 09/29/98 by MBR
QC and Data Review by DDR

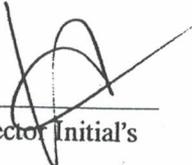
Preservative: Refrigeration
Container: 2 VOA Vials
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Volatile Petroleum Hydrocarbons

MA DEP Modified EPA Methods 8021/8015/8240

Parameter for AB20191	Results	MDL	Analyzed	Analyst
Aliphatics/Aromatics (mg/L)				
C5-C8 Aliphatics	0.29	0.150	10/11/98	CLD
C9-C12 Aliphatics	0.67	0.050	10/11/98	CLD
C9-C10 Aromatics	3.5	0.050	10/11/98	CLD
Targeted VPH Analytes (ug/L)				
Benzene	Not detected	10.0	10/11/98	CLD
Toluene	Not detected	10.0	10/11/98	CLD
Ethylbenzene	14	10.0	10/11/98	CLD
m,p-Xylenes	64	10.0	10/11/98	CLD
o-Xylene	Not detected	10.0	10/11/98	CLD
Naphthalene	34	10.0	10/11/98	CLD
Methyl-tert-butylether	Not detected	10.0	10/11/98	CLD
Surrogate Recovery (%)				
2,5-Dibromotoluene(%SR)	103		10/11/98	CLD
Carbon Chain Dilution Factor	10		10/11/98	CLD
Target Analytes Dilution Factor	10		10/11/98	CLD

I attest that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge, true, accurate, complete and all QA/QC procedures were followed as outlined in the above referenced method.


10/14/98

President/Lab Director Initial's

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: MW-1
 Lab ID No.: AB20191

Location: Ashburnham Highway Dept. - MA
 Client Job No.:

Matrix: Water
 Collected: 09/28/98 by KURIGER
 Received on 09/29/98 by MBR
 QC and Data Review by DDR

Preservative: Refrigeration
 Container: 1 Amber Glass Liter
 Condition of Sample as Received: Satisfactory
 Delivered by: Courier

Extractable Petroleum Hydrocarbons

MA DEP Modified EPA 8270/8100

Parameter for AB20191	Results	MDL	Extracted	Analyzed	Analyst
Aliphatics/Aromatics(mg/L)					
C9 - C18 Aliphatics	0.6	2.0	10/07/98	10/11/98	MBK
C19- C36 Aliphatics	0.8	2.0	10/07/98	10/11/98	MBK
C11- C22 Aromatics	1.7	2.0	10/07/98	10/11/98	MBK
Targeted PAH's Analytes (ug/L)					
Acenaphthene	Not detected	10.0	10/07/98	10/11/98	MBK
Acenaphthylene	Not detected	10.0	10/07/98	10/11/98	MBK
Anthracene	Not detected	10.0	10/07/98	10/11/98	MBK
Benzo (a) anthracene	Not detected	10.0	10/07/98	10/11/98	MBK
Benzo (b) fluoranthene	Not detected	10.0	10/07/98	10/11/98	MBK
Benzo (k) fluoranthene	Not detected	10.0	10/07/98	10/11/98	MBK
Benzo (a) pyrene	Not detected	10.0	10/07/98	10/11/98	MBK
Benzo (g,h,i) perylene	Not detected	10.0	10/07/98	10/11/98	MBK
Chrysene	Not detected	10.0	10/07/98	10/11/98	MBK
Dibenz (a,h) anthracene	Not detected	10.0	10/07/98	10/11/98	MBK
Fluoranthene	Not detected	10.0	10/07/98	10/11/98	MBK
Fluorene	Not detected	10.0	10/07/98	10/11/98	MBK
Indeno (1,2,3-cd) pyrene	Not detected	10.0	10/07/98	10/11/98	MBK
2-Methylnaphthalene	13	10.0	10/07/98	10/11/98	MBK
Naphthalene	Not detected	10.0	10/07/98	10/11/98	MBK
Phenanthrene	Not detected	10.0	10/07/98	10/11/98	MBK
Pyrene	Not detected	10.0	10/07/98	10/11/98	MBK
Surrogate Recovery(%)					
1-Chloro-octadecane(%SR)	73		10/07/98	10/11/98	MBK
Ortho-Terphenyl(%SR)	46		10/07/98	10/11/98	MBK
Carbon Chain Dilution Factor	1		10/07/98	10/11/98	MBK
Target Analytes Dilution Factor	1		10/07/98	10/11/98	MBK

I attest that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge, true, accurate, complete and all QA/QC procedures were followed as outlined in the above referenced method.

10/14/98

 Lab Director/President Initial's

Spectrum Analytical, Inc.

Laboratory Report Supplement

References

- Methods for the Determination of Organic Compounds in Drinking Water. EPA-600/4-88/039. EMSL 1988.
- Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. EMSL 1983.
- Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater. EPA 600/4-82-057. EMSL 1982.
- Test Methods for Evaluating Solid Waste. Physical/Chemical Methods. EPA SW-846. 1986.
- Standard Methods for the Examination of Water and Wastes. APHA-AWWA-WPCF. 16th Edition. 1985.
- Standard Methods for Comparison of Waterborne Petroleum Oils by Gas Chromatography. ASTM D 3328. 1982.
- Oil Spill Identification System. U.S. Coast Guard CG-D-52-77. 1977.
- Handbook for Analytical Quality Control in Water and Wastewater Laboratories. EPA 600/4-79-019. EMSL 1979.
- Choosing Cost-Effective QA/QC (Quality Assurance/Quality Control) Programs for Chemical Analyses. EPA 600/4-85/056. EMSL 1985.

Report Notations

Not Detected, Not Det, ND or nd	=	<i>The compound was not detected at a concentration equal to or above the established method detection limit.</i>
NC	=	<i>Not Calculated</i>
MCL	=	<i>EPA Maximum Contamination Level</i>
VOA	=	<i>Volatile Organic Analysis</i>
BFB	=	<i>4-Bromofluorobenzene</i> (An EPA 624 Surrogate)
p-DFB	=	<i>1,4-Difluorobenzene</i> (An EPA 624 Surrogate)
CLB-d5	=	<i>Chlorobenzene-d5</i> (An EPA 624 Surrogate)
BCP	=	<i>2-Bromo-1-chloropropane</i> (An EPA 601 Surrogate)
TFT	=	<i>a,a,a-Trifluorotoluene</i> (An EPA 602 Surrogate)
Decachlorobiphenyl	=	<i>(an EPA 608/8080 Surrogate)</i>

Definitions

Surrogate Recovery = The recovery (expressed as a percent) of a non-method analyte (see surrogates listed above) added to the sample for the purpose of monitoring system performance.

Matrix Spike Recovery = The recovery (expressed as a percent) of method analytes added to the sample for the purpose of determining any effect of sample composition on analyte recovery.

Laboratory Replicate = Two sample aliquots taken in the analytical laboratory and analyzed separately with identical procedures. Analyses of laboratory duplicates give a measure of the precision associated with laboratory procedures, but not with sample collection, preservation, or storage procedures.

Field Duplicate = Two separate samples collected at the same time and place under identical circumstances and treated exactly the same throughout field and laboratory procedures. Analysis of Field duplicates give a measure of the precision associated with sample collection, preservation and storage, as well as with laboratory procedures.

Relative Percent Difference (% RPD) = The precision measurement obtained on duplicate/replicate analyses. %RPD is calculated as:

$$\%RPD = \frac{(\text{value1} - \text{value2}) * 100\%}{\text{ave. value}}$$

CHAIN OF CUSTODY RECORD



SPECTRUM ANALYTICAL

Page 1 of 1

PROJECT NO.: _____ REPORT TO: W. E. Kurigel Associates

PROJECT NAME: Ashburnham Highway Dept. ADDRESS: 90 Atlantic Ave

LOCATION: Ashburnham STATE MA CITY Fitchburg STATE MA ZIP 01420

REFERENCE QUOTE NUMBER (RQN): _____ INVOICE TO: SAME

PURCHASE ORDER NO.: _____

PROJECT Mgr: W. E. Kurigel

SAMPLER(s): D. Covert

CITY _____ STATE _____ ZIP _____

SAMPLE TYPE & MATRIX CODES:

CONTAINERS VOC's SVOC's TPH METALS OTHER

1 - 601/8010 2 - 602/8020 1 - PCBs 2 - PEST (608/8080) 1 - GC(8100M) 2 - GC(8015M) 1 - VED 3 - ID 1 - IR(418:1) 2 - OIL/GREASE 1 - PH 2 - FLASH 3 - REACT

1 - 502/8021 2 - 524 1 - 624/8240 2 - 8260 1 - MTBE 2 - KETONES 1 - 8270 2 - BN 3 - PAHS 1 - GC(8100M) 2 - GC(8015M) 1 - VED 3 - ID 1 - IR(418:1) 2 - OIL/GREASE 1 - PH 2 - FLASH 3 - REACT

1 - 601/8010 2 - 602/8020 1 - 502/8021 2 - 524 1 - 624/8240 2 - 8260 1 - MTBE 2 - KETONES 1 - 8270 2 - BN 3 - PAHS 1 - PCBs 2 - PEST (608/8080) 1 - GC(8100M) 2 - GC(8015M) 1 - VED 3 - ID 1 - IR(418:1) 2 - OIL/GREASE 1 - PH 2 - FLASH 3 - REACT

COMPOSITE G = GRAB

AQUEOUS SOIL 3 = SLUDGE 4 = SEDIMENT 5 = OTHER

LAB USE ONLY	SAMPLE I.D.	DATE	TIME	MATRIX	SAMPLE TYPE	PRESERVATIVE	# 40 ml VOA VIALS	# OF AMBER GLASS LITERS	# OF PLASTIC LITERS	# OF GLASS SOIL JARS	1-601/8010	2-602/8020	1-502/8021	2-524	1-624/8240	2-8260	1-MTBE	2-KETONES	1-8270	2-BN	3-PAHS	1-PCBS	2-PEST (608/8080)	1-GC(8100M)	2-GC(8015M)	1-VED	3-ID	1-IR(418:1)	2-OIL/GREASE	PP13	RORA8	As, Cd, Cr, Hg, Pb	1-PH	2-FLASH	3-REACT		
20/97	MW-1	9/28/98	10:35	1	G	2	2	1																													

RELINQUISHED BY: William E. Kurigel RECEIVED BY: William E. Kurigel

DATE: 9/29/98 TIME: 12:50

DATE: 9/29 TIME: 1640

SPECIAL INSTRUCTIONS: _____

SPECIAL HANDLING: Return Sample after Analysis Dispose of Sample after 60 days Standard TAT 7 to 10 Business days Special TAT - 24 hr - 48 hr - 72 hr - 5 b. days

DATE RESULTS NEEDED: 10/7/98

11 Almgren Drive • Agawam, Massachusetts 01001 • 413-789-9018 • Fax 413-789-4076



W. E. Kuriger Associates

ENVIRONMENTAL SCIENCE

90 ATLANTIC AVE.
FITCHBURG, MA 01420
(508) 343-0921
1-800-292-0921
FAX: (508) 342-5065

10/16/98

To: Mike Bartley

Please proceed w/ PCB analysis for
Soil Sample from Ashburnham, I understand
Pile

The sample is part the EPA holding time
requirement

William E. Kuriger





SPECTRUM ANALYTICAL, INC.

Massachusetts Certification M-MA 138
Connecticut Approval # PH 0777
Rhode Island # 98 & Maine # n/a
New Hampshire ID # 2538
New York ID #11393
Florida HRS87448

*W.E. Kuriger Associates
90 Atlantic Avenue
Fitchburg, MA 01420*

October 14, 1998

Attn: W.E. Kuriger

Client Project No.: _____ **Location:** Ashburnham Highway Dept. - MA

<u>Lab ID No.</u>	<u>Client ID</u>	<u>Analysis Requested</u>
AB20191	MW-1	Extractable Oil Hydrocarbons Volatile Petroleum Hydrocarbons

Authorized by

Hanibal Tayea
President/Laboratory Director

ENVIRONMENTAL ANALYSES

SPECTRUM ANALYTICAL, INC.
Laboratory Report

Client ID: MW-1
Lab ID No.: AB20191

Location: Ashburnham Highway Dept. - MA
Client Job No.:

Matrix: Water
Collected: 09/28/98 by KURIGER
Received on 09/29/98 by MBR
QC and Data Review by DDR

Preservative: Refrigeration
Container: 2 VOA Vials
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Volatile Petroleum Hydrocarbons
MA DEP Modified EPA Methods 8021/8015/8240

Parameter for AB20191	Results	MDL	Analyzed	Analyst
Aliphatics/Aromatics (mg/L)				
C5-C8 Aliphatics	0.29	0.150	10/11/98	CLD
C9-C12 Aliphatics	0.67	0.050	10/11/98	CLD
C9-C10 Aromatics	3.5	0.050	10/11/98	CLD
Targeted VPH Analytes (ug/L)				
Benzene	Not detected	10.0	10/11/98	CLD
Toluene	Not detected	10.0	10/11/98	CLD
Ethylbenzene	14	10.0	10/11/98	CLD
m,p-Xylenes	64	10.0	10/11/98	CLD
o-Xylene	Not detected	10.0	10/11/98	CLD
Naphthalene	34	10.0	10/11/98	CLD
Methyl-tert-butylether	Not detected	10.0	10/11/98	CLD
Surrogate Recovery (%)				
2,5-Dibromotoluene(%SR)	103		10/11/98	CLD
Carbon Chain Dilution Factor	10		10/11/98	CLD
Target Analytes Dilution Factor	10		10/11/98	CLD

I attest that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge, true, accurate, complete and all QA/QC procedures were followed as outlined in the above referenced method.

10/14/98

President/Lab Director Initial's

SPECTRUM ANALYTICAL, INC.

Laboratory Report

Client ID: MW-1
Lab ID No.: AB20191

Location: Ashburnham Highway Dept. - MA
Client Job No.:

Matrix: Water
Collected: 09/28/98 by KURIGER
Received on 09/29/98 by MBR
QC and Data Review by DDR

Preservative: Refrigeration
Container: 1 Amber Glass Liter
Condition of Sample as Received: Satisfactory
Delivered by: Courier

Extractable Petroleum Hydrocarbons

MA DEP Modified EPA 8270/8100

Parameter for AB20191	Results	MDL	Extracted	Analyzed	Analyst
Aliphatics/Aromatics (mg/L)					
C9 - C18 Aliphatics	0.6	2.0	10/07/98	10/11/98	MBK
C19- C36 Aliphatics	0.8	2.0	10/07/98	10/11/98	MBK
C11- C22 Aromatics	1.7	2.0	10/07/98	10/11/98	MBK
Targeted PAH's Analytes (ug/L)					
Acenaphthene	Not detected	10.0	10/07/98	10/11/98	MBK
Acenaphthylene	Not detected	10.0	10/07/98	10/11/98	MBK
Anthracene	Not detected	10.0	10/07/98	10/11/98	MBK
Benzo (a) anthracene	Not detected	10.0	10/07/98	10/11/98	MBK
Benzo (b) fluoranthene	Not detected	10.0	10/07/98	10/11/98	MBK
Benzo (k) fluoranthene	Not detected	10.0	10/07/98	10/11/98	MBK
Benzo (a) pyrene	Not detected	10.0	10/07/98	10/11/98	MBK
Benzo (g,h,i) perylene	Not detected	10.0	10/07/98	10/11/98	MBK
Chrysene	Not detected	10.0	10/07/98	10/11/98	MBK
Dibenz (a,h) anthracene	Not detected	10.0	10/07/98	10/11/98	MBK
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Fluorene	Not detected	10.0	10/07/98	10/11/98	MBK
Indeno (1,2,3-cd) pyrene	Not detected	10.0	10/07/98	10/11/98	MBK
2-Methylnaphthalene	13	10.0	10/07/98	10/11/98	MBK
Naphthalene	Not detected	10.0	10/07/98	10/11/98	MBK
Phenanthrene	Not detected	10.0	10/07/98	10/11/98	MBK
Pyrene	Not detected	10.0	10/07/98	10/11/98	MBK
Surrogate Recovery(%)					
1-Chloro-octadecane(%SR)	73		10/07/98	10/11/98	MBK
Ortho-Terphenyl(%SR)	46		10/07/98	10/11/98	MBK
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Target Analytes Dilution Factor	1		10/07/98	10/11/98	MBK

I attest that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge, true, accurate, complete and all QA/QC procedures were followed as outlined in the above referenced method.

10/14/98

Lab Director/President Initial's

Spectrum Analytical, Inc. Laboratory Report Supplement

References

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- Choosing Cost-Effective QA/QC (Quality Assurance/Quality Control) Programs for Chemical Analyses. EPA 600/4-85/056. EMSL 1985.

Report Notations

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NC	=	<i>Not Calculated</i>
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BFB	=	<i>4-Bromofluorobenzene</i> (An EPA 624 Surrogate)
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Definitions

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Field Duplicate = Two separate samples collected at the same time and place under identical circumstances and treated exactly the same throughout field and laboratory procedures. Analysis of Field duplicates give a measure of the precision associated with sample collection, preservation and storage, as well as with laboratory procedures.

Relative Percent Difference (% RPD) = The precision measurement obtained on duplicate/replicate analyses. %RPD is calculated as:

$$\%RPD = \frac{(\text{value1} - \text{value2})}{\text{ave. value}} * 100\%$$

CHAIN OF CUSTODY RECORD



SPECTRUM ANALYTICAL

Page 1 of 1

PROJECT NO.: _____ REPORT TO: W. E. Kuriga Associates

SITE NAME: Ashburnham Highway Dept. ADDRESS: 90 Atlantic Ave

LOCATION: Ashburnham STATE: MA CITY: Fitchburg STATE: MA ZIP: 01420

REFERENCE QUOTE NUMBER (RQN): _____ INVOICE TO: SAME

PURCHASE ORDER NO.: _____

PROJECT Mgr: W. E. Kuriga

SAMPLER(s): T. Gove

CITY _____ STATE _____ ZIP _____

SAMPLE TYPE & MATRIX CODES:

CONTAINERS VOC's SVOC's TPH METALS OTHER

1 - Soluble
2 - Total
3 - TCLP

°C 2=HCl 3=H₂SO₄ 4=HNO₃ 5=OTHER _____

COMPOSITE G = GRAB

AQUEOUS 3 = SLUDGE 5 = OTHER
SOIL 4 = SEDIMENT

LAB USE ONLY	SAMPLE I.D.	DATE	TIME	MATRIX	SAMPLE TYPE	PRESERVATIVE	# 40 ml VOA VIALS	# OF AMBER GLASS LITERS	# OF PLASTIC LITERS	# OF GLASS SOIL JARS	1-601/8010	2-602/8020	1-502/8021	2-524	1-624/8240	2-8260	1-MTBE	2-KETONES	1-827/8270	3-PAHS	1-PCBS	2-PEST (608/8080)	1-GC(8100M)	2-GC(8015M)	1-VPH	3-ID	1-IR(418.1)	2-OIL/GREASE	PPT3	RCRA8	As, Cd, Cr, Hg, Pb	1-PH	2-FLASH	3-REACT		
	<u>MLW-1</u>	<u>9/28/98</u>	<u>10:35</u>	<u>1</u>	<u>G</u>	<u>2</u>	<u>2</u>	<u>1</u>																												

RELINQUISHED BY: William P. Gove RECEIVED BY: [Signature]

DATE: 9/29/98 TIME: 12:50

SPECIAL INSTRUCTIONS: * Revision 10/13/98 - add PCB analysis to

SPECIAL HANDLING: **Please check**

Return Sample after Analysis

Dispose of Sample after 60 days

Standard TAT 7 to 10 Business days

Special TAT - 24 hr - 48 hr - 72 hr - 5 b. days

• TAT begins when sample is received at test facility.

• TAT for samples rec'd after 3 pm will begin on the next business day.

• All TAT's are subject to laboratory approval and customer consent.

DATE RESULTS NEEDED: 10/7/98

Fax results when available to (978) 342-5065

OF ASHBURNHAM, MA

W. E. Burger Associates

019337

DATE	INVOICE	AMOUNT	AMOUNT	NET AMOUNT
99 2/9/99		750.00	14420 32400	750.00

TOTALS * 004360 COMMONWEALTH OF MASSACHUSETTS 750.00
 Environmental Department, 17 Central Street, Ashburnham, MA Release Tracking number
 RTN 3-1224

Dear Board of Selectmen
 TOWN OF ASHBURNHAM
 ASHBURNHAM, MASSACHUSETTS 01430

17 CENTRAL STREET AND TRUST CO
 WORCESTER, MA 01601

CHECK NUMBER 019337

Emergency Plan (MCP), 310 CMR 40.0000 at 310
 CMR 40.140 (M) Minimum Public Involvement Activities in Response Actions. This
 letter serves as notification of the filing of a Response Action Outcome (RAO) Statement
 and report for the disposal site, RTN 3-1224.

VENDOR	CHECK DATE	CHECK AMOUNT
004360	02/16/99	*****750.00

*****750 DOLLARS AND 00 CENTS

Commonwealth of Massachusetts
 DEPARTMENT OF ENVIRONMENTAL PROTECTION

of gasoline and diesel fuel contaminated soils are
 transported to American Reclamation Corporation
 Charlton, MA for disposal by recycling into asphalt. The RAO states that there is no
 petroleum contamination at the disposal site, but there is no significant risk to human
 health, public welfare or the environment at the site based on the results of a
 Risk Characterization.

Pland G. P. P. P.

019337 011302616 10225339 15

Should you have any questions regarding the RAO please contact William Brennan, I
 Supervisor, Ashburnham Highway Department, 17 Central Street, Ashburnham,
 telephone: 978-837-4120 or myself.

William E. Burger
 William E. Burger, Ph.D., L.S.P. #104
 Environmental Scientist
 Licensed Professional Engineer
 Board of Health





W. E. Kuriger Associates

ENVIRONMENTAL SCIENCE

90 ATLANTIC AVE.
FITCHBURG, MA 01420
(508) 343-0921
1-800-292-0921
FAX: (508) 342-5065

February 16, 1999

Board of Selectmen
Town of Ashburnham
Town Hall
Main Street
Ashburnham, MA 01430

Re: Notification of Immediate Response Action Completion and Response Action Outcome Statement, Gasoline Underground Storage Tank (UST) Release, Ashburnham Highway Department, 17 Central Street, Ashburnham, MA, Release Tracking Number (RTN) 2-12224

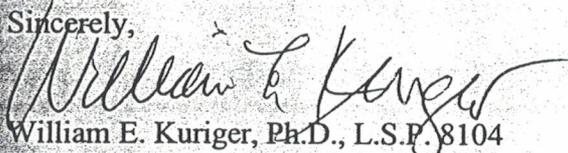
Dear Board of Selectmen:

As required by the Massachusetts Contingency Plan (MCP), 310 CMR 40.0000 at 310 CMR 40.1403: (3)(f) Minimum Public Involvement Activities in Response Actions, this letter serves as notification of the filing of a Response Action Outcome (RAO) Statement and report for the disposal site, RTN 2-12224, listed above.

Briefly, during the removal of a 4,000 gallon gasoline UST, a release of petroleum was discovered. A total of about 104 tons of gasoline and diesel fuel contaminated soils were removed from the disposal site, and transported to American Reclamation Corporation in Charlton, MA for disposal by recycling into asphalt. The RAO states that there is residual petroleum contamination at the disposal site, but there is no significant risk to human health, public welfare or the environment at the site based on the results of a Method 1 Risk Characterization.

Should you have any questions regarding the RAO please contact William Brennan, Jr. Superintendent, Ashburnham Highway Department, 17 Central Street, Ashburnham, MA, telephone 978-827-4120 or myself.

Sincerely,


William E. Kuriger, Ph.D., L.S.P. 8104

Environmental Scientist
Licensed Site Professional 8104
cc: Board of Health





ASHBURNHAM DEPARTMENT OF PUBLIC WORKS
Underground Storage Tank Fuel Release
Ashburnham, Massachusetts

DISPOSAL SITE NO. 2-10039

PHASE I
INITIAL SITE INVESTIGATION REPORT

March 18, 1996

Prepared By:
S E A CONSULTANTS INC.
Science/Engineering/Architecture
Cambridge, Massachusetts
Rocky Hill, Connecticut
Londonderry, New Hampshire

1.0 GENERAL DISPOSAL SITE INFORMATION

Based on available records, a release of diesel fuel occurred from an on-site underground storage tank (UST). The 1,000-gallon UST was removed on September 23, 1993. Closure documentation indicated that soil appeared to be impacted. The Ashburnham Fire Chief, who witnessed the tank removal, subsequently notified the Massachusetts Department of Environmental Protection (DEP) of the 72-hour release condition. At the time of tank removal and with DEP concurrence, the Town stockpiled approximately eight cubic yards of contaminated soil under a tarp within the DPW yard and backfilled the excavation.

In an attempt to evaluate the release, soil and groundwater samples were collected by Environmental Products & Services (EPS) as documented in their October 8, 1993 report. Diesel fuel oil was detected in soil samples at levels as high as 6,350 mg/kg along the walls of the UST excavation.

The site is presently listed as Disposal Site No. 2-10039. The site is currently used by the Ashburnham Department of Public Works (DPW) and is located along Central Street in Ashburnham, Massachusetts. The site has been used by the DPW for at least the past fifty years. The site was historically used as a railroad station from approximately the late 19th century to the early 20th century.

The Town received a letter on September 26, 1994 from DEP indicating that, under the Massachusetts Contingency Plan, the Town needed to submit either a Response Action Outcome (RAO) Statement or a Tier Classification prior to October 1, 1994. Neither document was filed with the DEP. The Town contacted S E A Consultants to conduct a Phase I Initial Site Investigation of the release site, in accordance with 310 CMR 40.0000, and to prepare a report and LSP Evaluation Opinion suitable for submission to the Massachusetts Department of Environmental Protection (DEP). The objectives of this Phase I Initial Site Investigation are as follows:

- Determine, to the extent possible, the distribution and impact, if any, of residual diesel fuel in soils and groundwater at the Underground Storage Tank release site;

- Determine potential migration pathways of the diesel fuel;

- Determine if the release poses an Imminent Hazard as per 310 CMR 40.0321 or Substantial Release Migration conditions as per 310 CMR 40.0413; and

- Determine if the release requires further comprehensive response actions and, if so, the scope of those activities

S E A conducted a review of publicly-available records, previous investigation reports and conducted subsurface investigations at the UST release site on October 5 and 19, 1994. Subsurface investigations included advancing one (1) test pit, the collection of subsurface soil samples from the UST excavation area, and the collection of two (2) groundwater samples (one sample each from two previously installed monitoring wells).

Soil was excavated under a presumed Limited Removal Action (LRA), failing to recognize that the DEP had been previously notified of the release by the Ashburnham Fire Chief. On October 5 and 19, 1994, approximately 35 to 40 cubic yards of impacted soil were excavated from the UST pit and stockpiled on-site. The impacted soil was transported off-site under a Bill of Lading on December 27, 1994. The average exposure point concentration of 318 mg/Kg total petroleum hydrocarbons is below applicable cleanup standards for release site soils classified as S-2/S-3/GW-2/GW-3, in accordance with the Massachusetts Contingency Plan (MCP). No groundwater impacts from this release were detected.

An activity and use limitation (AUL) is not required for the release site, pursuant to 310 CMR 40.1012(3)(d). Potential risks were characterized using Method I (310 CMR 40.0970) and levels of oil and hazardous waste materials in soil are at or below applicable Method I category S-1 soil standard, considering the historic use of the site as a railroad station.

1.1 DEP DISPOSAL SITE NUMBER

The DEP Disposal Site Number assigned to the site is 2-10039.

1.2 SITE LOCATION

1.2.1 Address: 19 Central Street, Ashburnham, Massachusetts

1.2.2 Latitude: N: 42° 38' 41''
Longitude: E: 72° 56' 10''

1.2.3 UTM Coordinates: N: 4,724,040
E: 261,500

1.3 DISPOSAL SITE LOCUS MAP

A Disposal Site Locus Map is provided in Figure 1-1. A Site Plan is provided in Figure 1-2.

1.4 ON-SITE WORKERS

There are eleven (11) permanent on-site workers. Non-permanent workers who come into contact with the site include contractors who deposit sand and gravel at the site; the frequency of this activity occurs approximately thirty (30) times per year and involves one (1) to two (2) people per event.

1.5 RESIDENTIAL POPULATION

According to the Town of Ashburnham Assessor's Department, the Town contains approximately 39.15 square miles of land. Based on the population reported in 1994 by the United States Census Bureau, there are approximately 109 people living within a one-half mile radius of the site.

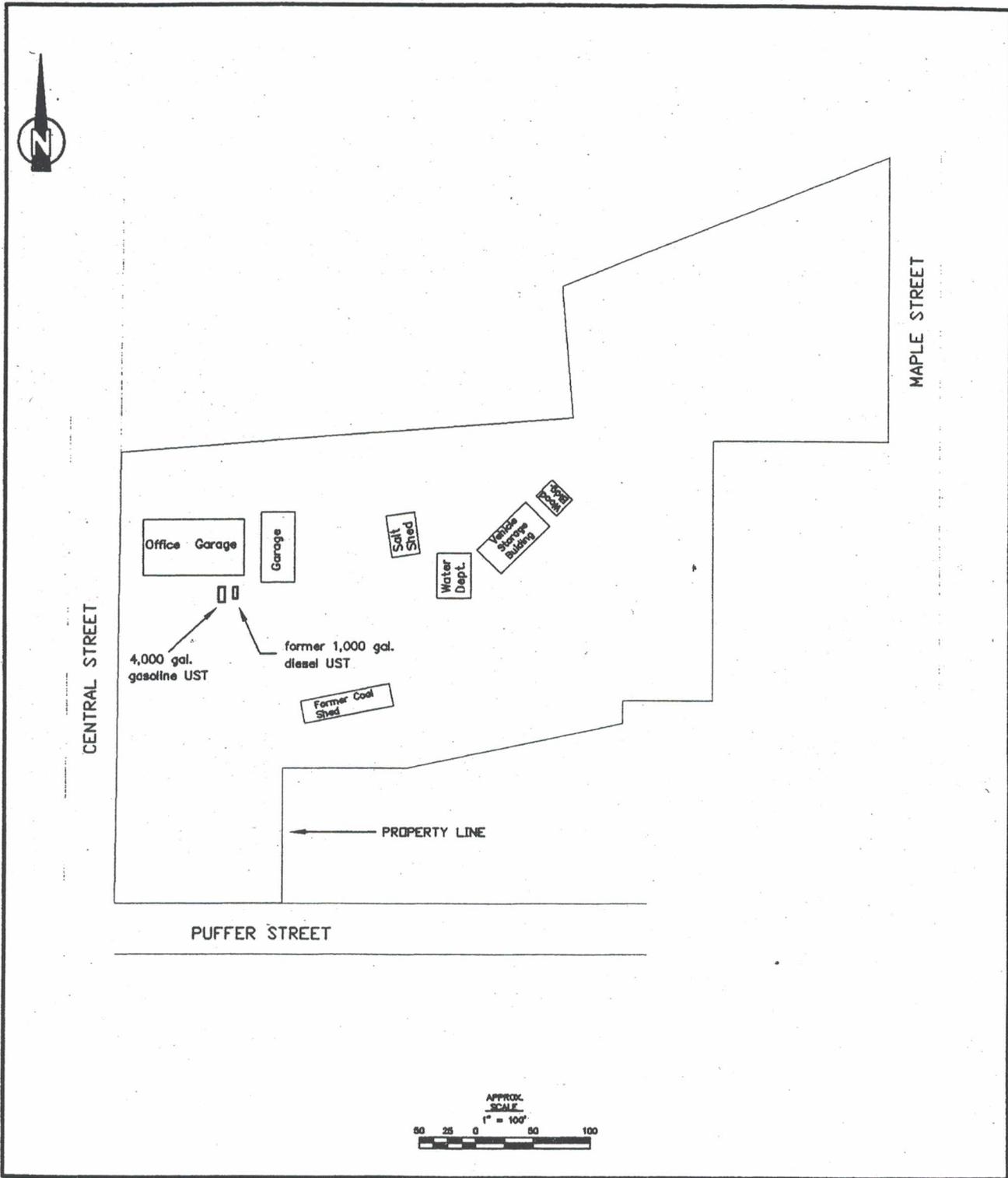


Figure 1-2

Site Map

RTN: 2-10039

Ashburnham Department
of Public Works
Ashburnham, Massachusetts

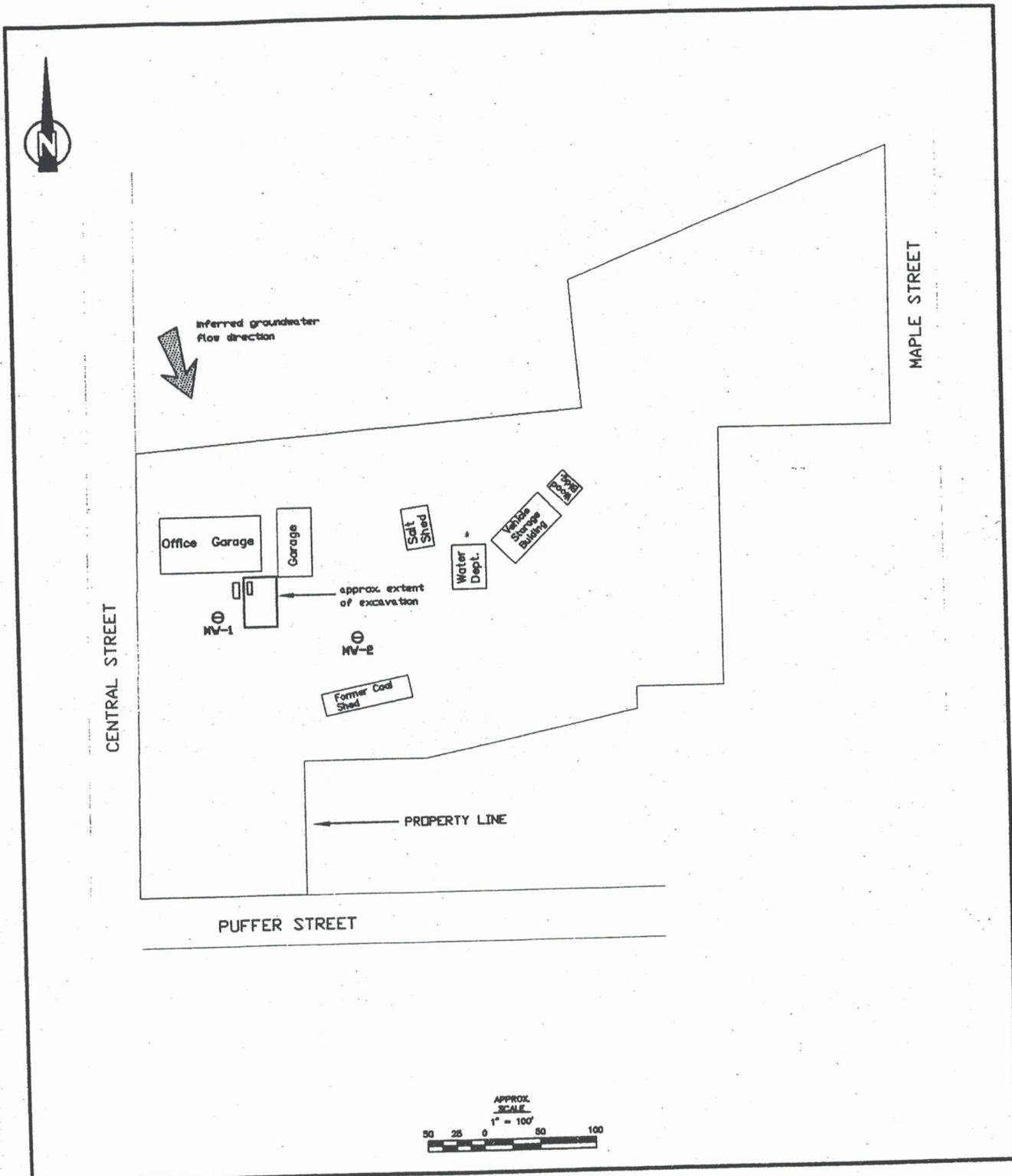


Figure 2-1
 Disposal Site Map

RTN: 2-10039

LEGEND

- ⊖ MW-1 approx. monitoring well location (sampled)
- 4,000 gal. gasoline UST
- former 1,000 gal. diesel UST

Ashburnham Department
 of Public Works
 Ashburnham, Massachusetts

3.1 OWNER/OPERATOR HISTORY

The DPW is located on a parcel of land approximately 4.2 acres in size. The DPW Garage Yard is a gravel area which is used for access to the Town garage, and for storage of sand, gravel, road salt and DPW equipment.

The site has been owned by the Town of Ashburnham and has been operated as the Ashburnham DPW for at least fifty years. A building permit for an addition at the site was granted on 5/14/91. On 11/5/92 Robert and Florence Saccone bought a small portion on the eastern border of the site.

The site was used as a railroad rotary station from approximately the late 1800s and to the 1930s. Based on town records and local and municipal interviews, it could not be ascertained what was present at the site prior to the railroad station.

3.2 RELEASE HISTORY

On September 23, 1993 a release of diesel fuel was encountered during the removal of one (1) 1,000-gallon diesel underground storage tank (UST) from the front of the DPW Garage. The UST was owned by Roy Brothers and was used by the Town of Ashburnham. Upon removal of the UST, it was observed that the UST had approximately six (6) holes in the bottom up to one inch in diameter, and that the ground beneath the tank showed signs of contamination. The Ashburnham Fire Chief, who witnessed the tank removal, subsequently notified the DEP of the 72-hour release condition.

At the time of tank removal and with DEP concurrence, the Town stockpiled approximately eight cubic yards of contaminated soil under a tarp within the DPW yard and backfilled the excavation. The backfilling of the excavation was allowed by the DEP with the understanding that the backfill, plus additional contaminated soil would be excavated and disposed of at a later date.

In an attempt to evaluate the release, soil and groundwater samples were collected by Environmental Products & Services (EPS) as documented in their October 8, 1993 report. Diesel fuel oil was detected in soil samples at concentrations as high as 6,350 mg/kg along the walls of the UST excavation. The Town contacted S E A to review the existing available data concerning the release and oversee remediation activities.

The Town received a letter on September 26, 1994 from DEP indicating that, under the Massachusetts Contingency Plan, the Town needed to submit either a Response Action Outcome (RAO) Statement or a Tier Classification prior to October 1, 1994. Neither document was filed with the DEP. The Town contacted S E A Consultants to review the existing available data concerning the release and oversee the remediation activities.

S E A Consultants conducted a subsurface investigation on October 5 and 19, 1994 that involved sampling two (2) monitoring wells, advancing a test pit, and obtaining soil samples from the excavation. Soil was excavated from the release site under a presumed Limited Removal Action (LRA), failing to recognize that the DEP had been previously notified of the release. On October 5 and 19, 1994, approximately 35 to 40 cubic yards of impacted soil were excavated from the UST pit and stockpiled on-site. The impacted soil was transported off-site under a Bill of Lading on December 27, 1994.

3.3 OIL AND HAZARDOUS MATERIALS USE AND STORAGE HISTORY

One (1) 1,000-gallon diesel UST was removed on September 23, 1993 from the site. The UST was located just south of the vehicle maintenance garage on the property. Figure 1-2 shows the location of the former UST. There are currently three (3) storage tanks located on the site: one (1) 4,000-gallon gasoline UST; one (1) 330-gallon diesel above-ground storage tank (AST) located in the garage, and; one (1) 275-gallon heating fuel AST located in the garage. As compared below, Fire Department records are not consistent with the current number of storage tanks located on-site.

A review of records regarding storage tanks was conducted at the Fire Department and Town Clerk's Department. As indicated in Section 3.3, the former diesel UST was removed on April 20, 1993 due to a release of diesel fuel. The most current records from the Town Clerk's Department indicate that on April 5, 1995 certificates of registration were granted for one (1) 1,000-gallon diesel UST and for one (1) 4,000-gallon gasoline UST. The certificate of registration for the diesel UST indicates that this tank was removed (see Appendix D for Fire Department record).

A review of records at the Fire Department indicates that the Ashburnham Highway Department has operated several USTs and ASTs on the premises since at least the mid-1960s. The following are the most current records: An application filed on April 25, 1986 lists several USTs at the site: one (1) 1,000-gallon diesel UST; one (1) 4,000-gallon gasoline UST installed 5/11/84; and two (2) 4,000-gallon and one (1) 3,000-gallon gasoline USTs installed 15 to 20 years ago. A permit was issued on August 20, 1992 for the installation of one (1) 500-gallon AST. A permit was filed on October 10, 1993 for a 330-gallon diesel AST. On October 3, 1994 an application was filed to install or alter a fuel oil burning equipment for a #2 fuel oil burner located in the garage. On April 20, 1994 an application was filed to install or alter fuel oil burning equipment in the basement.

Material Safety Data Sheets (MSDS) for the site were on file at the Fire Department for the following products: No. 2 fuel oil, diesel fuel, mineral spirits-safety-kleen 105 solvent-ms, solvent resin solution, Dexron II - petroleum hydrocarbons, SAE 15 w/40 multi-grade motor oil, Citgo super unleaded gasoline, Citgo regular gasoline, and Citgo unleaded gasoline.

ASTs are located in the general area near the site. Records from the DEP indicate that three releases occurred near the site:

(1) DEP Site No. 2-10733: A release of No. 2 fuel oil from a leaky feed line to an AST occurred at 8 Central Street on April 18, 1995; the volume of release was less than ten gallons. Based on the information provided, it appears that the extent of the release is limited to the boundaries of this site.

(2) DEP Site No. 2-10620: A release of approximately 100 gallons of #2 fuel oil from a copper feedline occurred at 19 Puffer Street, located approximately 150 feet to the east of the site. Two (2) monitoring wells were installed at this site. Contaminated soil was removed. Based on the information provided, the release of #2 fuel oil appears to be limited to the boundaries of this site.

TPH at a concentration of 14,390 mg/kg was detected in soil samples collected upgradient of the release on the 19 Puffer Street site. Groundwater flow direction, as measured, was not provided.

* LSP for 19 Puffer Street believes this 2nd area of contamination is emanating from the DPW yard

(3) DEP Site No. 2-10584: A spill from drums and a dumpster occurred at 14 Maple Avenue. The DEP OHM Release Log Form indicates that this spill was reported to the DEP on December 16, 1994. An unknown amount of heavy metal containing pigments was released into the air and onto the ground. A complaint was filed of colored dust blowing in air resulting from cleanup of the plant. Dye pigment containing heavy metals was observed on the ground.

Groundwater flow direction was not provided. The dust blowing in air could potentially impact the Ashburnham DPW depending on wind flow, however it would not impact the investigation of the release under consideration which is a subsurface fuel oil release.

3.4 WASTE MANAGEMENT HISTORY

Solid waste from the site is picked up once a week and transported to the Ashburnham Landfill. Solid waste is composed of materials such as rags, plastic, and paper. No hazardous waste is generated at the site, as reported by DPW Supervisor William Brennan.

Waste oil is stored inside the garage and is picked up by Cyn Environmental on an as needed basis. Wastewater from hosing off trucks discharges into the ground.

3.5 ENVIRONMENTAL PERMITS AND COMPLIANCE HISTORY

The site is currently used as a facility for the Department of Public Works and was historically used as a railroad station depot. A permit was granted on April 14, 1986 to maintain an existing/new underground storage facility. See Section 3.3 for additional information on storage tank permits.

There were no recorded violations of environmental permits associated with the release site or the property on which it is located noted during the records review. S E A did not discover environmental permits or compliance history information on the former users of the property.

3.6 POTENTIALLY RESPONSIBLE PARTIES

The Town of Ashburnham is the owner of the property where the release took place, the Ashburnham Highway Department is the operator of this property, and Roy Brothers Oil Co, Inc. were the owners of the tank. Their addresses are as follows:

1. Town of Ashburnham
Town Hall
32 Main Street
Ashburnham, Massachusetts 01430
2. Roy Brothers Oil Co., Inc.
4 South Main Street Box 802
Ashburnham, MA 01430

Additional Potentially Responsible Parties (PRPs) have not been identified at this date, but may include any other party or parties, which may be identified at a later date.

4.0 SITE HYDROGEOLOGICAL CHARACTERISTICS

4.1 PREVIOUS SUBSURFACE INVESTIGATIONS

Following the removal of one (1) 1,000-gal. diesel UST, Environmental Products & Services, Inc. (EPS) was contracted to perform a subsurface investigation associated with the tank removal. Soil and groundwater sampling was performed by EPS and analyzed by Contest Inc. See Appendix A for the Environmental Products & Services, Inc. report dated October 8, 1993.

Soil and groundwater were sampled on September 24, 1993 from the tank pit at the release site. EPS observed that soil along the sidewalls of the tank excavation was darkly colored at grade and had a distinct petroleum odor. Free product was not observed in the soil above the top of the UST. EPS also observed standing water in the bottom of the tank excavation, but attributed this to rainwater from the previous night's rainfall.

Evidence of the diesel fuel release was detected in soil and water samples collected in the UST pit. Soil samples collected from the limits of the UST pit indicated the presence of hydrocarbons similar to No. 2/No. 4 diesel fuel. TPH was detected at a concentration of 6,350 mg/k in a soil sample from the south wall of the excavation pit. Water samples collected from the UST pit indicated a much reduced level of TPH at 6.63 mg/L, and also trace quantities of MTBE at <50 ug/L. BTEX was detected at a total concentration of 150 ug/l in water samples.

For the purpose of this Phase I report, the release site is limited to the excavation area around the former UST as shown in Figure 2-1.

The EPS report indicates the presence of five (5) two-inch monitoring wells located at the site. These monitoring wells were not installed in association with the UST removal, as the wells were installed previous to the date of the UST removal. Two of the monitoring wells were considered useful in monitoring transport of fuel oil potentially released to the

groundwater as a result of the leaking 1,000-gallon UST. These monitoring wells are indicated as MW-1 and MW-2 on Figure 2-1. The sampling locations MW-1 and MW-2 allowed determination of whether the groundwater had been affected by the release.

4.2 BORING ADVANCEMENT AND WELL CONSTRUCTION

The Town of Ashburnham retained S E A Consultants to conduct remedial activities at the release site and to prepare a Phase I report in accordance with 310 CMR 40.0000. The objectives of S E A's investigation are stated in Section 1.0.

As indicated in Section 4.1, five (5) two-inch monitoring wells had previously been advanced on the property. The subsurface investigation included collecting groundwater samples from two of these monitoring wells, advancing a test pit, and collecting soil samples from the UST pit. The locations of the monitoring wells and test pit are shown in Figure 2-1.

Two (2) monitoring wells (MW-1 and MW-2) were considered to be appropriate for groundwater sampling. The inferred groundwater flow direction is to the south-southeast, as indicated in Section 4.5. MW-2 is downgradient of the release. MW-1 was utilized also as the gradient is relatively flat to assess whether potentially impacted groundwater could be spreading laterally.

4.3 SITE TOPOGRAPHY

The topography on the site is generally flat with a slight slope to the south. The general surrounding area gradually slopes to the south. Surface water is located approximately 300 feet to the south of the site.

4.4 Soil Stratigraphy and Bedrock

The soils grade from a native till to a clay layer at approximately the depth of the tank pit, according to the Environmental Products & Services, Inc. report. Also according to this report, the soil is porous glacial till, composed of poorly sorted pebbles, boulders, clays, and sands.

Based on the Bedrock Geologic Map of Massachusetts (Zen, 1983), the bedrock beneath the site is part of the Littleton Formation within the Merrimack Belt. The terrane is generally composed of Devonian age black to aluminous mica schist, quartzose schist, and aluminous phyllite. Depth to bedrock was measured to be approximately 9.25 feet at MW-1 and 14.00 feet at MW-2.

4.5 CONCEPTUAL GROUNDWATER FLOW

In an effort to determine groundwater flow direction, S E A attempted to survey the five (5) monitoring wells that were installed previous to the release, and performed a round of groundwater level measurements. Data gathered from the survey and groundwater level measurement are shown in Table 4.1.

Information obtained from two (2) of the five (5) monitoring wells could be surveyed due to satisfactory conditions. Based on topography, depth to water of monitoring wells MW-1 and MW-2, and the location of a wetland area to the south of the site and a stream to the east of the site, groundwater is inferred to flow to the south-southeast. In relation to the release site, monitoring wells MW-1 is cross-gradient and MW-2 is downgradient of the excavation.

5.0 NATURE AND EXTENT OF CONTAMINATION

5.1 EVIDENCE OF A RELEASE

One (1) 1,000-gal. diesel underground storage tank was removed from the site on September 23, 1993. The closure documentation indicated that soil appeared to be impacted by the release. Approximately 8 cubic yards of contaminated soil was stockpiled in September 1994, and approximately 35-40 cubic yards of contaminated soil was stockpiled in October 1994. Laboratory analytical results are attached in Appendix C.

The DEP was notified of the 72-hour condition release on October 1, 1993. In September 1993, Environmental Products & Services, Inc. (EPS) performed a subsurface investigation of the release. EPS observed standing water to be present in the excavation; EPS attributed this water to rainwater from the previous night's rainfall trapped by an impervious layer of blue clay which underlain native till. Soil and groundwater samples taken from the excavation pit were analyzed for BTEX, TPH, and MTBE. TPH was detected in soil samples at a range of 393 mg/k to 6,350 mg/k. No MTBE was detected in soil samples. Total BTEX was detected in groundwater at 150 mg/l. Trace quantities (<50 ug/l) of MTBE were detected in groundwater samples. Tables 5.1 and 5.2 provide a summary of the soil and groundwater analytical results from the EPS subsurface investigation.

On October 5, 1994 S E A sampled soil at the release site and oversaw the excavation of soil in the area of the former tank. Groundwater samples were not collected on October 5, 1994. Approximately 20-25 cubic yards of soil were removed from the excavation and stockpiled, based on visual and olfactory observations, and field screening with a photoionization detector (PID) using the jar headspace method. PID analytical results are summarized in Table 5.3.

Five (5) closure soil samples was taken on October 5, 1995 around the perimeter of the excavation. Soil samples were submitted to a DEP-certified laboratory for analysis. Soil samples taken one on each of the northern, southern, eastern, and western faces of the

excavation (ASH-1, ASH-2, ASH-3, and ASH-5) and one at the center bottom of the excavation (ASH-4) were analyzed for TPH. TPH was detected in soil samples at 1,600 mg/Kg at the Southern Face and at 11,000 mg/Kg at the Western Face. Soil samples from the Eastern Face were additionally analyzed for VOCs and PAHs as this sidewall sample location was considered to be at clean limits. No VOCs or PAHs were detected. Soil analytical results are summarized in Table 5.4.

On October 19, 1994, S E A sampled soil and groundwater and oversaw additional excavation at the release site. The excavation was extended in the southerly direction and as far in the westerly direction as the existing gasoline UST would allow. Approximately 10 to 15 cubic yards of contaminated soil were excavated based on field screening analyses with a PID using the jar headspace method. A test pit was also advanced on the western side of the gasoline UST to confirm that the diesel contaminated soil did not extend beyond the gasoline tank area. PID analytical results are summarized in Table 5.5.

Six (6) closure soil samples were taken on October 19, 1994 from the excavation sidewalls and middle/bottom. Soil samples were sent to a DEP-certified laboratory for analysis of VOCs, PAHs, and TPH. Soil samples were taken one each at the southeastern corner, southwestern corner, southern face, southwestern corner, and western face of the excavation (ASH-6, ASH-7, ASH-8, ASH-9, and ASH-10) and one at the test pit west of the gasoline UST (ASH-TEST PIT-6').

Analytical results for soil samples from October 19, 1994 indicated the following: TPH and VOCs were not detected in soil samples collected from the test pit. TPH was detected in soil samples at 780 mg/Kg at the southeastern corner and at 910 mg/Kg at the southern face. The average exposure point concentration of 318 mg/Kg for TPH is below the MCP Standards for the release site. The average exposure point concentrations for VOCs and PAHs are below the determined MCP Standards for the release site. Xylenes were detected in soil samples at 12,000 ug/Kg at the southern face and at 32 ug/Kg at the southeastern corner. Various PAH compounds were detected in soil samples at the southeastern corner, southern face, and at the test pit. These are attributable to the use of

the site as a railroad rotary station for 50 years in the era of coal burning locomotives. Soil analytical results with the associated MCP Standard are summarized in Tables 5.6 and 5.7.

Two (2) groundwater samples were taken on October 19, 1994 from two previously existing monitoring wells (MW-1 and MW-2) at the site. Groundwater samples were sent to a DEP-certified laboratory for analysis of VOCs and PAHs. MW-1 is located southwest of the former diesel UST. MW-2 is located southeast of the former diesel UST. Tetrachloroethene (TCE) was detected at 13 ug/l in the groundwater sample collected from monitoring well (MW-2), located downgradient from the former tank. The detected concentration of TCE is below the determined MCP Groundwater Standards for the site. No PAHs were detected in the groundwater samples from MW-1 or MW-2. Groundwater analytical results with the associated MCP Standard are summarized in Table 5.8.

Table 5.1

Summary of Analytical Data for Soil from Previous Study

Sampling Date: 9/24/93

1,000-Gallon Diesel UST
19 Central Street
Ashburnham, Massachusetts

(Source: Environmental Products & Services, Inc. October 8, 1993 report)

Sample ID	Sample Location	Depth of Sample (inches)	Compounds Detected
632A	North Wall	44"	393 mg/k TPH ¹
632B	East Wall	44"	<0.5 mg/k ethylbenzene 1,130 mg/k TPH
632C	South Wall	44"	6,350 mg/k TPH
632D	West Wall	44"	<0.5 mg/k toluene 1 mg/k ethylbenzene 5 mg/k xylene 4,610 mg/k TPH

Note: ¹TPH = Total Petroleum Hydrocarbon

Table 5.2

Summary of Analytical Data for Water from Previous Study

Sampling Date: 9/24/93

1,000-Gallon Diesel UST
19 Central Street
Ashburnham, Massachusetts

(Source: Environmental Products & Services, Inc. October 8, 1993 report)

Sample ID	Sample Location	Depth of Sample (inches)	Compounds Detected
632E & E1	Water at bottom of excavation	64"	30 ug/l benzene 40 ug/l toluene 10 ug/l ethylbenzene 70 ug/l xylene <50 ug/l MTBE ¹

Note: ¹MTBE = methyl tertiary butyl ether

Table 5.4

Summary of Closure Sampling Analytical Results for Soil

Sampling Date: 10/5/94

1,000-Gallon Diesel UST
19 Central Street
Ashburnham, Massachusetts

Sample ID	Sample Location	Depth of Sample (inches)	TPH ¹ (mg/Kg)	VOC ² (ug/Kg)	PAHs ³ (ug/Kg)
ASH-1	Eastern Face	6-7	ND ⁴	ND	ND
ASH-2	Northern Face (toward Garage)	5-7	ND	NT ⁵	NT
ASH-3	Southern Face	7-8	1,600 (diesel)	NT	NT
ASH-4	Middle/Bottom of Excavation	10	ND	NT	NT
ASH-5	Western Face (Next to gasoline UST)	5-6	11,000 (Diesel)	NT	NT

Notes:

¹TPH = Total Petroleum Hydrocarbons

²VOCs = Volatile Organic Compounds

³PAHs = Polynuclear Aromatic Hydrocarbons

⁴ND = Not Detected at or below instrument detection limit.

⁵NT = Not Tested

Table 5.6

**Summary of Final Closure Analytical Results -
Total Petroleum Hydrocarbon and Volatile Organic Compounds in Soil**

Sampling Date: 10/19/94

1,000-Gallon Diesel UST
19 Central Street
Ashburnham, Massachusetts

Analysis	ASH-6	ASH-7	ASH-8	ASH-9	ASH-10	ASH-TEST PIT-6'	Average Exposure Point Concentration ¹	MCP Standard ²
Hydrocarbon Scan (Units = mg/Kg)								
Total Petroleum Hydrocarbons (TPH)	780 (diesel)	ND ³	910 (diesel)	ND	ND	ND	318	2,500
Volatile Organic Compounds (VOCs) (Units = ug/Kg)								
Xylenes	32	ND	3,800	ND	ND	ND	640	500,000
Naphthalene	ND	ND	7,800	ND	ND	ND	1,311	1,000,000
p-Isopropyltoluene	57	ND	ND	ND	ND	ND	285	* ⁴
1,3,5-Trimethylbenzene	94	ND	3,900	ND	ND	ND	675	*
1,2,4-Trimethylbenzene	150	ND	12,000	ND	ND	ND	2,034	*

Notes:

¹ In order to determine the exposure point concentration for those compounds with a ND, half of the laboratory detection limit was used. The average exposure point concentrations for TPH and VOCs are to be used for comparison to MCP Standards.

² MCP Standards were taken from the minimum of soil type of S-2 or S-3 and groundwater type of GW-2 or GW-3.

³ ND = Not Detected at or below instrument detection limit.

⁴ * MCP Method I Standards were not available for these compounds. Because the mass of these chemicals was included in the mass being reported in the TPH value, then the TPH standard is applicable and a separate Method 2 Standard need not be developed.

Locations of Samples were as follows:

ASH-6 Southeastern Corner at a depth of 4 to 6 feet.

ASH-7 Southwestern Corner at a depth of 5 to 7 feet.

ASH-8 Southern Face at a depth of 5 to 7 feet.

ASH-9 Southwestern Corner at a depth of 5 to 10 feet.

ASH-10 Western Face at a depth of 1 to 5 feet.

ASH-TEST Pit-6' Test Pit West of Gasoline UST at a depth of 6 feet.

Table 5.7

Summary of Final Closure Analytical Results -
Polynuclear Aromatic Hydrocarbons in Soil

Sampling Date: 10/5/94

1,000-Gallon Diesel UST
19 Central Street, Ashburnham, Massachusetts

Analysis	ASH-6	ASH-7	ASH-8	ASH-9	ASH-10	ASH-TEST PIT-6'	Average Exposure Point Concentration ¹	MCP Standard ²
Polynuclear Aromatic Hydrocarbons (PAHs) (Units = ug/Kg)								
Fluoranthene	4,300	ND ³	390	ND	ND	160	858	600,000
Naphthalene	1,100	ND	2,500	ND	ND	ND	648	1,000,000
Benzo (a) anthracene	2,900	ND	ND	ND	ND	ND	539	1,000
Benzo (a) pyrene	3,400	ND	ND	ND	ND	ND	692	700
Benzo (b,k) fluoranthene	6,700	ND	ND	ND	ND	220	1,257	*
Chrysene	4,200	ND	ND	ND	ND	ND	805	10,000
Acenaphthylene	750	ND	ND	ND	ND	ND	211	800,000
Benzo (ghi) perylene	3,000	ND	ND	ND	ND	ND	664	100,000
Phenanthrene	1,700	ND	3,800	ND	ND	ND	974	100,000
Indeno (1,2,3-cd) pyrene	2,700	ND	ND	ND	ND	ND	608	1,000
Pyrene	4,700	ND	700	ND	ND	ND	962	500,000
1-Methylnaphthalene	ND	ND	10,000	ND	ND	ND	1,971	**
2-Methylnaphthalene	3,200	ND	15,000	ND	ND	ND	3,073	7,000
Acenaphthene	ND	ND	550	ND	ND	ND	212	2,000,000
Fluorene	ND	ND	2,000	ND	ND	ND	453	1,000,000

Notes:

¹ In order to determine the exposure point concentration for those compounds with a ND, half of the laboratory detection limit was used. The average exposure point concentrations for PAHs are to be used for comparison to MCP Standards.

² MCP Standards were taken from the minimum of soil type of S-2 or S-3 and groundwater type of GW-2 or GW-3.

³ ND = Not Detected at or below instrument detection limit.

⁴ * A MCP Method I Standard was not available for this compound. Because the mass of this chemical was included in the mass being reported in the TPH value, then the TPH standard is applicable and a separate Method 2 Standard need not be developed.

Locations of Samples were as follows:

ASH-6 Southeastern Corner at a depth of 4 to 6 feet.

ASH-7 Southwestern Corner at a depth of 5 to 7 feet.

ASH-8 Southern Face at a depth of 5 to 7 feet.

ASH-9 Southwestern Corner at a depth of 5 to 10 feet.

ASH-10 Western Face at a depth of 1 to 5 feet.

ASH-TEST Pit-6' Test Pit West of Gasoline UST at a depth of 6 feet.

Table 5.8

Summary of Analytical Results for Groundwater

Sampling Date: 10/19/94

1,000-Gallon Diesel UST
19 Central Street
Ashburnham, Massachusetts

Well Designation	Well Location	Volatile Organic Compounds	Polynuclear Aromatic Hydrocarbons	MCP Standard ¹
MW-1	50 ft. West of Former Diesel UST	ND ²	NT ³	3,000 ug/L (Tetrachloroethene)
MW-2	Southeast of Former Diesel UST	13 ug/l Tetrachloroethene	ND	3,000 ug/L (Tetrachloroethene)

Notes:

¹ MCP Standards were taken from the minimum of soil type of S-2 or S-3 and groundwater type of GW-2 or GW-3.

² ND = Not Detected at or below instrument detection limit.

³ NT = Not Tested

5.2 EXTENT OF CONTAMINATION

During excavation, PID analysis and laboratory analysis of soil and groundwater samples were used to locate diesel contaminated soil to be removed. On October 5, 1994 the contaminated soil was removed by advancing the excavation to the north in the direction of the DPW garage, to the east and in the center of the excavation. The analytical results showed that impacted soil remained along the southern face (1,600 mg/Kg TPH) and western face (11,000 mg/Kg TPH). Based on analytical results of soil samples it appears that soil impacted by diesel fuel was removed in the north face and east face of the excavation.

On October 19, 1994 the excavation was extended to the south and as far west as the existing gasoline UST would allow. A test pit was also advanced on the western side of the gasoline UST to confirm that the diesel contaminated soil did not extend beyond the gasoline tank area. Analytical results of soil samples taken from the test pit and western face, and of a groundwater sample taken from MW-1, located west and downgradient of the release location, indicated that the diesel fuel did not laterally migrate west of the excavation area.

Tetrachloroethene was the only compound detected in the groundwater sample taken from the downgradient monitoring well (MW-2); tetrachloroethene is not a component of diesel fuel as based on the Massachusetts Oil and Hazardous Materials List (310 CMR 40.16). Therefore, based on analytical results from the groundwater sample taken from MW-2, it appears that the diesel fuel did not migrate downgradient of the excavation. The extent of contamination is shown in Figure 2-1.

6.0 MIGRATION PATHWAYS AND EXPOSURE POTENTIAL

6.1 MIGRATION PATHWAYS

The three potential migration pathways present on the site are:

- volatilization into the air
- transport through the soil
- transport via groundwater

All of these potential pathways will be discussed in the sections below.

6.1.1 Air Pathways

Transport of contaminants after volatilization into the air is considered to be a potential threat to humans at the site. This potential migration pathway is due to the depth of groundwater (approximately five (5) feet below grade), the proximity of the building to the release, and the depth at which VOCs were detected in subsurface soils. Potential exposure to on-site workers could occur if the unpaved lot is disturbed. However, the concentration of VOCs in soil is below S-1 standards.

6.1.2 Soil Pathways

Migration through soil is expected to occur in two directions, downward and horizontally. Downward migration is expected in the areas directly under the contaminants released. Horizontal migration is expected to occur just above the groundwater capillary fringe for LNAPL's (light non-aqueous phase liquids) and on top of dense soil strata for DNAPL's (dense non-aqueous phase liquid). The specific gravity of diesel fuel is less than that of water; therefore, diesel fuel would generally become "hung up" in soils above the capillary fringe of the watertable. Since diesel fuel contains LNAPL fractions, horizontal migration of contaminants would be expected to occur above the groundwater and in the general

direction of groundwater flow.

6.1.3 Groundwater Pathways

Concentrations of TPH were detected at soil sample intervals from the excavation area that were in contact with groundwater. However, groundwater samples collected downgradient of the excavation area showed no detectable concentrations of VOCs or PAHs that are found in diesel fuel. Migration of the diesel fuel in groundwater was not evidenced by the groundwater sampling results.

6.2 KNOWN AND POTENTIAL HUMAN EXPOSURE TO ON-SITE CONTAMINANTS

The most common health risks associated with contaminants from diesel fuel are ingestion or direct contact with contaminated materials (e.g. surface soil/water). Impacts to soils at the release site were detected in subsurface soil samples. Human exposure to on-site contaminants could occur during subsurface trenching or excavation work during utility installation, repair, or site development and grading. Due to the location of the contamination below an unpaved lot and the use of the site, there is a potential risk for humans to be exposed to the contaminants. As there is no fence or other barriers to limit access to the site, children and adults residing in the area have free access.

Potential exposure to groundwater includes the monitoring wells at the facility. Laboratory results indicate that compounds associated with diesel fuel were not detected in groundwater samples. Tetrachloroethene was detected at a concentration of 13 ug/l in the groundwater from an unknown source. Additionally, the concentration level of tetrachloroethene is below the GW-2 and GW-3 Groundwater Standards that were determined for the release site (see Section 7.2). The fate and transport of tetrachloroethene are beyond the limits of this Phase I Site Investigation for the release site.

6.3 KNOWN AND POTENTIAL IMPACTS OF OHM ON ENVIRONMENTAL RECEPTORS

The reported environmental receptors include two streams located approximately 200 feet to the west and 200 feet to the east of the site. A freshwater nonforested wetland area is located approximately 300 feet to the south of the site. No additional potential environmental receptors have been identified.

Because groundwater concentrations recorded for the contaminants are below both GW-1 and GW-3 concentration limits, there are no significant impacts likely to environmental receptors.

APPENDIX 7

Professional Resumes

The following individuals coordinated work on collection of information and preparation of this report:

ELISE MAZAREAS is an Environmental Scientist with a background in geology and experience working on TRC field programs, including site assessments, multi-media sampling, and site remediation. Ms. Mazareas holds a Bachelor of Science degree in Environmental Geo-Science from Boston College (2001). Ms. Mazareas is a Field Technician with TRC and has practiced as an environmental professional for two years.

Ms. Mazareas has successfully completed the American Society for Testing and Materials Phase I Site Assessment & Transaction Screen Assessment Modules for Environmental Site Assessments For Commercial Real Estate Course in February 2002.



FRANK CALANDRA is responsible for projects involving environmental site assessment, risk assessment, and remediation design. Mr. Calandra holds a Bachelor of Science degree in Mechanical Engineering from University of Lowell (1990) and a Master of Science degree in Hazardous Materials Management from Tufts University (2000). Mr. Calandra is a Project Manager with TRC and has been actively practicing in engineering since 1990.

Mr. Calandra has successfully completed the American Society for Testing and Materials Phase I Site Assessment & Transaction Screen Assessment Modules for Environmental Site Assessments For Commercial Real Estate Course in February 2002.