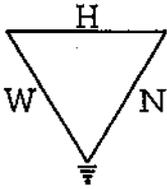


JAN 05 1996



Wagner, Heindel, and Noyes, Inc.

- Consulting Hydrogeologists
- Engineers
- Environmental Scientists

P.O. Box 64709 Burlington, Vermont 05406-4709

802-658-0820

FAX: 802-860-1014

January 2, 1996

Mr. Michael Young
Vermont Department of Environmental Conservation
Hazardous Materials Management Division
Sites Management Section
103 South Main Street / West Office
Waterbury, VT 05671

RE: Former Bradford Oil Company Fuel Storage and Distribution Facility
Bradford, Vermont

Dear Mr. Young:

Wagner, Heindel, and Noyes, Inc. (WH&N) has completed a Phase II investigation of the former Bradford Oil Co. fuel storage and distribution facility located on Route 25 in Bradford, Vermont. The Phase II report is enclosed for your review.

Please contact me if you have any questions or comments concerning this report.

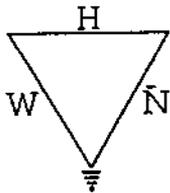
Sincerely,

Jeffrey A. Silfer, PhD
Project Manager

JAS/ral *ral*

Enclosure

cc: Ms. Carol Metayer
Mr. Craig Trischman
Mr. Michael Meagher, Esq.



Wagner, Heindel, and Noyes, Inc.

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**FORMER BRADFORD OIL CO., INC.
FUEL STORAGE AND DISTRIBUTION FACILITY
Bradford, Vermont**

Prepared by:

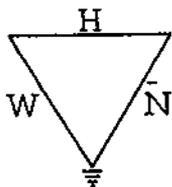
Wagner, Heindel, and Noyes, Inc.

January 2, 1996

FORMER BRADFORD OIL Co., INC.
FUEL STORAGE AND DISTRIBUTION FACILITY
Bradford, Vermont

TABLE OF CONTENTS

	Page
EXECUTIVE SUMMARY	I
1.0 INTRODUCTION	1
1.1 Historical Perspective	1
1.2 Purpose and Scope	2
2.0 SITE DESCRIPTION AND BACKGROUND	2
2.1 Site Location and Physiography	2
2.2 Existing Environmental Threats	4
2.3 Site History	4
3.0 METHODS OF INVESTIGATION	5
3.1 Monitoring Well Installation	5
3.2 Soil Screening and Sampling	6
3.3 Groundwater Sampling	6
3.4 Petroleum Product Sampling	7
4.0 INVESTIGATION RESULTS	8
4.1 Site Stratigraphy	8
4.2 Hydrogeology	8
4.3 Contaminant Distribution	8
4.3.1 Soil	8
4.3.2 Free Product Distribution and Characterization	10
4.3.3 Groundwater	10
5.0 CORRECTIVE ACTION	13
6.0 CONCLUSIONS AND RECOMMENDATIONS	14



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FORMER BRADFORD OIL CO., INC. FUEL STORAGE AND DISTRIBUTION FACILITY Bradford, Vermont

EXECUTIVE SUMMARY

Wagner, Heindel, and Noyes, Inc. (WH&N) has completed an investigation of the former Bradford Oil Co., Inc. fuel storage and distribution facility located on Route 25 in Bradford, Vermont. The investigation included research regarding historical land use practices and a subsurface testing program on the property currently occupied by Farmway, Inc. and Twin State Fertilizer Company. The investigation was designed to define the nature and extent of soil and groundwater contamination associated with the former storage terminal. An overview of the results of this investigation is presented below.

Site History

- WH&N reviewed sources of historical information and interviewed persons knowledgeable of the history of the area to develop an understanding of historical land use activities associated with the Bradford Oil storage facility. This research revealed that the site contained a fuel storage and distribution terminal for more than four decades. Records indicate a storage facility was operated by Bradford Oil Co. from approximately 1960 to 1990. Previously, an Esso facility had been operated on the site.
- Aerial photographs available from the late 1960s and 1970s reveal that the Bradford Oil bulk storage terminal consisted of seven 15,000 to 20,000 gallon tanks, and one smaller above-ground tank. A former employee of Bradford Oil stated fuel oil, diesel fuel, and gasoline were stored at the facility. Two pump islands, evident in the photographs, may have dispersed gasoline and diesel fuel for delivery trucks, and presumably were fed by underground storage tanks (USTs).
- The State of Vermont Department of Environmental Conservation (VT DEC) file for the site indicates Bradford Oil removed two waste oil tanks in 1987 without the required tank pull assessment. It is possible these tanks were the gasoline and diesel USTs that fed the pumps.

Subsurface Investigation

- A preliminary soil boring/monitoring well installation program was implemented October 11, 1995 to begin to assess the impact the former fuel distribution facility and an adjacent hazardous waste site (Maska US, Inc.) may have had on the Farmway, Inc. property. Approximately 1.2 feet of free-phase petroleum product was encountered in the monitoring well installed in the former tank battery location. A groundwater sample collected from the Bellefeuille property monitoring well, adjacent to the Maska US, Inc. site, contained no detectable volatile organic compounds (VOCs).
- The VT DEC was notified of the presence of free petroleum product, and that the owners of Farmway, Inc. intended to conduct additional site characterization using the Expressway procedure, on October 25, 1995.
- Nine additional monitoring wells were installed on the Farmway, Inc., Twin State Fertilizer Company, and Bellefeuille properties on November 6 and 7, 1995. Free-phase petroleum (approximately 0.15 feet) was observed in one of the new monitoring wells on the Twin State property below the former tank battery. Soil, groundwater, and free product samples were submitted for laboratory characterization.
- The gas chromatographic signature obtained for the petroleum product sample from MW-2 revealed the sample was most likely a mixture of gasoline and kerosene. Kerosene is chemically similar to No. 2 fuel oil and diesel fuel.
- Selected soil samples were analyzed by modified EPA Method 8100 to determine the total petroleum hydrocarbon (TPH) content and evaluate the fuel type. TPH concentrations for soil samples from MW-4, MW-5, MW-6, and MW-12 ranged from 34 to 13,800 mg/kg. In each instance, the chromatographic signature of the contaminant closely resembled diesel fuel, a petroleum product characterized by a molecular distribution virtually indistinguishable from No. 2 fuel oil.
- Groundwater samples were submitted for laboratory characterization of VOCs and TPH. Total BTEX concentrations ranged from below detection to 3,731 $\mu\text{g/L}$ (ppb). Outside of the free product zone, the only known violation of groundwater enforcement standards is the occurrence of benzene and xylenes in MW-8 at 1,020 $\mu\text{g/L}$ and 2,540 $\mu\text{g/L}$, respectively. In nine of the twelve monitoring wells, however, there were substantial quantities of non-target compounds, including alkylated benzenes, aliphatic hydrocarbons, and polycyclic aromatic hydrocarbons (PAHs).
- The groundwater flow direction is to the south-southeast. The horizontal hydraulic gradient averaged over the entire site is 0.004 ft/ft.

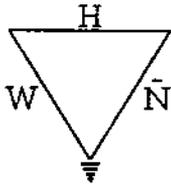
Analysis

- Free phase petroleum product, tentatively identified as a mixture of gasoline, No. 2 fuel oil and/or diesel fuel, was encountered in the former storage tank area.

Some of this contamination may have originated from the USTs that fueled the nearby pump islands; this possibility currently is under investigation. The free product thickness ranges from approximately 1.2 feet (MW-2) to 0.15 feet (MW-4). If it is assumed that the product zone encompasses 30 feet x 100 feet, averages 0.5 feet in thickness, and has a porosity of 0.40, approximately 600 gallons of free product would be present.

- From the information available, it is known that a dissolved-phase plume extends from the free product area south-southeast toward the Bellefeuille house. The downgradient limit of the plume has not been determined.
- Farmway, Inc. and Twin State Fertilizer Company, with the concurrence of the Petroleum Sites Management Section, have implemented a voluntary free product recovery program.

$$\begin{aligned} & 30 \text{ ft} \times 100 \text{ ft} \times 0.5 \text{ ft} \times 0.4 \\ &= 1500 \text{ ft}^3 \times 0.4 \\ &= 600 \text{ ft}^3 \\ & 600 \text{ ft}^3 \times 1.5 \text{ gal/ft}^3 \\ &= 4,800 \text{ gallons} \end{aligned}$$



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FORMER BRADFORD OIL CO., INC. FUEL STORAGE AND DISTRIBUTION FACILITY Bradford, Vermont

1.0 INTRODUCTION

1.1 Historical Perspective

Wagner, Heindel, and Noyes, Inc. (WH&N) was retained in September 1995 to conduct a Phase I/Phase II investigation of the Farmway, Inc. ("Farmway") property in Bradford, Vermont. During the subsurface investigation, three monitoring wells were installed on the Farmway property and the adjacent Bellefeuille residence. Free-phase petroleum product was encountered in a monitoring well completed in the vicinity of a former Bradford Oil Co., Inc. ("Bradford Oil") bulk storage tank battery. The Vermont Department of Environmental Conservation (VT DEC) was notified of the free product occurrence and that additional site characterization would proceed under the VTDEC "Expressway" procedure¹. A complementary copy of the work plan and cost estimate was forwarded to the Sites Management Section (SMS) of the VTDEC under separate cover².

WH&N was retained by Farmway and Twin State in late October 1995 to conduct additional site characterization. Nine additional monitoring wells were installed in early November 1995 to further define the extent of soil and groundwater contamination associated with the former Bradford Oil facility. Historical research revealed that the above-ground tank battery was located on land currently owned by Farmway and Twin State Fertilizer Company ("Twin State"). Consequently, the additional monitoring wells were installed on Farmway, Twin State, and Bellefeuille properties. The Bellefeuille property is located downgradient to the east, from the former tank area. Following the completion of the well installation program,

¹ October 25, 1995 letter from Jeff Silfer (WH&N) to Mr. Charles Schwer (SMS).

² November 2, 1995 letter from Jeff Silfer (WH&N) to Mr. Charles Schwer (SMS).

groundwater samples were collected for laboratory characterization, all on-site monitoring wells were surveyed, and water table elevations and free product thicknesses were determined.

1.2 Purpose and Scope

This report summarizes the results of investigation activities completed to date. Accordingly, the report documents the site history, presents the field and laboratory analytical results, outlines the progress of voluntary corrective action at the site, and presents a preliminary receptor evaluation. Conclusions and recommendations are discussed in the final section.

2.0 SITE DESCRIPTION AND BACKGROUND

2.1 Site Location and Physiography

The site is located on the north side of Route 25 in Bradford, Vermont (see Site Location Map, Appendix 1, page 1). Farmway and the Bellefeuille residence border Route 25, and Twin State abuts Farmway to the north (see Site Orthophoto and Site Air Photograph, Appendix 1, pages 2 and 3; and Site Plan, Map Pocket 1). The site is bordered to the north and east by agricultural cropland. The Miller residence and Upper Valley Press lie to the southeast. The Pierson Industrial Park abuts the site to the south on the opposite side of Route 25; the former Bradford Veneer and Panel, Inc. facility, Upper Valley Services, Inc., and Maska US, Inc. border Route 25 in the Industrial Park. The Boston and Maine Railroad parallels the western property boundary of Farmway and Twin State. The Central Vermont Public Service Company and a trailer park lie to the southwest and west, respectively, across the railroad right-of-way.

The site is relatively level and does not contain surface water impoundments. To the east, the topography slopes toward the Connecticut River some 300 yards distant. The Soil Conservation Survey of Orange County identifies soils in the area as the Merrimac-Agawam-Windsor-Winooski association. These soils are level to steep, moderately to excessively drained, moderately coarse to coarse-textured on stream terraces, and moderately well drained, medium-textured soils on bottom lands

subject to flooding³. Site specific soil characteristics are described in Section 4.0. Surface drainage is generally eastward toward the Connecticut River (see USGS map, Appendix 1, page 1).

Farmway is a retail sales outlet for outdoor clothing and farm supplies. The Farmway property contains one large, two-story building encompassing some 9000 square feet, and two smaller structures with footprints of approximately 2000 and 300 square feet. The two-story building is employed for storage, retail, and office space. The two smaller sheds contain farm supplies and related hardgoods. The parking lot is an unimproved earth surface.

Farmway employs Town of Bradford municipal water and an onsite septic system. The large building is heated with a propane forced hot air system and an oil-fired hot water system from a 275 gallon above ground fuel oil tank outside of the building. The two smaller storage buildings are not heated. Farmway does not use or dispense commercial petroleum products, and the property does not contain any underground storage tanks (USTs).

Twin State Fertilizer Company blends and distributes commercial fertilizers and lime according to customer specifications. Lime and fertilizer components are stored in bulk on the premises and are blended on order. The products are shipped in bag or bulk quantities. Liquid fertilizers are not used or produced by Twin State.

The Twin State property contains two buildings. The footprint of the main office and fertilizer storage building encompasses some 8000 square feet. A smaller structure located east of the main building has a footprint of about 600 square feet. The smaller building is used for vehicle maintenance and storage. The office space is heated with an electric hot air system. Twin State uses Town of Bradford municipal water and an on-site septic system. A 550 gallon gasoline UST is present on the property; the double-walled tank was installed in 1993 and is equipped with cathodic protection. The new tank replaced an existing 550 gallon gasoline UST that had been installed around 1990. The 550 gallon UST installed in 1990 replaced a gasoline UST of unknown capacity; this tank had been in place from 1966 to about 1990. No tank pull records were available in the VT DEC files for the removal of the UST. A tank pull assessment was completed in 1993 during the removal of UST

³

Soil Conservation Service Soil Survey of Orange County, Vermont, USDA 1978.

installed in 1990. No VOCs were detected during the assessment (see Appendix 2, pages 40 - 43, for tank pull report and related correspondence).

2.2 Existing Environmental Threats

Potential environmental hazards in Orange County and the Bradford area are depicted on maps included in Appendix 1 (pages 4 and 5, respectively). There are no known environmental threats immediately upgradient of the Farmway and Twin State properties.

The Twin State property is the site of the former Agrico Farm Center, a site listed on the USEPA Comprehensive Environmental Response, Compensation, and Liability Act Information System (CERCLIS). The EPA CERCLIS database lists potential and confirmed hazardous waste sites which have been, or need to be, addressed. The Agrico Farm Center site is characterized as not requiring additional action.

The Maska US, Inc. site, located southeast of Farmway across Route 25, also is listed on the CERCLIS database (No. VTD048419386). Investigations have documented the occurrence of tetrachloroethene (PCE) contamination in soil, soil vapor, and groundwater on the site. PCE also has been detected in soil and groundwater on the Upper Valley Services property immediately south of Farmway. The Maska and UVS properties are downgradient from Farmway and Twin State, and should pose no threat. On monitoring well (MW-1) was installed on the Bellefeuille property adjacent to the Maska property; no PCE was detected in this well.

2.3 Site History

Area residents and former employees relate that Mr. George Pratt purchased Bradford Oil Co. from Blake Chevrolet around 1960. Bradford Oil operated a petroleum storage facility on the site from approximately 1960 to 1990. Former employees have stated No. 2 fuel oil, gasoline, and diesel fuel were stored at the site. In aerial photographs from the late 1960s and early 1970s, seven 15,000 to 20,000 gallon capacity above ground tanks, and one smaller (~5,000 gallon) tank are visible. In addition, two fuel pumps for fueling delivery trucks, presumably fed by USTs, are present. A former employee of Bradford Oil stated one or possibly

two USTs were associated with the operation.

Historical maps and documents and interviews with area residents have revealed that the site has contained a petroleum storage and distribution facility for more than four decades. A Sanborn Fire Insurance map from 1955 has the facility marked "Esso"; the previous Sanborn map (1922) does not show a petroleum storage terminal.

3.0 METHODS OF INVESTIGATION

The objective of the subsurface investigation was to identify, and subsequently to define the nature and extent of contamination, associated with the former Bradford Oil Co. fuel storage and distribution facility. The investigation included a soil boring and monitoring well installation program, sampling and laboratory characterization of soil, groundwater, and petroleum product, and a site survey. Procedures employed during the subsurface investigation are described below.

3.1 Monitoring Well Installation

A total of 12 groundwater monitoring wells were installed on two separate dates to define the nature and extent of soil and groundwater contamination and evaluate hydrogeologic conditions. The monitoring wells were located in the potential source area (MW-2, MW-4, MW-5, MW-6), upgradient from the suspected source (MW-3, MW-7), and downgradient from the former tank battery (MW-8, MW-9, MW-10, MW-11, MW-12).

The monitoring wells were completed by M&W Soils Engineering, Inc. (Charlestown, NH) under WH&N supervision using hollow stem auger technology. Split spoon samples were collected at five foot intervals in each boring. Soils were logged from the ground surface to the total depth. Soils were screened for volatile organic compound (VOC) contamination in the field (see Section 3.2). Soil boring logs and drills logs are included in Appendix 2 (pages 1 - 15, and 16 - 27, respectively). The auger flights were steam cleaned between borings.

Monitoring wells were constructed of two-inch (i.d.) PVC casing with flush threaded joints and a ten-foot, factory-slotted screened section (0.010 inch slots). The

screened section was covered with filter sock, and the borehole around the screen was filled with clean native soil. A two-foot bentonite seal was placed above the screened section of the well. The wells were protected with flush-mounted curb boxes or well guards. Monitoring well construction diagrams are included in Appendix 2 (pages 28 - 39).

3.2 Soil Screening and Sampling

During the soil boring program discrete interval (split spoon) and composite soil samples obtained from cuttings were screened with an H-Nu Systems, Inc. Model PI 101 photoionization detector (PID) equipped with a 10.2 eV lamp. The PID was calibrated at the beginning of each day with a 100 ppm isobutylene span gas. Soil samples were permitted to equilibrate a minimum of 15 minutes in zip-lock plastic bags prior to headspace screening.

Based on the PID results, four soil samples were placed in 40 μ L volatile organic analysis (VOA) vials and submitted for laboratory characterization by modified EPA Method 8100 for total petroleum hydrocarbons (TPH) and petroleum fingerprint identification. Soil samples were stored on ice or refrigerated until delivered to the laboratory (Endyne, Inc.).

Soil analytical results are discussed in Section 4.3 of this report.

3.3 Groundwater Sampling

The monitoring wells were developed after installation by bailing ten well volumes. The wells were then sampled for laboratory analysis with disposable bailers. Two 40 mL vials were collected from each well. The samples were preserved with sodium azide and stored on ice until delivered to the laboratory (Endyne, Inc.).

Groundwater samples from MW-1, MW-2, and MW-3, collected October 11, 1995, were submitted for VOC analysis by EPA Methods 601 and 602. Samples from monitoring wells MW-3 through MW-12, collected during the second phase of the investigation on November 8, 1995, were originally submitted for VOC characterization by EPA Method 602. The second vial for each well was

resubmitted for further analysis by modified EPA Method 8260⁴ for a broader suite of volatile organic compounds and TPH.

The groundwater contaminant distribution is discussed in Section 4.3 of this report.

3.4 Petroleum Product Sampling

Free petroleum product was collected from MW-2 on October 11, 1995 for laboratory characterization. The free product sample was submitted to Endyne, Inc. for fingerprinting by gas chromatography with flame ionization detection (GC/FID).

3.5 Site Survey and Groundwater Elevations

Monitoring well locations and top-of-pipe (TOP) elevations were surveyed on November 14, 1995. The survey was tied to a nearby USGS benchmark which was assigned a relative elevation of 100 feet. Additional site features, such as building and former above-ground tank footprints, were located from existing maps or air photographs.

Water level and free product measurements also were obtained November 14, 1995 using an interface probe. The interface probe was decontaminated after each measurement by washing with soap and water followed by a distilled water rinse. Groundwater elevations were calculated by subtracting the measured water levels from the surveyed top-of-pipe elevations. For the two wells with free product (MW-2, MW-4), the projected water table elevation was calculated from the measured water elevation, the free product thickness, and the ratio of the specific gravity of water and hydrocarbon.

The monitoring well and water table elevation data are presented in tabular form on the Groundwater Contour Map (Map Pocket 2).

4.0 INVESTIGATION RESULTS

4.1 Site Stratigraphy

⁴

The samples were resubmitted after the 14 day holding time. The data is employed for fingerprinting, rather than quantitative, purposes.

4.0 INVESTIGATION RESULTS

4.1 Site Stratigraphy

During the soil boring program, soils were logged continuously from split spoon samples and cuttings. Soil boring logs and drillers logs are presented in Appendix 2 (pages 1 - 15 and 16 - 27, respectively). A schematic cross section is presented in Appendix 1 (Page 6).

In general, the subsurface can be subdivided into three relatively distinct facies. The uppermost unit is a brown, fine-to-medium grained sand with a variable silt content. This unit comprised the uppermost six to eight feet of the stratigraphic section. The second unit was comprised of brown to tan, medium-to-coarse-grained sand. The coarse sand facies typically occurred only in the unsaturated zone; however, the unit was present below the water table in MW-2, and the free product observed in that well occurs in the coarse sand. The lowermost unit encountered at the site consisted of a brown to grey, fine-grained silty sand. The phreatic surface and the uppermost portion of the saturated zone occur in this facies.

4.2 Hydrogeology

As discussed above, the phreatic surface and the uppermost ten feet of the saturated zone typically inhabit the fine-grained, silty sand facies. Water table elevations are presented on the Groundwater Contour Map (map pocket 2). The groundwater flow direction, perpendicular to the phreatic surface contours, is to the south-southeast. The horizontal gradient averages 0.004 ft/ft over the entire site (MW-3 to MW-1). Vertical gradients are not reported as no piezometric devices were installed.

4.3 Contaminant Distribution

4.3.1 Soil

Discrete interval (split spoon) and composite (cuttings) soil samples were field screened with an H-Nu PID. Field testing results are included in the soil boring logs (Appendix 2, pages 1 - 15). Soil samples from MW-4, MW-5, MW-6, and MW-12, were submitted for laboratory characterization of total

petroleum hydrocarbons (TPH) and chromatographic fingerprinting. The laboratory analytical reports are presented in Appendix 3 (pages 1 to 6). The field screening and laboratory results are compiled below.

SOIL ANALYTICAL RESULTS				
Field and Laboratory Testing				
Location	Field Screening PID Range (ppm)	Laboratory Testing		Additional Notes
		TPH (mg/kg)	Petroleum Fingerprint	
MW-1	0.4 - 1.0	NA ¹	NA	
MW-2	0.7 - 160	NA	NA	Elevated PID values (>100) below 10 ft bgs
MW-3	0.6 - 6.8	NA	NA	Highest PID value at 0 - 2' bgs
MW-4	3.0 - 50	34.1	Diesel/No. 2 fuel oil	Elevated PID concentrations (above 20 ppm) at greater than 7 ft bgs
MW-5	20 - 112	3,880	Diesel/No. 2 fuel oil	PID values elevated throughout boring
MW-6	0.3 - 132	13,800	Diesel/No. 2 fuel oil	Elevated PID values below 15 ft bgs
MW-7	0.3 - 62	NA	NA	Elevated PID concentrations below 15 ft bgs
MW-8	0.3 - 3.0	NA	NA	
MW-9	0.3	NA	NA	
MW-10	0.3 - 30	NA	NA	Elevated PID readings in capillary fringe
MW-11	0.3	NA	NA	
MW-12	0.2 - 40	42.8	Gasoline and Diesel/No. 2 Fuel Oil	Elevated PID readings at water table

¹ Not analyzed

The field screening results reveal that, with the exception of MW-10, elevated PID concentrations are restricted to the vicinity of the former tank battery (e.g. MW-2, MW-4, MW-5, MW-6, and MW-7). Soil borings completed outside the tank battery perimeter typically exhibit VOC

concentrations at or near background. The VOC distribution is consistent with petroleum releases from above and/or underground storage tanks.

Total petroleum hydrocarbon concentrations range from 34.1 to 13,800 mg/kg for the four samples analyzed. The chromatographic fingerprint for the petroleum in samples from MW-4, MW-5, and MW-6 exhibits a significant correlation with the fingerprint for diesel fuel; diesel fuel and No. 2 fuel oil are virtually indistinguishable chromatographically. The chromatographic fingerprint for the petroleum in soil from MW-12, in contrast, exhibits a significant correlation with the fingerprints of gasoline and diesel fuel (or No. 2 fuel oil), indicating a mixture of fuels is present.

4.3.2 Free Product Distribution and Characterization

Free-phase petroleum product is present in MW-2 (1.2 feet) and MW-4 (0.15 feet). In addition, a sheen was observed in MW-12 on November 7 during drilling, and November 14 during water level determination; measurable product was not present.

A sample of free product collected from MW-2 was submitted for fingerprinting by GC/FID. The laboratory analytical reports are included in Appendix 3 (pages 7 to 9). The product fingerprint most closely resembled a mixture of gasoline and kerosene fuels.

4.3.3 Groundwater

Groundwater samples from MW-1, MW-2, and MW-3 (collected October 11, 1995) were submitted for laboratory analysis by EPA Methods 601 and 602; in practice, these samples were analyzed for 601/602 target compounds by EPA Method 8260. Groundwater samples collected from wells installed during the subsequent drilling program (collected November 8, 1995) were submitted for analysis by EPA Method 602. Subsequently, the samples also were analyzed by EPA Method 8260 modified to include TPH. Laboratory analytical reports are presented in Appendix 3 (pages 10 to 71). The analytical results are compiled in the following table.

GROUNDWATER ANALYTICAL RESULTS

Location	Benzene ¹	Toluene ¹	Ethylbenzene ¹	Xylenes ¹	Total BTEX ¹	TPH ²	UID ³ Summary	
							No.	Description
MW-1	ND ⁴	ND	ND	ND	ND	NA ⁵	0	None present
MW-2	766	6,580	1,580	10,500	19,436	NA	>10	Alkylated benzenes and aliphatic hydrocarbons ranging from 100 to 2500 $\mu\text{g/L}$
MW-3	ND	TBQ ⁶	ND	8.0	8.0	NA	2	Alkylated benzenes each at about 5 $\mu\text{g/L}$.
MW-4	ND	ND	ND	215	215	188	>10	Alkylated benzenes aliphatic hydrocarbons, and PAHs, ranging from 500 to 10,000 $\mu\text{g/L}$.
MW-5	ND	ND	ND	21.5	21.5	0.17	>10	Alkylated benzenes and PAHs ranging from 1 to 10 $\mu\text{g/L}$.
MW-6	ND	ND	ND	314	314	2.2	>10	Alkylated benzenes and PAHs ranging from 20 to 500 $\mu\text{g/L}$.
MW-7	ND	ND	ND	ND	Nd	ND	>10	Not determined
MW-8	1,020	ND	171	2,540	3,731	6.4	>10	Alkylated benzenes ranging from 50 to 1000 $\mu\text{g/L}$.
MW-9	ND	ND	ND	ND	ND	TBQ	>10	Alkylated benzenes and PAHs ranging from 1 to 5 $\mu\text{g/L}$.
MW-10	ND	ND	ND	ND	ND	0.43	>10	Alkylated benzenes, aliphatic hydrocarbons, and PAHs ranging from 1 to 10 $\mu\text{g/L}$.
MW-11	ND	ND	ND	ND	ND	NA	0	None present
MW-12	ND	ND	41.0	380	421	2.1 ¹	>10	Alkylated benzenes and PAHs ranging from 1 to 10 $\mu\text{g/L}$.
MW-12 DUP	ND	ND	50.5	402	452.5	NA	>10	see above
Trip Blank	ND	ND	ND	ND	ND	NA	0	None present

¹ Concentrations in $\mu\text{g/L}$ (ppb).

³ Unidentified peaks.

⁵ Not analyzed.

² Total Petroleum Hydrocarbon (TPH) concentrations in mg/L (ppm).

⁴ Not detected.

⁶ Trace Below Quantitation.

Excluding the groundwater in contact with free product (MW-2, MW-4) total BTEX concentrations (sum of benzene, toluene, ethylbenzene, and xylenes) ranged from below detection to 3,731 $\mu\text{g/L}$. Quantifiable BTEX contamination was not observed in MW-1, MW-7, MW-9, MW-10, or MW-11. A dissolved phase BTEX plume emanates from the contaminant source area and extends downgradient (south-southeast) toward the Bellefeuille residence (see Contaminant Distribution Map, map pocket 3). Outside the free product zone, enforcement standards are exceeded in MW-8 where benzene is present at 1,020 $\mu\text{g/L}$ (standard is 5.0 $\mu\text{g/L}$) and xylenes are present at 2,540 $\mu\text{g/L}$ (standard is 400 $\mu\text{g/L}$). Note that the MW-12 sample contained 380 $\mu\text{g/L}$ xylenes, and the quality control MW-12 duplicate contained 402 $\mu\text{g/L}$. The average is below the enforcement standard. The preventative action levels (PALs) for these compounds also were exceeded in MW-8.

The dissolved phase contamination is most likely restricted to the capillary fringe and the upper few feet of the saturated zone. As a consequence, the ten foot screens used in the monitoring wells may lead to an underestimation of actual contaminant concentrations within the zone of contamination.

Nine of the twelve monitoring well samples contained more than ten unidentified, non-target analytes. As discussed above, samples subsequently were analyzed by gas chromatography/mass spectrometry (GC/MS) (EPA Method 8260) to characterize the non-target analytes and estimate TPH concentrations. Outside the free product zone, TPH concentrations ranged from below detection (0.1 $\mu\text{g/L}$) to 6.4 $\mu\text{g/L}$. TPH concentrations correspond, in general, with BTEX concentrations.

Concentrations of EPA Method 8260 analytes not included on the EPA Method 602 target list are compiled below. These values are considered qualitatively because the samples were analyzed after the fourteen-day holding time⁵.

5

Actual values would be greater than reported.

Location	- sec-butylbenzene	naphthalene	isopropylbenzene	n-propylbenzene	p-isopropyltoluene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene
MW-1	ND	ND	ND	ND	ND	ND	ND
MW-2	ND	ND	TBQ	281	ND	2,480	1000
MW-3	ND	ND	ND	ND	ND	3.6	TBQ
MW-4	149	663	TBQ	118	206	886	325
MW-5	TBQ	10.2	TBQ	TBQ	TBQ	3.4	TBQ
MW-6	ND	TBQ	ND	TBQ	ND	291	100
MW-7	ND	ND	ND	ND	ND	ND	ND
MW-8	ND	ND	ND	TBQ	ND	672	266
MW-9	ND	ND	ND	ND	ND	2.1	TBQ
MW-10	ND	ND	ND	ND	ND	ND	TBQ
MW-11	ND	ND	ND	ND	ND	ND	ND
MW-12	ND	ND	TBQ	TBQ	ND	62.6	183

The ubiquitous presence of alkylated benzenes and toluenes in groundwater is consistent with the presence of a gasoline source. The occurrence of higher molecular weight aliphatic hydrocarbons and polycyclic aromatic hydrocarbons (PAHs) supports the occurrence of a No. 2 fuel oil or diesel fuel source. It is likely that the observed contaminant distribution reflects contributions from both above ground and underground fuel tanks.

MW-1, installed across Route 25 from the Maska US, Inc. facility, contained no tetrachloroethene (PCE). The result indicates vapor phase PCE migration from the Maska property to the Bellefeuille property has not occurred.

5.0 CORRECTIVE ACTION

In voluntary cooperation with Farmway, Clean Earth Technology, Inc. (North Ferrisburgh, Vermont) received permission from the VT DEC to test a recently developed product recovery pump on the site. The Spill Terminator pump was installed by Clean Earth Technology under WH&N supervision on December 1, 1995. To date, approximately 2 gallons of petroleum have been recovered.

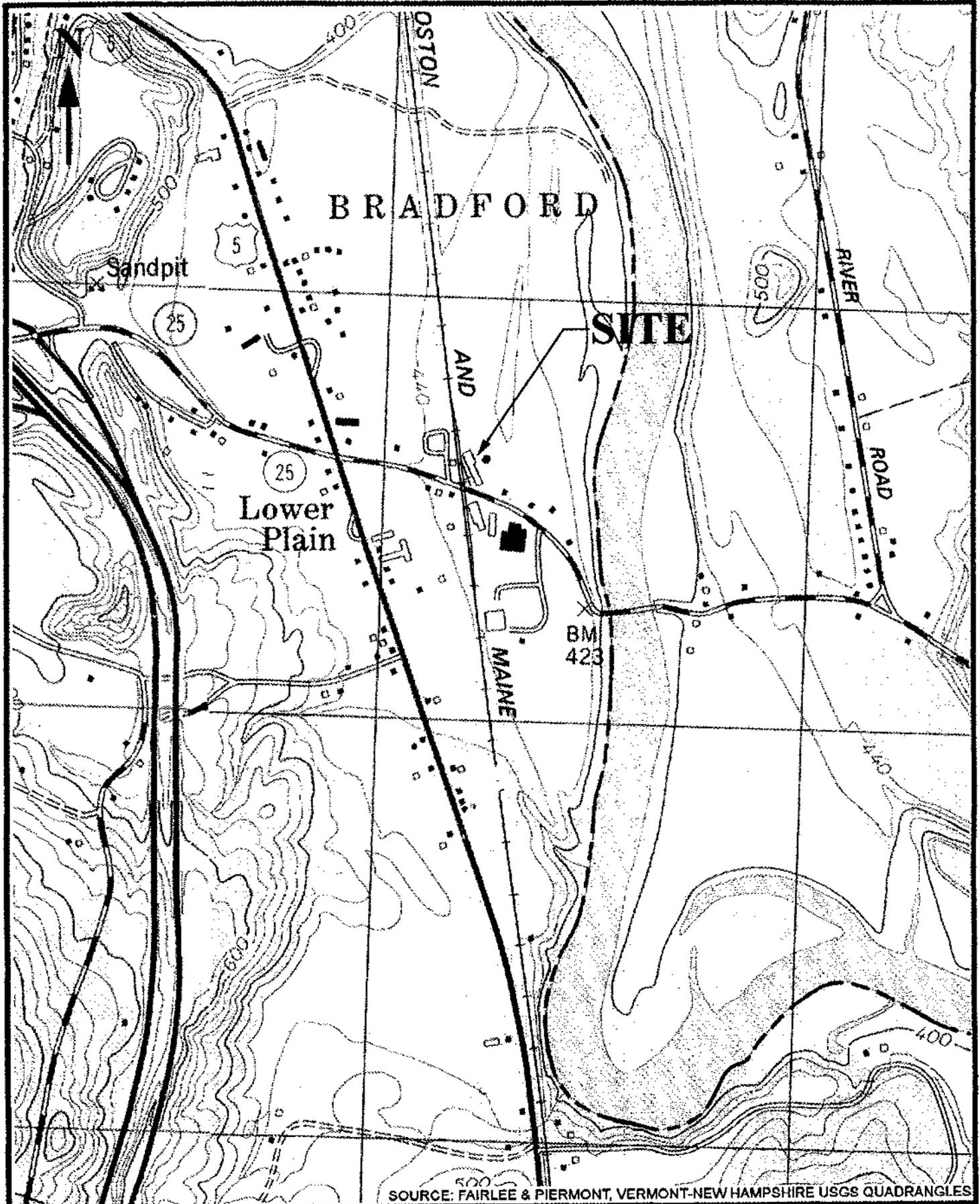
6.0 CONCLUSIONS AND RECOMMENDATIONS

WH&N has completed an investigation of the former Bradford Oil Co., Inc. fuel storage and distribution facility located on Route 25 in Bradford, Vermont. The investigation included research of historical land use practices and a subsurface testing program. Conclusions and recommendations are presented below.

- Historical research revealed that the property currently occupied by Farmway, Inc. and Twin State Fertilizer Company contained a fuel storage and distribution facility for more than four decades. Bradford Oil Co. operated a facility on the site from approximately 1960 to 1990. Aerial photographs available from the late 1960s and early 1970s reveal the Bradford Oil facility contained seven above ground storage tanks estimated to be of 15,000 to 20,000 gallon capacity, and one smaller above-ground tank (~5,000 gallon capacity). A former employee of Bradford Oil stated that No. 2 fuel oil, diesel fuel, and gasoline were stored on the site.
- Two sets of the fuel pumps are evident in the aerial photographs. Former Bradford Oil employees stated that these were gasoline and diesel fuel pumps for filling delivery trucks. The fuel pumps presumably were plumbed to underground storage tanks. The Vermont DEC has records indicating Bradford Oil Co. two waste oil USTs from the site in 1987 without the required tank pull assessment. The putative waste oil tanks may have been the USTs which fueled the gasoline and diesel pumps.
- Field screening of soil samples with a photoionization detector during the soil boring program revealed petroleum contamination in the unsaturated zone occurs almost exclusively in the source (former tank battery) area. TPH concentrations for selected soil samples ranged from 34 to 13,800 mg/kg. The chromatographic signature of the contaminant in each sample closely resembled diesel fuel. The molecular distribution of diesel fuel is virtually indistinguishable from No. 2 fuel oil.
- Free phase petroleum product was encountered in MW-2 (1.2 feet) and MW-4 (0.15 feet) in the former tank area. The chromatographic signature of free product from MW-2 most closely resembled a mixture of gasoline and kerosene. Kerosene is chemically similar to diesel fuel and No. 2 fuel oil.

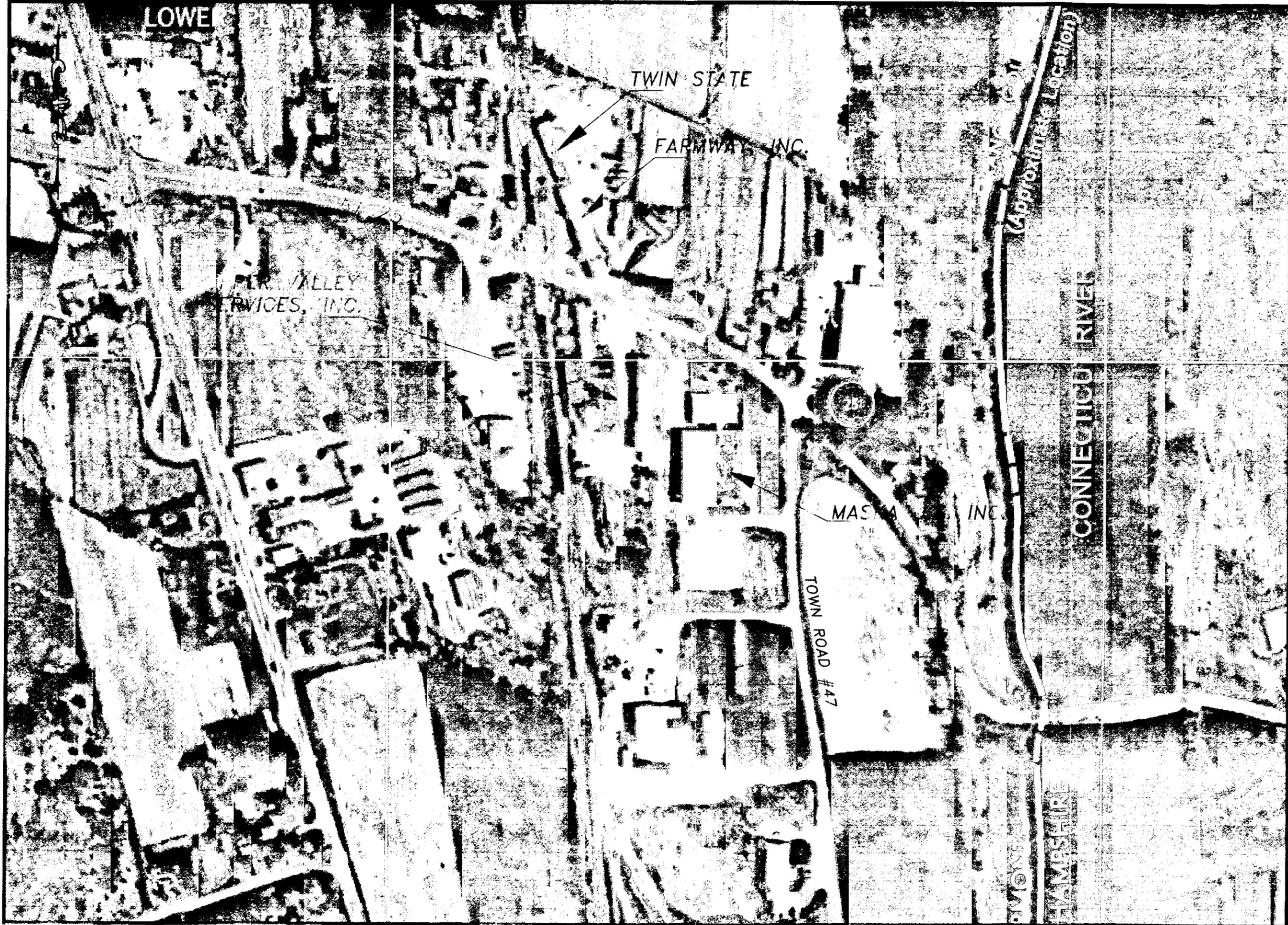
- A narrow dissolved phase petroleum plume extends from the source area south-southeast toward the Bellefeuille house. BTEX concentrations range from below detection to 3,731 $\mu\text{g/L}$ (ppb). TPH concentrations range from below detection to 6.4 $\mu\text{g/L}$ (ppm). Outside of the free product zone, the only known violations of Vermont groundwater enforcement standards are the occurrence of benzene and xylenes in MW-8 at 1,020 $\mu\text{g/L}$ and 2,540 $\mu\text{g/L}$, respectively.
- Petroleum constituents present in groundwater include alkylated benzenes, aliphatic hydrocarbons, and polycyclic aromatic hydrocarbons (PAHs). Alkylated benzenes, ubiquitous groundwater contaminants at the site, typically are associated with gasoline contamination. In contrast, higher molecular weight aliphatic hydrocarbons and PAHs typically are associated with No. 2 fuel oil, diesel, or kerosene. The compound distribution in groundwater supports the occurrence of both gasoline and No. 2 oil/diesel/kerosene contamination at the site.
- It is likely that the gasoline contamination, and possibly the "diesel" contamination, stems from former USTs associated with the fuel pumps observed in the aerial photographs.
- Farmway, Inc. and Twin State Fertilizer Company, in concurrence with the VT DEC, currently are engaged in a voluntary free product recovery program. To date, some 2 gallons of product have been recovered.

[U:\SILFER\WPDOCS\FARMWAY.R1C]



SOURCE: FAIRLEE & PIERMONT, VERMONT-NEW HAMPSHIRE USGS QUADRANGLES

FARMWAY, INC		DRAWN BY: M. Luman	APPROVED: J. Silfer
BRADFORD,	VERMONT	Wagner, Heindel, and Noyes, Inc.	
SITE LOCATION MAP		CONSULTING SCIENTISTS AND ENGINEERS	
SCALE: 1"=1000'	DATE: NOVEMBER 28, 1995	<ul style="list-style-type: none"> • Hydrogeology • Ecology • • Environmental Engineering • 	
FILE: C:\FARMWAY\SITMAP	PROJECT NO. 95215	P.O. BOX 64709 BURLINGTON, VERMONT 05406-4709	



FARMWAY/TWIN STATE

VERMONT

SITE ORTHOPHOTO

SCALE: 1" = 200'

DATE: NOVEMBER 30, 1995

PROJECT NO. 95213

FILE: FARMWAY ORTHSITE

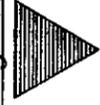
DRAWN BY: S. Fairhurst

APPROVED: J. Siffer

Wagner, Heindel, and Noyes, Inc.
CONSULTING SCIENTISTS AND ENGINEERS

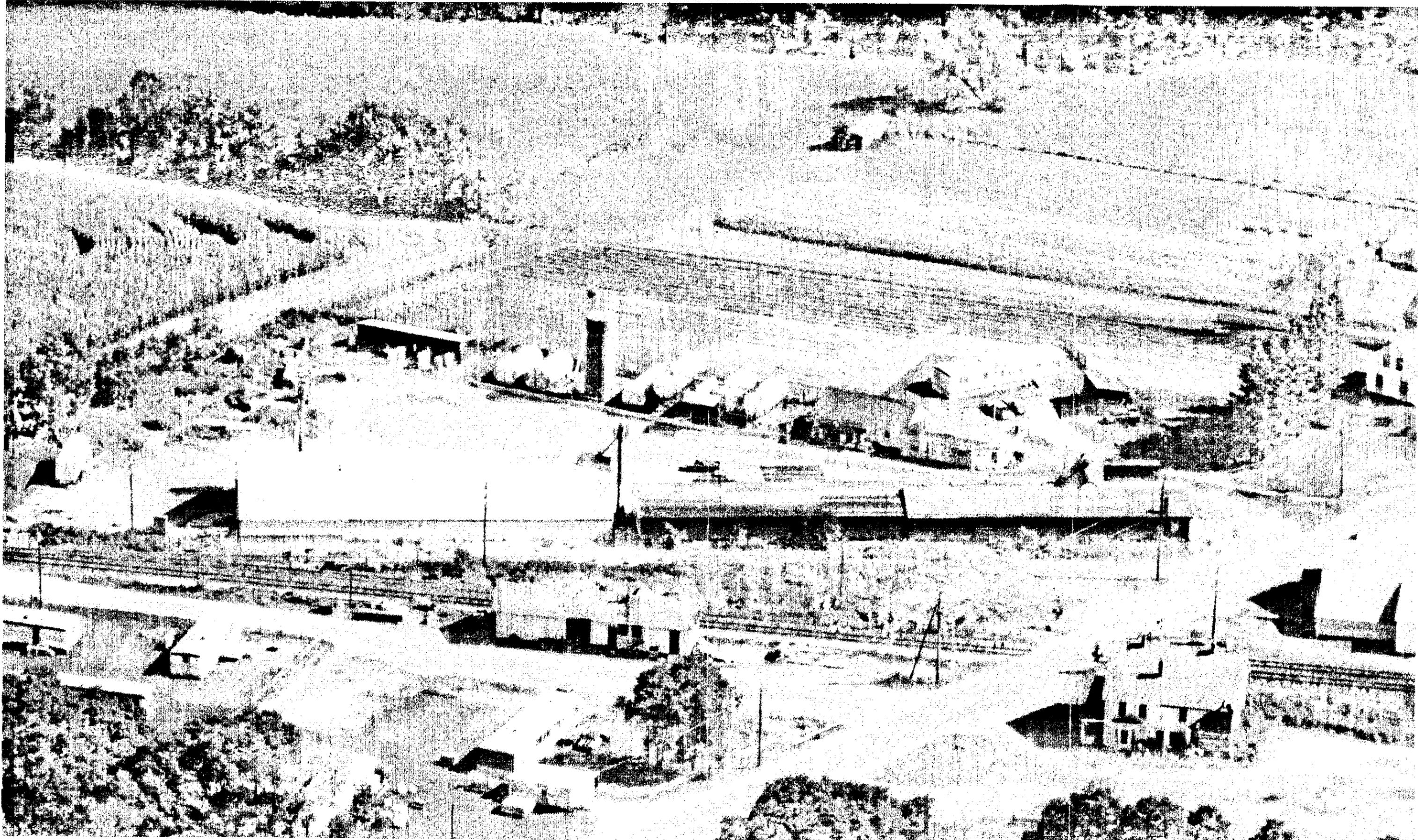
- Hydrogeology • Ecology •
- Environmental Engineering •

P.O. BOX 64709 BURLINGTON, VERMONT 05406-4709

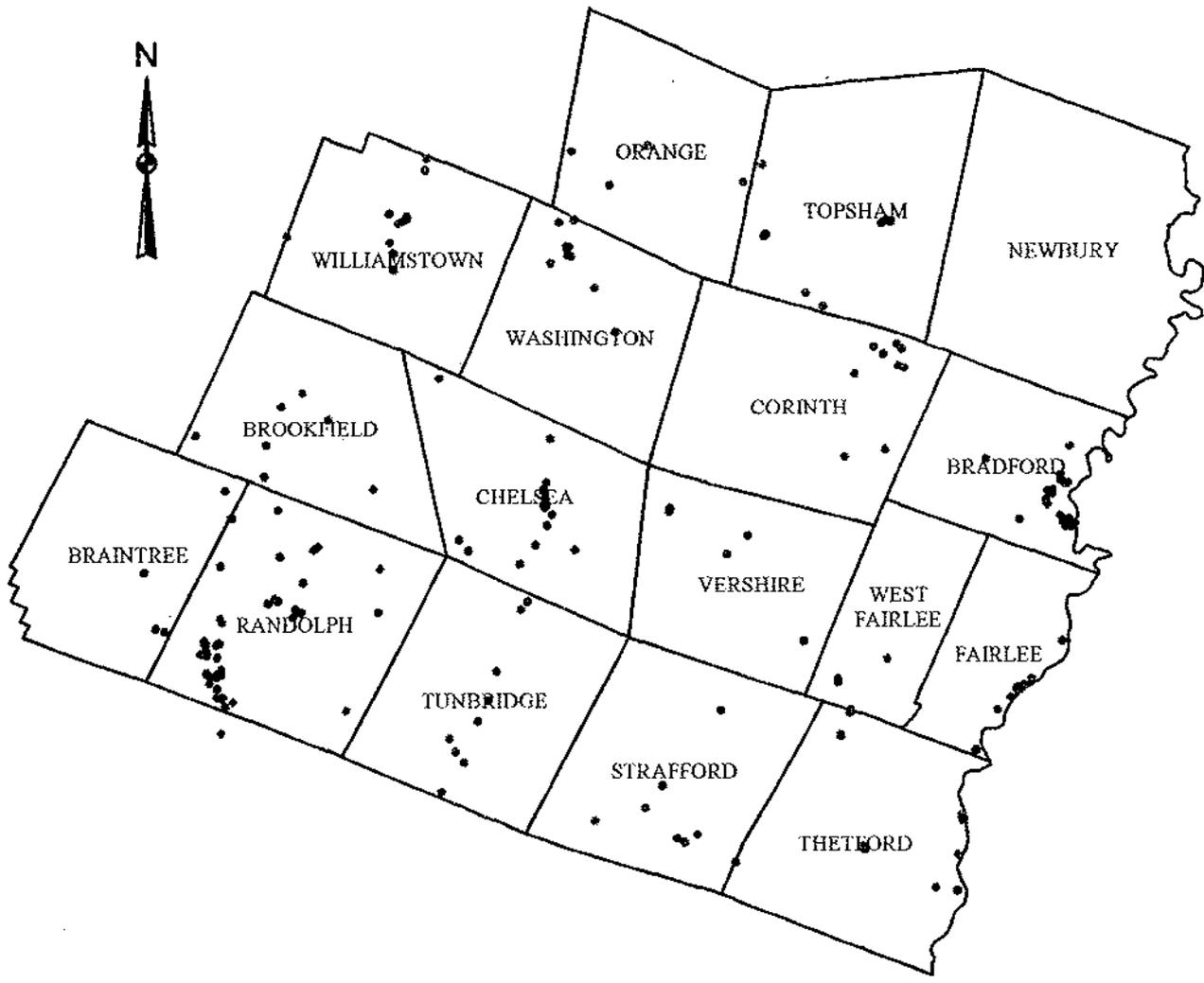


FORMER BRADFORD OIL CO. FUEL DISTRIBUTION FACILITY
PHOTOGRAPH CIRCA 1970

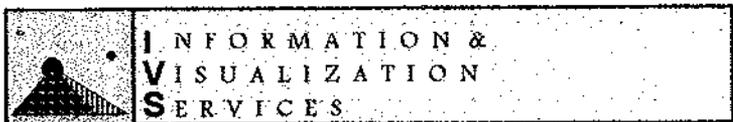
p.3



Environmental Hazards and Locations With Test Data in Orange County, Vermont



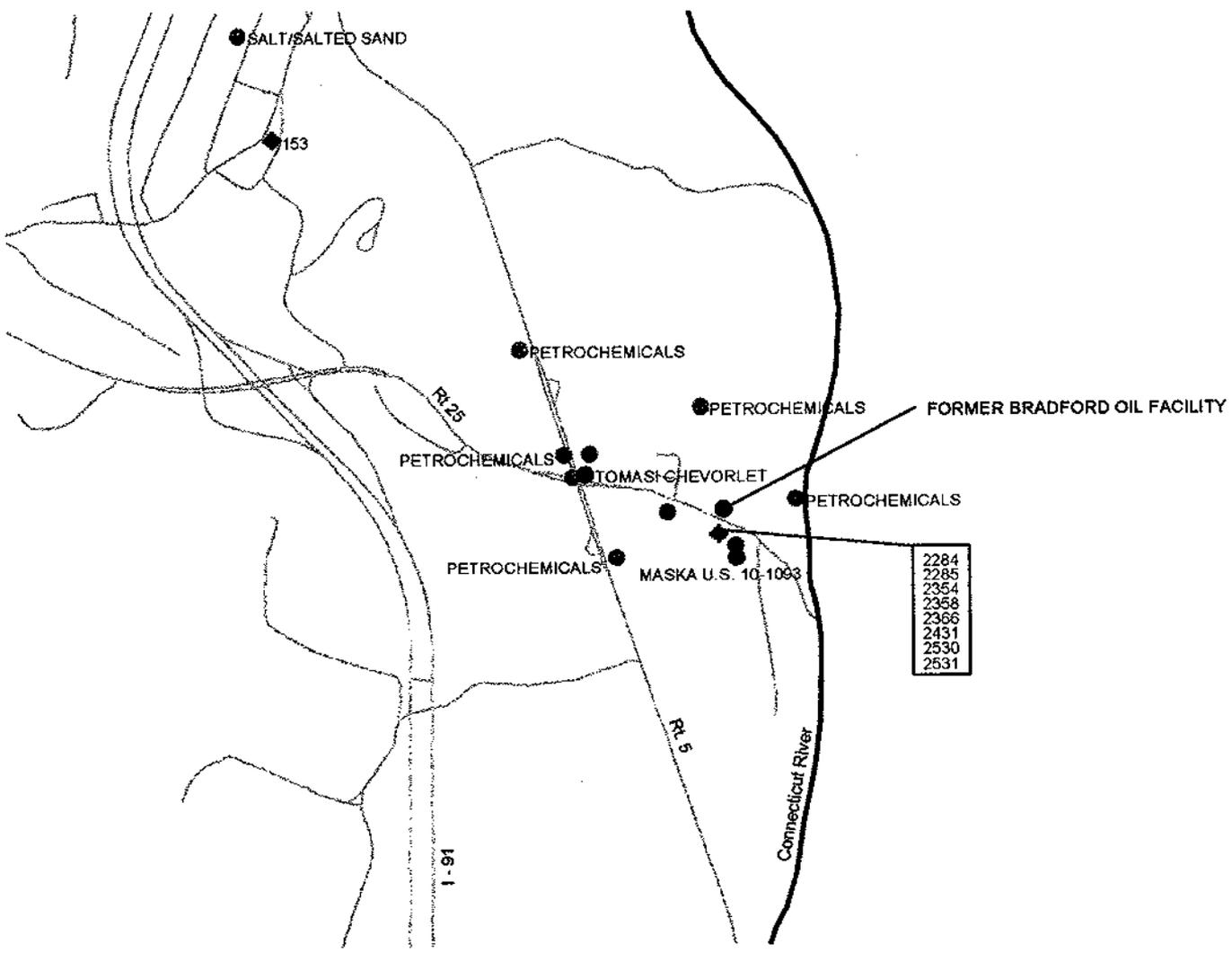
- INTERIM STATE DESIGNATED HAZARDOUS WASTE SITE. (1994)
- SITE SPECIFIC DATA AVAILABLE.
NOT NECESSARILY INDICATIVE OF AN ENVIRONMENTAL HAZARD.
- POTENTIAL GROUNDWATER POLLUTION SOURCE. (1980)
(IE. LANDFILL, INDUSTRIAL WASTE, FARMING, SALT, JUNK YARD, ETC)



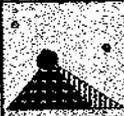
P.O. Box 64709 - Burlington, Vermont - 05406-4709 - Tel: (802) 865-0437 - Fax: (802) 860-1014 - Email: IVSBURL@AOL.COM

NOTE
TEST DATA SITES INDICATE
INVESTIGATIONS OF AN ECOLOGICAL,
GEOLOGICAL, OR PLANNING NATURE

Environmental Hazards and Locations With Test Data Surrounding Former Bradford Oil Inc. Bulk Storage Facility



- INTERIM STATE DESIGNATED HAZARDOUS WASTE SITE. (1994)
- ◆ SITE SPECIFIC DATA AVAILABLE
NOT NECESSARILY INDICATIVE OF AN ENVIRONMENTAL HAZARD.
- POTENTIAL SOURCE OF GROUNDWATER POLLUTION. (1980)
(IE. LANDFILL, INDUSTRIAL WASTE, FARMING, SALT, JUNK YARD, ETC.)

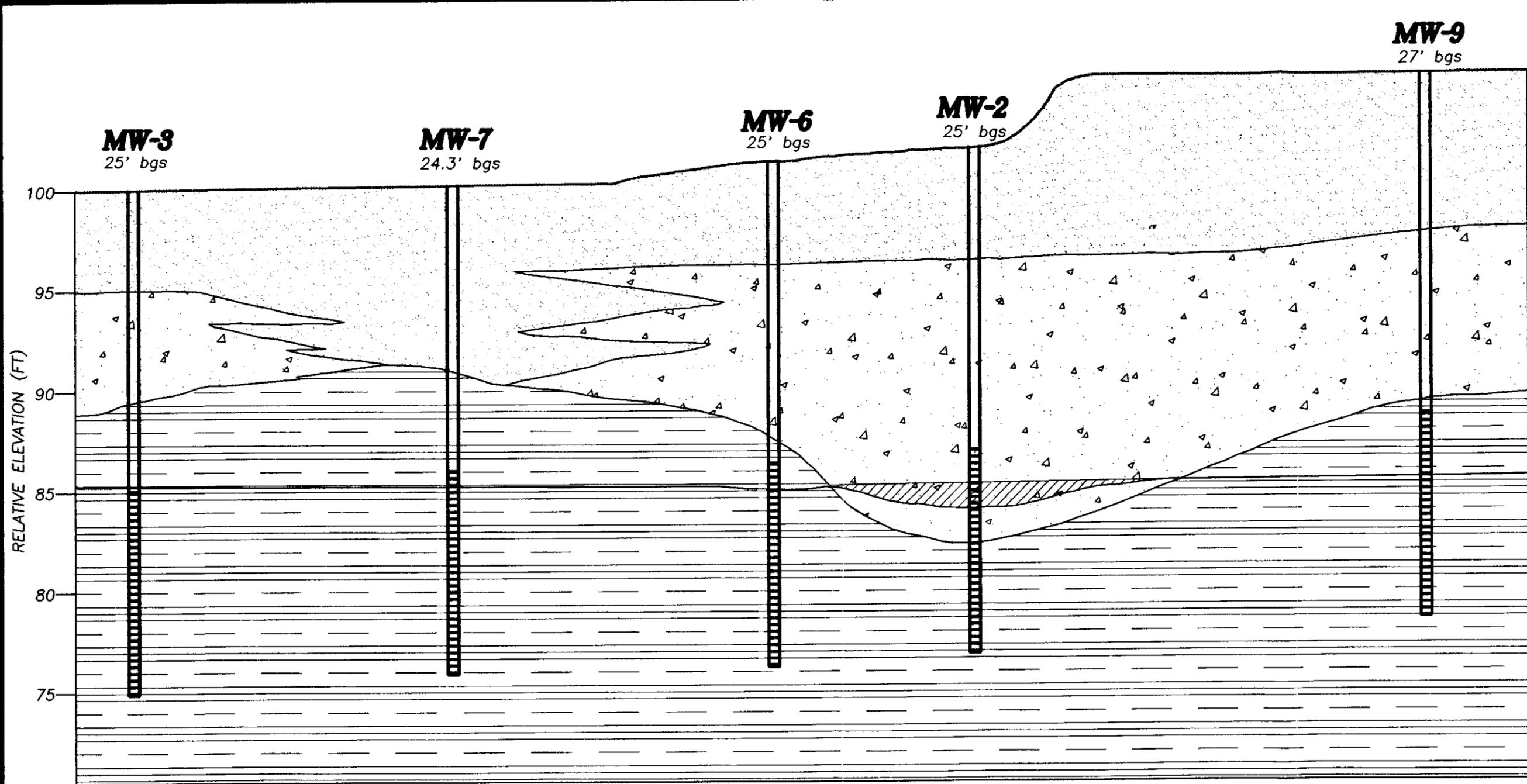


**INFORMATION &
VISUALIZATION
SERVICES**

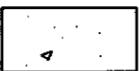
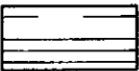
P.O. Box 64709 - Burlington, Vermont - 05406-4709 - Tel: (802) 865-0437 - Fax: (802) 860-1014 - Email: IVS@URL@AOL.COM



NOTE
TEST DATA SITES INDICATE
INVESTIGATIONS OF AN ECOLOGICAL,
GEOLOGICAL, OR PLANNING NATURE.



LEGEND

-  BROWN, FINE TO MEDIUM GRAINED SAND WITH SILT
-  BROWN TO TAN, MEDIUM TO COARSE GRAINED SAND
-  BROWN TO GREY, FINE GRAINED, SILTY SAND
-  PETROLEUM PRODUCT
-  WATER TABLE

p.6

MW-9
27' bgs

MW-2
25' bgs

MW-6
25' bgs

MW-7
24.3' bgs

MW-3
25' bgs

RELATIVE ELEVATION (FT)

100

95

90

85

80

75

FORMER BRADFORD OIL CO. FUEL DISTRIBUTION FACILITY
BRADFORD, VERMONT

SCHEMATIC CROSS SECTION A-A'

DATE: DECEMBER 7, 1995

SCALE: SCHEMATIC

DRAWN BY: M. Luman

APPROVED: J. Siffer

Wagner, Heindel, and Noyes, Inc.
CONSULTING SCIENTISTS AND ENGINEERS
• Hydrogeology • Ecology •
• Environmental Engineering •
P.O. BOX 64709 BURLINGTON, VERMONT 05406-4709

SOIL BORING LOG

WAGNER, HEINDEL & NOYES, INC. P.O. BOX 64709 BURLINGTON, VT 05406-4709				Project: <u>Farmway/Twin State</u>				Boring Number: <u>MW-1</u> Sheet <u>1</u> of <u>1</u> Project Number: <u>95215</u>														
Boring Company: <u>M & W Soils Engineering Inc., Charlestown, NH</u> Foreman: <u>Myron Domingue</u> WH&N Staff: <u>David J. Reese</u>						Boring Location: <u>Bellefeuille</u> Ground Elevation: Date Started: <u>10/11/95</u> Date Ended: <u>10/11/95</u>																
Casing Size: _____ Type: _____ Sampler Other: _____ Hammer: _____ Hammer: _____ Fall: _____ Fall: _____						Groundwater Readings Date _____ Depth _____ Casing _____ Stabil. Time _____																
Sample				Sample Description				Stratra Change & General Description		Field Testing PID		Equipment or Well Installed										
No.	Rec.	Depth	Blows																			
1	18"	0 - 2'	2, 4, 4, 4	Medium brown silty sands, 6" topsoil						0.4		See well construction log										
2	0	3' - 5'	none	Cuttings, fine to medium brown silty sand						0.5												
3	0	5' - 7'	7, 11, 11, 10	Drove cobble, no recovery, augered to 7' to retrieve sample																		
4	22"	7' - 9'	4, 7, 7, 7	Fine grey sand with thin silt lenses						1.0												
5	18"	10' - 12'	4, 5, 4, 4	Fine grey sands with thin silt lenses						1.0												
6	0	12' - 15'	none	Cuttings, fine brown silty sand						1.0												
7	0	15' - 20'	none	Cuttings, fine brown silty sand, moist						0.7												
8	24"	20' - 22'	1	Wet, fine grey brown silty sand						0.7												
9	0	22' - 25'	0	Cuttings, moist grey fine silty sands						0.6												
Proportions Used Trace: 0 to 10% Little: 10 to 20% Some: 20 to 35% And: 35 to 60%			Penetration Resistance 140 lb wt falling 20" on 2" O.D. Sampler <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> Cohesiveness Density 0-4 Very Loose 5-9 Loose 10-29 Med. Dense 30-49 Dense 50+ Very Dense </td> <td style="width: 50%; border: none;"> Cohesive Consistency 0-2 Very Soft 3-4 Soft 5-8 M/Stiff 9-15 Stiff 16-30 Very Stiff 31+ Hard </td> </tr> </table>						Cohesiveness Density 0-4 Very Loose 5-9 Loose 10-29 Med. Dense 30-49 Dense 50+ Very Dense	Cohesive Consistency 0-2 Very Soft 3-4 Soft 5-8 M/Stiff 9-15 Stiff 16-30 Very Stiff 31+ Hard	Well Construction Legend <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">Concrete</td> <td style="width: 50%; border: none;">Bentonite</td> </tr> <tr> <td style="border: none;">Grout</td> <td style="border: none;">Silica Sand</td> </tr> <tr> <td style="border: none;">Backfill</td> <td style="border: none;">Bedrock</td> </tr> </table>						Concrete	Bentonite	Grout	Silica Sand	Backfill	Bedrock
Cohesiveness Density 0-4 Very Loose 5-9 Loose 10-29 Med. Dense 30-49 Dense 50+ Very Dense	Cohesive Consistency 0-2 Very Soft 3-4 Soft 5-8 M/Stiff 9-15 Stiff 16-30 Very Stiff 31+ Hard																					
Concrete	Bentonite																					
Grout	Silica Sand																					
Backfill	Bedrock																					

SOIL BORING LOG

WAGNER, HEINDEL & NOYES, INC. P.O. BOX 64709 BURLINGTON, VT 05406-4709		Project: <u>Farmway/Twin State</u>		Boring Number: <u>Trial Boring 3</u> Sheet <u>1</u> of <u>1</u> Project Number: _____			
Boring Company: <u>M & W Soils Engineering, Inc.</u> Foreman: <u>Myron Domingue</u> WH&N Staff: <u>David J. Reese</u>			Boring Location: <u>AST Battery (Farmway Property)</u> Ground Elevation: _____ Date Started: <u>10/11/95</u> Date Ended: <u>10/11/95</u>				
Casing Size: _____ Type: _____ Other: _____ Hammer: _____ Hammer: _____ Fall: _____ Fall: _____		Sampler _____ _____		Groundwater Readings Date Depth Casing Stabil. Time			
Sample		Sample Description		Stratra Change & General Description	Field Testing PID	Equipment or Well Installed	
No.	Rec.	Depth	Blows				
		0 - 2'		brown, medium to fine sand	0.1	No well installed	
		5'		grey, medium sand	0.6		
		10'		grey, medium sand	1.2		
Proportions Used Trace: 0 to 10% Little: 10 to 20% Some: 20 to 35% And: 35 to 50%		Penetration Resistance 140 lb wt falling 20" on 2" O.D. Sampler <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> Cohesioniess Density 0-4 Very Loose 5-9 Loose 10-29 Med. Dense 30-49 Dense 50+ Very Dense </td> <td style="width: 50%; vertical-align: top;"> Cohesive Consistency 0-2 Very Soft 3-4 Soft 5-8 M/Stiff 9-15 Stiff 16-30 Very Stiff 31+ Hard </td> </tr> </table>		Cohesioniess Density 0-4 Very Loose 5-9 Loose 10-29 Med. Dense 30-49 Dense 50+ Very Dense	Cohesive Consistency 0-2 Very Soft 3-4 Soft 5-8 M/Stiff 9-15 Stiff 16-30 Very Stiff 31+ Hard	Well Construction Legend Concrete Bentonite Grout Silica Sand Backfill Bedrock	
Cohesioniess Density 0-4 Very Loose 5-9 Loose 10-29 Med. Dense 30-49 Dense 50+ Very Dense	Cohesive Consistency 0-2 Very Soft 3-4 Soft 5-8 M/Stiff 9-15 Stiff 16-30 Very Stiff 31+ Hard						

SOIL BORING LOG

WAGNER, HEINDEL & NOYES, INC. P.O. BOX 64709 BURLINGTON, VT 05406-4709		Project: <u>Farmway/Twin State</u>		Boring Number: <u>MW-2</u> Sheet <u>1</u> of <u>1</u> Project Number: <u>95125</u>	
Boring Company: <u>M & W Soils Engineering Inc., Charlestown, NH</u>				Boring Location: <u>AST Battery Farmway Property (Trial Boring 1)</u>	
Foreman: <u>Myron Domingue</u>				Ground Elevation: _____	
WH&N Staff: <u>David J. Reese</u>				Date Started: <u>10/11/95</u> Date Ended: <u>10/11/95</u>	
Casing Size: _____ Type: _____		Sampler Other: _____		Groundwater Readings	
Hammer: _____		Hammer: _____		Date	Depth
Fall: _____		Fall: _____		Casing	Stabil. Time
Sample		Sample Description		Strata Change & General Description	Field Testing PID
Equipment or Well Installed					
No.	Rec.	Depth	Blows		
1	16"	0 - 2'	4, 5, 6, 6	6" topsoil, 10" brown to tan sand	
				0.7	See well construction log
2	0	2' - 5'	none	Cuttings, brown medium silty sand	
				1.1	
3	20"	6' - 7'	2, 2, 2, 2	Moist medium brown to tan coarse sands	
				1.2	
4	24"	10' - 13'	1	Coarse quartz sand, heavy fuel odor, wet	
				110	
5	24"	20' - 22'	2, 3, 3, 4	20 - 21 medium to coarse wet sands 21 - 22 grey silty sands heavy odor	
				160	
Drilled to 25', TD 25'					
Note: fuel odors consisted of oil and possibly weathered gas					
Proportions Used		Penetration Resistance		Well Construction Legend	
		140 lb wt falling 20" on 2" O.D. Sampler			
Trace: 0 to 10%		Cohesioness Density	Cohesive	Concrete	Bentonite
Little: 10 to 20%		Consistency		Grout	Silica Sand
Some: 20 to 35%		0-4 Very Loose	0-2 Very Soft	Backfill	Bedrock
And: 35 to 50%		5-9 Loose	3-4 Soft		
		10-29 Med. Dense	6-8 M/Stiff		
		30-49 Dense	9-16 Stiff		
		50+ Very Dense	16-30 Very Stiff		
			31+ Hard		

SOIL BORING LOG

WAGNER, HEINDEL & NOYES, INC. P.O. BOX 64709 BURLINGTON, VT 05406-4709		Project: <u>Farmway/Twin State</u>		Boring Number: <u>MW-3</u> Sheet <u>1</u> of <u>1</u> Project Number: <u>95125</u>			
Boring Company: <u>M & W Soils Engineering Inc., Charlestown, NH</u> Foreman: <u>Myron Domingue</u> WH&N Staff: <u>David J. Reese</u>			Boring Location: <u>Northwest corner of Farmway building</u> Ground Elevation: Date Started: <u>10/11/95</u> Date Ended: <u>10/11/95</u>				
Casing Size: _____ Type: _____ Hammer: _____ Fall: _____		Sampler Other: _____ Hammer: _____ Fall: _____		Groundwater Readings			
				Date	Depth	Casing	Stabil. Time
Sample		Sample Description		Strata Change & General Description	Field Testing PID	Equipment or Well Installed	
No.	Rec.	Depth	Blows				
1	24"	0 - 2'	5, 4, 4, 3	8" of brown sandy topsoil, 3" black coal like material, possibly charred 13" brown silt and fine sands	6.8	See well construction log	
2	0	2' - 5'	none	Cuttings brown medium silty sand	1.6		
3	16"	5' - 7'	4, 4, 7, 7	Medium to coarse quartz sand with some silt	0.6		
4	0	7' - 10'	none	Cuttings brown medium silty sand	0.6		
5	16"	10' - 12'	7, 9, 8, 8	8" of coarse moist sands 8" of fine grey sand and gravel with interbedded silts			
6	24"	20' - 22'	1, 1, 1, 1	Wet grey silty sand	2.4		
				Note: location of this well was 10' south of grain hopper, heavy beef talo smell. Surface stains and white granular fertilizer with brown grainy substance located on the surface. All wells MW-1, 2, and 3 developed and sampled 10/11/95 for 601, 602			
Proportions Used		Penetration Resistance				Well Construction Legend	
		140 lb wt falling 20" on 2" O.D. Sampler					
Trace: 0 to 10%		Cohesioness Density		Cohesive		Concrete	Bentonite
Little: 10 to 20%		Consistency				Grout	Silica Sand
Some: 20 to 35%		0-4	Very Loose	0-2	Very Soft	Backfill	Bedrock
And: 35 to 50%		5-9	Loose	3-4	Soft		
		10-29	Med. Dense	5-8	M/Stiff		
		30-49	Dense	9-15	Stiff		
		50+	Very Dense	16-30	Very Stiff		
				31+	Hard		

SOIL BORING LOG

WAGNER, HEINDEL & NOYES, INC. P.O. BOX 64709 BURLINGTON, VT 05406-4709				Project: <u>Farmway/Twin State</u>				Boring Number: <u>MW-4</u> Sheet <u>1</u> of <u>1</u> Project Number: <u>95215</u>																			
Boring Company: <u>M & W Soils Engineering Inc., Charlestown, NH</u> Foreman: <u>Myron Domingue</u> WH&N Staff: <u>David J. Reese</u>						Boring Location: <u>AST Battery (Twin State Property)</u> Ground Elevation: Date Started: <u>11/1/95</u> Date Ended: <u>11/1/95</u>																					
Casing Size: _____ Type: _____ Sampler Other: _____ Hammer: _____ Fall: _____				Groundwater Readings Date Depth Casing Stabil. Time																							
Sample				Sample Description				Stratra Change & General Description		Field Testing PID		Equipment or Well Installed															
No.	Rec.	Depth	Blows																								
1	18"	0 - 2'	8,7,6,6	8" black oil stained sands, 10" medium to coarse silty sand					3.0	See well construction log																	
2	0	5 - 7'	6,6,12	Cobble, no odor, no recovery																							
3	0	7 - 9'	Cuttings	Gray to brown to fine medium sand, silt					21																		
4	16"	10-12'	9,10, 10,11	Medium to coarse sand, gravel					24																		
5	18"	21-23'	3,1,2,3	Wet fine to medium silty sands, petroleum odor, sheen,					50																		
-	-	25	-	Drilled to 25', set well, flowing sand, flushed with fresh water.																							
Proportions Used Trace: 0 to 10% Little: 10 to 20% Some: 20 to 35% And: 35 to 50%				Penetration Resistance 140 lb wt falling 20" on 2" O.D. Sampler <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Cohesioness Density</td> <td style="width: 50%;">Cohesive</td> </tr> <tr> <td>Consistency</td> <td></td> </tr> <tr> <td>0-4 Very Loose</td> <td>0-2 Very Soft</td> </tr> <tr> <td>5-9 Loose</td> <td>3-4 Soft</td> </tr> <tr> <td>10-29 Med. Dense</td> <td>5-8 M/Stiff</td> </tr> <tr> <td>30-49 Dense</td> <td>9-15 Stiff</td> </tr> <tr> <td>50+ Very Dense</td> <td>16-30 Very Stiff</td> </tr> <tr> <td></td> <td>31+ Hard</td> </tr> </table>				Cohesioness Density	Cohesive	Consistency		0-4 Very Loose	0-2 Very Soft	5-9 Loose	3-4 Soft	10-29 Med. Dense	5-8 M/Stiff	30-49 Dense	9-15 Stiff	50+ Very Dense	16-30 Very Stiff		31+ Hard	Well Construction Legend 2" PVC monitor well installation 10 ft of 0.01" screen with filter sock 15 ft of riser flush mount Concrete 0 - 1 Bentonite 10 - 11 Grout Silica Sand Backfill To surface Bedrock			
Cohesioness Density	Cohesive																										
Consistency																											
0-4 Very Loose	0-2 Very Soft																										
5-9 Loose	3-4 Soft																										
10-29 Med. Dense	5-8 M/Stiff																										
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50+ Very Dense	16-30 Very Stiff																										
	31+ Hard																										

SOIL BORING LOG

WAGNER, HEINDEL & NOYES, INC. P.O. BOX 64709 BURLINGTON, VT 05406-4709				Project: <u>Farmway/Twin State</u>				Boring Number: <u>MW-5</u> Sheet <u>1</u> of <u>1</u> Project Number: <u>95125</u>																																																						
Boring Company: <u>M & W Soils Engineering Inc., Charlestown, NH.</u>						Boring Location: <u>Twin State Between Shed & Scales</u>																																																								
Foreman: <u>Myron Domingue</u>						Ground Elevation: _____																																																								
WH&N Staff: <u>David J. Reese</u>						Date Started: <u>11/1/95</u> Date Ended: <u>11/1/95</u>																																																								
Casing Size: _____ Type: _____ Other: _____ Hammer: _____ Hammer: _____ Fall: _____ Fall: _____				Sampler _____				Groundwater Readings Date Depth Casing Stabil. Time																																																						
Sample				Sample Description				Stratra Change & General Description		Field Testing PID		Equipment or Well Installed																																																		
No.	Rec.	Depth	Blows																																																											
1	0	0-5'	Cuttings	Gray fine to medium sands				20		See well construction log																																																				
2	14"	5-7'	6,7,7,6	Gray to tan medium to coarse sand, gravel				44																																																						
3	14"	10-12'	6,7,12,12	Tan, medium to coarse sands and gravel				18																																																						
4	14"	15-17'	4,5,7,8	Tan, medium to coarse sand and gravel, heavy odor, moist				68																																																						
5	14"	18-19'	12,11,8,7	Coarse sand and gravel, wet, oily				112																																																						
-	-	25'	-	drilled to 25' bgs, flowing sands, flushed with fresh water																																																										
Proportions Used Trace: 0 to 10% Little: 10 to 20% Some: 20 to 35% And: 35 to 50%			Penetration Resistance 140 lb wt falling 20" on 2" O.D. Sampler <table style="width: 100%; border: none;"> <tr> <td colspan="3" style="padding: 5px;">Cohesioness Density</td> <td colspan="3" style="padding: 5px;">Cohesive</td> </tr> <tr> <td colspan="6" style="padding: 5px;">Consistency</td> </tr> <tr> <td style="padding: 5px;">0-4</td> <td style="padding: 5px;">Very Loose</td> <td style="padding: 5px;">0-2</td> <td style="padding: 5px;">Very Soft</td> <td colspan="2"></td> </tr> <tr> <td style="padding: 5px;">5-9</td> <td style="padding: 5px;">Loose</td> <td style="padding: 5px;">3-4</td> <td style="padding: 5px;">Soft</td> <td colspan="2"></td> </tr> <tr> <td style="padding: 5px;">10-29</td> <td style="padding: 5px;">Med. Dense</td> <td style="padding: 5px;">5-8</td> <td style="padding: 5px;">M/Stiff</td> <td colspan="2"></td> </tr> <tr> <td style="padding: 5px;">30-49</td> <td style="padding: 5px;">Dense</td> <td style="padding: 5px;">9-15</td> <td style="padding: 5px;">Stiff</td> <td colspan="2"></td> </tr> <tr> <td style="padding: 5px;">50+</td> <td style="padding: 5px;">Very Dense</td> <td style="padding: 5px;">16-30</td> <td style="padding: 5px;">Very Stiff</td> <td colspan="2"></td> </tr> <tr> <td colspan="2"></td> <td style="padding: 5px;">31+</td> <td style="padding: 5px;">Hard</td> <td colspan="2"></td> </tr> </table>						Cohesioness Density			Cohesive			Consistency						0-4	Very Loose	0-2	Very Soft			5-9	Loose	3-4	Soft			10-29	Med. Dense	5-8	M/Stiff			30-49	Dense	9-15	Stiff			50+	Very Dense	16-30	Very Stiff					31+	Hard			Well Construction Legend 2" PVC monitor well installation 10 ft of 0.01" screen with filter sock 15 ft of riser flush mound Concrete 0 - 1 Grout Backfill			Bentonite 5 - 6" bgs Silica Sand Bedrock		
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SOIL BORING LOG

WAGNER, HEINDEL & NOYES, INC. P.O. BOX 64709 BURLINGTON, VT 05406-4709		Project: <u>Farmway/Twin State</u>		Boring Number: <u>MW-6</u> Sheet <u>1</u> of <u>1</u> Project Number: <u>95125</u>		
Boring Company: <u>M & W Soils Engineering Inc., Charlestown, NH</u> Foreman: <u>Myron Domingue</u> WH&N Staff: <u>David J. Reese</u>				Boring Location: <u>Southwest of MW-2 Parking Lot</u> Ground Elevation: _____ Date Started: <u>11/1/95</u> Date Ended: <u>11/1/95</u>		
Casing Size: _____ Type: _____ Other: _____ Hammer: _____ Hammer: _____ Fall: _____ Fall: _____		Groundwater Readings				
		Date	Depth	Casing	Stabil. Time	
Sample		Sample Description		Strata Change & General Description	Field Testing PID	
				Equipment or Well Installed		
No.	Rec.	Depth	Blows			
1	14"	5-7'	5,5,6,6	Tan medium to coarse sand, moist	0.3	
2	16"	10-12'	10,12, 12,12	Moist tan medium to coarse sand	0.3	
3	16"	15-17'	3,5,8,9	Fine to medium gray sands, some silt, heavy petroleum stain and odor	132	
4	18"	17-19'	5,6,5,6	Wet, fine silty sands	116	
-	-	25'	-	Drilled to 25', flowing sands, flushed with fresh water		
Proportions Used Trace: 0 to 10% Little: 10 to 20% Some: 20 to 35% And: 35 to 50%		Penetration Resistance 140 lb wt falling 20" on 2" O.D. Sampler			Well Construction Legend 2" PVC monitor well installation 10' of 0.01" screen with filter sock 15' of riser flush mount Concrete 0 - 1 Bentonite 12 - 15 Grout Silica Sand Backfill Bedrock	
		Cohesioness Density		Cohesive		
		Consistency				
		0-4	Very Loose	0-2	Very Soft	
		5-9	Loose	3-4	Soft	
		10-29	Med. Dense	5-8	M/Stiff	
		30-49	Dense	9-15	Stiff	
		50+	Very Dense	16-30	Very Stiff	
				31+	Hard	

SOIL BORING LOG

WAGNER, HEINDEL & NOYES, INC. P.O. BOX 64709 BURLINGTON, VT 05406-4709		Project: <u>Farmway/Twin State</u>		Boring Number: <u>MW-7</u> Sheet <u>1</u> of <u>1</u> Project Number: <u>95125</u>																							
Boring Company: <u>M & W Soils Engineering Inc., Charlestown, NH</u> Foreman: <u>Myron Domingue</u> WH&N Staff: <u>David J. Reese</u>			Boring Location: <u>Entrance - Twin State Office Building</u> Ground Elevation: Date Started: <u>11/1/95</u> Date Ended: <u>11/1/95</u>																								
Casing: _____ Size: _____ Type: _____ Other: _____ Hammer: _____ Fall: _____		Sampler _____ _____		Groundwater Readings Date Depth Casing Stabil. Time																							
Sample _____		Sample Description _____		Stratra Change & General Description _____																							
Field Testing PID _____		Equipment or Well Installed _____																									
No.	Rec.	Depth	Blows	Description	Field Testing PID	Equipment or Well Installed																					
1	14"	5-7'	4,4,5,5	Moist brown medium silty sand	4.2	See well construction log																					
2	16"	10-12'	6,7,7,6	Tan fine silty sand, moist	0.3																						
3	18"	15-17'	4,2,3,4	Wet brown fine silty sand	44																						
4	24"	17-19'	2,2,1,2	Wet brown fine silty sand	62																						
-	-	25'	-	Drilled to 25', set well																							
Proportions Used Trace: 0 to 10% Little: 10 to 20% Some: 20 to 35% And: 35 to 50%		Penetration Resistance 140 lb wt falling 20" on 2" O.D. Sampler <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Cohesioness Density</td> <td style="width: 50%;">Cohesive</td> </tr> <tr> <td>Consistency</td> <td></td> </tr> <tr> <td>0-4 Very Loose</td> <td>0-2 Very Soft</td> </tr> <tr> <td>5-9 Loose</td> <td>3-4 Soft</td> </tr> <tr> <td>10-29 Med. Dense</td> <td>5-8 M/Stiff</td> </tr> <tr> <td>30-49 Dense</td> <td>9-15 Stiff</td> </tr> <tr> <td>50+ Very Dense</td> <td>16-30 Very Stiff</td> </tr> <tr> <td></td> <td>31+ Hard</td> </tr> </table>		Cohesioness Density	Cohesive	Consistency		0-4 Very Loose	0-2 Very Soft	5-9 Loose	3-4 Soft	10-29 Med. Dense	5-8 M/Stiff	30-49 Dense	9-15 Stiff	50+ Very Dense	16-30 Very Stiff		31+ Hard	Well Construction Legend 2" PVC monitor well installation 10 ft of 0.01" screen with filter sock 15 ft of riser flush mount <table style="width: 100%; border: none;"> <tr> <td>Concrete 0 - 1</td> <td>Bentonite 10 - 11</td> </tr> <tr> <td>Grout</td> <td>Silica Sand</td> </tr> <tr> <td>Backfill</td> <td>Bedrock</td> </tr> </table>		Concrete 0 - 1	Bentonite 10 - 11	Grout	Silica Sand	Backfill	Bedrock
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SOIL BORING LOG

WAGNER, HEINDEL & NOYES, INC. P.O. BOX 64709 BURLINGTON, VT 05406-4709		Project: <u>Farmway/Twin State</u>		Boring Number: <u>MW-9</u> Sheet <u>1</u> of <u>1</u> Project Number: <u>95125</u>		
Boring Company: <u>M & W Soils Engineering Inc., Charlestown, NH</u>			Boring Location: <u>East of MW-2</u>			
Foreman: <u>Myron Domingue</u>			Ground Elevation: _____			
WH&N Staff: <u>David J. Reese</u>			Date Started: <u>11/1/95</u> Date Ended: <u>11/1/95</u>			
Casing Size: _____ Type: _____ Other: _____ Hammer: _____ Hammer: _____ Fall: _____ Fall: _____		Groundwater Readings Date Depth Casing Stabil. Time				
Sample		Sample Description		Stratra Change & General Description	Field Testing PID	
Equipment or Well Installed						
No.	Rec.	Depth	Blows			
1	14"	5-7'	4,4,6, 10	Tan to brown fine to medium sand and silt	0.3	
2	16"	15-17'	9, 17, 14, 7	8" coarse sand and gravel 8" fine tan silty sand	0.3	
3	18"	20-22'	3,2,2,3	Wet fine sandy silt	0.3	
4	24"	25-27'	3,2,2,3	Wet brown to grey fine to silty sand, possible sheen, small rainbow bubble	0.3	
5	24"	27-29'	4,6,4,6	Wet brown silty sand	0.3	
-	-	25'	-	Set well at 25'		
Proportions Used Trace: 0 to 10% Little: 10 to 20% Some: 20 to 35% And: 35 to 50%		Penetration Resistance 140 lb wt falling 20" on 2" O.D. Sampler			Well Construction Legend 2" PVC monitor well installation 10 ft of 0.01" screen with filter sock 15 ft of riser well guard and stick up 2.4'	
		Cohesioness Density Cohesive				
		Consistency				
		0-4	Very Loose	0-2	Very Soft	
		5-9	Loose	3-4	Soft	
		10-29	Med. Dense	5-8	M/Stiff	Concrete
		30-49	Dense	9-15	Stiff	Grout
		50+	Very Dense	16-30	Very Stiff	Backfill
				31+	Hard	Bentonite 10 - 11 Silica Sand Bedrock

SOIL BORING LOG

WAGNER, HEINDEL & NOYES, INC. P.O. BOX 64709 BURLINGTON, VT 05406-4709		Project: <u>Farmway/Twin State</u>		Boring Number: <u>MM-10</u> Sheet <u>1</u> of <u>1</u> Project Number: <u>95125</u>																										
Boring Company: <u>M & W Soils Engineering Inc., Charlestown, NH</u> Foreman: <u>Myron Domingue</u> WH&N Staff: <u>David J. Reese</u>				Boring Location: <u>East of shed center</u> Ground Elevation: Date Started: <u>11/1/95</u> Date Ended: <u>11/1/95</u>																										
Casing Size: _____ Type: _____ Hammer: _____ Fall: _____		Sampler Other: _____ Hammer: _____ Fall: _____		Groundwater Readings Date Depth Casing Stabil. Time																										
Sample		Sample Description		Stratra Change & General Description	Field Testing PID	Equipment or Well Installed																								
No.	Rec.	Depth	Blows																											
1	0"	0 - 15'	cuttings	Brown medium silty sand, moist	0.3	See well construction log																								
2	14"	16-18'	4,5,5,4	Coarse quartz sand and gravel, odor	8.6																									
3	14"	18-20'	4,3,4,5	Coarse quartz sand and gravel, odor	30																									
4	18"	20-22'	10, 4, 5, 4	3" coarse quartz sand and gravel grey stained 15" wet silty sand, odor	2.0																									
-	-	25'		Drilled to 25'																										
Proportions Used Trace: 0 to 10% Little: 10 to 20% Some: 20 to 35% And: 35 to 50%		Penetration Resistance 140 lb wt falling 20" on 2" O.D. Sampler <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Cohesioness Density</td> <td style="width: 50%;">Cohesive</td> </tr> <tr> <td>Consistency</td> <td></td> </tr> <tr> <td>0-4 Very Loose</td> <td>0-2 Very Soft</td> </tr> <tr> <td>5-9 Loose</td> <td>3-4 Soft</td> </tr> <tr> <td>10-29 Med. Dense</td> <td>5-8 M/Stiff</td> </tr> <tr> <td>30-49 Dense</td> <td>9-15 Stiff</td> </tr> <tr> <td>50+ Very Dense</td> <td>16-30 Very Stiff</td> </tr> <tr> <td></td> <td>31+ Hard</td> </tr> </table>		Cohesioness Density	Cohesive	Consistency		0-4 Very Loose	0-2 Very Soft	5-9 Loose	3-4 Soft	10-29 Med. Dense	5-8 M/Stiff	30-49 Dense	9-15 Stiff	50+ Very Dense	16-30 Very Stiff		31+ Hard	Well Construction Legend 2" PVC monitor well installation 10 ft of 0.01" screen with filter sock stick up - 2.75' <table style="width: 100%; border: none;"> <tr> <td>Concrete</td> <td>Bentonite</td> <td>10 - 11</td> </tr> <tr> <td>Grout</td> <td>Silica Sand</td> <td></td> </tr> <tr> <td>Backfill</td> <td>Bedrock</td> <td></td> </tr> </table>		Concrete	Bentonite	10 - 11	Grout	Silica Sand		Backfill	Bedrock	
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SOIL BORING LOG

WAGNER, HEINDEL & NOYES, INC. P.O. BOX 64709 BURLINGTON, VT 05406-4709				Project: <u>Farmway/Twin State</u>				Boring Number: <u>MW-12</u> Sheet <u>1</u> of <u>1</u> Project Number: <u>95125</u>																												
Boring Company: <u>M & W Soils Engineering Inc., Charlestown, NH</u> Foreman: <u>Myron Domingue</u> WH&N Staff: <u>David J. Reese</u>						Boring Location: <u>South of Farmway barn</u> Ground Elevation: Date Started: <u>11/1/95</u> Date Ended: <u>11/1/95</u>																														
Casing Size: _____ Type: _____ Sampler Other: _____ Hammer: _____ Hammer: _____ Fall: _____ Fall: _____				<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center;">Groundwater Readings</th> </tr> <tr> <th style="width: 25%;">Date</th> <th style="width: 25%;">Depth</th> <th style="width: 25%;">Casing</th> <th style="width: 25%;">Stabil. Time</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>						Groundwater Readings				Date	Depth	Casing	Stabil. Time																			
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No.	Rec.	Depth	Blows																																	
1	0"	0 - 5'	cuttings	Red brown fine to medium silty sand						0.2		See well construction log																								
2	14"	5 - 7'	2,3,3,4	Tan brown medium quartz sand, silt						0.4																										
3	10"	10-12'	3,2,1,1	Tan brown medium quartz sand, silt						0.4																										
4	18"	12-14'	4,5,4,4	Tan to brown medium quartz sand and silt, pebbles, moist petroleum odor						13.8																										
5	18"	16-18'	3,2,2,2	2" grey stain, fine silty sand, 16" wet, silty sand, sheen						40																										
6	24"	20-22'	3,4,4,3	Wet silty sand						28																										
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M & W Soils Engineering, Inc.
 Main St. Charlestown, NH 03603

TO WAGNER, HEINDEL & NOYES ADDRESS BURLINGTON, VT
 PROJECT NAME FARMWAY, INC. LOCATION BRADFORD, VT
 REPORT SENT TO DAVID REESE PROJ. NO. _____
 SAMPLE SENT TO RETAINED BY W. H. & N. OUR JOB NO. 6514-95

SHEET 1 OF 1
 DATE 10/11/95
 HOLE NO. MW-1
 LINE & STA. _____
 OFFSET _____

GROUND WATER OBSERVATIONS		Type	CASING	SAMPLER	CORE BAR	SURFACE ELEV.
AT <u>16'10"</u>	AT <u>4</u> HOURS		HSA	SS		DATE STARTED <u>10/11/95</u>
		Size I. D.	<u>3 1/4"</u>	<u>1 1/2"</u>		DATE COMPL. <u>10/11/95</u>
		Hammer Wt.		<u>140#</u>	BIT	BORING FORMAN <u>M.D. & R.R.</u>
AT _____	AT _____ HOURS	Hammer Fall		<u>30"</u>		INSPECTOR <u>D. REESE</u>
						SOILS ENGR. _____

LOCATION OF BORING

Depth	CASING BLOWS PER FOOT	SAMPLE DEPTHS FROM-TO	TYPE OF SAMPLE	Blows per 6" on sampler			MOISTURE DENSITY OF CONSTANT	STRATA CHANGE ELEV.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, cond., hardness, Drilling time, seams and ect.	SAMPLE			
				From 0-6	6-12	To 12-18				NO.	PEN	REC	
5'		0' - 2'	SS	2	4		LOOSE	2'6"	BROWN LAYERS OF FINE SANDS, SILTS AND COARSE GRAVELS	1	24"	18"	
				4	4								
		5' - 7'	SS	7	11		MED. DENSE	7'	BROWN FINE TO MED. SANDS TRACE OF GRAVELS	2	24"	*	
				11	10								
10'		7' - 9'	SS	4	7			18'	BROWN AND GREY FINE SANDS TRACE OF SILT	3	24"	20"	
				7	7								
		10' - 12'	SS	4	5		LOOSE TO MED. DENSE	18'	SAME MATERIAL	4	24"	24"	
				4	4								
20'		20' - 22'	SS	3	4		LOOSE - WET	25'	BROWN SILTS AND FINE SAND				
				4	5								
								25'	SAME MATERIAL				
25'								25'	TOP OF WELL AT 13' BOTTOM OF WELL AT 23' BENTONITE SEAL FROM 10'-11'				

GROUND SURFACE TO 25' USED HSA CASING THEN _____

Sample Type D-Dry C-Cored W-Washed UP-Unfinished Piston TP-Test Pit A-Auger V-Vane Test UT-Undisturbed Thinwall	Proportions Used trace 0 to 10% little 10 to 20% some 20 to 35% and 35 to 50%	140 lb. wt. x 30"-fall an 2" O.D. Sampler Cohesionless Density 0-10 Loose 10-30 Med. Dense 30-50 Dense 50+ Very Dense	Cohesive Consistency 0-4 Soft 30 + Hard 4-8 M/Stiff 8-15 Stiff 15-30 V-Stiff	summary
				EARTH BORING <u>25'</u> ROCK CORING _____ SAMPLES <u>4</u>

HOLE NO. MW-1

12

M & W Soils Engineering, Inc.
 Main St. Charlestown, NH 03603

TO WAGNER, HEINDEL & NOYES ADDRESS BURLINGTON, VT
 PROJECT NAME FARMWAY, INC. LOCATION BRADFORD, VT
 REPORT SENT TO DAVID REESE PROJ. NO. _____
 SAMPLE SENT TO RETAINED BY W. H. & N. OUR JOB NO. 6514-95

SHEET 1 OF 1
 DATE 10/11/95
 HOLE NO. MW-2
 LINE & STA. _____
 OFFSET _____

GROUND WATER OBSERVATIONS
 AT 18'10" AT IMMEDIATELY HOURS
 AT _____ AT _____ HOURS

Type HSA SS
 Size I. D. 3 1/4" 1 1/2"
 Hammer Wt. _____ 140# BIT
 Hammer Fall _____ 30"

SURFACE ELEV. _____
 DATE STARTED 10/11/95
 DATE COMPL. 10/11/95
 BORING FORMAN M.D. & R.R.
 INSPECTOR D. REESE
 SOILS ENGR. _____

LOCATION OF BORING BETWEEN TWO SHEDS - NEXT TO FERTILIZER PROPERTY LINE

Depth	CASING BLOWS PER FOOT	SAMPLE DEPTHS FROM-TO	TYPE OF SAMPLE	Blows per 6" on sampler			MOISTURE DENSITY OF CONSTANT	STRATA CHANGE ELEV.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, cond., hardness, Drilling time, seams and ect.	SAMPLE		
				From 0-6	6-12	To 12-18				NO.	PEN	REC
5'		0' - 2'	SS	4	5		LOOSE	NO TOPSOIL	1	24"	20"	
				6	6							
		5' - 7'	SS	2	2					2	24"	20"
				2	2							
10'		10' - 13'	SS	3 BLOWS			14'	STRONG OIL ODOR - FREE PRODUCT SAME MATERIAL	3	24"	13"	
20'		20' - 22'	SS	2	3		LOOSE	BROWN SILTY FINE SANDS - STRONG ODOR OF OIL AND GAS	4	24"	24"	
				3	4							
25'							25'	TOP OF WELL AT 15' BOTTOM OF WELL AT 25' BENTONITE SEAL FROM 6'-7'				

GROUND SURFACE TO 25'

USED HSA CASING THEN _____

Sample Type
 D-Dry C-Cored W-Washed
 UP-Unfinished Piston
 TP-Test Pit A-Auger V-Vane Test
 UT-Undisturbed Thinwall

Proportions Used
 trace 0 to 10%
 little 10 to 20%
 some 20 to 35%
 and 35 to 50%

140 lb. wt. x 30"-fall an 2" O.D. Sampler
 Cohesionless Density
 0-10 Loose
 10-30 Med. Dense
 30-50 Dense
 50+ Very Dense

Cohesive Consistency
 0-4 Soft 30 + Hard
 4-8 M/Stiff
 8-15 Stiff
 15-30 V-Stiff

summary
 EARTH BORING 25'
 ROCK CORING _____
 SAMPLES 4
 HOLE NO. MW-2

M & W Soils Engineering, Inc.
Main St. Charlestown, NH 03603

TO WAGNER, HEINDEL & NOYES ADDRESS BURLINGTON, VT
PROJECT NAME FARMWAY, INC. LOCATION BRADFORD, VT
REPORT SENT TO DAVID REESE PROJ. NO. _____
SAMPLE SENT TO RETAINED BY W. H. & N. OUR JOB NO. 6514-95

SHEET 1 OF 1
DATE 10/11/95
HOLE NO. MW-3
LINE & STA. _____
OFFSET _____

GROUND WATER OBSERVATIONS		Type HSA SS	CASING 3 1/4"	SAMPLER 1 1/2"	CORE BAR	SURFACE ELEV.
AT <u>16'7"</u>	AT <u>1</u> HOURS					
AT _____	AT _____ HOURS	Hammer Wt. 140#	BIT	DATE STARTED <u>10/11/95</u>		
		Hammer Fall 30"	DATE COMPL. <u>10/11/95</u>			
		BORING FORMAN <u>M.D. & R.R.</u>				
		INSPECTOR <u>D. REESE</u>				
		SOILS ENGR. _____				

LOCATION OF BORING BEHIND BUILDING - NEXT TO RAILROAD TRACKS

Depth	CASING BLOWS PER FOOT	SAMPLE DEPTHS FROM-TO	TYPE OF SAMPLE	Blows per 6" on sampler			MOISTURE DENSITY OF CONSTANT	STRATA CHANGE ELEV.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, cond., hardness. Drilling time, seams and ect.	SAMPLE		
				From 0-6	6-12	To 12-18				NO.	PEN	REC
5'		0' - 2'	SS	5	4		LOOSE	1'2"	BROWN FINE SANDS AND CINDERS	1	24"	24"
				4	3							
		5' - 7'	SS	4	4	7	LOOSE	6"	BROWN SANDY SILTS	2	24"	24"
10'				7								
		10' - 12'	SS	7	9		MED. DENSE		BROWN FINE TO MED. SANDS - TRACE OF FINE GRAVELS	3	24"	24"
				8	8							
15'									SAME MATERIAL			
20'									SAME MATERIAL			
		21' - 22'	SS	1	1					4	24"	24"
				1	1							
25'									SAME MATERIAL			
									TOP OF WELL AT 15' BOTTOM OF WELL AT 25' BENTONITE SEAL FROM 10'-11'			

GROUND SURFACE TO 25' USED HSA CASING THEN _____

Sample Type D-Dry C-Cored W-Washed UP-Unfinished Piston TP-Test Pit A-Augur V-Vane Test UT-Undisturbed Thinwall	Proportions Used trace 0 to 10% little 10 to 20% some 20 to 35% and 35 to 50%	140 lb. wt. x 30"-fall an 2" O.D. Sampler Cohesionless Density 0-10 Loose 10-30 Med. Dense 30-50 Dense 50+ Very Dense	Cohensive Consistency 0-4 Soft 30 + Hard 4-8 M/Stiff 8-15 Stiff 15-30 V-Stiff	summary EARTH BORING <u>25'</u> ROCK CORING _____ SAMPLES <u>4</u>
				HOLE NO. <u>MW-3</u>

M & W Soils Engineering, Inc.

Main St.

Charlestown, NH 03603

TO WAGNER HEINDEL & NOYES
 PROJECT NAME FARMWAY, INC.
 REPORT SENT TO DAVID REESE
 SAMPLE SENT TO RETAINED BY W. H. & N.

ADDRESS BURLINGTON, VT
 LOCATION BRADFORD, VT
 PROJ. NO. _____
 OUR JOB NO. 6514-95

SHEET 1 OF 1
 DATE 11/6/95
 HOLE NO. MW-4
 LINE & STA. _____
 OFFSET _____

GROUND WATER OBSERVATIONS		Type HSA SS	CASING HSA	SAMPLER SS	CORE BAR	SURFACE ELEV. _____
AT _____	AT _____					HOURS _____
AT _____	AT _____	HOURS _____	Size I. D. <u>4 1/4"</u>	<u>1 1/2"</u>	BIT	DATE COMPL. <u>11/6/95</u>
			Hammer Wt. _____	<u>140#</u>		BORING FORMAN <u>M.D. & M.H.</u>
			Hammer Fall _____	<u>30"</u>		INSPECTOR <u>D. REESE</u>
						SOILS ENGR. _____

LOCATION OF BORING NEXT TO PORTABLE FERTILIZER TANKS

Depth	CASING BLOWS PER FOOT	SAMPLE DEPTHS FROM-TO	TYPE OF SAMPLE	Blows per 6" on sampler			MOISTURE DENSITY OF CONSTANT	STRATA CHANGE ELEV.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, cond., hardness, Drilling time, seams and ect	SAMPLE		
				From 0-6	6-12	To 12-18				NO.	PEN	REC
5'		0' - 2'	SS	8	7		MED. DENSE	1'	BROWN GRAVELLY FINE SANDS	1	24"	18"
				6	6							
		5' - 7'	SS	6	6		MED. DENSE		BROWN SILTY FINE SANDS (ODOR OF FUEL OIL AT 3')	2	24"	"
				6	12			7' +/-				*LOST
10'		10' - 12'	SS	9	10		MED. DENSE		BROWN GRAVELLY FINE TO MED. SANDS	3	24"	18"
		(STRONG ODOR)		10	11							
15'								16'	SAME MATERIAL			
							LOOSE - WET		BROWN FINE SANDS - TRACE OF SILTS			
20'		21' - 23'	SS	3	1	2				4	24"	20"
				3					SAME MATERIAL.			
25'								25'				
									SET WELL: TOP OF WELL AT 15' BOTTOM OF WELL AT 25' BENTONITE SEAL FROM 10'-11'			
									MATERIALS USED: 25# OF BENTONITE CHIPS			

GROUND SURFACE TO 25'

USED HSA CASING THEN _____

Sample Type
 D-Dry C-Cored W-Washed
 UP-Unfinished Piston
 TP-Test Pit A-Auger V-Vane Test
 UT-Undisturbed Thinwall

Proportions Used
 trace 0 to 10%
 little 10 to 20%
 some 20 to 35%
 and 35 to 50%

140 lb. wt. x 30"-fall an 2" O.D. Sampler
 Cohesionless Density
 0-10 Loose
 10-30 Med. Dense
 30-50 Dense
 50+ Very Dense

Cohesive Consistency
 0-4 Soft 30 + Hard
 4-8 M/Stiff
 8-15 Stiff
 15-30 V-Stiff

summary	
EARTH BORING	25'
ROCK CORING	_____
SAMPLES	4
HOLE NO.	MW-4

M & W Soils Engineering, Inc.
Main St. Charlestown, NH 03603

TO WAGNER, HEINDEL & NOYES ADDRESS BURLINGTON, VT
PROJECT NAME FARMWAY, INC. LOCATION BRADFORD, VT
REPORT SENT TO DAVID REESE PROJ. NO. _____
SAMPLE SENT TO RETAINED BY W. H. & N. OUR JOB NO. 6514-95

SHEET 1 OF 1
DATE 11/6/95
HOLE NO. MW-5
LINE & STA. _____
OFFSET _____

GROUND WATER OBSERVATIONS		CASING	SAMPLER	CORE BAR	SURFACE ELEV.
AT <u>18'2"</u>	AT <u>IMMEDIATELY</u> HOURS	Type <u>HSA</u>	<u>SS</u>	_____	DATE STARTED <u>11/6/95</u>
AT _____	AT _____ HOURS	Size I. D. <u>4 1/4"</u>	<u>1 1/2"</u>	_____	DATE COMPL. <u>11/6/95</u>
		Hammer Wt. _____	<u>140#</u>	BIT _____	BORING FORMAN <u>M.D. & M.H.</u>
		Hammer Fall _____	<u>30"</u>	_____	INSPECTOR <u>D. REESE</u>
					SOILS ENGR. _____

LOCATION OF BORING MIDDLE OF DRIVE - BETWEEN FARMWAY AND TWIN STATE

Depth	CASING BLOWS PER FOOT	SAMPLE DEPTHS FROM-TO	TYPE OF SAMPLE	Blows per 6" on sampler			MOISTURE DENSITY OF CONSTANT	STRATA CHANGE ELEV.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, cond., hardness. Drilling time, seams and ect.	SAMPLE		
				From 0-6	6-12	To 12-18				NO.	PEN	REC
5'							DENSE	2'	BROWN COARSE SANDY GRAVELS WITH COBBLES			
		5' - 7'	SS	6	7		MED. DENSE		LIGHT BROWN GRAVELLY FINE TO COARSE SANDS	1	24"	14"
		(SLIGHT ODOR)		7	6							
10'		10' - 12'	SS	6	7				SAME MATERIAL	2	24"	18"
		(NO ODOR)		12	12							
15'									SAME MATERIAL			
		16' - 18'	SS	4	5				SAME MATERIAL	3	24"	14"
		(STRONG ODOR)		7	8							
		18' - 19'	SS	12	11					4	24"	21"
			8	7								
20'							MED. DENSE WET		BROWN SILTS AND FINE SANDS			
25'								25'	SAME MATERIAL			
									SET WELL: TOP OF WELL AT 15' BOTTOM OF WELL AT 25' BENTONITE SEAL FROM 5'-6'			

GROUND SURFACE TO 25' USED HSA CASING THEN _____

Sample Type
D-Dry C-Cored W-Washed
UP-Unfinished Piston
TP-Test Pit A-Auger V-Vane Test
UT-Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb. wt. x 30"-fall an 2" O.D. Sampler
Cohesionless Density
0-10 Loose
10-30 Med. Dense
30-50 Dense
50+ Very Dense

Cohesive Consistency
0-4 Soft 30 + Hard
4-8 M/Stiff
8-15 Stiff
15-30 V-Stiff

summary
EARTH BORING 25'
ROCK CORING _____
SAMPLES 4
HOLE NO. MW-5

M & W Soils Engineering, Inc.
Main St. Charlestown, NH 03603

TO WAGNER, HEINDEL & NOYES ADDRESS BURLINGTON, VT
PROJECT NAME FARMWAY, INC. LOCATION BRADFORD, VT
REPORT SENT TO DAVID REESE PROJ. NO. _____
SAMPLE SENT TO RETAINED BY W. H. & N. OUR JOB NO. 6514-95

SHEET 1 OF 1
DATE 11/6/95
HOLE NO. MW-7
LINE & STA. _____
OFFSET _____

GROUND WATER OBSERVATIONS		CASING	SAMPLER	CORE BAR	SURFACE ELEV.
AT 17'+/-	AT IMMEDIATELY	Type HSA	SS		DATE STARTED 11/6/95
	HOURS	Size I. D. 4 1/4"	1 1/2"		DATE COMPL. 11/6/95
AT _____	AT _____	Hammer Wt. _____	140#	BIT	BORING FORMAN M.D. & M.H.
HOURS		Hammer Fall _____	30"		INSPECTOR D. REESE
					SOILS ENGR.

LOCATION OF BORING CORNER OF FARMWAY AND FERTILIZER PLANT

Depth	CASING BLOWS PER FOOT	SAMPLE DEPTHS FROM-TO	TYPE OF SAMPLE	Blows per 6" on sampler			MOISTURE DENSITY OF CONSTANT	STRATA CHANGE ELEV.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, cond., hardness, Drilling time, seams and ect	SAMPLE				
				From 0-6	6-12	To 12-18				NO.	PEN	REC		
							DENSE	1'6"	DARK BROWN SILTY SANDY GRAVELS					
5'		5' - 7'	SS	4	4		LOOSE TO MED. DENSE		BROWN FINE TO MED. SANDS - TRACE OF FINE GRAVELS	1	24"	18"		
				5	5									
10'		10' - 12'	SS	6	7				SAME MATERIAL	2	24"	18"		
		(SLIGHT ODOR)		7	6									
15'		16' - 18'	SS	4	2				SAME MATERIAL	3	24"	24"		
		(NO ODOR)		3	4									
		18' - 20'	SS	2	2							4	24"	20"
20'		(NO ODOR)		1	2				SAME MATERIAL					
25'									SAME MATERIAL					
30'									SET WELL: TOP OF WELL AT 14' BOTTOM OF WELL AT 28' BENTONITE SEAL FROM 11'-12'					
												MATERIALS USED: 25# OF BENTONITE CHIPS		

GROUND SURFACE TO 27' USED HSA CASING THEN

Sample Type
D-Dry C-Cored W-Washed
UP-Unfinished Piston
TP-Test Pit A-Auger V-Vane Test
UT-Undisturbed Thinwall

Proportions Used
trace 0 to 10%
little 10 to 20%
some 20 to 35%
and 35 to 50%

140 lb. wt. x 30"-fall an 2" O.D. Sampler
Cohesionless Density
0-10 Loose
10-30 Med. Dense
30-50 Dense
50+ Very Dense

Cohesive Consistency
0-4 Soft 30 + Hard
4-8 M/Stiff
8-15 Stiff
15-30 V-Stiff

summary
EARTH BORING 27'
ROCK CORING _____
SAMPLES 4
HOLE NO. MW-7

M & W Soils Engineering, Inc.

Main St. Charlestown, NH 03603

TO WAGNER, HEINDEL & NOYES ADDRESS BURLINGTON, VT
 PROJECT NAME FARMWAY, INC. LOCATION BRADFORD, VT
 REPORT SENT TO DAVID REESE PROJ. NO. _____
 SAMPLE SENT TO RETAINED BY W. H. & N. OUR JOB NO. 6514-95

SHEET 1 OF 1
 DATE 11/6/95
 HOLE NO. MW-8
 LINE & STA. _____
 OFFSET _____

GROUND WATER OBSERVATIONS		Type HSA SS	CASING HSA	SAMPLER SS	CORE BAR	SURFACE ELEV.
AT _____	AT _____ HOURS					
Type		Size I. D.	4 1/4"	1 1/2"	BIT	DATE STARTED <u>11/6/95</u>
Hammer Wt.		Hammer Fall	140#	30"		DATE COMPL. <u>11/6/95</u>
AT _____						BORING FORMAN <u>M.D. & M.H.</u>
						INSPECTOR <u>D. REESE</u>
						SOILS ENGR.

LOCATION OF BORING IN MEADOW

Depth	CASING BLOWS PER FOOT	SAMPLE DEPTHS FROM-TO	TYPE OF SAMPLE	Blows per 6" on sampler			MOISTURE DENSITY OF CONSTANT	STRATA CHANGE ELEV.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, cond., hardness, Drilling time, seams and ect.	SAMPLE		
				From 0-6	6-12	To 12-18				NO.	PEN	REC
5'		5' - 7'	SS	3	4		7'6" +/-	NO TOPSOIL				
		(NO ODOR)		5	6			LOOSE TO MED. DENSE	LIGHT BROWN FINE SANDS - TRACE OF SILT	1	24'	20'
									SAME MATERIAL			
10'		10' - 12'	SS	7	12		14'6"	MED. DENSE TO DENSE	BROWN GRAVELLY FINE TO COARSE SANDS - TRACE OF COBBLES	2	24'	12'
		(NO ODOR)		13	14				SAME MATERIAL			
15'		16' - 18'	SS	5	4		25'	MED. DENSE	BROWN SILTY FINE SANDS	3	24'	21'
		(NO ODOR)		5	6					4	24'	24'
		18' - 20'	SS	5	4							
20'		(NO ODOR)		5	4				SAME MATERIAL			
									(STRONG ODOR OF OLD GAS FROM 23'-25')			
25'									SAME MATERIAL			
									SET WELL: TOP OF WELL AT 15' BOTTOM OF WELL AT 25' BENTONITE SEAL FROM 11'-12'			
									MATERIALS USED: 25# OF BENTONITE CHIPS			

GROUND SURFACE TO 25'

USED HSA CASING THEN _____

Sample Type
 D-Dry C-Cored W-Washed
 UP-Unfinished Piston
 TP-Test Pit A-Auger V-Vane Test
 UT-Undisturbed Thinwall

Proportions Used
 trace 0 to 10%
 little 10 to 20%
 some 20 to 35%
 and 35 to 50%

140 lb. wt. x 30"-fall an 2" O.D. Sampler
 Cohesionless Density
 0-10 Loose
 10-30 Med. Dense
 30-50 Dense
 50+ Very Dense
 Cohesive Consistency
 0-4 Soft 30 + Hard
 4-8 M/Stiff
 8-15 Stiff
 15-30 V-Stiff

summary
EARTH BORING <u>25'</u>
ROCK CORING _____
SAMPLES <u>4</u>
HOLE NO. <u>MW-8</u>

M & W Soils Engineering, Inc.

Main St. Charlestown, NH 03603

TO WAGNER, HEINDEL & NOYES ADDRESS BURLINGTON, VT
 PROJECT NAME FARMWAY, INC. LOCATION BRADFORD, VT
 REPORT SENT TO DAVID REESE PROJ. NO. _____
 SAMPLE SENT TO RETAINED BY W. H. & N. OUR JOB NO. 6514-95

SHEET 1 OF 1
 DATE 11/7/95
 HOLE NO. MW-9
 LINE & STA. _____
 OFFSET _____

GROUND WATER OBSERVATIONS		Type _____ Size I. D. _____ Hammer Wt. _____ Hammer Fall _____	CASING	SAMPLER	CORE BAR	SURFACE ELEV. _____
AT <u>20'10"</u>	AT <u>IMMEDIATELY</u> HOURS		HSA	SS	_____	DATE STARTED <u>11/7/95</u>
AT _____	AT _____ HOURS	_____	_____	_____	DATE COMPL. <u>11/7/95</u>	
						BORING FORMAN <u>M.D. & M.H.</u>
						INSPECTOR <u>D. REESE</u>
						SOILS ENGR. _____

LOCATION OF BORING IN MEADOW

Depth	CASING BLOWS PER FOOT	SAMPLE DEPTHS FROM-TO	TYPE OF SAMPLE	Blows per 6" on sampler			MOISTURE DENSITY OF CONSTANT	STRATA CHANGE ELEV.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, cond., hardness, Drilling time, seams and ect	SAMPLE		
				From 0-6	6-12	To 12-18				NO.	PEN	REC
									NO TOPSOIL			
5'		5' - 7'	SS	4	4		LOOSE TO MED. DENSE	12'	LIGHT BROWN FINE SANDS	1	24"	12'
		(NO ODOR)		6	10							
10'									SAME MATERIAL			
15'		15' - 17'	SS	9	17		MED. DENSE	16'6"	BROWN SANDY FINE GRAVELS	2	24"	13'
		(NO ODOR)		14	7							
20'		20' - 22'	SS	3	2		LOOSE - WET	29'	BROWN SILTY FINE SANDS (WATER AT 19')	3	24"	18'
		(NO ODOR)		2	3							
25'		25' - 27'	SS	3	2				SAME MATERIAL	4	24"	20'
				2	3							
30'		27' - 29'	SS	4	6				SAME MATERIAL	5	24"	24'
				4	6							
		(*MAY BE SLIGHT ODOR)							SET WELL: TOP OF WELL AT 16' BOTTOM OF WELL AT 25' BENTONITE SEAL FROM 11'-12'			
									MATERIALS USED: 25# OF BENTONITE CHIPS 40# OF CEMENT MIX			

GROUND SURFACE TO 29' USED HSA CASING THEN DROVE SS 24"

Sample Type D-Dry C-Cored W-Washed UP-Unfinished Piston TP-Test Pit A-Auger V-Vane Test UT-Undisturbed Thinwall	Proportions Used trace 0 to 10% little 10 to 20% some 20 to 35% and 35 to 50%	140 lb. wt. x 30"-fall an 2" O.D. Sampler Cohesionless Density 0-10 Loose 10-30 Med. Dense 30-50 Dense 50+ Very Dense	Cohesive Consistency 0-4 Soft 30 + Hard 4-8 M/Stiff 8-15 Stiff 15-30 V-Stiff	summary EARTH BORING <u>29'</u> ROCK CORING _____ SAMPLES <u>5</u>
				HOLE NO. <u>MW-9</u>

M & W Soils Engineering, Inc.

Main St. Charlestown, NH 03603

TO WAGNER HEINDEL & NOYES ADDRESS BURLINGTON, VT
 PROJECT NAME FARMWAY, INC. LOCATION BRADFORD, VT
 REPORT SENT TO DAVID REESE PROJ. NO. _____
 SAMPLE SENT TO RETAINED BY W. H. & N. OUR JOB NO. 6514-95

SHEET 1 OF 1
 DATE 11/7/95
 HOLE NO. MW-10
 LINE & STA. _____
 OFFSET _____

GROUND WATER OBSERVATIONS		Type HSA	CASING HSA	SAMPLER SS	CORE BAR	SURFACE ELEV.	
AT <u>19'+/-</u>	AT <u>IMMEDIATELY</u> HOURS					DATE STARTED <u>11/7/95</u>	
		Size I. D. <u>4 1/4"</u>	<u>1 1/2"</u>			DATE COMPL. <u>11/7/95</u>	
		Hammer Wt. _____	<u>140#</u>	BIT		BORING FORMAN <u>M.D. & M.H.</u>	
AT _____ AT _____ HOURS		Hammer Fall _____	<u>30"</u>			INSPECTOR <u>D. REESE</u>	
						SOILS ENGR.	

LOCATION OF BORING IN MEADOW

Depth	CASING BLOWS PER FOOT	SAMPLE DEPTHS FROM-TO	TYPE OF SAMPLE	Blows per 6" on sampler			MOISTURE DENSITY OF CONSTANT	STRATA CHANGE ELEV.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, cond., hardness. Drilling time, seams and ect.	SAMPLE									
				From 0-6	6-12	To 12-18				NO.	PEN	REC							
5'							LOOSE TO MED. DENSE	LIGHT BROWN FINE SANDS											
									SAME MATERIAL										
										SAME MATERIAL									
10'							LOOSE TO MED. DENSE	BROWN SANDY FINE GRAVELS											
									SAME MATERIAL										
										1 24' 13'									
											2 24' 18'								
15'							LOOSE TO MED. DENSE	BROWN SANDY FINE GRAVELS											
									SAME MATERIAL										
										3 24' 16'									
20'							LOOSE - WET	BROWN SILTY FINE SANDS											
									SAME MATERIAL										
25'							LOOSE - WET	BROWN SILTY FINE SANDS											
									SAME MATERIAL										
										SAME MATERIAL									
											SAME MATERIAL								
												SAME MATERIAL							
													SAME MATERIAL						
														SAME MATERIAL					
															SAME MATERIAL				
																SAME MATERIAL			
																	SAME MATERIAL		

GROUND SURFACE TO 25'

USED HSA CASING THEN _____

Sample Type
 D-Dry C-Cored W-Washed
 UP-Unfinished Piston
 TP-Test Pit A-Auger V-Vane Test
 UT-Undisturbed Thinwall

Proportions Used
 trace 0 to 10%
 little 10 to 20%
 some 20 to 35%
 and 35 to 50%

140 lb. wt. x 30"-fall an 2" O.D. Sampler
 Cohesionless Density
 0-10 Loose
 10-30 Med. Dense
 30-50 Dense
 50+ Very Dense

Cohesive Consistency
 0-4 Soft 30 + Hard
 4-8 M/Stiff
 8-15 Stiff
 15-30 V-Stiff

summary	
EARTH BORING	<u>25'</u>
ROCK CORING	_____
SAMPLES	<u>3</u>
HOLE NO.	<u>MW-10</u>

M & W Soils Engineering, Inc.

Main St. Charlestown, NH 03603

SHEET 1 OF 1
 DATE 11/7/95
 HOLE NO. MW-11
 LINE & STA.
 OFFSET

TO WAGNER, HEINDEL & NOYES ADDRESS BURLINGTON, VT
 PROJECT NAME FARMWAY, INC. LOCATION BRADFORD, VT
 REPORT SENT TO DAVID REESE PROJ. NO.
 SAMPLE SENT TO RETAINED BY W. H. & N. OUR JOB NO. 6514-95

GROUND WATER OBSERVATIONS		CASING	SAMPLER	CORE BAR	SURFACE ELEV.
AT 20'+/-	AT IMMEDIATELY	HSA	SS		DATE STARTED 11/7/95
	HOURS	Size I. D. 4 1/4"	1 1/2"		DATE COMPL. 11/7/95
		Hammer Wt. 140#	BIT		BORING FORMAN M.D. & M.H.
AT	AT	Hammer Fall 30"			INSPECTOR D. REESE
	HOURS				SOILS ENGR.

LOCATION OF BORING IN MEADOW

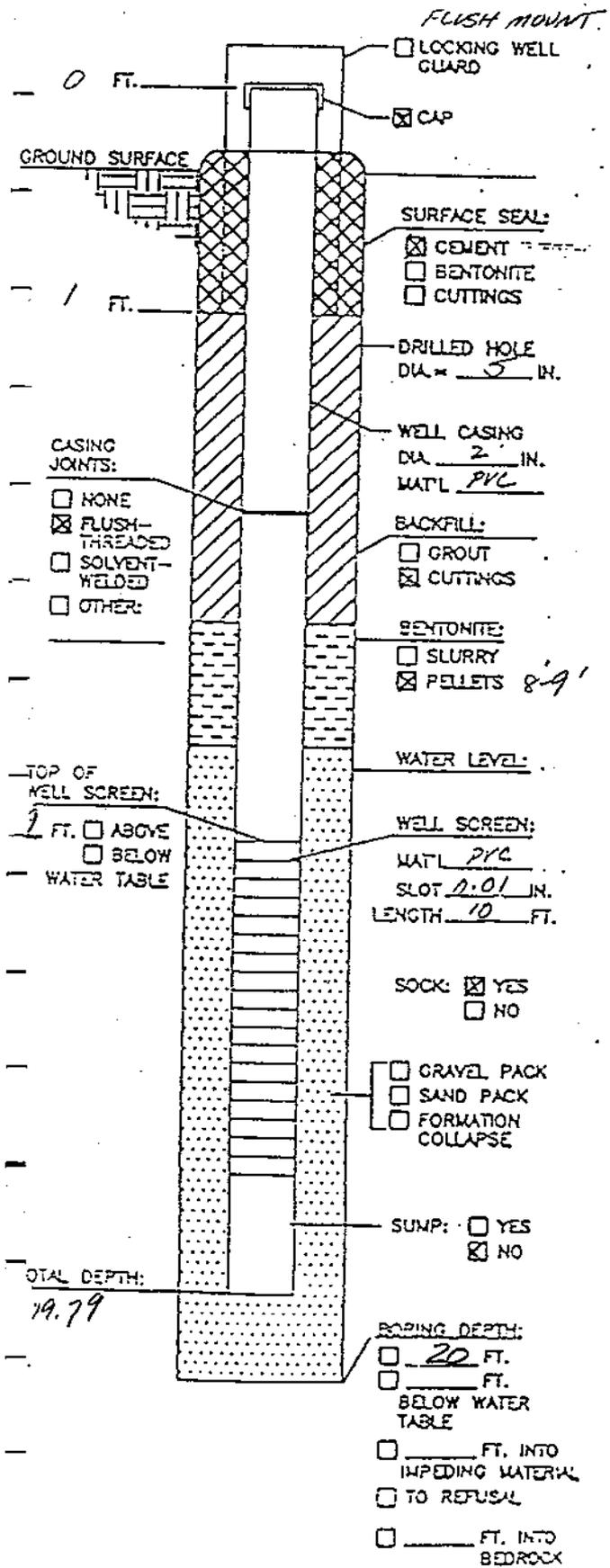
Depth	CASING BLOWS PER FOOT	SAMPLE DEPTHS FROM-TO	TYPE OF SAMPLE	Blows per 6" on sampler			MOISTURE DENSITY OF CONSTANT	STRATA CHANGE ELEV.	SOIL IDENTIFICATION Remarks include color, gradation, Type of soil etc. Rock-color, type, cond., hardness, Drilling time, seams and ect.	SAMPLE		
				From 0-6	6-12	To 12-18				NO.	PEN	REC
5'							LOOSE TO MED. DENSE	13'	BROWN SILTY FINE SANDS			
									SAME MATERIAL			
									SAME MATERIAL			
15'		15'6" - 17'6"	SS	5	6		MED. DENSE	17'6"	BROWN GRAVELLY FINE TO COARSE SANDS	1	24"	15"
				7	7							
20'		20' - 22'	SS	4	3		LOOSE - WET	25'	BROWN SILTY FINE SANDS	2	24"	18"
				4	4				SAME MATERIAL			
25'		25' - 27'	SS	4	5				SET WELL: TOP OF WELL AT 15' BOTTOM OF WELL AT 25' BENTONITE SEAL FROM 11'-12'			
				6	6					MATERIALS USED: 10' OF 2" PVC 0.010" SCREEN 18' OF 2" PVC SOLID 25# OF BENTONITE CHIPS 40# OF CEMENT MIX		
30'												

GROUND SURFACE TO 27' USED HSA CASING THEN

Sample Type D-Dry C-Cored W-Washed UP-Unfinished Piston TP-Test Pit A-Auger V-Vane Test UT-Undisturbed Thinwall	Proportions Used trace 0 to 10% little 10 to 20% some 20 to 35% and 35 to 50%	140 lb. wt. x 30"-fall an 2" O.D. Sampler Cohesionless Density 0-10 Loose 10-30 Med. Dense 30-50 Dense 50+ Very Dense	Cohesive Consistency 0-4 Soft 30 + Hard 4-8 M/Stiff 8-15 Stiff 15-30 V-Stiff	summary
				EARTH BORING 27' ROCK CORING SAMPLES 2 HOLE NO. MW-11

WELL CONSTRUCTION LOG

WAGNER, HEINDEL, and NOYES, INC.
BURLINGTON, VERMONT



PROJECT FARMWAY / TWIN STATE

WELL # MW-12

JOB # 95293

TOWN/CITY/STATE BRADFORD VT

INSTALLATION DATE(S) 11-6-95 11-7-95

DRILLING METHOD Auger Hollow Stem 4 1/4"

DRILLING FLUID TYPE NINE VOLUME _____

DRILLING CONTRACTOR M+W SOILS

WELL DEVELOPED? YES NO

IF YES, THEN VOLUME RECOVERED IS 5 GAL

IF YES, BY WHOM? DJR

DATE: 11-8-95

STATIC DEPTH TO WATER 17.9 FT. BELOW TOP OF CASING

MEASURED ESTIMATED ON DATE: 11-8-95

SPLIT-SPOON SAMPLES? YES NO

IF YES, THEN INTERVAL IS 5 FT. OR CONTINUOUS

WELL PURPOSE PHASE II SITE INVESTIGATION

REMARKS _____

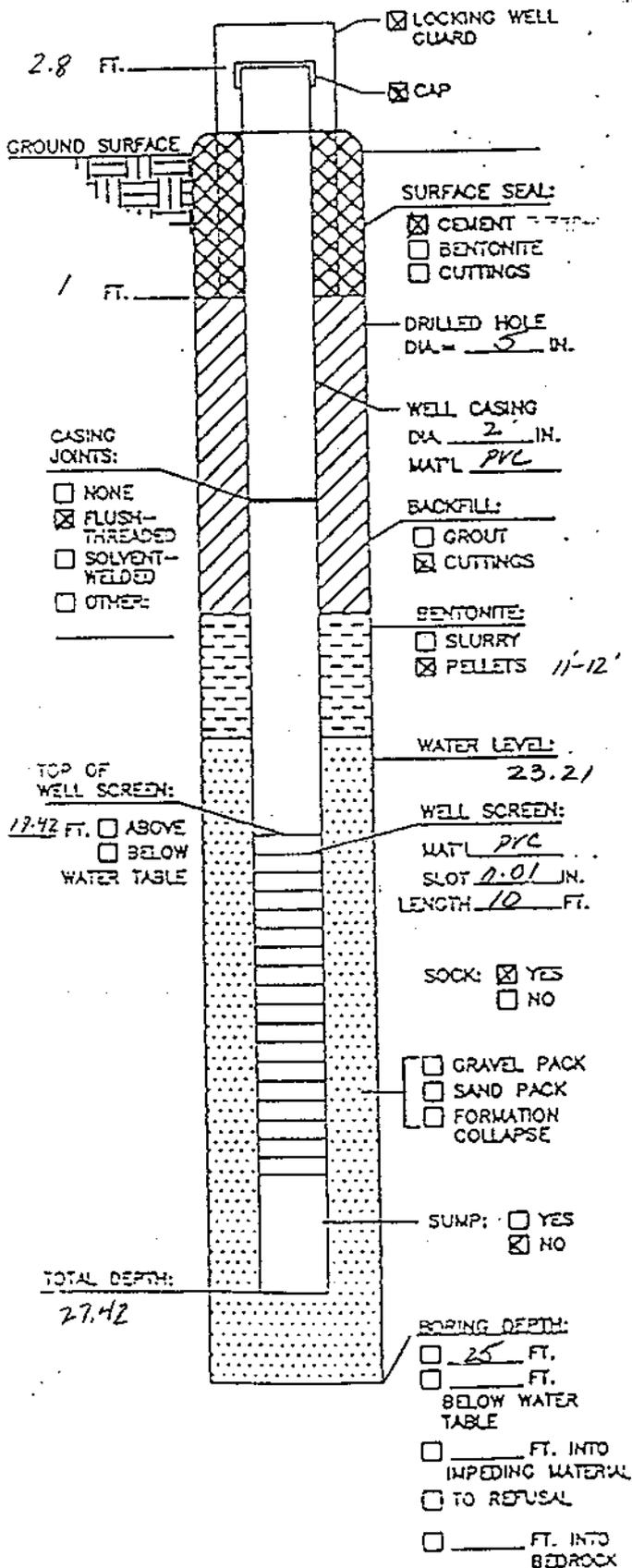
PREPARED BY DJR

DATE 11-29-95

WELL CONSTRUCTION LOG

p. 1

WAGNER, HEINDEL, and NOYES, INC.
BURLINGTON, VERMONT



PROJECT FARMWAY / TWIN STATE

WELL # MW-11

JOB # 95293

TOWN/CITY/STATE BRAEFORD VT

INSTALLATION DATE(S) 11-6-95 11-7-95

DRILLING METHOD AVGER HOLLOW STEM 4 1/4"

DRILLING FLUID TYPE NONE VOLUME _____

DRILLING CONTRACTOR M+W SOILS

WELL DEVELOPED? YES NO

IF YES, THEN VOLUME RECOVERED IS _____ GAL

IF YES, BY WHOM? DJR

DATE: 11-8-95

STATIC DEPTH TO WATER 23.21 FT. BELOW TOP OF CASING

MEASURED ESTIMATED ON DATE: 11-8-95

SPLIT-SPOON SAMPLES? YES NO

IF YES, THEN INTERVAL IS 5 FT. OR CONTINUOUS

WELL PURPOSE PHASE II SITE INVESTIGATION

REMARKS _____

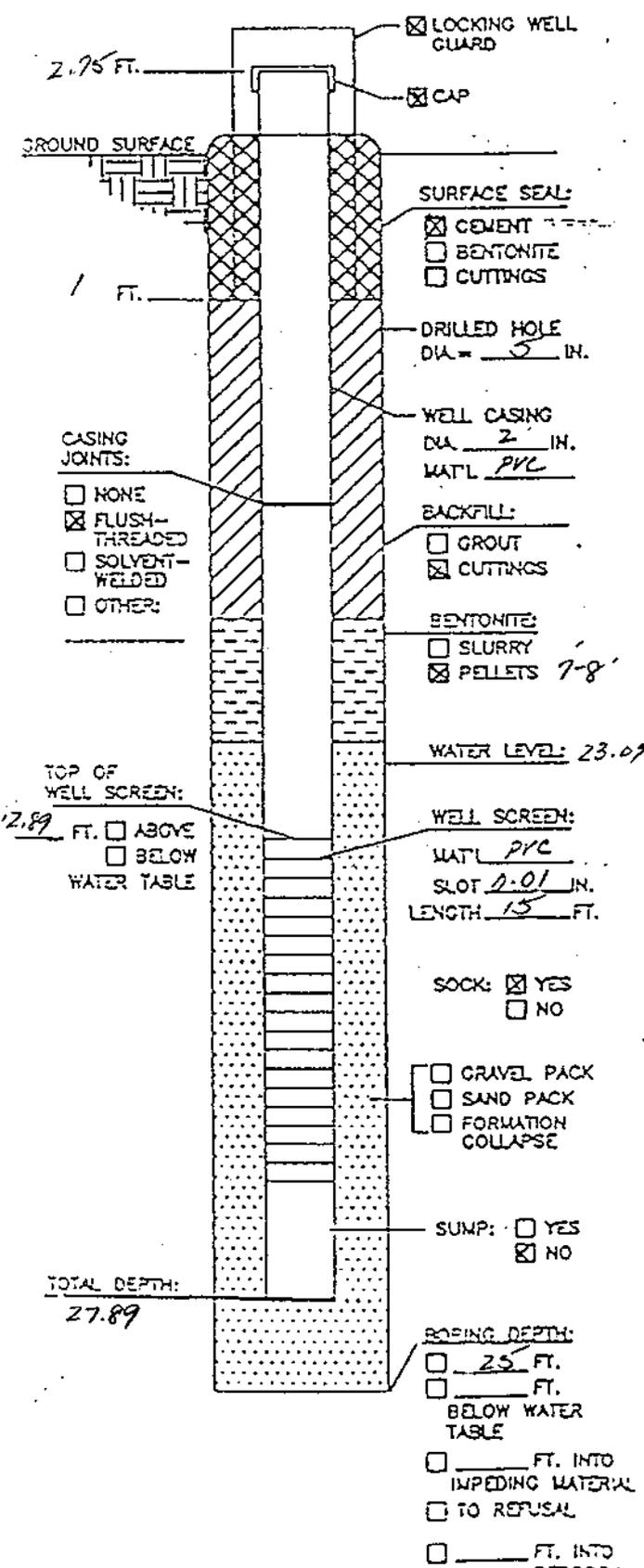
PREPARED BY DJR

DATE 11-29-95

WELL CONSTRUCTION LOG

WAGNER, HEINDEL, and NOYES, INC.
BURLINGTON, VERMONT

P: _____



PROJECT FARMWAY / TWIN STATE

WELL # MW-10

JOB # 95293

TOWN/CITY/STATE BRADFORD VT

INSTALLATION DATE(S) 11-6-95 11-7-95

DRILLING METHOD Auger Hollow Stem 4 1/4"

DRILLING FLUID TYPE NONE VOLUME _____

DRILLING CONTRACTOR M+W SOILS

WELL DEVELOPED? YES NO

IF YES, THEN VOLUME RECOVERED IS 7 GAL

IF YES, BY WHOM? DJR

DATE: 11-8-95

STATIC DEPTH TO WATER 23.09 FT. BELOW TOP OF CASING

MEASURED ESTIMATED ON DATE: 11-8-95

SPLIT-SPOON SAMPLES? YES NO

IF YES, THEN INTERVAL IS 5 FT. OR CONTINUOUS

WELL PURPOSE PHASE II SITE INVESTIGATION

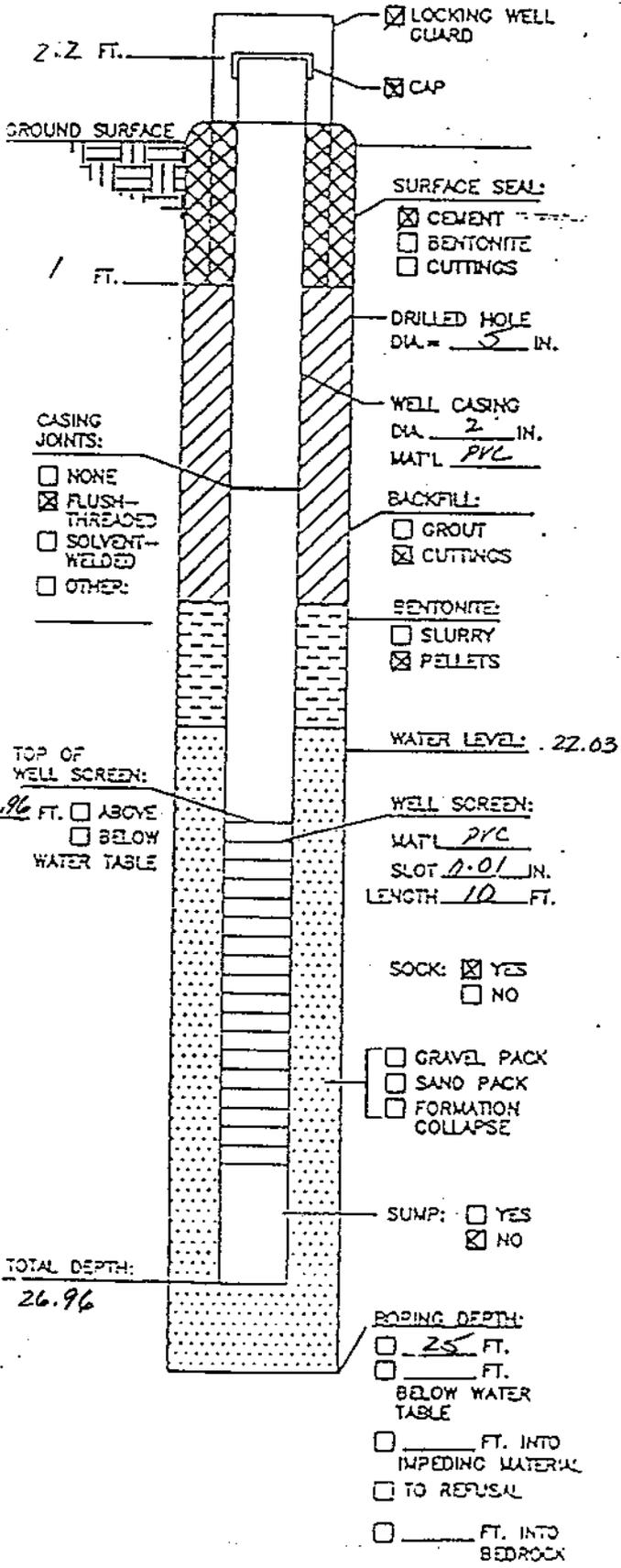
REMARKS _____

PREPARED BY DJR

DATE 11-29-95

WELL CONSTRUCTION LOG

WAGNER, HEINDEL, and NOYES, INC.
BURLINGTON, VERMONT



PROJECT FARMWAY / TWIN STATE

WELL # MW-8

JOB # 95293

TOWN/CITY/STATE BRADFORD VT

INSTALLATION DATE(S) 11-6-95 11-7-95

DRILLING METHOD Auger Hollow Stem 4 1/4"

DRILLING FLUID TYPE NONE VOLUME _____

DRILLING CONTRACTOR M+W SOILS

WELL DEVELOPED? YES NO

IF YES, THEN VOLUME RECOVERED IS 6 GAL

IF YES, BY WHOM? DJR

DATE: 11-8-95

STATIC DEPTH TO WATER 22.03 FT. BELOW TOP OF CASING

MEASURED ESTIMATED ON DATE: 11-8-95

SPLIT-SPOON SAMPLES? YES NO

IF YES, THEN INTERVAL IS 5 FT. OR CONTINUOUS

WELL PURPOSE PHASE II SITE INVESTIGATION

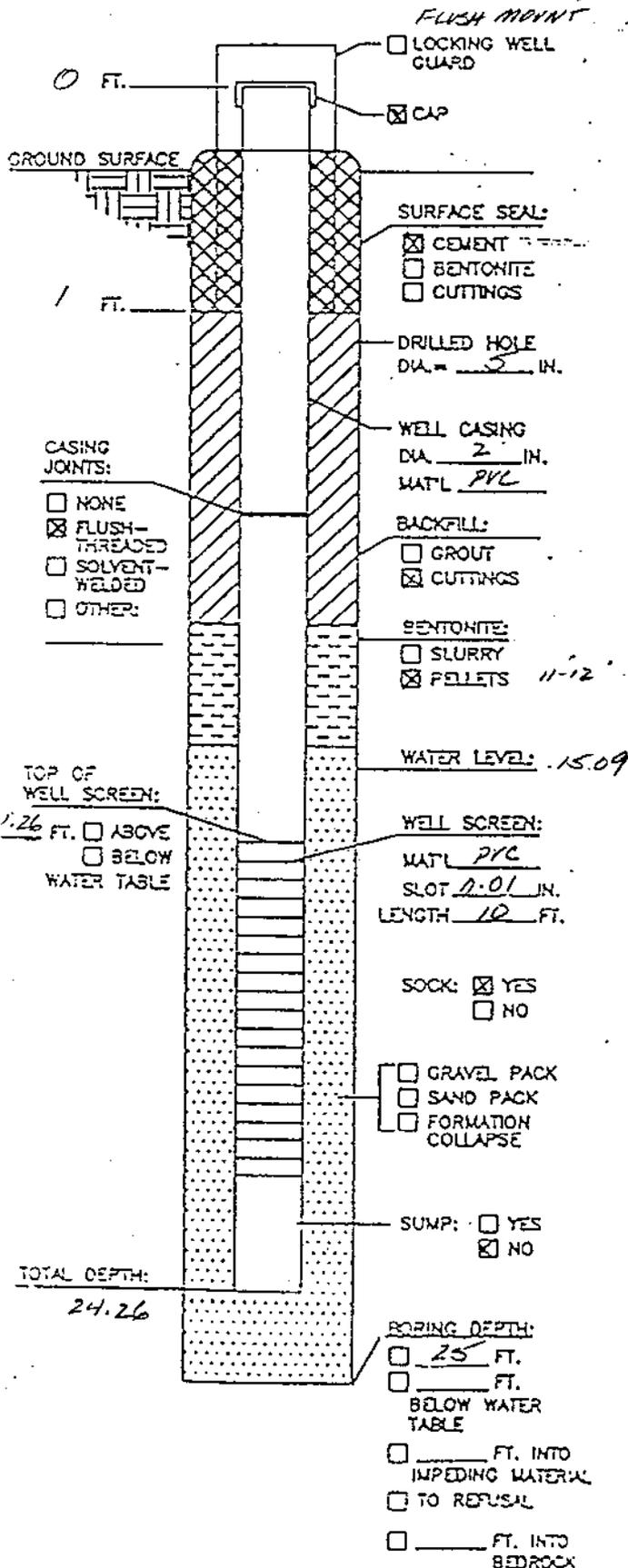
REMARKS _____

PREPARED BY DJR

DATE 11-29-95

WELL CONSTRUCTION LOG

WAGNER, HEINDEL, and NOYES, INC.
BURLINGTON, VERMONT



PROJECT FARMWAY / TWIN STATE

WELL # MW-7

JOB # 95293

TOWN/CITY/STATE BRADFORD VT

INSTALLATION DATE(S) 11-6-95 11-7-95

DRILLING METHOD Auger Hollow Stem 4 1/4"

DRILLING FLUID TYPE WINE VOLUME _____

DRILLING CONTRACTOR M+W SOILS

WELL DEVELOPED? YES NO

IF YES, THEN VOLUME RECOVERED IS 10.5 GAL

IF YES, BY WHOM? DJR

DATE: 11-8-95

STATIC DEPTH TO WATER 15.09 FT. BELOW TOP OF CASING

MEASURED ESTIMATED ON DATE: 11-8-95

SPLIT-SPOON SAMPLES? YES NO

IF YES, THEN INTERVAL IS 5 FT. OR CONTINUOUS

WELL PURPOSE PHASE II SITE INVESTIGATION

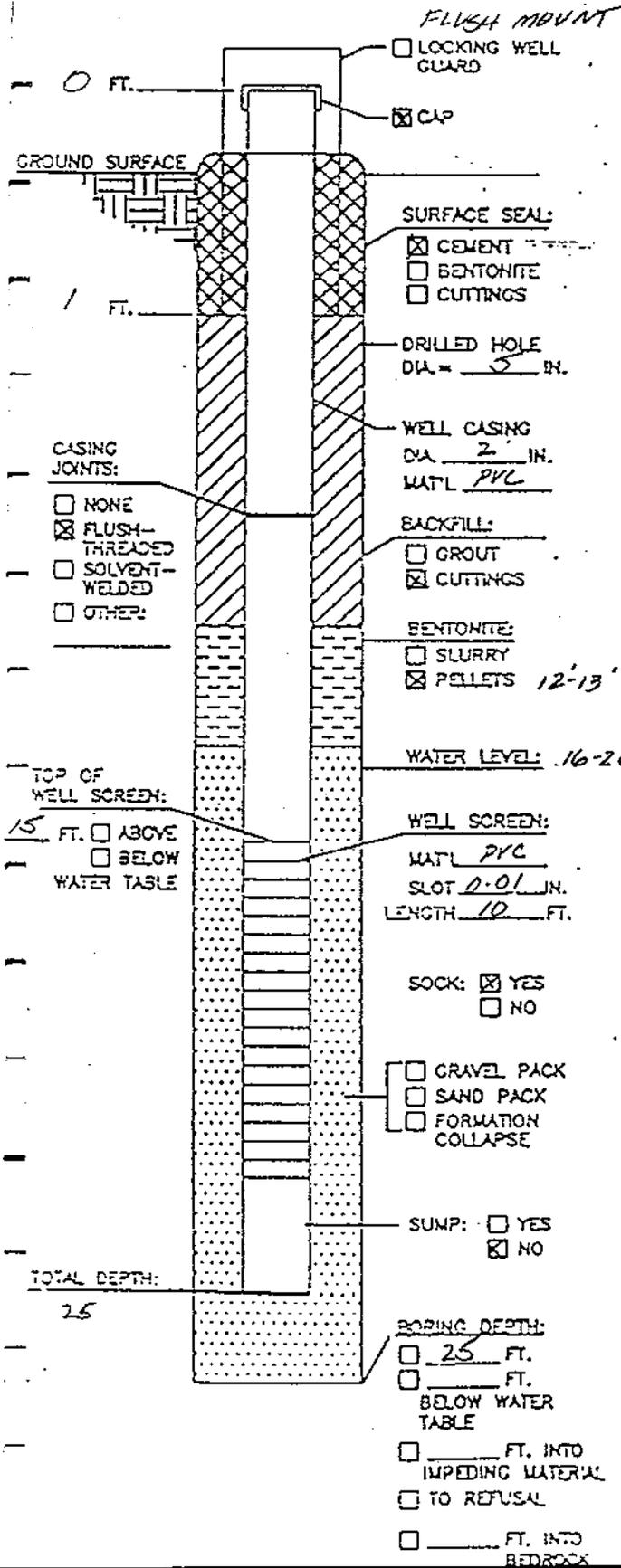
REMARKS _____

PREPARED BY DJR

DATE 11-29-95

WELL CONSTRUCTION LOG

WAGNER, HEINDEL, and NOYES, INC.
BURLINGTON, VERMONT



PROJECT FARMWAY / TWIN STATE

WELL # MW-6

JOB # 95293

TOWN/CITY/STATE BRADFORD VT

INSTALLATION DATE(S) 11-6-95 11-7-95

DRILLING METHOD Auger Hollow Stem 4 1/4"

DRILLING FLUID TYPE NONE VOLUME _____

DRILLING CONTRACTOR M+W SOILS

WELL DEVELOPED? YES NO

IF YES, THEN VOLUME RECOVERED IS 12 GAL

IF YES, BY WHOM? DJR

DATE: 11-8-95

STATIC DEPTH TO WATER 16.26 FT. BELOW TOP OF CASING

MEASURED ESTIMATED ON DATE: 11-8-95

SPLIT-SPOON SAMPLES? YES NO

IF YES, THEN INTERVAL IS 5 FT. OR CONTINUOUS

WELL PURPOSE PHASE II SITE INVESTIGATION

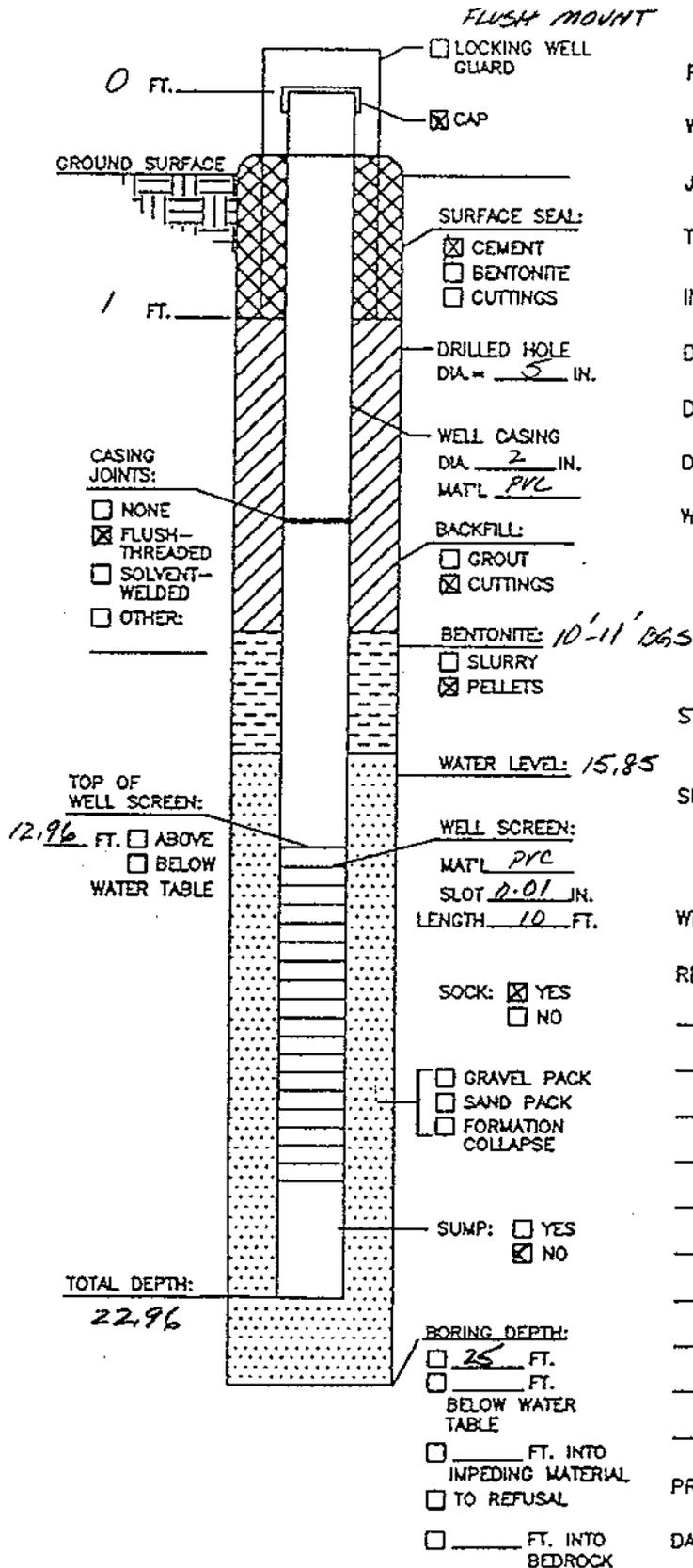
REMARKS _____

PREPARED BY DJR

DATE 11-27-95

WELL CONSTRUCTION LOG

WAGNER, HEINDEL, and NOYES, INC.
BURLINGTON, VERMONT



PROJECT KAYNES / FARMWAY

WELL # MW-1

JOB # 95215

TOWN/CITY/STATE BRADFORD VT

INSTALLATION DATE(S) 10-11-95

DRILLING METHOD Auger Hollow Stem 3/4"

DRILLING FLUID TYPE NONE VOLUME _____

DRILLING CONTRACTOR M+W SOILS

WELL DEVELOPED? YES NO

IF YES, THEN VOLUME RECOVERED IS 9 GAL

IF YES, BY WHOM? DJR

DATE 10-11-95

STATIC DEPTH TO WATER 15.85 FT. BELOW TOP OF CASING

MEASURED ESTIMATED ON DATE: _____

SPLIT-SPOON SAMPLES? YES NO

IF YES, THEN INTERVAL IS 5 FT. OR CONTINUOUS

WELL PURPOSE PHASE II SITE INVESTIGATION

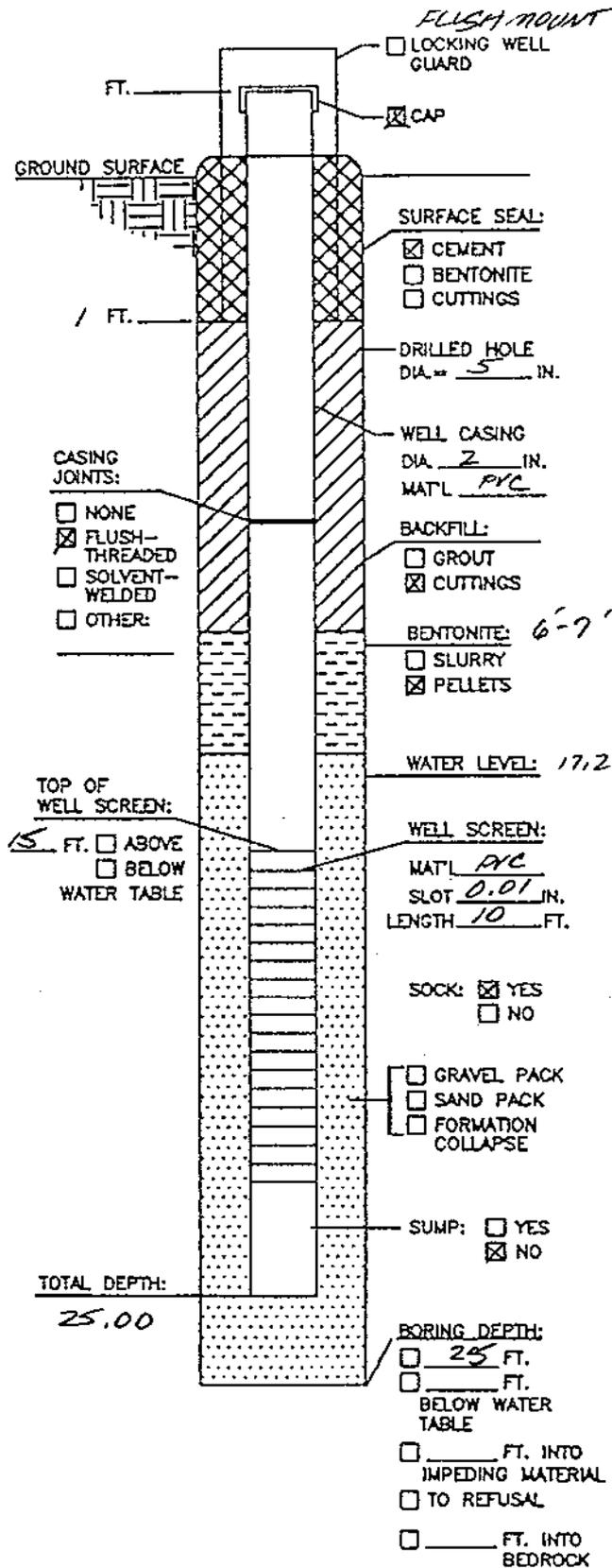
REMARKS LOCN - ACROSS RTE 25 FROM
MASSA

PREPARED BY DJR

DATE 10-17-95

WELL CONSTRUCTION LOG

WAGNER, HEINDEL, and NOYES, INC.
BURLINGTON, VERMONT



PROJECT HAYNES / PARKWAY

WELL # MW-2

JOB # 95215

TOWN/CITY/STATE BRADFORD, VT

INSTALLATION DATE(S) 10-11-95

DRILLING METHOD 3/4" HOLLOW STEM AUGER

DRILLING FLUID TYPE NONE VOLUME _____

DRILLING CONTRACTOR MHW SOILS

WELL DEVELOPED? YES NO

IF YES, THEN VOLUME RECOVERED IS 13 GALS

IF YES, BY WHOM? DJR

DATE: 10-11-95

STATIC DEPTH TO WATER 17.21 FT. BELOW TOP OF CASING

MEASURED ESTIMATED ON DATE: _____

SPLIT-SPOON SAMPLES? YES NO

IF YES, THEN INTERVAL IS 5 FT. ()

CONTINUOUS

WELL PURPOSE PHASE II INVESTIGATION

REMARKS LOC'N FORMER BRADFORD OIL TANK BATTERY

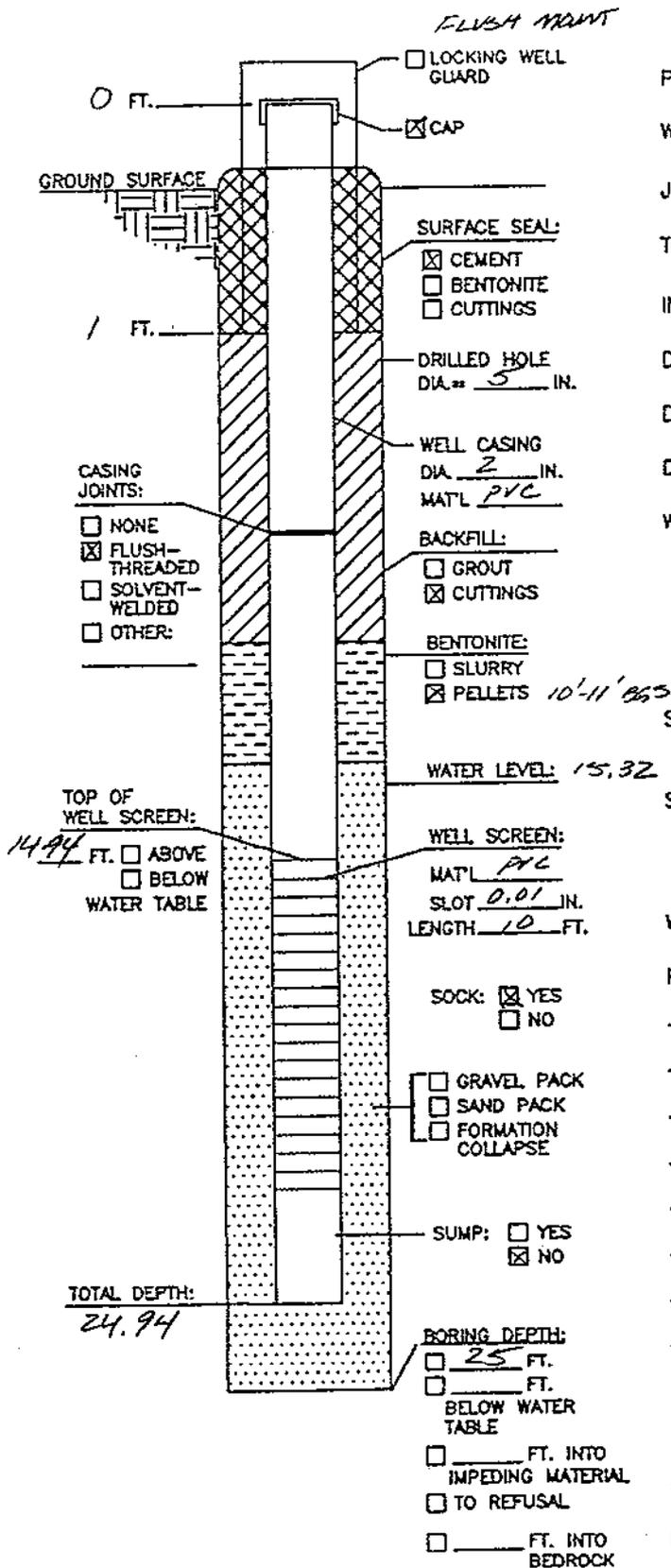
PREPARED BY DJR

DATE 10-17-95

WELL CONSTRUCTION LOG

p.38

WAGNER, HEINDEL, and NOYES, INC.
BURLINGTON, VERMONT



PROJECT HAYNES FARMWAY

WELL # MW-3

JOB # 95215

TOWN/CITY/STATE BRADFORD, VT

INSTALLATION DATE(S) 10-11-95

DRILLING METHOD 3/4" HOLLOW STEM AUGER

DRILLING FLUID TYPE NONE VOLUME _____

DRILLING CONTRACTOR MHW SOILS

WELL DEVELOPED? YES NO

IF YES, THEN VOLUME RECOVERED IS 15 GAL

IF YES, BY WHOM? DJR

DATE: 10-11-95

STATIC DEPTH TO WATER 15.32 FT. BELOW TOP OF CASING

MEASURED ESTIMATED ON DATE: _____

SPLIT-SPOON SAMPLES? YES NO

IF YES, THEN INTERVAL IS 5 FT. OR CONTINUOUS

WELL PURPOSE PHASE II INVESTIGATION

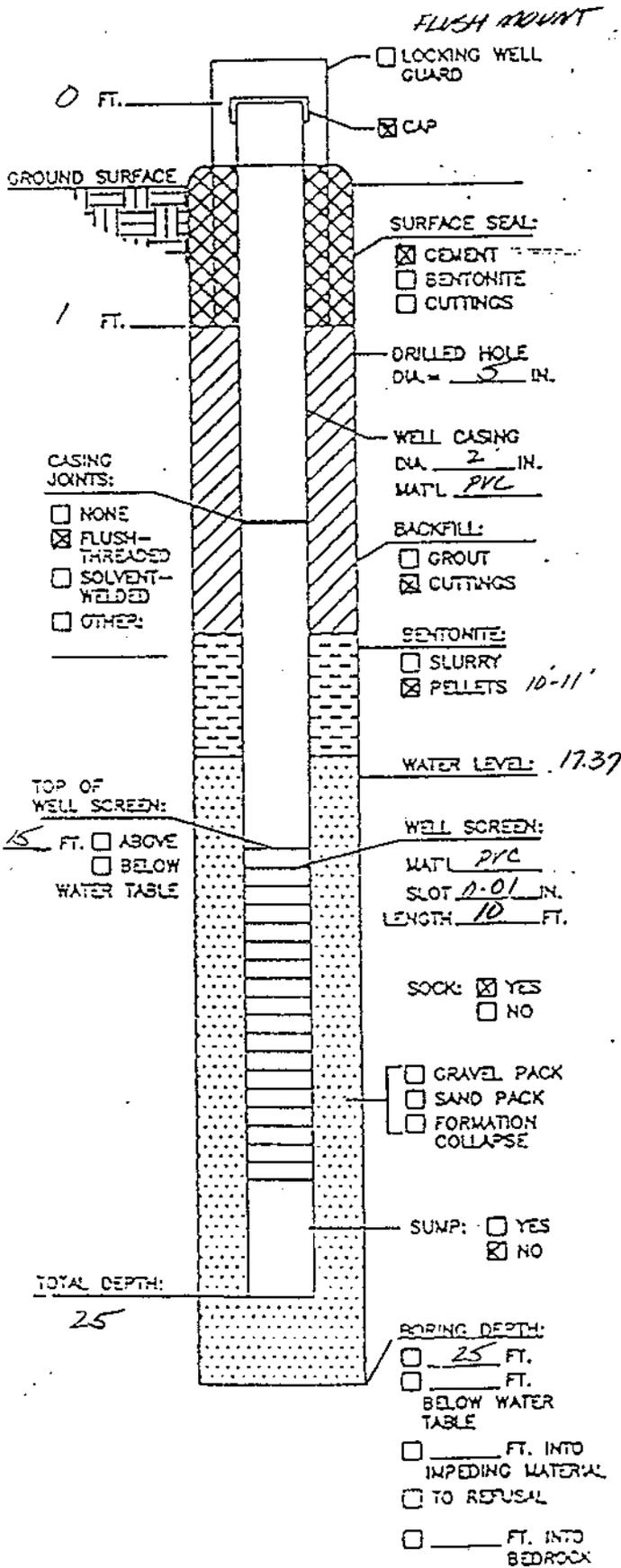
REMARKS LOC'N NW CORNER OF FARMWAY BUILDINGS

PREPARED BY DJR

DATE 10-17-95

WELL CONSTRUCTION LOG

WAGNER, HEINDEL, and NOYES, INC.
BURLINGTON, VERMONT



PROJECT FARINWAY / TWIN STATE

WELL # MW-4

JOB # 95293

TOWN/CITY/STATE BRADFORD VT

INSTALLATION DATE(S) 11-6-95 11-7-95

DRILLING METHOD Auger Hollow Stem 4 1/4

DRILLING FLUID TYPE NONE VOLUME _____

DRILLING CONTRACTOR M+W SOILS

WELL DEVELOPED? YES NO

IF YES, THEN VOLUME RECOVERED IS 3 GAL

IF YES, BY WHOM? DJR

DATE: 11-8-95

STATIC DEPTH TO WATER 17.37 FT. BELOW TOP OF CASING

MEASURED ESTIMATED ON DATE: 11-8-95

SPLIT-SPOON SAMPLES? YES NO

IF YES, THEN INTERVAL IS 5 FT. OR CONTINUOUS

WELL PURPOSE PHASE II SITE INVESTIGATION

REMARKS _____

PREPARED BY DJR

DATE 11-29-95

VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION
UNDERGROUND STORAGE TANK PROGRAM
TANK PULL FORM

TODAY'S DATE:

7-22-93

DATE OF REMOVAL:

7-6-93

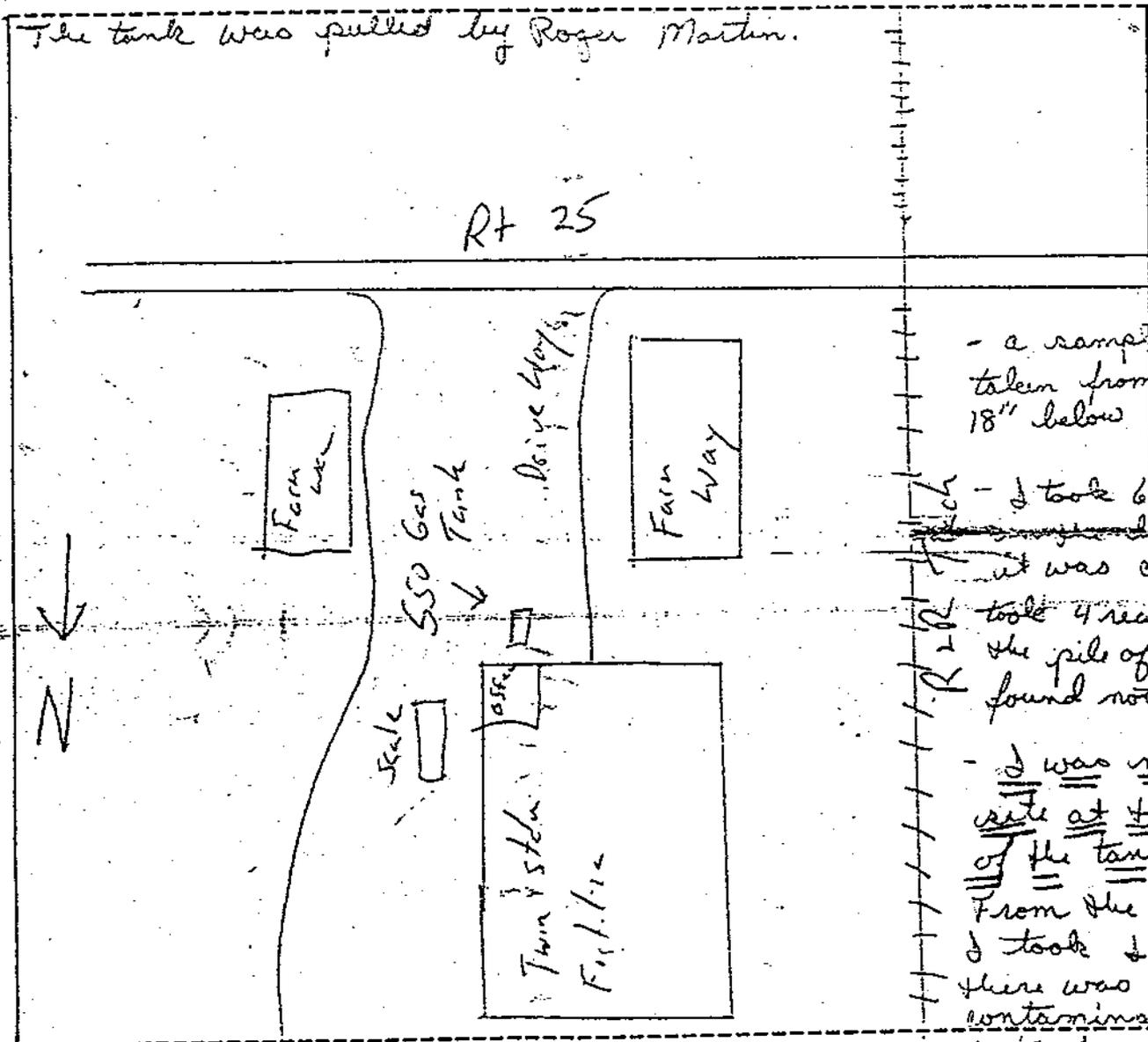
INSPECTOR: Wilfredo Ayotte

BUSINESS NAME:

Twin STATE Fertilizer
BRADFORD VT 05033

Talked with Ted Uncle on the 7-19-93
SITE DIAGRAM

Show location of all tanks and distance to permanent structures, sample points, areas of contamination and any pertinent site information. Indicate North arrow and major street names or route number.



- a sample was taken from about 18" below the tank

- I took 6 readings ~~at the hole and~~ it was clean, I took 4 readings in the pile of dirt and found nothing.

- I was not on site at the time of the tank pull. From the readings I took I believe there was no contamination at the tank or in hole.

VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION
 UNDERGROUND STORAGE TANK PROGRAM
 103 SOUTH MAIN STREET
 WATERBURY, VERMONT 05671-0404
 (802) 244-8702

Date of Removal: 7-6-93 Date of Assessment: 7-14-93
 Person & Company Doing Assessment: Wilfred Ayotte N. Petroleum Division of
 Telephone Number: 1-800-788-3002 BRAD FORD Oil Inc

Business Name Where Tank(s) Located: Twin STATE Fertilizer

Number of Employees: 6
 Street Address & Town/City: PO BOX 145
BRAD FORD UT. 05033

Owner of Tank(s): Twin STATE Fertilizer
 Address:
 Town/City:

Contact Person: Bill Sellinger
 Phone Number: 1-800-788-3002

UST Facility ID Number: N/A at the time

Tank #	Product	Size	Condition
1	<u>GAS</u>	<u>550</u>	<u>good</u>
2			
3			
4			

Reason for Tank Removal (check one): abandoned routine replacement
 tank or piping leaking liability

Replacement Tank(s)? yes no Number of Replacement Tanks: 1

DEC UST Permit(s) Obtained? yes no

DEC-Permitted Tank(s) Still On-Site? yes no Number of Tanks: _____

Out of Service Tank(s) On-Site? yes no Number of Tanks: _____

Heating Oil Tank(s) On-Site? yes no No. of Tanks: _____ Size(s): _____

Any Waste Pumpage? yes no Estimated Volume: _____
 Transported By: _____

Size of Excavation (ft²): 10'x12' Depth: 6' Soil Type: Sandy gravel
 Concentrations Detected with PID: _____ Peak = 0 Average = 0

Type of PID: HNU

Number of Readings (please put locations on attached drawing): 10

Calibration Info. (date, time, type of gas): 7-14-93 5:00 PM

Free Phase Product Encountered? yes no Approx. Amount: _____

Cont. Soils Stockpiled? yes no Amount (yd³): _____

Cont. Soils Backfilled? yes no Amount (yd³): _____

Groundwater Encountered? yes no Depth to Groundwater: _____

Monitoring Wells Installed? yes no Number: _____ Screen Depth: _____

On-Site Drinking Well? yes no (if yes: rock gravel spring)

Public Water Supply Well(s) Within 1/4 Mile? yes no
 Distance to nearest: _____

Private Water Supply Well(s) Within 1/4 Mile? yes no How Many? _____

Samples Collected for Laboratory Analysis? yes no How Many? 1

[check all that apply: soil groundwater drinking water]

Receptors Affected (check all that apply):

soil residential; # of houses/people: _____
 groundwater surface water; name/type of water body: _____

Signature of Owner or Authorized Representative: Wilfred Ayotte

Date: 7-22-93

Signature of Person Performing Site Assessment: Wilfred Ayotte

Date: 7-22-93

*** ATTACH OBSERVATIONS, CONCLUSIONS, AND DRAWING ON A SEPARATE PAGE ***

State of Vermont

AGENCY OF NATURAL RESOURCES
Department of Environmental Conservation

Hazardous Materials Management Division
103 South Main Street, West Building
Waterbury, Vermont 05671-0404
(802) 244-8702

Department of Fish and Wildlife
Department of Forests, Parks and Recreation
Department of Environmental Conservation
State Geologist
Natural Resources Conservation Council

March 18, 1993

Mr. Craig Trischman, President
Twin State Fertilizer
P.O. Box 145
Bradford, VT. 05033

Re: Letter of Warning: Twin State Fertilizer, Bradford, VT.

Dear Mr. Trischman:

On February 3, 1993 an inspector from the Vermont Department of Environmental Conservation visited Twin State Fertilizer located in Bradford, Vermont to inspect the underground storage tank (UST) for compliance with Vermont's UST Regulations. The inspector found the following alleged violations of the Vermont UST Regulations:

1. Failure to obtain an UST permit. No owner or operator shall operate or maintain any category one tank without a permit from the Agency... [UST Regulation 8-302(2)(a)]
2. Failure to pay annual Petroleum Tank Assessment fees or otherwise demonstrate adequate financial responsibility in accordance with 10 V.S.A. Chapter 59, Section 1943.

Prior to 1989, USTs with a capacity of less than 1100 gallons that were used for commercial purposes were exempt from the UST rules. However, laws passed in 1989 eliminated this exemption, and included tanks such as yours in the definition of "category one tanks". The 500 gallon UST on your premises has therefore required a permit since 1989. The Agency does not collect back fees for UST permits, but \$25.00 is due for the year of 1993 if the UST is to remain in service. See Section 8-302 of the Vermont UST Regulations which the inspector left with you for more information on UST permits.

According to Vermont UST Regulation 8-303, "The owner or operator of any category one tank...shall demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by sudden and nonsudden accidental releases from underground storage tanks in a timely manner..." If you cannot demonstrate self insurance or attain pollution liability insurance, you must pay annual Petroleum Tank Assessment fees to the Agency in order to fulfill the financial responsibility requirement. Petroleum Tank Assessment fees for the UST at your facility have been payable in the amount \$200.00 annually since 1989, inclusive. Back fees total \$800.00 for the past four years and must be paid in order to permit the UST.

The Agency cannot issue a permit without these assessment fees paid in full. Furthermore, nonpayment of Petroleum Tank Assessment fees means that you will not be covered by the State Petroleum Cleanup Fund in the event contamination is found around your UST. In this case, you will be liable for all expenses incurred for remediation of the environment. See Section 8-303 of the Vermont UST Regulations for details.

Mr. Craig Trischman
18 March, 1993
Page 2.

If your UST is 10 years old or older it also requires an approved method of release detection to be implemented. All category one tanks, regardless of age, will require release detection no later than December 22, 1993. Information on methods for release detection may be found in Section 8-504 of the Vermont UST Regulations.

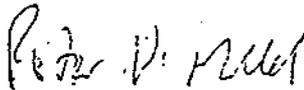
The alternative to permitting the UST, equipping it with releases detection, and paying future permit fees and future Petroleum Tank Assessment fees is to have the tank removed. If you choose this option, we strongly urge that you pay the overdue Petroleum Tank Assessment fees of \$800.00 first. You would then be eligible for the Petroleum Cleanup fund if contamination is found. Ultimately this may be the most economical solution, as no future fees need be paid.

For your convenience, we have enclosed lists of contractors who can remove and dispose of the UST, and consultants who can perform a site assessment. Please contact this office at least fifteen days prior to the date of scheduled removal if you choose this option. Details of UST removal (tank closure) can be found in Section 8-605 of the Vermont UST Regulations. We can also send a more detailed packet on UST removal and site assessment requirements.

Within 30 days after receiving this letter you must respond in writing with your intended course of action. Failure to correct the violation may result in stricter enforcement measures being taken, but we are confident that problems are best resolved on a voluntary basis.

If you have any questions on how to bring your facility into compliance, please call Tim McNamara or Ted Unkles at 244-8702, so that we can discuss your particular situation.

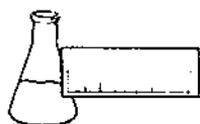
Sincerely,



Peter Marshall, Chief
Management & Prevention Section

PM/tm
Enclosure

twil.vvm



ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

REPORT OF LABORATORY ANALYSIS

CLIENT: Wagner, Heindel, & Noyes, Inc.
PROJECT NAME: Haynes Farmway
DATE REPORTED: November 30, 1995
DATE SAMPLED: November 6 - 7, 1995

PROJECT CODE: HNHF1953
REF. # 82,828 - 82,831

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody record.

Chain of custody indicated sample preservation upon arrival at the laboratory.

All samples were prepared and analyzed by requirements outlined in the referenced methods and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced methods.

Blank contamination was not observed at levels affecting the analytical results.

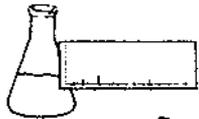
Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Individual sample performance was monitored by the addition of surrogate analytes to each sample. All surrogate data was determined to be within Laboratory QA/QC guidelines unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

enclosures



ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

GC/FID PETROLEUM FINGERPRINT

CLIENT: Wagner, Heindel, & Noyes, Inc.

PROJECT NAME: Haynes Farmway

REPORT DATE: November 30, 1995

SAMPLER: D. Reese

DATE SAMPLED: November 6, 1995

DATE RECEIVED: November 9, 1995

PROJECT CODE: HNHF1953

ANALYSIS DATE: November 22, 1995

STATION: MW4

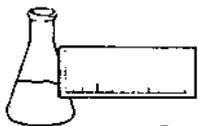
REF.#: 82,828

TIME SAMPLED: 10:00

The chromatographic fingerprint of this sample shows a significant correlation with the chromatographic fingerprint of Diesel Fuel. The total Petroleum Hydrocarbon value for this sample determined by modified EPA method 8100 is 34.1 mg/Kg.

NOTES:

1 Method detection limit is 5.0 mg/Kg.



ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

GC/FID PETROLEUM FINGERPRINT

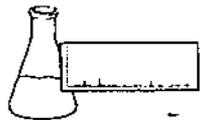
CLIENT: Wagner, Heindel, & Noyes, Inc.
PROJECT NAME: Haynes Farmway
REPORT DATE: November 30, 1995
SAMPLER: D. Reese
DATE SAMPLED: November 6, 1995
DATE RECEIVED: November 9, 1995

PROJECT CODE: HNHF1953
ANALYSIS DATE: November 22, 1995
STATION: MW5
REF.#: 82,829
TIME SAMPLED: 12:00

The chromatographic fingerprint of this sample shows a significant correlation with the chromatographic fingerprint of Diesel Fuel. The total Petroleum Hydrocarbon value for this sample determined by modified EPA method 8100 is 3,880 mg/Kg.

NOTES:

1 Method detection limit is 5.0 mg/Kg.



ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

GC/FID PETROLEUM FINGERPRINT

CLIENT: Wagner, Heindel, & Noyes, Inc.

PROJECT NAME: Haynes Farmway

REPORT DATE: November 30, 1995

SAMPLER: D. Reese

DATE SAMPLED: November 6, 1995

DATE RECEIVED: November 9, 1995

PROJECT CODE: HNHF1953

ANALYSIS DATE: November 22, 1995

STATION: MW6

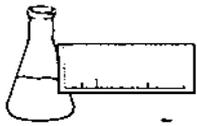
REF.#: 82,830

TIME SAMPLED: 14:00

The chromatographic fingerprint of this sample shows a significant correlation with the chromatographic fingerprint of Diesel Fuel. The total Petroleum Hydrocarbon value for this sample determined by modified EPA method 8100 is 13,800 mg/Kg.

NOTES:

1 Method detection limit is 5.0 mg/Kg.



ENDYNE, INC.

p.5

Laboratory Services

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LABORATORY REPORT

GC/FID PETROLEUM FINGERPRINT

CLIENT: Wagner, Heindel, & Noyes, Inc.

PROJECT NAME: Haynes Farmway

REPORT DATE: November 30, 1995

SAMPLER: D. Reese

DATE SAMPLED: November 7, 1995

DATE RECEIVED: November 9, 1995

PROJECT CODE: HNHF1953

ANALYSIS DATE: November 22, 1995

STATION: MW 12

REF.#: 82,831

TIME SAMPLED: 16:00

The chromatographic fingerprint of this sample shows a significant correlation with the chromatographic fingerprint of Gasoline and Diesel Fuel. The total Petroleum Hydrocarbon value for this sample determined by modified EPA method 8100 is 42.8 mg/Kg.

NOTES:

1 Method detection limit is 5.0 mg/Kg.

CHAIN-OF-CUSTODY RECORD

17648

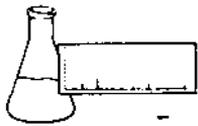
Project Name: <u>HAYNES FARMWAY</u> Site Location: <u>BRADFORD, VT</u>	Reporting Address:	Billing Address:
Endyne Project Number: <u>H/NHF 1953</u>	Company: <u>WHN</u> Contact Name/Phone #: <u>J. SILVER</u>	Sampler Name: <u>D. RYSE</u> Phone #: <u>WHN</u>

Lab #	Sample Location	Matrix	G R A B	C O M P	Date/Time	Sample Containers		Field Results/Remarks	Analysis Required	Sample Preservation	Rush
						No.	Type/Size				
82,828	MW 4	SOIL		X	11-6-95 1000	1	250ml AG		30	40	
82,829	5	↓		↓	1200	↓	↓		↓	↓	
82,830	6	↓		↓	1400	↓	↓		↓	↓	
82,831	12	↓		↓	11/7/95 1000	↓	↓		↓	↓	

Relinquished by: Signature <u>[Signature]</u>	Received by: Signature <u>[Signature]</u>	Date/Time <u>11/9/95 11:30 P.M.</u>
Relinquished by: Signature	Received by: Signature	Date/Time

 New York State Project: Yes No
Requested Analyses

1	pH	6	TKN	11	Total Solids	16	Metals (Specify)	21	EPA 624	26	EPA 8270 B/N or Acid
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	EPA 625 B/N or A	27	EPA 8010/8020
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	EPA 418.1	28	EPA 8080 Pest/PCB
4	Nitrite N	9	BOD ₅	14	Turbidity	19	BTEX	24	EPA 608 Pest/PCB		
5	Nitrate N	10	Alkalinity	15	Conductivity	20	EPA 601/602	25	EPA 8240		
29	TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										
30	Other (Specify): <u>TPH BY 8100 PETRO. I.D.</u>										



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REPORT OF LABORATORY ANALYSIS

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes/Farmway
DATE REPORTED: November 9, 1995
DATE SAMPLED: October 18, 1995

PROJECT CODE: HNHF1679
REF. #: 81,451

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody record.

Chain of custody indicated sample preservation with Sodium Azide.

All samples were prepared and analyzed by requirements outlined in the referenced methods and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced methods.

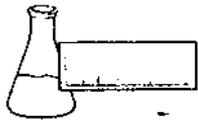
Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy were monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

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LABORATORY REPORT

GC/FID PETROLEUM FINGERPRINT

CLIENT: Wagner, Heindel, and Noyes, Inc.

PROJECT NAME: Haynes/Farmway

REPORT DATE: November 9, 1995

SAMPLER: D. Reese

DATE SAMPLED: October 18, 1995

DATE RECEIVED: October 19, 1995

PROJECT CODE: HNHF1679

ANALYSIS DATE: October 26, 1995

STATION: MW2

REF.#: 81,451

TIME SAMPLED: 0900

Petroleum identification is determined by comparison of the chromatographic fingerprint of the sample with a laboratory generated library of chromatographic fingerprints of assorted Petroleum Standards. The fingerprint of this sample most closely resembles a mixture of Gasoline and Kerosene Fuels.



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CHAIN-OF-CUSTODY RECORD

14879

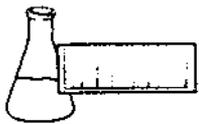
Project Name: <u>HAYNES/FARMWAY</u>	Reporting Address:	Billing Address:
Site Location: <u>BRADFORD, VT</u>		
Endyne Project Number: <u>HNUHF1679</u>	Company: <u>WHN</u>	Sampler Name: <u>D. REESE</u>
	Contact Name/Phone #: <u>J. SILFELZ</u>	Phone #: <u>WHN</u>

Lab #	Sample Location	Matrix	G R A B	C O M P	Date/Time	Sample Containers		Field Results/Remarks	Analysis Required	Sample Preservation	Rush
						No.	Type/Size				
81,451	MU/2	FUEL	X		10-18-95 0900	2	40 ml		PETRO. I.D.	WHN/5/40	

Relinquished by: Signature	Received by: Signature <u>Ron Ben</u>	Date/Time <u>10/19/95 4:40 p.m.</u>
Relinquished by: Signature	Received by: Signature	Date/Time

New York State Project: Yes No Requested Analyses

1	pH	6	TKN	11	Total Solids	16	Metals (Specify)	21	EPA 624	26	EPA 8270 B/N or Acid
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	EPA 625 B/N or A	27	EPA 8010/8020
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	EPA 418.1	28	EPA 8080 Pest/PCB
4	Nitrite N	9	BOD ₅	14	Turbidity	19	BTEX	24	EPA 608 Pest/PCB		
5	Nitrate N	10	Alkalinity	15	Conductivity	20	EPA 601/602	25	EPA 8240		
29	TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										
30	Other (Specify):										



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REPORT OF LABORATORY ANALYSIS

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes/Farmway
REPORT DATE: October 25, 1995
DATE SAMPLED: October 11, 1995

PROJECT CODE: HNHF1582
REF. #: 81,145 - 81,147

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody.

Chain of custody indicated sample preservation with Sodium Azide.

All samples were prepared and analyzed by requirements outlined in the referenced method and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced method.

Blank contamination was not observed at levels affecting the analytical results.

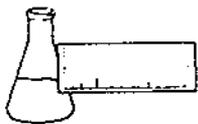
Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Individual sample performance was monitored by the addition of surrogate analytes to each sample. All surrogate recovery data was determined to be within Laboratory QA/QC guidelines unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

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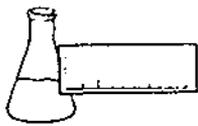
LABORATORY REPORT

EPA METHOD 601/602 COMPOUNDS BY EPA METHOD 8260

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes/Farmway
REPORT DATE: October 25, 1995
DATE SAMPLED: October 11, 1995
DATE RECEIVED: October 12, 1995
ANALYSIS DATE: October 24, 1995

PROJECT CODE: HNHF1582
REF.#: 81,145
STATION: MW 1
TIME SAMPLED: 15:45
SAMPLER: D. Reese

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	2	ND ¹
Bromobenzene	2	ND
Bromochloromethane	2	ND
Bromodichloromethane	2	ND
Bromoform	2	ND
Bromomethane	5	ND
n-Butylbenzene	2	ND
sec-Butylbenzene	2	ND
Carbon Tetrachloride	2	ND
Chlorobenzene	2	ND
Chloroethane	5	ND
Chloroform	5	ND
Chloromethane	10	ND
2&4-Chlorotoluene	2	ND
Dibromochloromethane	2	ND
1,2-Dibromo-3-Chloropropane	2	ND
1,2-Dibromoethane	2	ND
Dibromomethane	2	ND



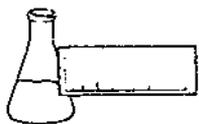
ENDYNE, INC.

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REF.#: 81,145

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Dichlorodifluoromethane	10	ND
1,1-Dichloroethane	2	ND
1,2-Dichloroethane	2	ND
1,1-Dichloroethene	2	ND
cis-1,2-Dichloroethene	2	ND
trans-1,2-Dichloroethene	2	ND
1,2-Dichloropropane	2	ND
1,3-Dichloropropane	2	ND
2,2-Dichloropropane	2	ND
1,1-Dichloropropene	2	ND
cis-1,3-Dichloropropene	2	ND
trans-1,3-Dichloropropene	2	ND
Ethylbenzene	2	ND
Hexachlorobutadiene	5	ND
Isopropylbenzene	2	ND
p-Isopropyltoluene	2	ND
Methylene Chloride	10	ND
Naphthalene	10	ND
n-Propylbenzene	2	ND
Styrene	2	ND
1,1,1,2-Tetrachloroethane	2	ND
1,1,2,2-Tetrachloroethane	2	ND
Tetrachloroethene	2	ND



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REF.#: 81,145

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Toluene	2	ND
1,2,3-Trichlorobenzene	2	ND
1,2,4-Trichlorobenzene	2	ND
1,1,1-Trichloroethane	2	ND
1,1,2-Trichloroethane	2	ND
Trichloroethene	2	ND
Trichlorofluoromethane	2	ND
1,2,3-Trichloropropane	2	ND
1,2,4-Trimethylbenzene	2	ND
1,3,5-Trimethylbenzene	2	ND
Vinyl Chloride	10	ND
Total Xylenes	2	ND
MTBE	5	ND

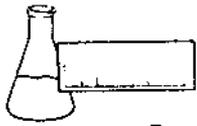
NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

ANALYTICAL SURROGATE RECOVERY:

Dibromofluoromethane : 90.%
 Toluene-d8 : 100.%
 4-Bromofluorobenzene : 87.%

NOTES:

1 None detected



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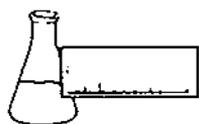
LABORATORY REPORT

EPA METHOD 601/602 COMPOUNDS BY EPA METHOD 8260

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes/Farmway
REPORT DATE: October 25, 1995
DATE SAMPLED: October 11, 1995
DATE RECEIVED: October 12, 1995
ANALYSIS DATE: October 24, 1995

PROJECT CODE: HNHF1582
REF.#: 81,146
STATION: MW 2
TIME SAMPLED: 16:30
SAMPLER: D. Reese

<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	200	766.
Bromobenzene	200	ND ²
Bromochloromethane	200	ND
Bromodichloromethane	200	ND
Bromoform	200	ND
Bromomethane	500	ND
n-Butylbenzene	200	ND
sec-Butylbenzene	200	ND
Carbon Tetrachloride	200	ND
Chlorobenzene	200	ND
Chloroethane	500	ND
Chloroform	500	ND
Chloromethane	1000	ND
2&4-Chlorotoluene	200	ND
Dibromochloromethane	200	ND
1,2-Dibromo-3-Chloropropane	200	ND
1,2-Dibromoethane	200	ND
Dibromomethane	200	ND



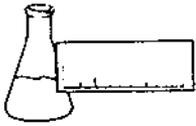
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Laboratory Services

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REF.#: 81,146

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
1,2-Dichlorobenzene	200	ND
1,3-Dichlorobenzene	200	ND
1,4-Dichlorobenzene	200	ND
Dichlorodifluoromethane	1000	ND
1,1-Dichloroethane	200	ND
1,2-Dichloroethane	200	ND
1,1-Dichloroethene	200	ND
cis-1,2-Dichloroethene	200	ND
trans-1,2-Dichloroethene	200	ND
1,2-Dichloropropane	200	ND
1,3-Dichloropropane	200	ND
2,2-Dichloropropane	200	ND
1,1-Dichloropropene	200	ND
cis-1,3-Dichloropropene	200	ND
trans-1,3-Dichloropropene	200	ND
Ethylbenzene	200	1,580.
Hexachlorobutadiene	500	ND
Isopropylbenzene	200	TBQ ³
p-Isopropyltoluene	200	ND
Methylene Chloride	1000	ND
Naphthalene	1000	ND
n-Propylbenzene	200	281.
Styrene	200	ND
1,1,1,2-Tetrachloroethane	200	ND
1,1,2,2-Tetrachloroethane	200	ND
Tetrachloroethene	200	ND



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REF.#: 81,146

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Toluene	200	6,590.
1,2,3-Trichlorobenzene	200	ND
1,2,4-Trichlorobenzene	200	ND
1,1,1-Trichloroethane	200	ND
1,1,2-Trichloroethane	200	ND
Trichloroethene	200	ND
Trichlorofluoromethane	200	ND
1,2,3-Trichloropropane	200	ND
1,2,4-Trimethylbenzene	200	2,480.
1,3,5-Trimethylbenzene	200	1,000.
Vinyl Chloride	1000	ND
Total Xylenes	200	10,500.
MTBE	500	ND

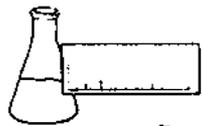
NUMBER OF UNIDENTIFIED PEAKS FOUND: >10

ANALYTICAL SURROGATE RECOVERY:

Dibromofluoromethane : 91.%
Toluene-d8 : 95.%
4-Bromofluorobenzene : 89.%

NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at a 1% dilution.
- 2 None detected
- 3 Trace below quantitation limit



LABORATORY REPORT

EPA METHOD 601/602 COMPOUNDS BY EPA METHOD 8260

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes/Farmway
REPORT DATE: October 25, 1995
DATE SAMPLED: October 11, 1995
DATE RECEIVED: October 12, 1995
ANALYSIS DATE: October 24, 1995

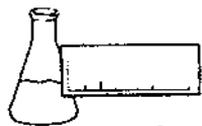
PROJECT CODE: HNHF1582
REF.#: 81,147
STATION: MW 3
TIME SAMPLED: 18:00
SAMPLER: D. Reese

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	2	ND ¹
Bromobenzene	2	ND
Bromochloromethane	2	ND
Bromodichloromethane	2	ND
Bromoform	2	ND
Bromomethane	5	ND
n-Butylbenzene	2	ND
sec-Butylbenzene	2	ND
Carbon Tetrachloride	2	ND
Chlorobenzene	2	ND
Chloroethane	5	ND
Chloroform	5	ND
Chloromethane	10	ND
2&4-Chlorotoluene	2	ND
Dibromochloromethane	2	ND
1,2-Dibromo-3-Chloropropane	2	ND
1,2-Dibromoethane	2	ND
Dibromomethane	2	ND



REF.#: 81,147

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Dichlorodifluoromethane	10	ND
1,1-Dichloroethane	2	ND
1,2-Dichloroethane	2	ND
1,1-Dichloroethene	2	ND
cis-1,2-Dichloroethene	2	ND
trans-1,2-Dichloroethene	2	ND
1,2-Dichloropropane	2	ND
1,3-Dichloropropane	2	ND
2,2-Dichloropropane	2	ND
1,1-Dichloropropene	2	ND
cis-1,3-Dichloropropene	2	ND
trans-1,3-Dichloropropene	2	ND
Ethylbenzene	2	ND
Hexachlorobutadiene	5	ND
Isopropylbenzene	2	ND
p-Isopropyltoluene	2	ND
Methylene Chloride	10	ND
Naphthalene	10	ND
n-Propylbenzene	2	ND
Styrene	2	ND
1,1,1,2-Tetrachloroethane	2	ND
1,1,2,2-Tetrachloroethane	2	ND
Tetrachloroethene	2	ND



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REF.#: 81,147

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Toluene	2	TBQ ²
1,2,3-Trichlorobenzene	2	ND
1,2,4-Trichlorobenzene	2	ND
1,1,1-Trichloroethane	2	ND
1,1,2-Trichloroethane	2	ND
Trichloroethene	2	ND
Trichlorofluoromethane	2	ND
1,2,3-Trichloropropane	2	ND
1,2,4-Trimethylbenzene	2	3.6
1,3,5-Trimethylbenzene	2	TBQ
Vinyl Chloride	10	ND
Total Xylenes	2	8.0
MTBE	5	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: 2

ANALYTICAL SURROGATE RECOVERY:

Dibromofluoromethane : 87.%

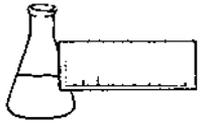
Toluene-d8 : 100.%

4-Bromofluorobenzene : 88.%

NOTES:

1 None detected

2 Trace below quantitation limit



ENDYNE, INC.

p. 20
Laboratory Services

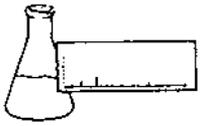
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LABORATORY REPORT

CHARACTERIZATION OF UNIDENTIFIED PEAKS

Client: Wagner, Heindel, & Noyes, Inc.
Project: Haynes/Farmway
Analysis: EPA Method 601/602
Reference #: 81,146
Station I.D.: MW 2
Unidentified Peaks: >10
Project Code: HNHF1582

Unidentified peak characterization is achieved by direct comparison of sample and library spectral data. The unidentified peaks in this sample consist of Aliphatic Hydrocarbons and Alkylated Benzenes ranging in concentration from 100 - 2,500 ug/L.



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p. 21
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LABORATORY REPORT

CHARACTERIZATION OF UNIDENTIFIED PEAKS

Client: Wagner, Heindel, & Noyes, Inc.
Project: Haynes/Farmway
Analysis: EPA Method 601/602
Reference #: 81,147
Station I.D.: MW 3
Unidentified Peaks: 2
Project Code: HNHF1582

Unidentified peak characterization is achieved by direct comparison of sample and library spectral data. The unidentified peaks in this sample consist of Alkylated Benzenes both at approximately 5 ug/L.



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CHAIN-OF-CUSTODY RECORD

15977

Project Name: HAYNES FARMWAY	Reporting Address:	Billing Address:
Site Location: BRADFORD, VT		
Endyne Project Number: HNHR-1582	Company: WHA	Sampler Name: D. REESE
	Contact Name/Phone #: J. SILVER	Phone #: WHA

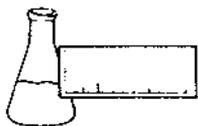
Lab #	Sample Location	Matrix	GRA B	COMP	Date/Time	Sample Containers		Field Results/Remarks	Analysis Required	Sample Preservation	Rush
						No.	Type/Size				
81,145	MW 1	WATER	X		10-11-95 1545	2	40ml		20	N ₂	
81,146	2	↓	↓		1630	↓	↓		↓	↓	
81,147	3	↓	↓		1800	↓	↓		↓	↓	

Relinquished by: Signature	Received by: Signature	Date/Time 10/10/95	1:20
Relinquished by: Signature	Received by: Signature	Date/Time	

New York State Project: Yes No

Requested Analyses

1	pH	6	TKN	11	Total Solids	16	Metals (Specify)	21	EPA 624	26	EPA 8270 B/N or Acid
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	EPA 625 B/N or A	27	EPA 8010/8020
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	EPA 418.1	28	EPA 8080 Pest/PCB
4	Nitrite N	9	BOD ₅	14	Turbidity	19	BTEX	24	EPA 608 Pest/PCB		
5	Nitrate N	10	Alkalinity	15	Conductivity	20	EPA 601/602	25	EPA 8240		
29	TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										
30	Other (Specify):										



ENDYNE, INC.

Laboratory Services

32 James Brown Drive
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(802) 879-4333
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REPORT OF LABORATORY ANALYSIS

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes Farmway
REPORT DATE: November 27, 1995
DATE SAMPLED: November 8, 1995

PROJECT CODE: HNHF1954
REF.#: 82,832 - 82,842

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. Chain of custody indicated sample preservation with NaN_3 .

All samples were prepared and analyzed by requirements outlined in the referenced method and within the specified holding times. All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced method. Blank contamination was not observed at levels affecting the analytical results.

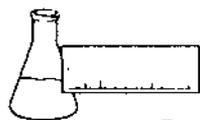
Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Individual sample performance was monitored by the addition of surrogate analytes to each sample. All surrogate recovery data was determined to be within laboratory QA/QC guidelines unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

enclosures



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LABORATORY REPORT

EPA METHOD 602--PURGEABLE AROMATICS

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes Farmway
REPORT DATE: November 27, 1995
DATE SAMPLED: November 8, 1995
DATE RECEIVED: November 9, 1995
DATE ANALYZED: November 17, 1995

PROJECT CODE: HNHF1954
REF.#: 82,840
STATION: MW-4
TIME SAMPLED: 15:15
SAMPLER: D. Reese

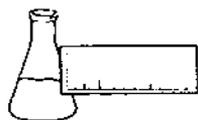
<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	50	ND ²
Chlorobenzene	50	ND
1,2-Dichlorobenzene	50	ND
1,3-Dichlorobenzene	50	ND
1,4-Dichlorobenzene	50	ND
Ethylbenzene	50	ND
Toluene	50	ND
Xylenes	50	215.
MTBE	500	ND

Bromobenzene Surrogate Recovery: 102%

NUMBER OF UNIDENTIFIED PEAKS FOUND: >10

NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at a 2% dilution.
- 2 None detected



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LABORATORY REPORT

EPA METHOD 602--PURGEABLE AROMATICS

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes Farmway
REPORT DATE: November 27, 1995
DATE SAMPLED: November 8, 1995
DATE RECEIVED: November 9, 1995
DATE ANALYZED: November 16, 1995

PROJECT CODE: HNHF1954
REF.#: 82,839
STATION: MW-5
TIME SAMPLED: 14:45
SAMPLER: D. Reese

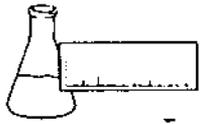
<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	21.5
MTBE	10	ND

Bromobenzene Surrogate Recovery: 94%

NUMBER OF UNIDENTIFIED PEAKS FOUND: >10

NOTES:

1 None detected



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LABORATORY REPORT

EPA METHOD 602--PURGEABLE AROMATICS

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes Farmway
REPORT DATE: November 27, 1995
DATE SAMPLED: November 8, 1995
DATE RECEIVED: November 9, 1995
DATE ANALYZED: November 16, 1995

PROJECT CODE: HNHF1954
REF.#: 82,838
STATION: MW-6
TIME SAMPLED: 14:15
SAMPLER: D. Reese

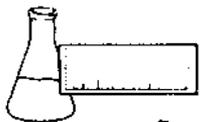
<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	20	ND ²
Chlorobenzene	20	ND
1,2-Dichlorobenzene	20	ND
1,3-Dichlorobenzene	20	ND
1,4-Dichlorobenzene	20	ND
Ethylbenzene	20	ND
Toluene	20	ND
Xylenes	20	314.
MTBE	200	ND

Bromobenzene Surrogate Recovery: 104%

NUMBER OF UNIDENTIFIED PEAKS FOUND: >10

NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at a 5% dilution.
- 2 None detected



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LABORATORY REPORT

EPA METHOD 602--PURGEABLE AROMATICS

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes Farmway
REPORT DATE: November 27, 1995
DATE SAMPLED: November 8, 1995
DATE RECEIVED: November 9, 1995
DATE ANALYZED: November 16, 1995

PROJECT CODE: HNHF1954
REF.#: 82,837
STATION: MW-7
TIME SAMPLED: 13:15
SAMPLER: D. Reese

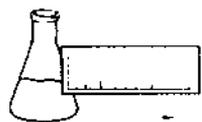
<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	10	ND

Bromobenzene Surrogate Recovery: 99%

NUMBER OF UNIDENTIFIED PEAKS FOUND: >10

NOTES:

1 None detected



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LABORATORY REPORT

EPA METHOD 602--PURGEABLE AROMATICS

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes Farmway
REPORT DATE: November 27, 1995
DATE SAMPLED: November 8, 1995
DATE RECEIVED: November 9, 1995
DATE ANALYZED: November 16, 1995

PROJECT CODE: HNHF1954
REF.#: 82,835
STATION: MW-8
TIME SAMPLED: 11:15
SAMPLER: D. Reese

<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	50	1,020.
Chlorobenzene	50	ND ²
1,2-Dichlorobenzene	50	ND
1,3-Dichlorobenzene	50	ND
1,4-Dichlorobenzene	50	ND
Ethylbenzene	50	171.
Toluene	50	ND
Xylenes	50	2,540.
MTBE	500	ND

Bromobenzene Surrogate Recovery: 98%

NUMBER OF UNIDENTIFIED PEAKS FOUND: >10

NOTES:

1 Detection limit raised due to high levels of contaminants. Sample run at a 2% dilution.

2 None detected



ENDYNE, INC.

p. 29

Laboratory Services

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LABORATORY REPORT

EPA METHOD 602--PURGEABLE AROMATICS

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes Farmway
REPORT DATE: November 27, 1995
DATE SAMPLED: November 8, 1995
DATE RECEIVED: November 9, 1995
DATE ANALYZED: November 16, 1995

PROJECT CODE: HNHF1954
REF.#: 82,833
STATION: MW-9
TIME SAMPLED: 10:00
SAMPLER: D. Reese

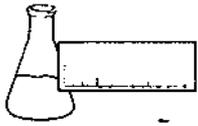
<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	10	ND

Bromobenzene Surrogate Recovery: 97%

NUMBER OF UNIDENTIFIED PEAKS FOUND: >10

NOTES:

1 None detected



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p-31

Laboratory Services

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LABORATORY REPORT

EPA METHOD 602--PURGEABLE AROMATICS

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes Farmway
REPORT DATE: November 27, 1995
DATE SAMPLED: November 8, 1995
DATE RECEIVED: November 9, 1995
DATE ANALYZED: November 16, 1995

PROJECT CODE: HNHF1954
REF.#: 82,834
STATION: MW-10
TIME SAMPLED: 10:30
SAMPLER: D. Reese

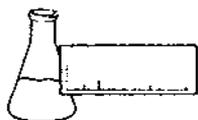
<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	10	ND

Bromobenzene Surrogate Recovery: 99%

NUMBER OF UNIDENTIFIED PEAKS FOUND: >10

NOTES:

1 None detected



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LABORATORY REPORT

EPA METHOD 602--PURGEABLE AROMATICS

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes Farmway
REPORT DATE: November 27, 1995
DATE SAMPLED: November 8, 1995
DATE RECEIVED: November 9, 1995
DATE ANALYZED: November 16, 1995

PROJECT CODE: HNHF1954
REF.#: 82,832
STATION: MW-11
TIME SAMPLED: 9:30
SAMPLER: D. Reese

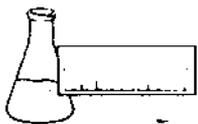
<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	10	ND

Bromobenzene Surrogate Recovery: 96%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected



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LABORATORY REPORT

EPA METHOD 602--PURGEABLE AROMATICS

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes Farmway
REPORT DATE: November 27, 1995
DATE SAMPLED: November 8, 1995
DATE RECEIVED: November 9, 1995
DATE ANALYZED: November 18, 1995

PROJECT CODE: HNHF1954
REF.#: 82,836
STATION: MW-12
TIME SAMPLED: 12:00
SAMPLER: D. Reese

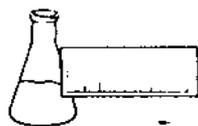
<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	20	ND ²
Chlorobenzene	20	ND
1,2-Dichlorobenzene	20	ND
1,3-Dichlorobenzene	20	ND
1,4-Dichlorobenzene	20	ND
Ethylbenzene	20	41.0
Toluene	20	ND
Xylenes	20	380.
MTBE	200	ND

Bromobenzene Surrogate Recovery: 105%

NUMBER OF UNIDENTIFIED PEAKS FOUND: >10

NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at a 5% dilution.
- 2 None detected



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LABORATORY REPORT

EPA METHOD 602--PURGEABLE AROMATICS

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes Farmway
REPORT DATE: November 27, 1995
DATE SAMPLED: November 8, 1995
DATE RECEIVED: November 9, 1995
DATE ANALYZED: November 17, 1995

PROJECT CODE: HNHF1954
REF.#: 82,842
STATION: Dup
TIME SAMPLED: Not Indicated
SAMPLER: D. Reese

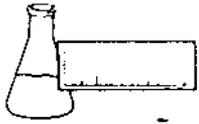
<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	20	ND ²
Chlorobenzene	20	ND
1,2-Dichlorobenzene	20	ND
1,3-Dichlorobenzene	20	ND
1,4-Dichlorobenzene	20	ND
Ethylbenzene	20	50.5
Toluene	20	ND
Xylenes	20	402.
MTBE	200	ND

Bromobenzene Surrogate Recovery: 103%

NUMBER OF UNIDENTIFIED PEAKS FOUND: >10

NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at a 5% dilution.
- 2 None detected



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LABORATORY REPORT

EPA METHOD 602--PURGEABLE AROMATICS

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes Farmway
REPORT DATE: November 27, 1995
DATE SAMPLED: November 8, 1995
DATE RECEIVED: November 9, 1995
DATE ANALYZED: November 16, 1995

PROJECT CODE: HNHF1954
REF.#: 82,841
STATION: Trip
TIME SAMPLED: 7:00
SAMPLER: D. Reese

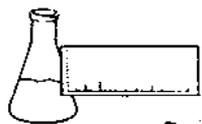
<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	10	ND

Bromobenzene Surrogate Recovery: 98%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected



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p. 35

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EPA METHOD 602 LABORATORY REPORT

MATRIX SPIKE AND DUPLICATE LABORATORY CONTROL DATA

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes Farmway
REPORT DATE: November 27, 1995
DATE SAMPLED: November 8, 1995
DATE RECEIVED: November 9, 1995
DATE ANALYZED: November 16, 1995

PROJECT CODE: HNHF1954
REF.#: 82,839
STATION: MW-5
TIME SAMPLED: 14:45
SAMPLER: D. Reese

<u>Parameter</u>	<u>Sample(ug/L)</u>	<u>Spike(ug/L)</u>	<u>Dup1(ug/L)</u>	<u>Dup2(ug/L)</u>	<u>Avg % Rec</u>
Benzene	ND ¹	10	9.9	9.5	97%
Toluene	ND	10	9.1	8.5	88%
Ethylbenzene	ND	10	8.8	8.8	88%
Xylenes	21.5	30	49.0	49.0	92%

NOTES:

1 None detected

CHAIN-OF-CUSTODY RECORD

17583

82,832 — 82,845

Project Name: <i>HA WWS/PAW WWT</i>	Reporting Address:	Billing Address:
Site Location: <i>BRADFORD, VT</i>		
Endyne Project Number: <i>HNHF1954</i>	Company: <i>WVN</i>	Sampler Name: <i>D. PEELE</i>
	Contact Name/Phone #: <i>J. SAFER</i>	Phone #: <i>WVN</i>

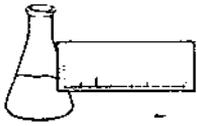
Lab #	Sample Location	Matrix	G R A B	C O M P	Date/Time	Sample Containers		Field Results/Remarks	Analysis Required	Sample Preservation	Rush
						No.	Type/Size				
82,832	<i>MW-11</i>	<i>WASP</i>	<i>X</i>		<i>11-8-95</i> <i>0930</i>	<i>2</i>	<i>40ml</i>		<i>602</i>	<i>Na/Ks</i>	
82,833	<i>9</i>				<i>1000</i>						
82,834	<i>10</i>				<i>1030</i>						
82,835	<i>8</i>				<i>1115</i>				<i>30</i>		
82,836	<i>12</i>				<i>1200</i>						
82,837	<i>7</i>				<i>1315</i>						
82,838	<i>6</i>				<i>1415</i>				<i>30</i>		
82,839	<i>5</i>				<i>1445</i>						
82,840	<i>4</i>				<i>1515</i>				<i>30</i>		
82,841	<i>TRIP</i>				<i>0700</i>						
82,842	<i>DUP</i>				<i>-</i>						

Relinquished by: Signature <i>[Signature]</i>	Received by: Signature <i>[Signature]</i>	Date/Time <i>11/9/95</i>	<i>11:30 AM</i>
Relinquished by: Signature	Received by: Signature	Date/Time	

New York State Project: Yes No

Requested Analyses

1	pH	6	TKN	11	Total Solids	16	Metals (Specify)	21	EPA 624	26	EPA 8270 B/N or Acid
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	EPA 625 B/N or A	27	EPA 8010/8020
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	EPA 418.1	28	EPA 8080 Pests/PCB
4	Nitrite N	9	BOD ₅	14	Turbidity	19	BTEX	24	EPA 608 Pests/PCB		
5	Nitrate N	10	Alkalinity	15	Conductivity	20	EPA 601/602	25	EPA 8240		
29	TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										
30	Other (Specify): <i>DISSOLVED LEAD</i>										



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REPORT OF LABORATORY ANALYSIS

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes/Farmway
DATE REPORTED: December 4, 1995
DATE SAMPLED: November 8, 1995

PROJECT CODE: HNHF1954
REF. #: 82,833 - 82,840

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody record.

Chain of custody indicated sample preservation with Sodium Azide.

All samples were prepared and analyzed by requirements outlined in the referenced methods. TPH by modified 8015 analysis was requested after specified holding times had expired.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced methods.

Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy were monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

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LABORATORY REPORT

TOTAL PETROLEUM HYDROCARBONS (TPH) BY MODIFIED EPA METHOD 8015

DATE: December 4, 1995
CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT: Haynes/Farmway
PROJECT CODE: HNHF1954
COLLECTED BY: D. Reese
DATE SAMPLED: November 8, 1995
DATE RECEIVED: November 9, 1995

<u>Reference #</u>	<u>Sample ID</u>	<u>Concentration(mg/L)¹</u>
82,833	MW 9; 1000	TBQ ²
82,834	MW 10; 1030	0.43
82,835	MW 8; 1115	6.4
82,836	MW 12; 1200	2.1
82,837	MW 7; 1315	ND ³
82,838	MW 6; 1415	2.2
82,839	MW 5; 1445	0.17
82,840	MW 4; 1515	188.

Notes:

- 1 Method detection limit is 0.1 mg/L.
- 2 Trace below quantitation limit
- 3 None Detected

Project Name: <u>HANOVER/FARMWAY</u>	Reporting Address:	Billing Address:
Site Location: <u>BRADFORD, VT</u>		
Endyne Project Number: <u>HWHC1954</u>	Company: <u>W/N</u>	Sampler Name: <u>D. PEESE</u>
	Contact Name/Phone #: <u>J. SILVER</u>	Phone #: <u>W/N</u>

Lab #	Sample Location	Matrix	GRA B	COMP	Date/Time	Sample Containers		Field Results/Remarks	Analysis Required	Sample Preservation	Rush
						No.	Type/Size				
82,832	MW 11	WATER	X		11-8-95 0930	2	40ml	W/N	602	N/A	
82,833	9. W				1000						
82,834	10. W				1030			5	100		
82,835	8. W				1115	1	40 ml	2.0%	30		
82,836	12. W 82460				1200			5.0%			
82,837	7. W 82460				1315			100.0%			
82,838	6. W Bit				1415	1	40 ml	5.0%	30		
82,839	5. W Bit				1445			100.0%			
82,840	4. W 602				1515	1	40 ml	0.5	2.0%	30	
82,841	TRIP				0900			100			
82,842	DUP MW12!				-			2			

Relinquished by: Signature <u>[Signature]</u>	Received by: Signature <u>[Signature]</u>	Date/Time <u>11/9/95</u>	<u>11:30 AM</u>
Relinquished by: Signature	Received by: Signature	Date/Time	

New York State Project: Yes No

Requested Analyses

1	pH	6	TKN	11	Total Solids	16	Metals (Specify)	21	EPA 624	26	EPA 8270 B/N or Acid
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	EPA 625 B/N or A	27	EPA 8010/8020
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	EPA 418.1	28	EPA 8080 Pest/PCB
4	Nitrite N	9	BOD ₅	14	Turbidity	19	BTEX	24	EPA 603 Pest/PCB		
5	Nitrate N	10	Alkalinity	15	Conductivity	20	EPA 601/602	25	EPA 8240		
29	TCPLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										
30	Other (Specify): <u>DISSOLVED LEAD</u>										

TRIP A L L - 11:30 AM



ENDYNE, INC.

Laboratory Services

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REPORT OF LABORATORY ANALYSIS

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes/Farmway
REPORT DATE: December 4, 1995
DATE SAMPLED: November 8, 1995

PROJECT CODE: HNHF1954
REF. #: 82,833 - 82,840

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody.

Chain of custody indicated sample preservation with Sodium Azide.

All samples were prepared and analyzed by requirements outlined in the referenced method. Request for 8260 analysis was received after specified holding times had expired.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced method.

Blank contamination was not observed at levels affecting the analytical results.

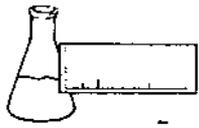
Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Individual sample performance was monitored by the addition of surrogate analytes to each sample. All surrogate recovery data was determined to be within Laboratory QA/QC guidelines unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

enclosures



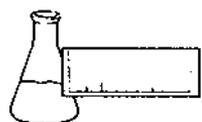
LABORATORY REPORT

EPA METHOD 8260 WATER MATRIX

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes/Farmway
REPORT DATE: December 4, 1995
DATE SAMPLED: November 8, 1995
DATE RECEIVED: November 9, 1995
ANALYSIS DATE: December 3, 1995

PROJECT CODE: HNHF1954
REF.#: 82,833
STATION: MW 9
TIME SAMPLED: 10:00
SAMPLER: D. Reese

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	2	ND ¹
Bromobenzene	2	ND
Bromochloromethane	2	ND
Bromodichloromethane	2	ND
Bromoform	2	ND
Bromomethane	5	ND
n-Butylbenzene	2	ND
sec-Butylbenzene	2	ND
Carbon Tetrachloride	2	ND
Chlorobenzene	2	ND
Chloroethane	5	ND
Chloroform	5	ND
Chloromethane	10	ND
2&4-Chlorotoluene	2	ND
Dibromochloromethane	2	ND
1,2-Dibromo-3-Chloropropane	2	ND
1,2-Dibromoethane	2	ND
Dibromomethane	2	ND



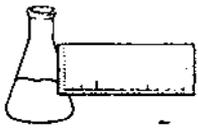
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REF.#: 82,833

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Dichlorodifluoromethane	10	ND
1,1-Dichloroethane	2	ND
1,2-Dichloroethane	2	ND
1,1-Dichloroethene	2	ND
cis-1,2-Dichloroethene	2	ND
trans-1,2-Dichloroethene	2	ND
1,2-Dichloropropane	2	ND
1,3-Dichloropropane	2	ND
2,2-Dichloropropane	2	ND
1,1-Dichloropropene	2	ND
cis-1,3-Dichloropropene	2	ND
trans-1,3-Dichloropropene	2	ND
Ethylbenzene	2	ND
Hexachlorobutadiene	5	ND
Isopropylbenzene	2	ND
p-Isopropyltoluene	2	ND
Methylene Chloride	10	ND
Naphthalene	10	ND
n-Propylbenzene	2	ND
Styrene	2	ND
1,1,1,2-Tetrachloroethane	2	ND
1,1,2,2-Tetrachloroethane	2	ND
Tetrachloroethene	2	ND



REF.#: 82,833

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Toluene	2	ND
1,2,3-Trichlorobenzene	2	ND
1,2,4-Trichlorobenzene	2	ND
1,1,1-Trichloroethane	2	ND
1,1,2-Trichloroethane	2	ND
Trichloroethene	2	ND
Trichlorofluoromethane	2	ND
1,2,3-Trichloropropane	2	ND
1,2,4-Trimethylbenzene	2	2.1
1,3,5-Trimethylbenzene	2	TBQ ²
Vinyl Chloride	10	ND
Total Xylenes	2	TBQ
MTBE	5	ND

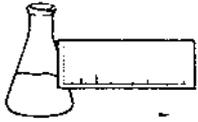
NUMBER OF UNIDENTIFIED PEAKS FOUND: > 10

ANALYTICAL SURROGATE RECOVERY:

Dibromofluoromethane : 110.%
Toluene-d8 : 115.%
4-Bromofluorobenzene : 95.%

NOTES:

- 1 None detected
- 2 Trace below quantitation limit



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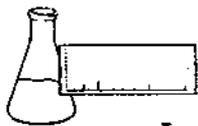
LABORATORY REPORT

EPA METHOD 8260 WATER MATRIX

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes/Farmway
REPORT DATE: December 4, 1995
DATE SAMPLED: November 8, 1995
DATE RECEIVED: November 9, 1995
ANALYSIS DATE: December 3, 1995

PROJECT CODE: HNHF1954
REF.#: 82,834
STATION: MW 10
TIME SAMPLED: 10:30
SAMPLER: D. Reese

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	2	ND ¹
Bromobenzene	2	ND
Bromochloromethane	2	ND
Bromodichloromethane	2	ND
Bromoform	2	ND
Bromomethane	5	ND
n-Butylbenzene	2	ND
sec-Butylbenzene	2	ND
Carbon Tetrachloride	2	ND
Chlorobenzene	2	ND
Chloroethane	5	ND
Chloroform	5	ND
Chloromethane	10	ND
2&4-Chlorotoluene	2	ND
Dibromochloromethane	2	ND
1,2-Dibromo-3-Chloropropane	2	ND
1,2-Dibromoethane	2	ND
Dibromomethane	2	ND



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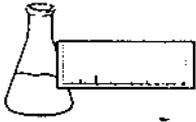
p.45

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REF.#: 82,834

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Dichlorodifluoromethane	10	ND
1,1-Dichloroethane	2	ND
1,2-Dichloroethane	2	ND
1,1-Dichloroethene	2	ND
cis-1,2-Dichloroethene	2	ND
trans-1,2-Dichloroethene	2	ND
1,2-Dichloropropane	2	ND
1,3-Dichloropropane	2	ND
2,2-Dichloropropane	2	ND
1,1-Dichloropropene	2	ND
cis-1,3-Dichloropropene	2	ND
trans-1,3-Dichloropropene	2	ND
Ethylbenzene	2	ND
Hexachlorobutadiene	5	ND
Isopropylbenzene	2	ND
p-Isopropyltoluene	2	ND
Methylene Chloride	10	ND
Naphthalene	10	ND
n-Propylbenzene	2	ND
Styrene	2	ND
1,1,1,2-Tetrachloroethane	2	ND
1,1,2,2-Tetrachloroethane	2	ND
Tetrachloroethene	2	ND



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REF.#: 82,834

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Toluene	2	ND
1,2,3-Trichlorobenzene	2	ND
1,2,4-Trichlorobenzene	2	ND
1,1,1-Trichloroethane	2	ND
1,1,2-Trichloroethane	2	ND
Trichloroethene	2	ND
Trichlorofluoromethane	2	ND
1,2,3-Trichloropropane	2	ND
1,2,4-Trimethylbenzene	2	ND
1,3,5-Trimethylbenzene	2	TBQ ²
Vinyl Chloride	10	ND
Total Xylenes	2	3.9
MTBE	5	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: >10

ANALYTICAL SURROGATE RECOVERY:

Dibromofluoromethane : 106.%

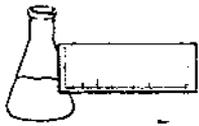
Toluene-d8 : 103.%

4-Bromofluorobenzene : 94.%

NOTES:

1 None detected

2 Trace below quantitation limit



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p-47

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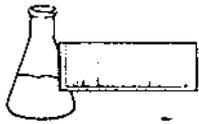
LABORATORY REPORT

EPA METHOD 8260 WATER MATRIX

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes/Farmway
REPORT DATE: December 4, 1995
DATE SAMPLED: November 8, 1995
DATE RECEIVED: November 9, 1995
ANALYSIS DATE: December 4, 1995

PROJECT CODE: HNHF1954
REF.#: 82,835
STATION: MW 8
TIME SAMPLED: 11:15
SAMPLER: D. Reese

<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	100	1,070.
Bromobenzene	100	ND ²
Bromochloromethane	100	ND
Bromodichloromethane	100	ND
Bromoform	100	ND
Bromomethane	250	ND
n-Butylbenzene	100	ND
sec-Butylbenzene	100	ND
Carbon Tetrachloride	100	ND
Chlorobenzene	100	ND
Chloroethane	250	ND
Chloroform	250	ND
Chloromethane	500	ND
2&4-Chlorotoluene	100	ND
Dibromochloromethane	100	ND
1,2-Dibromo-3-Chloropropane	100	ND
1,2-Dibromoethane	100	ND
Dibromomethane	100	ND



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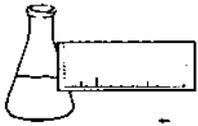
p. 48

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REF.#: 82,835

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
1,2-Dichlorobenzene	100	ND
1,3-Dichlorobenzene	100	ND
1,4-Dichlorobenzene	100	ND
Dichlorodifluoromethane	500	ND
1,1-Dichloroethane	100	ND
1,2-Dichloroethane	100	ND
1,1-Dichloroethene	100	ND
cis-1,2-Dichloroethene	100	ND
trans-1,2-Dichloroethene	100	ND
1,2-Dichloropropane	100	ND
1,3-Dichloropropane	100	ND
2,2-Dichloropropane	100	ND
1,1-Dichloropropene	100	ND
cis-1,3-Dichloropropene	100	ND
trans-1,3-Dichloropropene	100	ND
Ethylbenzene	100	233.
Hexachlorobutadiene	250	ND
Isopropylbenzene	100	ND
p-Isopropyltoluene	100	ND
Methylene Chloride	500	ND
Naphthalene	500	ND
n-Propylbenzene	100	TBQ ³
Styrene	100	ND
1,1,1,2-Tetrachloroethane	100	ND
1,1,2,2-Tetrachloroethane	100	ND
Tetrachloroethene	100	ND



REF.#: 82,835

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Toluene	100	TBQ
1,2,3-Trichlorobenzene	100	ND
1,2,4-Trichlorobenzene	100	ND
1,1,1-Trichloroethane	100	ND
1,1,2-Trichloroethane	100	ND
Trichloroethene	100	ND
Trichlorofluoromethane	100	ND
1,2,3-Trichloropropane	100	ND
1,2,4-Trimethylbenzene	100	672.
1,3,5-Trimethylbenzene	100	266.
Vinyl Chloride	500	ND
Total Xylenes	100	2,450.
MTBE	250	ND

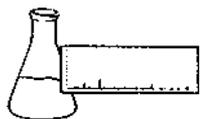
NUMBER OF UNIDENTIFIED PEAKS FOUND: 6

ANALYTICAL SURROGATE RECOVERY:

Dibromofluoromethane : 115.%
Toluene-d8 : 114.%
4-Bromofluorobenzene : 94.%

NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at a 2% dilution.
- 2 None detected
- 3 Trace below quantitation limit



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LABORATORY REPORT

EPA METHOD 8260 WATER MATRIX

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes/Farmway
REPORT DATE: December 4, 1995
DATE SAMPLED: November 8, 1995
DATE RECEIVED: November 9, 1995
ANALYSIS DATE: December 4, 1995

PROJECT CODE: HNHF1954
REF.#: 82,836
STATION: MW 12
TIME SAMPLED: 12:00
SAMPLER: D. Reese

<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	40	ND ²
Bromobenzene	40	ND
Bromochloromethane	40	ND
Bromodichloromethane	40	ND
Bromoform	40	ND
Bromomethane	100	ND
n-Butylbenzene	40	ND
sec-Butylbenzene	40	ND
Carbon Tetrachloride	40	ND
Chlorobenzene	40	ND
Chloroethane	100	ND
Chloroform	100	ND
Chloromethane	200	ND
2&4-Chlorotoluene	40	ND
Dibromochloromethane	40	ND
1,2-Dibromo-3-Chloropropane	40	ND
1,2-Dibromoethane	40	ND
Dibromomethane	40	ND



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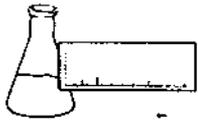
p.51

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REF.#: 82,836

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
1,2-Dichlorobenzene	40	ND
1,3-Dichlorobenzene	40	ND
1,4-Dichlorobenzene	40	ND
Dichlorodifluoromethane	200	ND
1,1-Dichloroethane	40	ND
1,2-Dichloroethane	40	ND
1,1-Dichloroethene	40	ND
cis-1,2-Dichloroethene	40	ND
trans-1,2-Dichloroethene	40	ND
1,2-Dichloropropane	40	ND
1,3-Dichloropropane	40	ND
2,2-Dichloropropane	40	ND
1,1-Dichloropropene	40	ND
cis-1,3-Dichloropropene	40	ND
trans-1,3-Dichloropropene	40	ND
Ethylbenzene	40	80.6
Hexachlorobutadiene	100	ND
Isopropylbenzene	40	TBQ ³
p-Isopropyltoluene	40	ND
Methylene Chloride	200	ND
Naphthalene	200	ND
n-Propylbenzene	40	TBQ
Styrene	40	ND
1,1,1,2-Tetrachloroethane	40	ND
1,1,2,2-Tetrachloroethane	40	ND
Tetrachloroethene	40	ND



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REF.#: 82,836

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Toluene	40	ND
1,2,3-Trichlorobenzene	40	ND
1,2,4-Trichlorobenzene	40	ND
1,1,1-Trichloroethane	40	ND
1,1,2-Trichloroethane	40	ND
Trichloroethene	40	ND
Trichlorofluoromethane	40	ND
1,2,3-Trichloropropane	40	ND
1,2,4-Trimethylbenzene	40	62.6
1,3,5-Trimethylbenzene	40	183.
Vinyl Chloride	200	ND
Total Xylenes	40	470.
MTBE	100	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: > 10

ANALYTICAL SURROGATE RECOVERY:

Dibromofluoromethane : 112.%

Toluene-d8 : 112.%

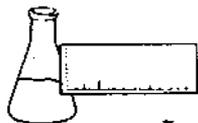
4-Bromofluorobenzene : 95.%

NOTES:

1 Detection limit raised due to high levels of contaminants. Sample run at a 5% dilution.

2 None detected

3 Trace below quantitation limit



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p.53

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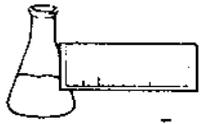
LABORATORY REPORT

EPA METHOD 8260 WATER MATRIX

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes/Farmway
REPORT DATE: December 4, 1995
DATE SAMPLED: November 8, 1995
DATE RECEIVED: November 9, 1995
ANALYSIS DATE: December 4, 1995

PROJECT CODE: HNHF1954
REF.#: 82,837
STATION: MW 7
TIME SAMPLED: 13:15
SAMPLER: D. Reese

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	2	ND ¹
Bromobenzene	2	ND
Bromochloromethane	2	ND
Bromodichloromethane	2	ND
Bromoform	2	ND
Bromomethane	5	ND
n-Butylbenzene	2	ND
sec-Butylbenzene	2	ND
Carbon Tetrachloride	2	ND
Chlorobenzene	2	ND
Chloroethane	5	ND
Chloroform	5	ND
Chloromethane	10	ND
2&4-Chlorotoluene	2	ND
Dibromochloromethane	2	ND
1,2-Dibromo-3-Chloropropane	2	ND
1,2-Dibromoethane	2	ND
Dibromomethane	2	ND



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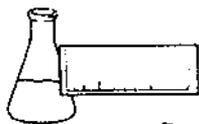
p-53

REF.#: 82,837

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<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Dichlorodifluoromethane	10	ND
1,1-Dichloroethane	2	ND
1,2-Dichloroethane	2	ND
1,1-Dichloroethene	2	ND
cis-1,2-Dichloroethene	2	ND
trans-1,2-Dichloroethene	2	ND
1,2-Dichloropropane	2	ND
1,3-Dichloropropane	2	ND
2,2-Dichloropropane	2	ND
1,1-Dichloropropene	2	ND
cis-1,3-Dichloropropene	2	ND
trans-1,3-Dichloropropene	2	ND
Ethylbenzene	2	ND
Hexachlorobutadiene	5	ND
Isopropylbenzene	2	ND
p-Isopropyltoluene	2	ND
Methylene Chloride	10	ND
Naphthalene	10	ND
n-Propylbenzene	2	ND
Styrene	2	ND
1,1,1,2-Tetrachloroethane	2	ND
1,1,2,2-Tetrachloroethane	2	ND
Tetrachloroethene	2	ND



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p. 54

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REF.#: 82,837

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Toluene	2	ND
1,2,3-Trichlorobenzene	2	ND
1,2,4-Trichlorobenzene	2	ND
1,1,1-Trichloroethane	2	ND
1,1,2-Trichloroethane	2	ND
Trichloroethene	2	ND
Trichlorofluoromethane	2	ND
1,2,3-Trichloropropane	2	ND
1,2,4-Trimethylbenzene	2	ND
1,3,5-Trimethylbenzene	2	ND
Vinyl Chloride	10	ND
Total Xylenes	2	ND
MTBE	5	ND

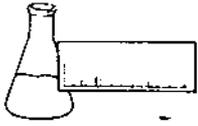
NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

ANALYTICAL SURROGATE RECOVERY:

Dibromofluoromethane : 106.%
Toluene-d8 : 108.%
4-Bromofluorobenzene : 96.%

NOTES:

1 None detected



ENDYNE, INC.

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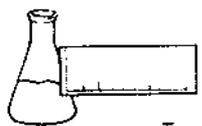
LABORATORY REPORT

EPA METHOD 8260 WATER MATRIX

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes/Farmway
REPORT DATE: December 4, 1995
DATE SAMPLED: November 8, 1995
DATE RECEIVED: November 9, 1995
ANALYSIS DATE: December 4, 1995

PROJECT CODE: HNHF1954
REF.#: 82,838
STATION: MW 6
TIME SAMPLED: 14:15
SAMPLER: D. Reese

<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	40	ND ²
Bromobenzene	40	ND
Bromochloromethane	40	ND
Bromodichloromethane	40	ND
Bromoform	40	ND
Bromomethane	100	ND
n-Butylbenzene	40	ND
sec-Butylbenzene	40	ND
Carbon Tetrachloride	40	ND
Chlorobenzene	40	ND
Chloroethane	100	ND
Chloroform	100	ND
Chloromethane	200	ND
2&4-Chlorotoluene	40	ND
Dibromochloromethane	40	ND
1,2-Dibromo-3-Chloropropane	40	ND
1,2-Dibromoethane	40	ND
Dibromomethane	40	ND



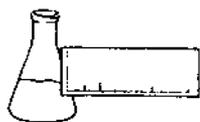
ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

REF.#: 82,838

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
1,2-Dichlorobenzene	40	ND
1,3-Dichlorobenzene	40	ND
1,4-Dichlorobenzene	40	ND
Dichlorodifluoromethane	200	ND
1,1-Dichloroethane	40	ND
1,2-Dichloroethane	40	ND
1,1-Dichloroethene	40	ND
cis-1,2-Dichloroethene	40	ND
trans-1,2-Dichloroethene	40	ND
1,2-Dichloropropane	40	ND
1,3-Dichloropropane	40	ND
2,2-Dichloropropane	40	ND
1,1-Dichloropropene	40	ND
cis-1,3-Dichloropropene	40	ND
trans-1,3-Dichloropropene	40	ND
Ethylbenzene	40	TBQ ³
Hexachlorobutadiene	100	ND
Isopropylbenzene	40	ND
p-Isopropyltoluene	40	ND
Methylene Chloride	200	ND
Naphthalene	200	TBQ
n-Propylbenzene	40	TBQ
Styrene	40	ND
1,1,1,2-Tetrachloroethane	40	ND
1,1,2,2-Tetrachloroethane	40	ND
Tetrachloroethene	40	ND



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REF.#: 82,838

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Toluene	40	ND
1,2,3-Trichlorobenzene	40	ND
1,2,4-Trichlorobenzene	40	ND
1,1,1-Trichloroethane	40	ND
1,1,2-Trichloroethane	40	ND
Trichloroethene	40	ND
Trichlorofluoromethane	40	ND
1,2,3-Trichloropropane	40	ND
1,2,4-Trimethylbenzene	40	291.
1,3,5-Trimethylbenzene	40	100.
Vinyl Chloride	200	ND
Total Xylenes	40	413.
MTBE	100	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: > 10

ANALYTICAL SURROGATE RECOVERY:

Dibromofluoromethane : 113.%

Toluene-d8 : 109.%

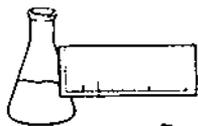
4-Bromofluorobenzene : 95.%

NOTES:

1 Detection limit raised due to high levels of contaminants. Sample run at a 5% dilution.

2 None detected

3 Trace below quantitation limit



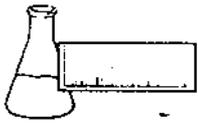
LABORATORY REPORT

EPA METHOD 8260 WATER MATRIX

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes/Farmway
REPORT DATE: December 4, 1995
DATE SAMPLED: November 8, 1995
DATE RECEIVED: November 9, 1995
ANALYSIS DATE: December 4, 1995

PROJECT CODE: HNHF1954
REF.#: 82,839
STATION: MW 5
TIME SAMPLED: 14:45
SAMPLER: D. Reese

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	2	ND ¹
Bromobenzene	2	ND
Bromochloromethane	2	ND
Bromodichloromethane	2	ND
Bromoform	2	ND
Bromomethane	5	ND
n-Butylbenzene	2	ND
sec-Butylbenzene	2	TBQ ²
Carbon Tetrachloride	2	ND
Chlorobenzene	2	ND
Chloroethane	5	ND
Chloroform	5	ND
Chloromethane	10	ND
2&4-Chlorotoluene	2	ND
Dibromochloromethane	2	ND
1,2-Dibromo-3-Chloropropane	2	ND
1,2-Dibromoethane	2	ND
Dibromomethane	2	ND



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32 James Brown Drive
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REF.#: 82,839

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
1,2-Dichlorobenzene	2	ND
1,3-Dichlorobenzene	2	ND
1,4-Dichlorobenzene	2	ND
Dichlorodifluoromethane	10	ND
1,1-Dichloroethane	2	ND
1,2-Dichloroethane	2	ND
1,1-Dichloroethene	2	ND
cis-1,2-Dichloroethene	2	ND
trans-1,2-Dichloroethene	2	ND
1,2-Dichloropropane	2	ND
1,3-Dichloropropane	2	ND
2,2-Dichloropropane	2	ND
1,1-Dichloropropene	2	ND
cis-1,3-Dichloropropene	2	ND
trans-1,3-Dichloropropene	2	ND
Ethylbenzene	2	ND
Hexachlorobutadiene	5	ND
Isopropylbenzene	2	TBQ
p-Isopropyltoluene	2	TBQ
Methylene Chloride	10	ND
Naphthalene	10	10.2
n-Propylbenzene	2	TBQ
Styrene	2	ND
1,1,1,2-Tetrachloroethane	2	ND
1,1,2,2-Tetrachloroethane	2	ND
Tetrachloroethene	2	ND



ENDYNE, INC.

REF.#: 82,839

Laboratory Services

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<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Toluene	2	ND
1,2,3-Trichlorobenzene	2	ND
1,2,4-Trichlorobenzene	2	ND
1,1,1-Trichloroethane	2	ND
1,1,2-Trichloroethane	2	ND
Trichloroethene	2	ND
Trichlorofluoromethane	2	ND
1,2,3-Trichloropropane	2	ND
1,2,4-Trimethylbenzene	2	3.4
1,3,5-Trimethylbenzene	2	TBQ
Vinyl Chloride	10	ND
Total Xylenes	2	21.8
MTBE	5	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: >10

ANALYTICAL SURROGATE RECOVERY:

Dibromofluoromethane : 116.%

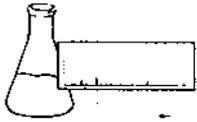
Toluene-d8 : 111.%

4-Bromofluorobenzene : 96.%

NOTES:

1 None detected

2 Trace below quantitation limit



ENDYNE, INC.

Laboratory Services

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LABORATORY REPORT

EPA METHOD 8260 WATER MATRIX

CLIENT: Wagner, Heindel, and Noyes, Inc.
PROJECT NAME: Haynes/Farmway
REPORT DATE: December 4, 1995
DATE SAMPLED: November 8, 1995
DATE RECEIVED: November 9, 1995
ANALYSIS DATE: December 4, 1995

PROJECT CODE: HNHF1954
REF.#: 82,840
STATION: MW 4
TIME SAMPLED: 15:15
SAMPLER: D. Reese

<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	100	ND ²
Bromobenzene	100	ND
Bromochloromethane	100	ND
Bromodichloromethane	100	ND
Bromoform	100	ND
Bromomethane	250	ND
n-Butylbenzene	100	ND
sec-Butylbenzene	100	149.
Carbon Tetrachloride	100	ND
Chlorobenzene	100	ND
Chloroethane	250	ND
Chloroform	250	ND
Chloromethane	500	ND
2&4-Chlorotoluene	100	ND
Dibromochloromethane	100	ND
1,2-Dibromo-3-Chloropropane	100	ND
1,2-Dibromoethane	100	ND
Dibromomethane	100	ND



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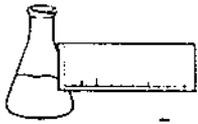
p.6

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REF.#: 82,840

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
1,2-Dichlorobenzene	100	ND
1,3-Dichlorobenzene	100	ND
1,4-Dichlorobenzene	100	ND
Dichlorodifluoromethane	500	ND
1,1-Dichloroethane	100	ND
1,2-Dichloroethane	100	ND
1,1-Dichloroethene	100	ND
cis-1,2-Dichloroethene	100	ND
trans-1,2-Dichloroethene	100	ND
1,2-Dichloropropane	100	ND
1,3-Dichloropropane	100	ND
2,2-Dichloropropane	100	ND
1,1-Dichloropropene	100	ND
cis-1,3-Dichloropropene	100	ND
trans-1,3-Dichloropropene	100	ND
Ethylbenzene	100	ND
Hexachlorobutadiene	250	ND
Isopropylbenzene	100	TBQ ³
p-Isopropyltoluene	100	206.
Methylene Chloride	500	ND
Naphthalene	500	663.
n-Propylbenzene	100	118.
Styrene	100	ND
1,1,1,2-Tetrachloroethane	100	ND
1,1,2,2-Tetrachloroethane	100	ND
Tetrachloroethene	100	ND



ENDYNE, INC.

p63

Laboratory Services

32 James Brown Drive
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FAX 879-7103

REF.#: 82,840

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Toluene	100	ND
1,2,3-Trichlorobenzene	100	ND
1,2,4-Trichlorobenzene	100	ND
1,1,1-Trichloroethane	100	ND
1,1,2-Trichloroethane	100	ND
Trichloroethene	100	ND
Trichlorofluoromethane	100	ND
1,2,3-Trichloropropane	100	ND
1,2,4-Trimethylbenzene	100	886.
1,3,5-Trimethylbenzene	100	325.
Vinyl Chloride	500	ND
Total Xylenes	100	590.
MTBE	250	ND

NUMBER OF UNIDENTIFIED PEAKS FOUND: > 10

ANALYTICAL SURROGATE RECOVERY:

Dibromofluoromethane : 110.%

Toluene-d8 : 107.%

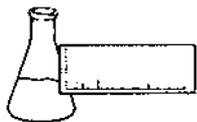
4-Bromofluorobenzene : 98.%

NOTES:

1 Detection limit raised due to high levels of contaminants. Sample run at a 2% dilution.

2 None detected

3 Trace below quantitation limit



ENDYNE, INC.

p.64
Laboratory Services

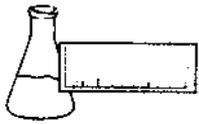
32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

CHARACTERIZATION OF UNIDENTIFIED PEAKS

Client: Wagner, Heindel, & Noyes, Inc.
Project: Haynes/Farmway
Analysis: EPA Method 8260
Reference #: 82,833
Station I.D.: MW-9
Unidentified Peaks: >10
Project Code: HNHF1954

Unidentified peak characterization is achieved by direct comparison of sample and library spectral data. The unidentified peaks in this sample consist of Alkylated Benzenes and PAHs ranging in concentration from 1 to 5 ug/L.



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p.65

Laboratory Services

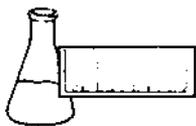
32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

CHARACTERIZATION OF UNIDENTIFIED PEAKS

Client: Wagner, Heindel, & Noyes, Inc.
Project: Haynes/Farmway
Analysis: EPA Method 8260
Reference #: 82,834
Station I.D.: MW-10
Unidentified Peaks: >10
Project Code: HNHF1954

Unidentified peak characterization is achieved by direct comparison of sample and library spectral data. The unidentified peaks in this sample consist of Aliphatic Hydrocarbons, Alkylated Benzenes, and PAHs ranging in concentration from 1 to 10 ug/L.



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p. 66
Laboratory Services

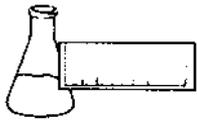
32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

CHARACTERIZATION OF UNIDENTIFIED PEAKS

Client: Wagner, Heindel, & Noyes, Inc.
Project: Haynes/Farmway
Analysis: EPA Method 8260
Reference #: 82,835
Station I.D.: MW-8
Unidentified Peaks: 6
Project Code: HNHF1954

Unidentified peak characterization is achieved by direct comparison of sample and library spectral data. The unidentified peaks in this sample consist of Alkylated Benzenes ranging in concentration from 50 to 1,000 ug/L.



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p. 67

Laboratory Services

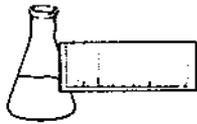
32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

CHARACTERIZATION OF UNIDENTIFIED PEAKS

Client: Wagner, Heindel, & Noyes, Inc.
Project: Haynes/Farmway
Analysis: EPA Method 8260
Reference #: 82,836
Station I.D.: MW-12
Unidentified Peaks: >10
Project Code: HNHF1954

Unidentified peak characterization is achieved by direct comparison of sample and library spectral data. The unidentified peaks in this sample consist of Alkylated Benzenes and PAHs ranging in concentration from 20 to 50 ug/L.



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p. 62

Laboratory Services

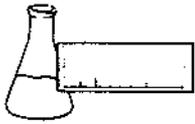
32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

CHARACTERIZATION OF UNIDENTIFIED PEAKS

Client: Wagner, Heindel, & Noyes, Inc.
Project: Haynes/Farmway
Analysis: EPA Method 8260
Reference #: 82,838
Station I.D.: MW-6
Unidentified Peaks: >10
Project Code: HNHF1954

Unidentified peak characterization is achieved by direct comparison of sample and library spectral data. The unidentified peaks in this sample consist of Alkylated Benzenes and PAHs ranging in concentration from 20 to 500 ug/L.



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p.69

Laboratory Services

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LABORATORY REPORT

CHARACTERIZATION OF UNIDENTIFIED PEAKS

Client: Wagner, Heindel, & Noyes, Inc.
Project: Haynes/Farmway
Analysis: EPA Method 8260
Reference #: 82,839
Station I.D.: MW-5
Unidentified Peaks: >10
Project Code: HNHF1954

Unidentified peak characterization is achieved by direct comparison of sample and library spectral data. The unidentified peaks in this sample consist of Alkylated Benzenes and PAHs ranging in concentration from 1 to 10 ug/L.



9.70
Laboratory Services

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LABORATORY REPORT

CHARACTERIZATION OF UNIDENTIFIED PEAKS

Client: Wagner, Heindel, & Noyes, Inc.
Project: Haynes/Farmway
Analysis: EPA Method 8260
Reference #: 82,840
Station I.D.: MW-4
Unidentified Peaks: >10
Project Code: HNHF1954

Unidentified peak characterization is achieved by direct comparison of sample and library spectral data. The unidentified peaks in this sample consist of Aliphatic Hydrocarbons, Alkylated Benzenes and PAHs ranging in concentration from 500 to 10,000 ug/L.

Project Name: <i>HAYNES FARMWAY</i>	Reporting Address:	Billing Address:
Site Location: <i>BRADFORD VT</i>		
Endyne Project Number: <i>WVH 954</i>	Company: <i>WVH</i>	Sampler Name: <i>D. PEEPLE</i>
	Contact Name/Phone #: <i>J. SILVER</i>	Phone #: <i>WVH</i>

Lab #	Sample Location	Matrix	G R A B	C O M P	Date/Time	Sample Containers		Field Results/Remarks	Analysis Required	Sample Preservation	Rush
						No.	Type/Size				
82,832	<i>MW 11</i>	<i>WATER</i>			<i>11-8-95</i> <i>0930</i>	<i>2</i>	<i>40ml</i>	<i>(new)</i>	<i>602</i>	<i>Na/N3</i>	
82,833	<i>09' W</i>				<i>1000</i>						
82,834	<i>10' W</i>				<i>1030</i>			<i>5</i>	<i>100</i>		
82,835	<i>08' W</i>				<i>1115</i>	<i>1</i>	<i>40 ml</i>		<i>2%</i>	<i>30</i>	
82,836	<i>07' W 824/60</i>				<i>1200</i>				<i>5%</i>		
82,837	<i>07' W 824/TPH</i>				<i>1315</i>				<i>100%</i>		
82,838	<i>06' W</i>				<i>1415</i>	<i>1</i>	<i>40 ml</i>	<i>5</i>	<i>5%</i>	<i>30</i>	
82,839	<i>05' W</i>				<i>1445</i>				<i>100%</i>		
82,840	<i>04' W</i>				<i>1515</i>	<i>1</i>	<i>40 ml</i>	<i>0.5</i>	<i>2%</i>	<i>30</i>	
<i>82,841</i>	<i>TRIP</i>				<i>0700</i>			<i>100</i>			
<i>82,842</i>	<i>DUP MW12!</i>							<i>2</i>			

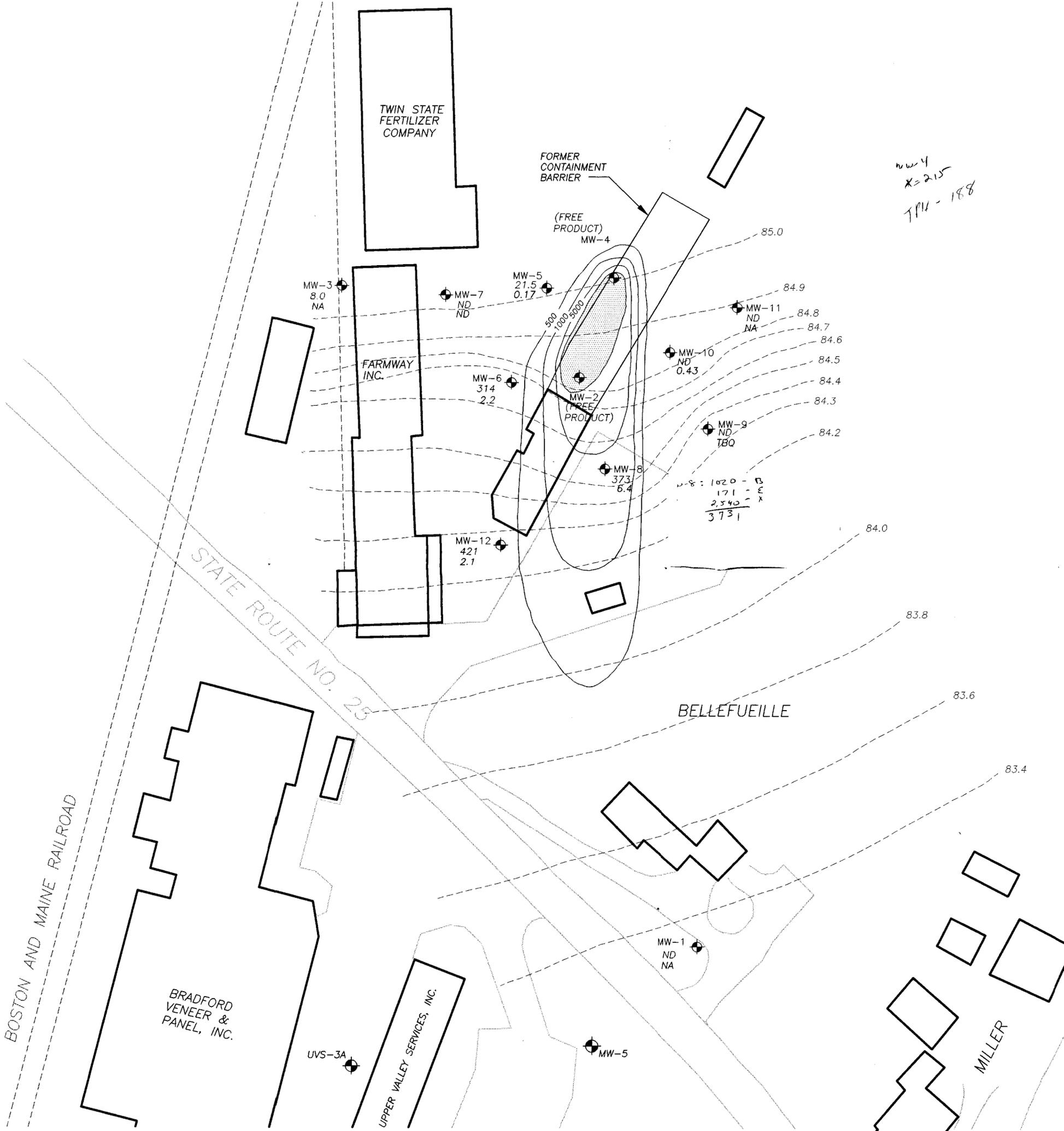
Relinquished by: Signature <i>[Signature]</i>	Received by: Signature <i>[Signature]</i>	Date/Time <i>11/9/95</i>	<i>11:30 AM</i>
Relinquished by: Signature	Received by: Signature	Date/Time	

New York State Project: Yes No

Requested Analyses

1	pH	6	TKN	11	Total Solids	16	Metals (Specify)	21	EPA 624	26	EPA 8270 B/N or Acid
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	EPA 625 B/N or A	27	EPA 8010/8020
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	EPA 418.1	28	EPA 8080 Pest/PCB
4	Nitrite N	9	BOD ₅	14	Turbidity	19	BTEX	24	EPA 608 Pest/PCB		
5	Nitrate N	10	Alkalinity	15	Conductivity	20	EPA 601/602	25	EPA 8240		
29	TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										
30	Other (Specify): <i>DISSOLVED LEAD</i>										

TRIP A, Red Box



BOSTON AND MAINE RAILROAD

BRADFORD VENEER & PANEL, INC.

UPPER VALLEY SERVICES, INC.

TWIN STATE FERTILIZER COMPANY

FARMWAY INC.

BELLEFUEILLE

MILLER

STATE ROUTE NO. 25

FORMER CONTAINMENT BARRIER

(FREE PRODUCT) MW-4

MW-2 (FREE PRODUCT)

LEGEND

- MW-8 MONITORING WELL LOCATION
- MONITORING WELL LOCATION MASKA US, INC. SITE
- ROAD/PARKING LOT
- BUILDING LOCATION
- BTEX CONCENTRATION CONTOUR
- FREE PRODUCT
- 421 BTEX CONCENTRATION (ppb)
- 6.4 TPH CONCENTRATION (ppm)
- WATER TABLE CONTOUR (FEET) - 11/14/95

FORMER BRADFORD OIL CO. FUEL STORAGE AND DISTRIBUTION FACILITY
BRADFORD, VERMONT

CONTAMINANT DISTRIBUTION MAP

SCALE: 1"=40'	DATE: DECEMBER 29, 1995
PROJECT NO. 95293	DRAWN BY: M. Luman
FILE: C:\FARMWAY SITEPLAN	APPROVED: J. Siffer

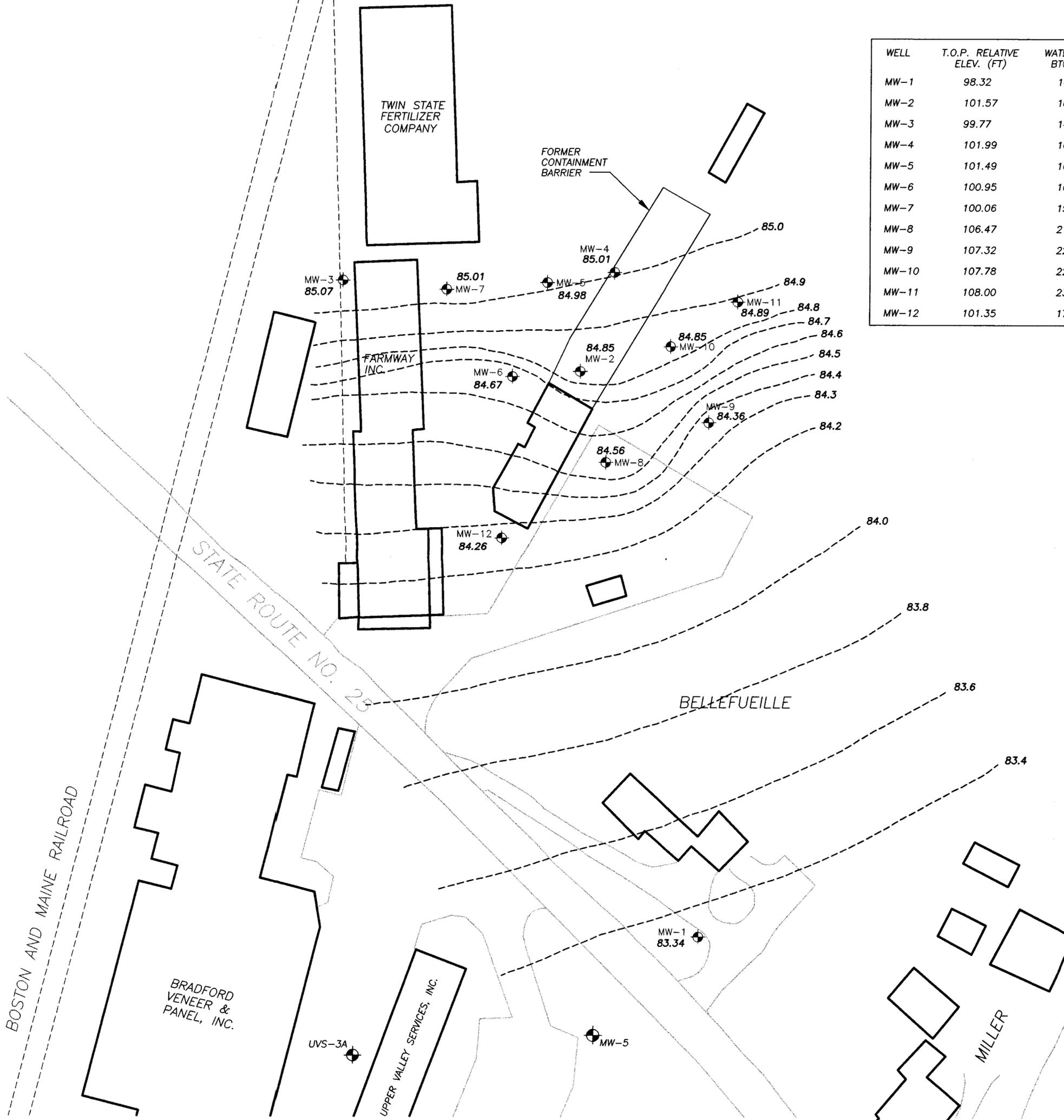
Wagner, Heindel, and Noyes, Inc.
CONSULTING SCIENTISTS AND ENGINEERS

- Hydrogeology • Ecology •
- Environmental Engineering •

P.O. BOX 64709 BURLINGTON, VERMONT 05406-4709



WELL	T.O.P. RELATIVE ELEV. (FT)	WATER LEVEL BTOP (FT)	WATER TABLE ELEV (FT)
MW-1	98.32	14.98	83.34
MW-2	101.57	16.72	84.85
MW-3	99.77	14.70	85.07
MW-4	101.99	16.98	85.01
MW-5	101.49	16.51	84.98
MW-6	100.95	16.28	84.67
MW-7	100.06	15.05	85.01
MW-8	106.47	21.91	84.56
MW-9	107.32	22.96	84.36
MW-10	107.78	22.93	84.85
MW-11	108.00	23.11	84.89
MW-12	101.35	17.09	84.26



BOSTON AND MAINE RAILROAD

STATE ROUTE NO. 25

BRADFORD VENEER & PANEL, INC.

UPPER VALLEY SERVICES, INC.

TWIN STATE FERTILIZER COMPANY

FARMWAY INC.

BELLEFUEILLE

MILLER

LEGEND

- MW-8 MONITORING WELL LOCATION
- MONITORING WELL LOCATION MASKA US, INC. SITE
- ROAD/PARKING LOT
- BUILDING LOCATION
- 84.85 WATER TABLE ELEV. (FT)

FORMER BRADFORD OIL CO. FUEL STORAGE AND DISTRIBUTION FACILITY
BRADFORD, VERMONT

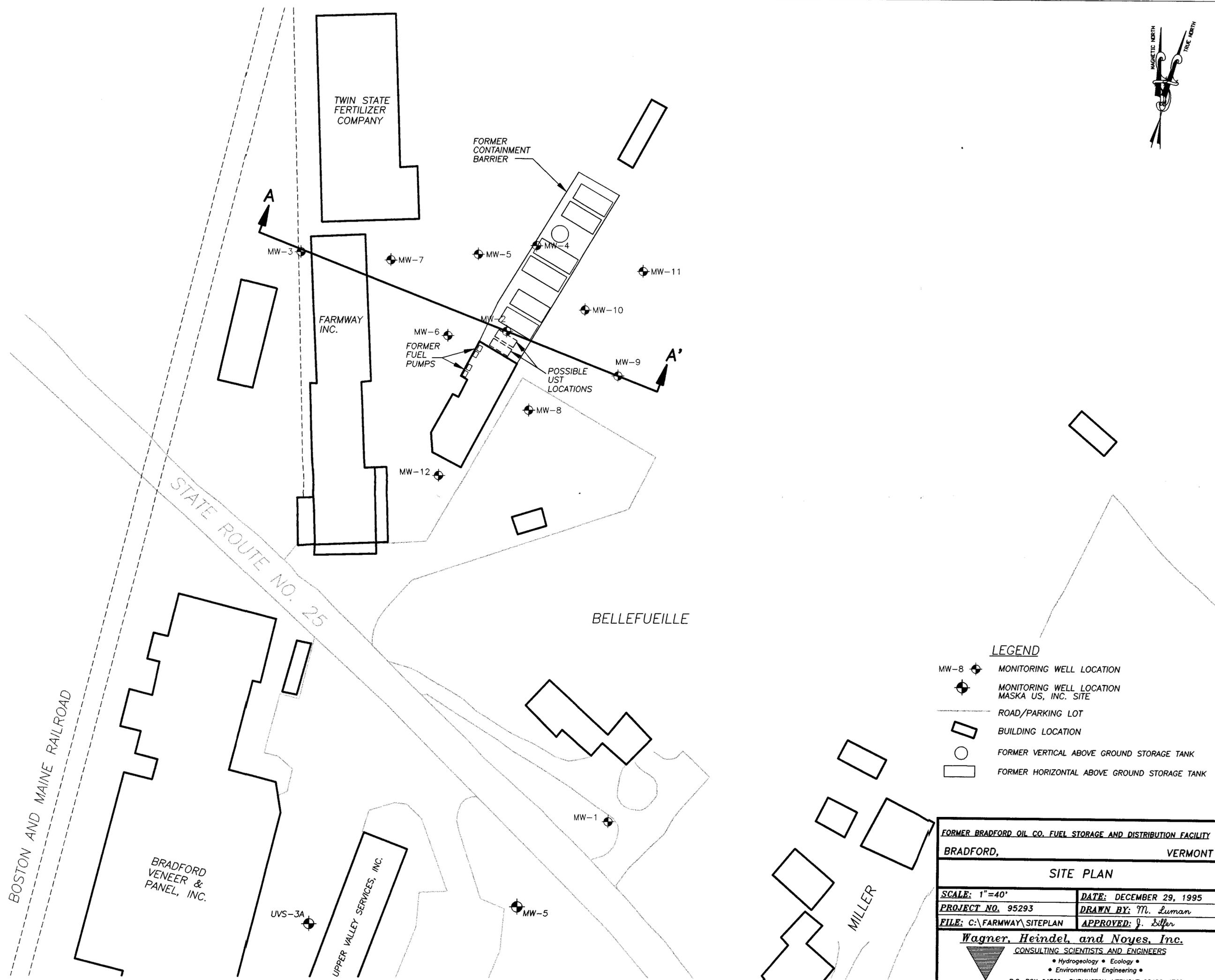
WATER TABLE CONTOUR MAP (11/14/95)

SCALE: 1"=40'	DATE: DECEMBER 29, 1995
PROJECT NO. 95293	DRAWN BY: M. Luman
FILE: C:\FARMWAY\SITEPLAN	APPROVED: J. Siffer

Wagner, Heindel, and Noyes, Inc.
CONSULTING SCIENTISTS AND ENGINEERS

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LEGEND

- MW-8 MONITORING WELL LOCATION
- MONITORING WELL LOCATION MASKA US, INC. SITE
- ROAD/PARKING LOT
- BUILDING LOCATION
- FORMER VERTICAL ABOVE GROUND STORAGE TANK
- FORMER HORIZONTAL ABOVE GROUND STORAGE TANK

FORMER BRADFORD OIL CO. FUEL STORAGE AND DISTRIBUTION FACILITY	
BRADFORD, VERMONT	
SITE PLAN	
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