



Initial Site Investigation Report

**Germain Residence
266 Ferry Street
North Hyde Park, Vermont**

SMS Site #: 2003-3156

28 January 2004

Prepared For:

**Ms. Vickie Germain
266 Ferry Street
North Hyde Park, Vermont 05655**

Phone: (802) 635-0410

Prepared By:

**Andres O. Torizzo, Hydrogeologist
Ross Environmental Associates, Inc.
P.O. Box 1533
Stowe, Vermont 05672**

Phone: (802) 253-4280

Fax: (802) 253-4829

**R.E.A. Project No. 23-140
R.E.A. Document #: 23140ISI**

TABLE OF CONTENTS

	Page
Executive Summary	<i>i</i>
Site Profile	<i>ii</i>
1.0 Introduction	1
1.1 Site Location and Setting	1
1.2 Site History	1
1.3 Land Use and Adjacent Property Ownership	3
2.0 Field Investigation Results and Procedures	3
2.1 Contaminants of Concern	3
2.2 Source Area Evaluation	3
2.3 Soil Boring and Monitoring Well Installation	4
2.4 Ground-Water Elevations and Flow Direction	5
2.5 Ground-Water Sampling and Analysis	5
2.6 Supply Well Sampling and Analysis	6
2.7 Investigation Procedures	7
3.0 Sensitive Receptor Identification and Risk Assessment	8
3.1 Receptor Identification	8
3.2 Risk Assessment	9
4.0 Data Evaluation and Regulatory Status	10
5.0 Recommendations	11
6.0 References	11

List of Appendices

- Appendix A Figures and Tables**
- Appendix B Photographs**
- Appendix C Soil Boring/Monitoring Well Logs**
- Appendix D Laboratory Reports**

EXECUTIVE SUMMARY

Ross Environmental Associates, Inc. (**R.E.A.**) has conducted an initial site investigation at the Germain Residence located at 266 Ferry Street in North Hyde Park, Vermont. Field investigation included: installation of five monitoring wells and one soil boring; field screening of subsurface soil samples for the possible presence of volatile organic compounds (VOCs); sampling and analysis of water from five on-site monitoring wells, one on-site drinking-water supply well, four off-site drinking-water supply wells, and a receptor survey to identify potential risks to the environment and human health.

Available information indicates that groundwater beneath the site has been impacted by petroleum compounds. At this time, subsurface petroleum contamination appears to have migrated to the west; based on groundwater quality data collected from the Stotesbury Residence drinking-water supply well, which is located approximately 60 feet downgradient of the former AST and spill area. Other than the Stotesbury Residence well, no additional sensitive receptors appear to be impacted; however, the on site supply well, the neighboring drinking-water supply wells serving the Heath and Hurlburt residences, Beaver Meadow Brook, and the Gihon River are threatened by residual petroleum contamination. Removal of approximately 17 tons of petroleum contaminated soil (PCS) from the Germain basement has greatly reduced the potential threat to nearby receptors and installation of the venting system and vapor barrier Germain basement appears to have mitigated residual petroleum vapors in ambient air.

On the basis of the results of this investigation and the conclusions stated above, **R.E.A.** makes the following recommendations.

1. The residential supply wells located adjacent to the Germain property should be re-sampled for the possible presence of VOCs in accordance with U.S. EPA Method 8021B, to confirm the findings of the initial sampling event. These water supply wells include: the Heath, Hurlburt, and Stotesbury Residences.
2. The on-site monitoring wells and drinking water supply well should be re-sampled. All samples should be analyzed for the possible presence of volatile organic compounds (VOCs) in accordance with U.S. EPA Methods 8021B.
3. A summary report should be completed following the completion of the next ground water sampling event, which should include recommendations for possible long-term monitoring.

SITE PROFILE

Site Information

Site Name: Germain Residence
SMS Site #: 2003-3156
Site Address: 266 Ferry Street, North Hyde Park, VT
Mailing Address: Same
Telephone: (802) 635-0410
Contact/Owner: Ms. Vickie Germain
Coordinates: latitude 44° 40' 12.9" N, and longitude, 72° 35' 38.1W.
Contaminants of Concern: Petroleum, characteristic of No. 2 Fuel-Oil

Source: Fuel oil release from former AST system. Petroleum-stained soils and strong petroleum odors were observed in the Germain Residence basement. Elevated PID readings were observed during soil excavation in November 2003.

Aquifer Characteristics

Soil Type: The soils at the site consisted primarily of brown coarse sand with some gravel.

Effective Porosity: 0.4
Hydraulic conductivity: 0.25 to 100 ft/day
Ground-water flow direction: northwest
Horizontal hydraulic gradient: 0.2% (12/12/03)
Average ground water velocity: 0.01 to 0.31 ft/day
Ground-water depth bgs: 6 to 12 feet bgs
Saturated thickness: unknown
Depth to Bedrock: > 19 feet bgs

Receptors

Drinking water: The site is supplied by a dug well located approximately 25 feet southeast of the former AST. The abutting properties to the west (Stotesbury) and north (Heath) are supplied by shallow supply wells located approximately 60 west and 140 feet north of the former AST, respectively. VOCs were detected in the Stotesbury water-supply above the Vermont Health Advisory (VHA) and U.S. EPA Maximum Contaminant Level (MCL) on 28 October 2003 and on 19 November 2003.

Ground water: No petroleum contamination was detected in ground water samples collected at the site on 12 December 2003 from MW-1, MW-2, MW-3, MW-4, and MW-5; see Table 2, Appendix A.

SITE PROFILE

Surface water: Beaver Meadow Brook is located approximately 300 feet west of the former AST, and the Gihon River is located approximately 350 feet north of the former AST.

Buildings: The former AST was located in the northwest corner of the Germain Residence basement. Approximately 17 tons of Petroleum Contaminated Soil (PCS) was removed from the basement floor in November and December 2003. A venting system and concrete slab was installed over the release area following the soil excavation.

Underground utilities: No underground utilities are located in the area downgradient of the former AST.

1.0 INTRODUCTION

Ms. Vickie Germain obtained the services of **R.E.A.** to complete an initial site investigation (ISI) at the Germain Residence in North Hyde Park, Vermont in accordance with Vermont Department of Environmental Conservation (VT DEC) guidelines. This report has been prepared by **R.E.A.** under the direction of Ms. Vickie Germain; unauthorized use or reproduction of this report is prohibited, without written authorization from **R.E.A.**, or Ms. Vickie Germain.

1.1 Site Location and Setting

The subject property, which is currently owned by Vickie Germain, is occupied by one building; the Germain Residence. The property is located at 266 Ferry Street in North Hyde Park, Vermont (Figure 1, Appendix A). Drinking water for the site is provided by an on-site dug well located against the foundation of the Germain Residence, approximately 25 feet southeast of the former AST. The abutting properties to the west (Stotesbury) and north (Heath) are supplied by shallow supply wells located approximately 60 and 140 feet from of the former AST, respectively. Wastewater disposal for the Germain Residence is provided a small leachfield located on the southwest corner of the residence.

The ground surface slopes slightly to the south and west, with an average elevation of 880 feet above mean sea level (Maptech, 1998). Beaver Meadow Brook is located approximately 300 feet west of the former AST, and the Gihon River is located approximately 350 feet north of the former AST. The geographic coordinates of the site are: latitude 44° 40' 12.9" N, and longitude 71° 35 38.1" W. The surficial geology in the vicinity of the site is mapped as littoral sediment consisting predominately of pebbly sand (Stewart and MacClintock, 1970). Bedrock in the North Hyde Park area is mapped as the Ottauquechee Formation consisting of black carbonaceous phyllite or schist of Middle Cambrian age (Doll, 1961). No bedrock outcrops were observed in the immediate vicinity of the site.

Figure 2 in Appendix A shows the approximate locations of various site features. Photographs of the site and surrounding area taken during the initial site investigation are included in Appendix B.

1.2 Site History

Before 1 October 2003, Rod and Son Oil Company, the oil provider for the Germain Residence, observed fuel-oil leaking from a hole behind the filter system of a 275-gallon AST, formerly located in the northwest corner of the Germain basement. According to Rod Hemingway of Rod and Son Oil Company, a magnetic patch was placed over the hole to stop the leak. Approximately 20-gallons of fuel oil was recovered using speedy-dry during this initial spill response completed by Rod and Son.

Fuel-oil migration was observed to the south and west toward the furnace and the foundation wall, respectively. It appeared that the fuel-oil had subsequently infiltrated into the soil and through the cracks of the partial concrete floor. It was later determined that approximately 200-gallons of #2 fuel-oil may have been released into the subsurface environment in the basement of the residence.

On 28 October 2003, Mr. Marc Roy of the Vermont DEC performed a site visit and collected a water sample from the Stotesbury (abutting property to the west) and Germain shallow water-supply wells. Petroleum contamination was detected in the Stotesbury supply well; benzene was detected at 51micrograms per liter ($\mu\text{g/L}$), which exceeds the Vermont Health Advisory (VHA) and U.S. EPA Maximum Contaminant Level (MCL) of 5.0 $\mu\text{g/L}$. Based on the finding of the Vermont DEC investigation, the VT DEC requested that further work be completed at the site to determine the degree and extent of contamination. In November 2003, Ms. Vickie Germain obtained the services of Ross Environmental Associates, Inc. (*R.E.A.*) to complete an initial site investigation at the site to further evaluate the extent of petroleum contamination at the Germain property.

During November and December 2003, *R.E.A.* was present during the removal of approximately 17 tons of Petroleum Contaminated Soil (PCS) from the spill area in the Germain basement. Following the excavation a venting system and concrete slab were installed to mitigate remaining petroleum vapors. The excavation and venting system/slab installation activities performed at the Germain Residence are outlined in a report sent to Ms. Vickie Germain and Mr. Bob Haslam of the Vermont DEC, dated 19 December 2003.

On 13 November 2003, Mr. John Beauchamp of Vermont Water Treatment installed a point-of-entry carbon treatment system at the Stotesbury Residence. On 19 November 2003, samples were collected from the Effluent-1, Effluent-2 and Influent ports on the Stotesbury treatment system. The VHA/MCL for benzene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and naphthalene were exceeded in the influent sample. No volatile petroleum compounds were detected in the effluent samples indicating that the treatment system was removing petroleum contaminants. In addition to the Stotesbury Residence, samples were also collected from nearby drinking water supply wells, as a precautionary measure. These drinking water supply wells sampled included the Hurlburt, Heath, Lyon, and Germain Residences; no VOCs were detected in these samples.

1.3 Land Use and Adjacent Property Ownership

The Germain Residence is located in a rural neighborhood of North Hyde Park. The adjacent property upgradient and to the east is occupied by Heath Lumber Company, which operates a saw mill and lumber storage facility. Beaver Meadow Brook flows through the abutting property to the south, which is an undeveloped parcel of land. Ferry Street forms the northern edge of the Germain property, and the property to the west is occupied by a single-family residence (Stotesbury). The properties on the north side of Ferry Street are occupied by private residences.

2.0 Field Investigation Results and Procedures

R.E.A.'s field investigation included: the installation of five monitoring wells (MW-1, MW-2, MW-3, MW-4 and MW-5) one soil boring (SB-1); field screening of subsurface soil samples for the possible presence of volatile organic compounds (VOCs); collection and analysis of water samples from five on-site monitoring wells, one onsite drinking water supply well, four off-site drinking water supply wells, and a receptor survey to identify potential risks to the environment and human health. Approximate monitoring well/soil boring locations and significant site features are shown on Figure 2 in Appendix A.

The objectives of this initial site investigation were to:

- É Evaluate the degree and extent of petroleum contamination in soils and ground water;
- É Qualitatively assess the risks to environmental and public health via relevant sensitive receptors and potential contaminant migration pathways.
- É Identify the need for further site characterization, appropriate monitoring, and/or remedial actions based on the site conditions.

2.1 Contaminants of Concern

Based on available information, the contaminants of concern (COC) at the Germain property appear to include: benzene, toluene, ethylbenzene, total xylenes, (collectively referred to as BTEX), 1,3,5-trimethylbenzene, 1,2,4-trimethylbenzene, and naphthalene. All of these contaminants are typically associated with petroleum products such as fuel-oil.

2.2 Source Area Evaluation

Based on available information, the source of petroleum contamination discovered at the site is the former fuel-oil AST system that was removed in October 2003. Before 1 October 2003, Rod and Son Oil Company observed fuel-oil leaking from the former AST onto the slab and dirt basement floor. It was later estimated that approximately 200-gallons of #2 fuel-oil was released to the sub-

surface environment. Following this discovery, **R.E.A.** provided oversight during the removal of approximately 17 tons of PCS from the basement floor.

2.3 Soil Boring and Monitoring Well Installation

On 24 November 2003, **R.E.A.** provided oversight during the installation of five monitoring wells and one soil boring. MW-1, MW-2, and SB-1 were installed between the Germain and Stotesbury Residences, in the presumed downgradient direction from the former AST system. MW-3, MW-4, and MW-5 were installed on the Stotesbury property also in the presumed downgradient direction from the former AST system. The soils at the site consisted primarily of brown coarse sand with some pebbles and cobbles. The soil borings extended to between 12 and 19 feet below ground surface (bgs).

Monitoring wells were constructed using 1.0-inch-diameter schedule 40 polyvinyl chloride (PVC), with flush-threaded joints. Ten-foot sections of 0.01-inch factory-slotted well screens were installed at the bottom of each boring. Solid PVC risers, extending to ground surface, were used to complete each well. A clean sand pack was placed around the screened section of each monitoring well extending one to two feet above the top of the screen, with a bentonite seal placed above the sand pack. Flush-mounted road-box protective casings were installed over each monitoring well. All monitoring wells were developed before sample collection using a peristaltic pump. Soil descriptions and monitoring well construction details are included on the soil boring logs in Appendix C. Technical Drilling Services, Inc. (TDS) of Sterling, MA installed the soil borings and monitoring wells under direct supervision of **R.E.A.**

Photo-ionization detector (PID) readings on soil samples collected from the monitoring wells/soil borings ranged from 0.0 to 1.2 ppm. No petroleum odors or staining were noted during completion of any of the soil boring. PID screening results are included on the soil boring logs in Appendix C. **R.E.A.**'s hydrogeologist screened soil samples from the soil borings for the possible presence of volatile organic compounds (VOCs) using a RAE Systems model 2000 portable PID. The PID was calibrated with an isobutylene standard gas to a benzene reference.

After installation of the soil boring/monitoring wells, **R.E.A.** surveyed the locations of the boring/wells in relation to existing site features and roadways. Each boring/well was located in azimuth to an accuracy of ± 1.0 feet, and in elevation with an accuracy of ± 0.01 feet relative to an on-site benchmark of 100.00 feet (MW-1).

2.4 Ground Water Elevations and Flow Direction

On 12 December 2003, ground-water flow in the unconfined surficial aquifer at the site was toward the northwest, west, and southwest with an estimated hydraulic gradient of approximately 0.3 percent. Water-level measurements and elevation calculations for 12 December 2003, are presented in Table 1 and the ground-water contour map prepared using this data is presented as Figure 4, Appendix A.

Static water-table elevations were computed for each monitoring well by subtracting measured depth-to-water readings from the surveyed top-of-casing (TOC) elevations, which are relative to an arbitrary site datum of 100.00 feet (MW-1).

The effective porosity of the predominantly coarse sand encountered below the water-table is presumably around 0.4, with hydraulic conductivities of 0.25 to 100 feet per day (Freeze & Cherry, 1979). Assuming Darcian flow, these estimates combine with the calculated horizontal gradient of 0.3 percent to yield an estimated range of ground-water flow velocities of between 0.01 to 0.31 feet per day. Contaminant migration would be less accounting for retardation and dispersion of the contaminants.

2.5 Ground Water Sampling and Analysis

Available information indicates that subsurface petroleum contamination is primarily limited to the immediate vicinity of the spill, but has migrated to the west, based on petroleum contamination discovered in the Stotesbury water supply well. At this time, the extent of subsurface petroleum contamination has been determined. None of the Vermont Groundwater Enforcement Standards (VGESs)¹ for volatile petroleum compounds were exceeded in groundwater samples collected on site. No volatile petroleum compounds or total petroleum hydrocarbons were detected in ground water samples collected from the monitoring wells installed to characterize the possible extent of subsurface contamination.

On 12 December 2003, ground water samples were collected from five monitoring wells (MW-1, MW-2, MW-3, MW-4 and MW-5). No VOCs were detected in any of the samples collected from the monitoring wells. In addition, no petroleum compounds were detected in the trip-blank sample and the duplicate sample results (MW-1) were identical. The analytical results are summarized on Table 2, and copies of the laboratory analytical reports are included as Appendix D.

¹The Vermont DEC has established groundwater enforcement standards for eight petroleum related VOCs, as follows: benzene - 5 ug/L; toluene - 1,000 ug/L; ethylbenzene - 700 ug/L; xylenes - 10,000 ug/L; MTBE - 40 ug/L; 1,3,5-trimethyl benzene - 4 ug/L; 1,2,4-trimethyl benzene - 5 ug/L; and naphthalene - 20 ug/L.

Prior to sample collection, *R.E.A* field personnel measured the water level in each monitoring well and purged approximately three to five standing volumes of water from each well. All monitoring well samples were collected by pumping water from polyethylene tubing directly into 40-milliliter glass vials with teflon-lined septum lids. The drinking water supply wells were collected at the faucets in the Residences. Each sample vial was preserved with hydrochloric acid to reduce the pH to less than 2 standard units (su).

Immediately after sample collection, field measurements were obtained for pH, specific conductivity, temperature, total dissolved solids (TDS), and oxygen reduction potential (ORP). A summary of the field measurement data is included on Table 3, in Appendix A.

All of the samples were analyzed for the possible presence of volatile petroleum compounds and total petroleum hydrocarbons (TPH) in accordance with U.S. EPA Methods 8021B and 8015-Deseil Range Organics (DRO), respectively. All samples were transported under chain-of-custody in an ice-filled cooler to Endyne, Inc. of Williston, Vermont for laboratory analysis.

2.6 Supply Well Sampling and Analysis

Available information indicates that subsurface petroleum contamination has impacted the supply well serving the Stotesbury Residence. Between 17 and 24 November 2003, water samples were collected from the on-site drinking water supply well, the treatment system serving the Stotesbury Residence and three off-site drinking water supply wells located on adjacent properties (Heath, Lyon, Hurlburt). On 19 November 2003, samples were collected from the Effluent-1, Effluent-2 and Influent ports on the Stotesbury treatment system. The VHA/MCL² for benzene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and naphthalene were exceeded in the influent sample. No volatile petroleum compounds were detected in the effluent samples indicating that the treatment system was removing petroleum contaminants. In the Stotesbury Influent sample, benzene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and naphthalene were detected at 28.4, 91.3, 32.5, and 74.2 µg/L, respectively. No VOCs were detected in any of the other water supply samples collected in November 2003. The approximate locations of the adjacent residences and supply wells are shown on Figure 5 in Appendix A. The analytical results are summarized on Table 2 in Appendix A, and copies of the laboratory analytical reports are included as Appendix D.

²The Vermont Health Advisory (VHA*) and U.S. EPA Maximum Contaminant Level (MCL) for eight petroleum related VOCs, as follows: benzene* - 1 ug/L; toluene - 1,000 ug/L; ethylbenzene - 700 ug/L; total xylenes - 10,000 ug/L; MTBE* - 40 ug/L; 1,3,5-trimethyl benzene* - 4 ug/L; 1,2,4-trimethyl benzene* - 5 ug/L; and naphthalene* - 20 ug/L.

The supply well samples were collected after allowing the water at each faucet to run for approximately 10 minutes before directly filling each sample container. The Heath, Lyon, Hurlburt, and Germain supply well samples were collected at the kitchen faucet. The Stotesbury treatment system samples were collected from the sampling ports located before (Influent), between (Effluent-1) and after (Effluent-2) the carbon canisters. No petroleum compounds were detected in the trip-blank sample, and analytical results for the blind field duplicate, collected from the Stotesbury Influent, were within the U.S. EPA guidance difference of 35%.

All of the supply well samples were analyzed for the possible presence of volatile petroleum compounds in accordance with U.S. EPA Method 8021B, except the sample collected from the Germain residence which was analyzed in accordance with U.S. EPA Method 524.2. All samples were transported under chain-of-custody in an ice-filled cooler to Endyne, Inc. of Williston, Vermont for laboratory analysis.

2.7 Investigation Procedures

The procedures used during the initial site investigation at the Germain Residence are consistent with the following guidance documents:

- É *“Underground Storage Tank Closure and Site Assessment Requirements.”* Vermont Agency of Natural Resources, Waste Management Division. November 1997.
- É *“Site Investigation Guidance.”* Vermont Agency of Natural Resources, Waste Management Division. August 1996.
- É *“Corrective Action Guidance.”* Vermont Agency of Natural Resources, Waste Management Division. November 1997.
- É *“Agency Guidelines for Petroleum Contaminated Soil and Debris.”* Vermont Agency of Natural Resources, Waste Management Division. August 1996.
- É ASTM D 2488-93. *“Standard Practice for Description and Identification of Soils (Visual-Manual Procedure).”* American Society for Testing and Materials.
- É ASTM D 5092-90. *“Standard Practice for Design and Installation of Ground Water Monitoring Wells in Aquifers.”* American Society for Testing and Materials.
- É ASTM D 4750-87. *“Standard Test Method for Determining Subsurface Liquid Levels in a Borehole or Monitoring Well.”* American Society for Testing and Materials.
- É ASTM D 4448-85a. *“Standard Guide for Sampling Ground Water Monitoring Wells.”* American Society for Testing and Materials.

3.0 SENSITIVE RECEPTOR IDENTIFICATION AND RISK ASSESSMENT

At this time, the Stotesbury drinking water supply well appears to have been impacted by residual petroleum contamination related to the leaking AST system. The Beaver Meadow Brook, the Gihon River, the on-site drinking water supply well, and the other off-site drinking water supply wells do not appear to be impacted by residual petroleum contamination at the site; however, these receptors are threatened due to their close proximity to the fuel oil spill. Removal of approximately 17 tons of petroleum contaminated soil (PCS) from the Germain basement has greatly reduced the potential threat to nearby receptors. In addition, the venting system and vapor barrier has appeared to have mitigated residual petroleum vapors in the Germain basement.

3.1 Receptor Identification

The following sensitive receptors were identified in the vicinity of the Germain property:

- É The on-site drinking water supply well located approximately 35 feet southwest of the former AST system.
- É Ambient air in the Germain Residence.
- É The supply well serving the Stotesbury Residence located approximately 60 feet west of the former AST system.
- É Three supply wells located in the vicinity of the Germain Residence (Heath, Lyon, and Hurlburt).
- É Beaver Meadow Brook, which is located approximately 300 feet south of the former and AST system.
- É The Gihon River, which is located approximately 350 feet northwest of the former and AST system.

3.2 Risk Assessment

On the basis of the information obtained during this investigation, *R.E.A.* has qualitatively assessed the risks that the subsurface contamination poses to human health and the environment. The findings are summarized as follows:

- É The Stotesbury Residence drinking water supply well has been impacted by residual petroleum contamination related to the fuel spill; volatile petroleum compounds exceeding the VHA and MCL were detected in the supply well on 28 October and 19 November 2003.

- É The on-site drinking water supply well does not appear to be impacted at this time, since contamination was not discovered in the water sample collected from the well on 17 November 2003. However, the dug well is considered to be threatened due to its close proximity to the former AST system.
- É Ambient air in the Germain Residence does not appear to be impacted by petroleum vapors, following the excavation of PCS and subsequent installation of the venting system and slab.
- É The Heath and Hurlburt water supply wells do not appear to be impacted by residual petroleum contamination, since no VOCs were detected in the samples collected from the wells on 17 and 24 November 2003, respectively; however, both of these wells are considered to be threatened due to their proximity to the release area.
- É The Lyon water supply spring is not considered to be threatened, since it is located approximately 400 feet northwest of the spill area on the opposite side of the Gihon River.
- É Available data indicates that the Beaver Meadow Brook and the Gihon River do not appear to be impacted at this time. No petroleum contamination was detected in monitoring wells situated between the spill area and these two surface water bodies.

4.0 DATA EVALUATION AND REGULATORY STATUS

Available information indicates that groundwater beneath the site has been impacted by petroleum compounds, based on the presence of petroleum contamination discovered in the Stotesbury water supply well on 28 October and 19 November 2003. At this time, no other sensitive receptors appear to be impacted by residual contamination at the site.

Based on available information, no further active remediation at the site is not likely to be required by the VT DEC. Generally the VT DEC requires active remediation when greater than an 1/8" of free-product is present, or when human health or a sensitive receptor is impacted or threatened by contamination. Removal of approximately 17 tons of petroleum contaminated soil (PCS) from the Germain basement has greatly reduced the potential threat to nearby receptors and installation of the venting system and vapor barrier Germain basement appears to have mitigated residual petroleum vapors in ambient air. At this time, the VT DEC will most likely require that additional ground water and supply well monitoring be preformed at the site.

A summary of the significant findings of the ISI is outlined below:

- É On 19 November 2003, the VHAs/MCLs for benzene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and naphthalene were exceeded in the influent sample collected from the treatment system serving the Stotesbury residence. No volatile petroleum hydrocarbons were detected in the treatment system effluent samples, or in the other drinking water supply wells sampled in November 2003 (Germain, Heath, Hurlburt, and Lyon).
- É No volatile petroleum hydrocarbons or TPH were detected in the water samples collected from the five on-site monitoring wells (MW-1, MW-2, MW-3, MW-4, and MW-5).
- É Ground water in the shallow overburden formation appears to flow primarily toward the northwest with a slight radial component, presumably due to the merging of Beaver Meadow Brook and the Gihon River.
- É Residual petroleum vapors in the Germain basement appear to have been mitigated following the PCS excavation, and subsequent installation of the venting system, vapor barrier and concrete slab.
- É The on-site and off-site drinking water supply wells, the Gihon River, and Beaver Meadow Brook are threatened by the residual contamination due to their close proximity to the former AST system and spill area.

5.0 RECOMMENDATIONS

On the basis of the results of this investigation and the conclusions stated above, **R.E.A.** makes the following recommendations.

1. The residential supply wells located adjacent to the Germain property should be re-sampled for the possible presence of VOCs in accordance with U.S. EPA Method 8021B, to confirm the findings of the initial sampling event. These water supply wells include: the Heath, Hurlburt, and Stotesbury Residences.
2. The on-site monitoring wells and drinking water supply well should be re-sampled. All samples should be analyzed for the possible presence of volatile organic compounds (VOCs) in accordance with U.S. EPA Methods 8021B.
3. A summary report should be completed following the completion of the next ground water sampling event, which should include recommendations for possible long-term monitoring.

6.0 REFERENCES

Doll, C.G. and others, 1961. "*Geologic Map of Vermont*", Office of the State Geologist.

Freeze, R. A., and Cherry, J.A., 1976. *Groundwater*, Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 29 p.

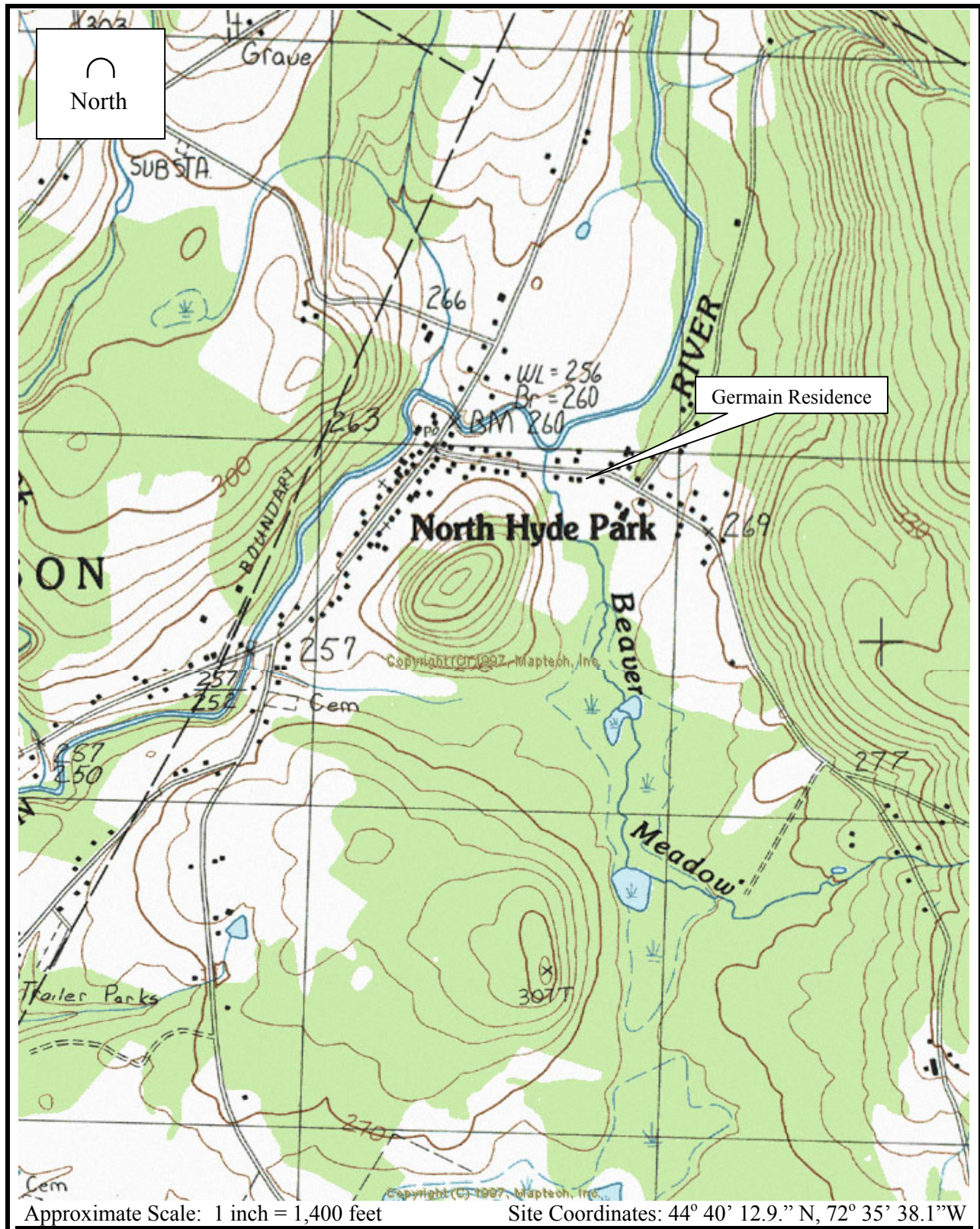
Fetter, C.W., 1994. *Applied Hydrogeology, 3rd Ed.*, Prentice Hall, Englewood Cliffs, New Jersey, 98 p.

Stewart, D.P. and MacClintock, P., 1970. "*Surficial Geologic Map of Vermont*", Office of the State Geologist.

Maptech, 1998. Eden Quadrangle Vermont. U.S. Geological Survey. 7.5 minute series (topographic). 1968. Maptech, Inc. Greenland, NH. 1998.

**A
T
T
A
C
H
M
E
N
T
A**

FIGURES AND TABLES

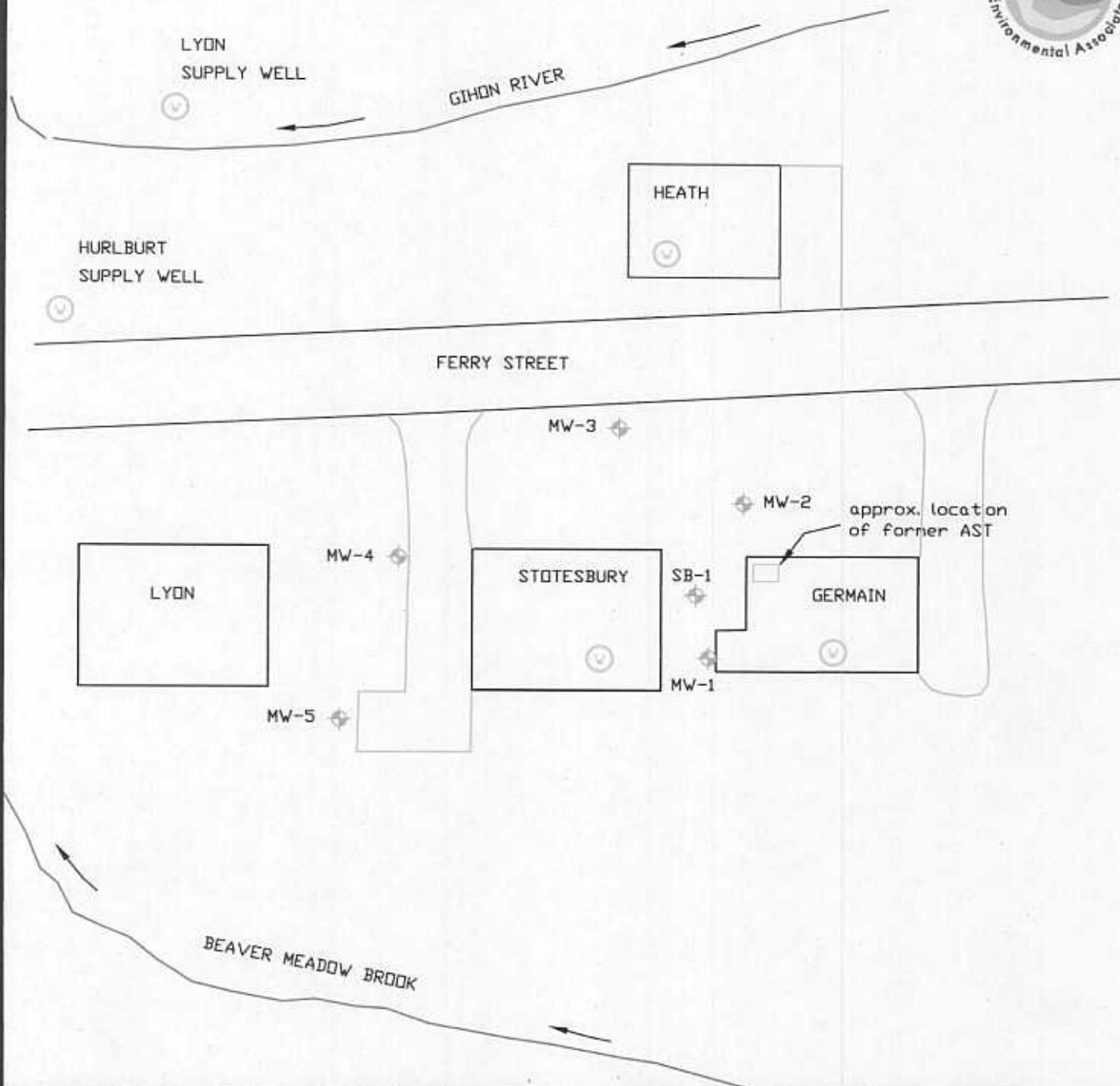


Approximate Scale: 1 inch = 1,400 feet



Site Coordinates: 44° 40' 12.9." N, 72° 35' 38.1"W

Source: USGS 1986. Eden Quadrangle, Vermont.
 1986 Provisional Edition Topographic Map
 (7.5 X 15 minute series). Maptech, Inc. 1998.
 R.E.A. Project No. 23-140

Figure 1
 Site Location Map
 Germain Residence
 North Hyde Park, Vermont



Legend

-  Monitoring Well Location
-  Supply Well Location

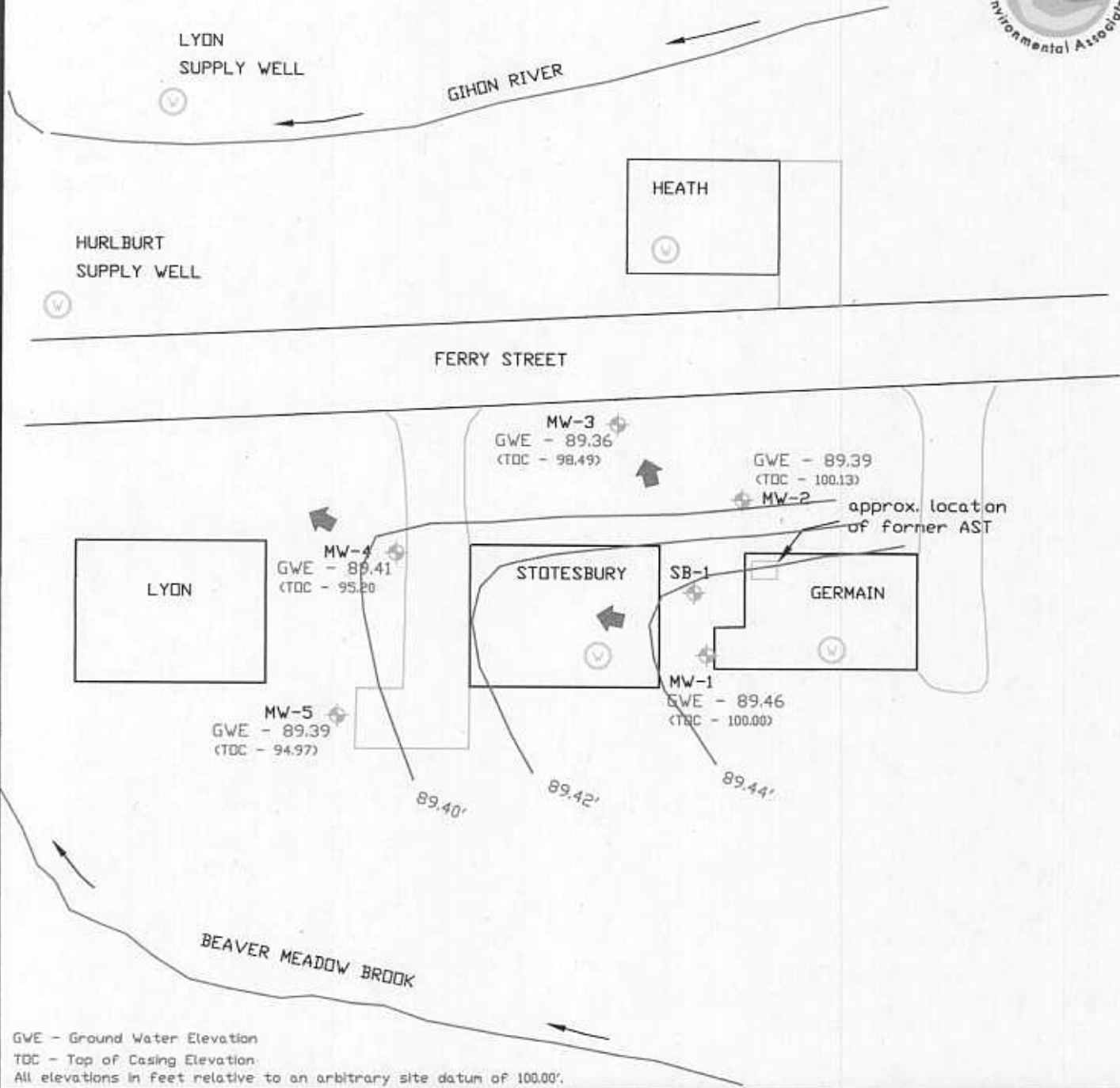
All locations are approximate

SITE PLAN
 (with Monitoring Well Locations)
 Germain Residence
 North Hyde Park, Vermont

Scale 1"=40'-0"	Date 12/4/2003	Drawn By T.F.M.D.
File Name 23-140	Approved By	

Ross Environmental Associates, Inc.
 Stowe, Vermont (802) 253-4280

FIGURE 2



GWE - Ground Water Elevation
 TDC - Top of Casing Elevation.
 All elevations in feet relative to an arbitrary site datum of 100.00'.

Legend
 Monitoring Well Location
 Supply Well Location
 All locations are approximate

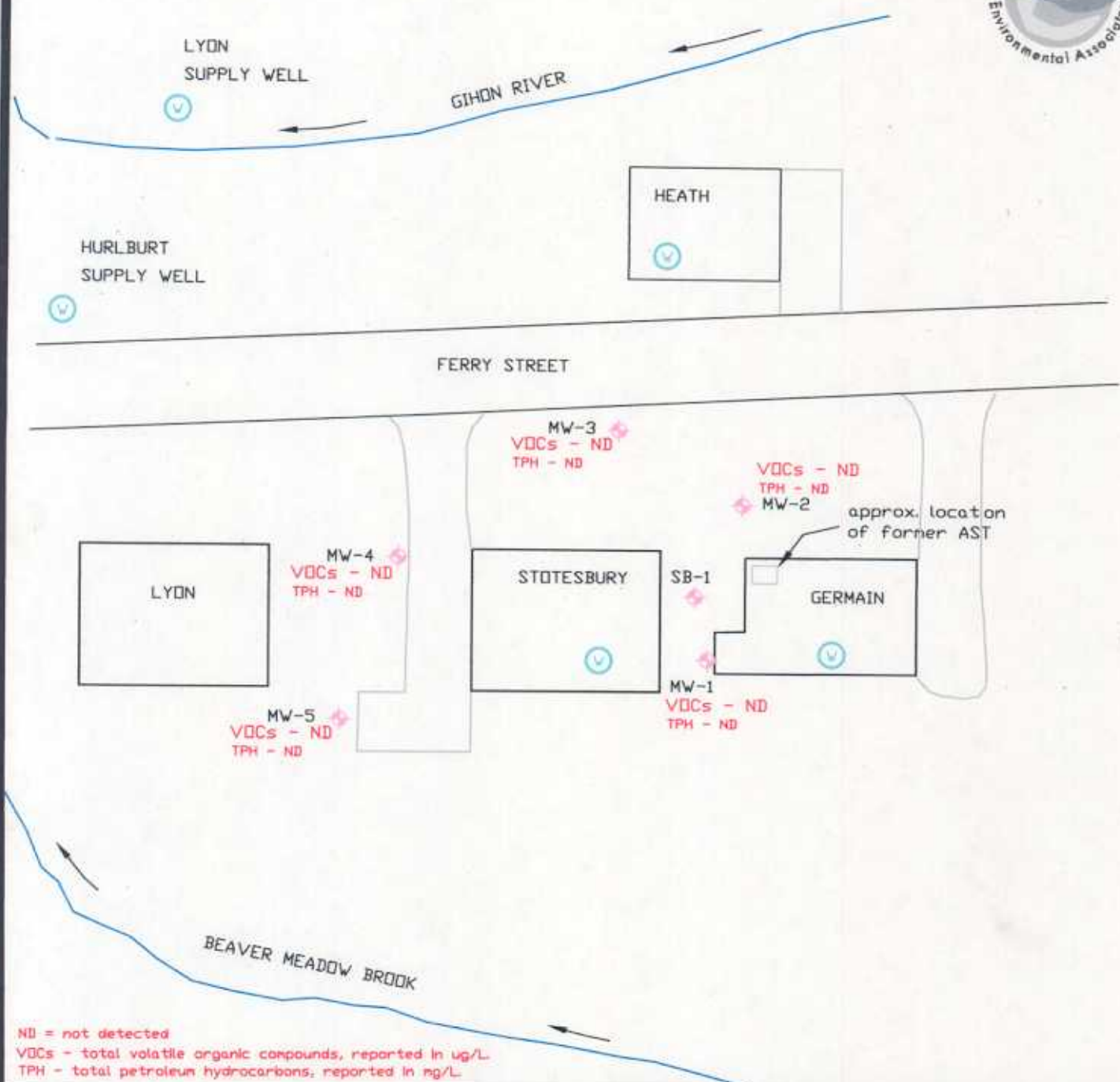
GROUND WATER CONTOUR MAP
 (Monitoring Date: 12 December 2003)
 Germain Residence
 North Hyde Park, Vermont

Scale	Date	Drawn By
1"=40'-0"	12/4/2003	T.F.M.D.
File Name	Approved By	
23-140		

Ross Environmental Associates, Inc.
 Stowe, Vermont (802) 253-4280

FIGURE 3

NORTH



ND = not detected
 VOCs - total volatile organic compounds, reported in ug/L
 TPH - total petroleum hydrocarbons, reported in ng/L

Legend
 ◆ Monitoring Well Location
 ○ Supply Well Location
 All locations are approximate

CONTAMINANT DISTRIBUTION
 (Monitoring Date: 12 December 2003)
 Germain Residence
 North Hyde Park, Vermont

Scale 1"=40'-0"	Date 12/4/2003	Drawn By T.F.M.D.
File Name 23-140	Approved By	

Ross Environmental Associates, Inc.
 Stowe, Vermont (802) 253-4280

FIGURE 4

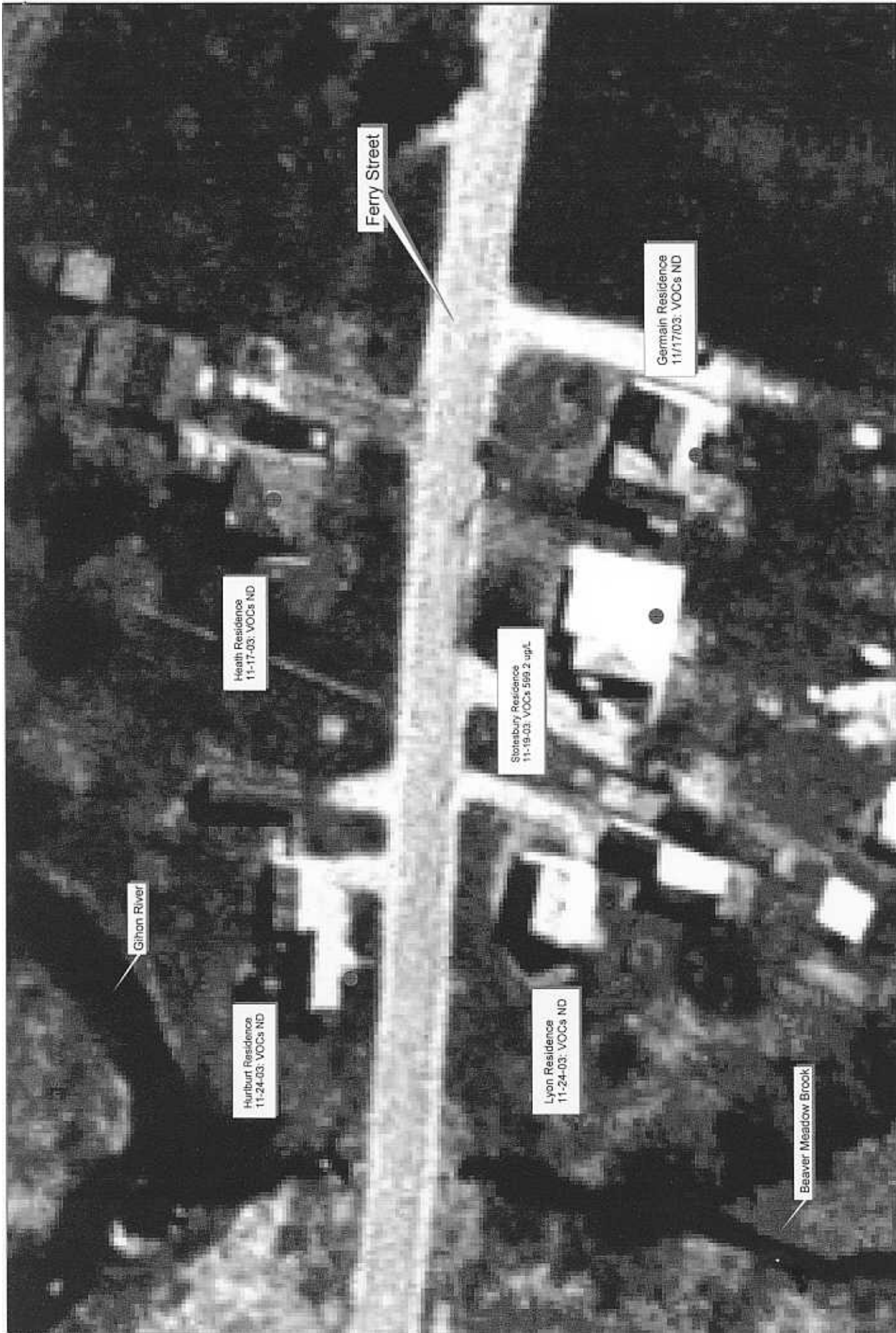


Figure 5. Germain Residence and Surrounding Properties and North Hyde Park, VT

50 Feet
 0 50
 scale: 1" = 50'

TABLE 1
GROUND WATER ELEVATION CALCULATIONS

Germain Residence
North Hyde Park, Vermont

Monitoring Date: 12 December 2003

Well I.D.	Top of Casing Elevation (ft)	Depth to Water (ft)	Water Table Elevation (ft)
MW-1	100.00	10.54	89.46
MW-2	100.13	10.74	89.39
MW-3	98.49	9.13	89.36
MW-4	95.20	5.79	89.41
MW-5	94.97	5.58	89.39

All values reported in feet relative to arbitrary site datum of 100.00 feet

**TABLE 2
GROUND-WATER AND SUPPLY WELL ANALYTICAL RESULTS**

Germain Residence
North Hyde Park, Vermont

Sample ID	MTBE	Benzene	Toluene	Ethyl benzene	Total Xylenes	1,3,5 TMB	1,2,4 TMB	Napthalene	Total VOCs	TPH (mg/L)	UIP's
Ground Water Samples - Monitoring Date: 12 December 2003											
MW-1	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND	ND<40.0	0
MW-2	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND	ND<40.0	0
MW-3	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND	ND<40.0	0
MW-4	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND	ND<40.0	0
MW-5	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND	ND<40.0	0
Duplicate	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND	ND<40.0	0
Trip Blank	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0	ND	--	0
VGES	40	5.0	1,000	700	10,000	4.0	5.0	20	--	--	--
Supply Well Samples Monitoring Date: 17 - 24 November 2003											
Heath	ND <2.0	ND <1.0	ND <1.0	ND <1.0	ND <2.0	ND <1.0	ND <1.0	ND <1.0	ND	--	0
Stotesbury - Inf	ND <2.0	28.4	17.7	54.1	301	32.5	91.3	74.2	599.2	--	>10
Stotesbury - Eff-1	ND <2.0	ND <1.0	ND <1.0	ND <1.0	ND <2.0	ND <1.0	ND <1.0	ND <1.0	ND	--	0
Stotesbury - Eff-2	ND <2.0	ND <1.0	ND <1.0	ND <1.0	ND <2.0	ND <1.0	ND <1.0	ND <1.0	ND	--	0
Lyon	ND <2.0	ND <1.0	ND <1.0	ND <1.0	ND <2.0	ND <1.0	ND <1.0	ND <1.0	ND	--	0
Hulburt	ND <2.0	ND <1.0	ND <1.0	ND <1.0	ND <2.0	ND <1.0	ND <1.0	ND <1.0	ND	--	0
Duplicate	ND <2.0	39.8	22.8	63.1	346	40.0	124	96.1	731.8	--	>10
TB-1	ND <2.0	ND <1.0	ND <1.0	ND <1.0	ND <2.0	ND <1.0	ND <1.0	ND <1.0	ND	--	0
MCL/VHA	40*	1.0*	1,000	700	10,000	4.0*	5.0*	20*	--	--	--

Notes:

All results reported as micrograms per liter (ug/L), unless indicated otherwise.
 ND: None detected at indicated detection limit
 UIP: Unidentified Peaks.
 Shaded values indicate exceedance of corresponding standard.
 Vermont Groundwater Enforcement Standards (VGESs).
 U.S. EPA Maximum Contaminant Level (MCL) and Vermont Health Advisory (VHA)*
 1,3,5-TMB = 1,3,5-trimethylbenzene and 1,2,4-TMB = 1,2,4-trimethylbenzene.

**TABLE 3
FIELD MEASUREMENT DATA**

Germain Residence
North Hyde Park, VT

Monitoring Date: 12 December 2003

Well ID	pH (su)	Specific conductivity (μ S)	Temperature ($^{\circ}$ C)	TDS (ppm)	ORP (mV)	Comments
MW-1	5.38	150.4	7.6	97.65	159	grey
MW-2	5.61	191.9	7.7	126.20	150	red
MW-3	6.05	186.3	7.1	122.30	148	red
MW-4	5.95	1096.0	5.9	773.40	177	--
MW-5	6.38	704.1	6.7	483.10	153	--

pH reported in standard units (s.u.). Specific conductivity reported in microsiemens (μ S) .
 Oxidation-reduction potential (ORP) reported in millivolts (mV).
 Total dissolved solids (TDS) reported in parts per million (ppm).

**A
T
T
A
C
H
M
E
N
T
B**

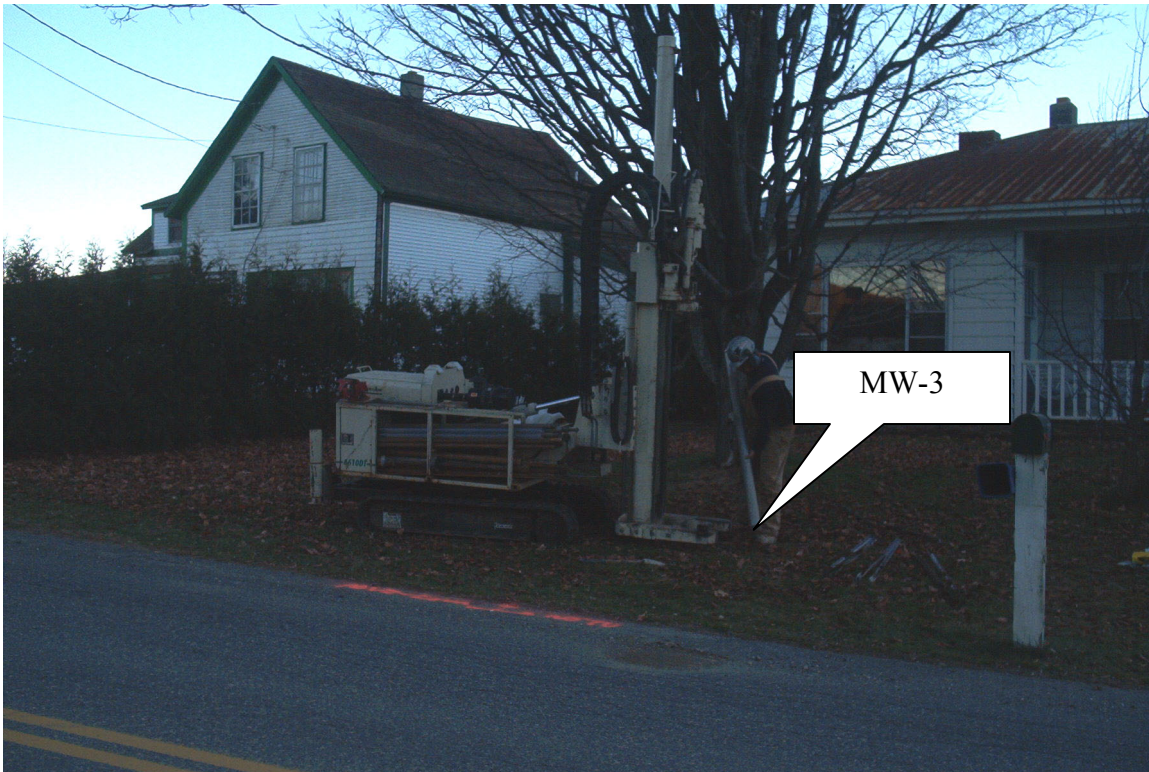
SITE PHOTOGRAPHS



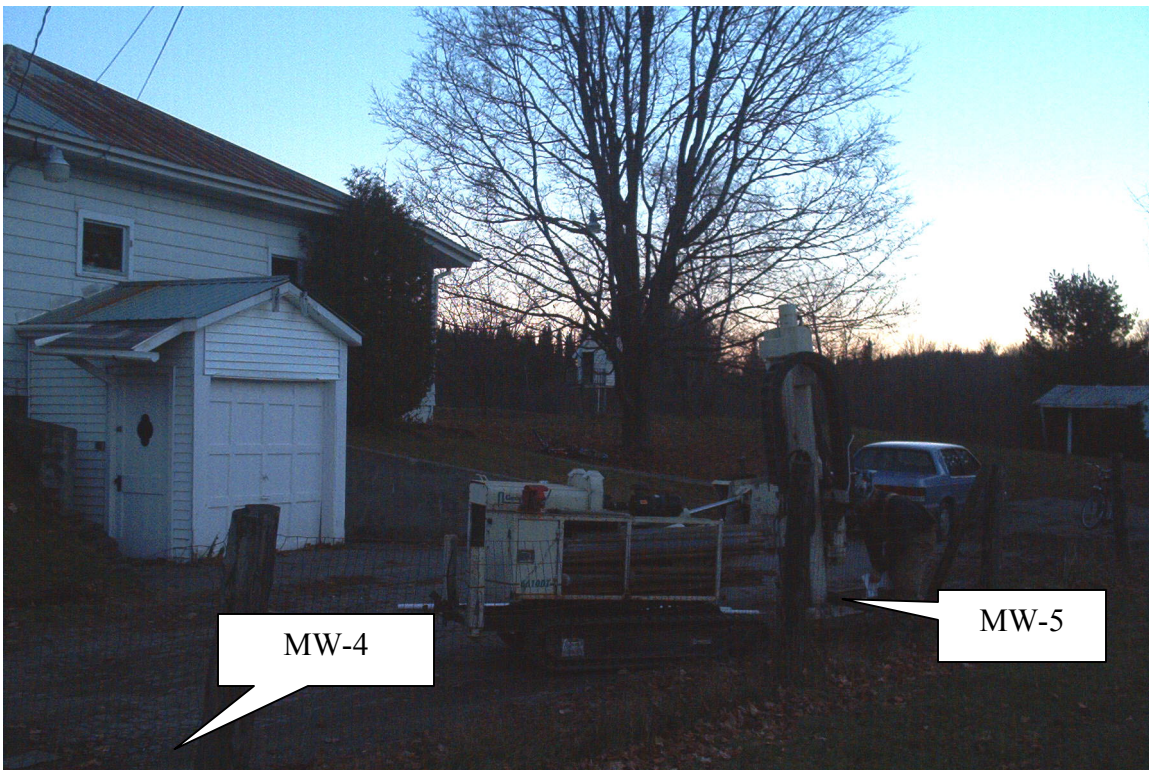
FERRY STREET
(MW-1 Installation – View Toward North)



FERRY STREET
(MW-2 Installation – View Toward South)



FERRY STREET
(MW-3 Installation – View Toward South)



GERMAIN RESIDENCE
(MW-5 Installation – View Toward Southeast)

**SOIL BORING
MONITORING WELL LOGS**

**A
T
T
A
C
H
M
E
N
T
C**



BORING / WELL IDENTIFICATION: MW-1

Site Name: **Germaine Spill**

Site Location: **North Hyde Park, VT**

Well Depth: **19'** Boring Depth: **19'** Installation Date: **November 24, 2003**

Depth to Water (during drilling): **12'** Job Number: **23-140**

Screen Diameter: **1"** Depth: **9' to 19' bgs** REA Representative: **A. Torizzo**

Screen Type/Size: **0.010 slot schedule 40 PVC** Drilling Company: **Technical Drilling Services**

Riser Diameter: **1"** Depth: **0.5' to 9' bgs** Sampling Method: **Geoprobe**

Riser Type/Size: **schedule 40 PVC** Reference Point (RP): **none**

Depth (ft)	Sample Depth (ft)	Blows/6" and Recovery (in)	Sample Description / Notes	PID (ppm)	Well Profile	Legend
0	0-5		Top 6": Soil.	0.1		Concrete
1			Bottom: Coarse brown SAND with some Pebbles.			Native Material
2						Bentonite
3						Filter Sand
4					Riser	
5	5-10		Same as above.	0.0	Screen	
6					Water Level	
7						
8						
9						
10	10-15		Top 3": Same as above.	0.0		
11			Bottom: SILT. Moist.			
12	▼					
13						
14						
15	15-19		SILT with some coarse Sand. Wet.	0.0		
16						
17						
18						
19			Well set at 19'.			
PROPORTIONS USED		BLOW COUNT (COHESIVE SOILS)		BLOW COUNT (GRANULAR SOILS)		NOTES:
AND 33-50% SOME 20-33%	LITTLE 10-20% TRACE 0-10%	<2 VERY SOFT 2-4 SOFT 4-8 MEDIUM STIFF	8-15 STIFF 15-30 VERY STIFF >30 HARD	0-4 VERY LOOSE 4-10 LOOSE 10-30 MEDIUM DENSE	30-50 DENSE >50 VERY DENSE	Mini RAE 2000 used.



BORING / WELL IDENTIFICATION: MW-2

Site Name: **Germaine Spill**
 Site Location: **North Hyde Park, VT**

Well Depth:	17'	Boring Depth:	17'	Installation Date:	November 24, 2003
Depth to Water (during drilling):			12'	Job Number:	23-140
Screen Diameter:	1"	Depth:	7' to 17' bgs	REA Representative:	A. Torizzo
Screen Type/Size:	0.010 slot schedule 40 PVC			Drilling Company:	Technical Drilling Services
Riser Diameter:	1"	Depth:	0.5' to 7' bgs	Sampling Method:	Geoprobe
Riser Type/Size:	schedule 40 PVC			Reference Point (RP):	none

Depth (ft)	Sample Depth (ft)	Blows/6" and Recovery (in)	Sample Description / Notes	PID (ppm)	Well Profile	Legend
0	0-5		Top 6": Soil.	0.1		Concrete
1			Bottom: Coarse brown SAND.			
2						Bentonite
3						Filter Sand
4						Riser
5	5-10		Same as above.	0.2		Screen
6						
7						
8						
9						
10	10-15		Same as above.	0.2		
11						
12	▼					
13						
14						
15						
16						
17			Well set at 17'.			

PROPORTIONS USED		BLOW COUNT (COHESIVE SOILS)		BLOW COUNT (GRANULAR SOILS)		NOTES:
AND 33-50%	LITTLE 10-20%	<2 VERY SOFT	8-15 STIFF	0-4 VERY LOOSE	30-50 DENSE	Mini RAE 2000 used.
SOME 20-33%	TRACE 0-10%	2-4 SOFT	15-30 VERY STIFF	4-10 LOOSE	>50 VERY DENSE	
		4-8 MEDIUM STIFF	>30 HARD	10-30 MEDIUM DENSE		



BORING / WELL IDENTIFICATION: MW-3

Site Name: **Germaine Spill**

Site Location: **North Hyde Park, VT**

Well Depth: **15'** Boring Depth: **15'** Installation Date: **November 24, 2003**

Depth to Water (during drilling): **9'** Job Number: **23-140**

Screen Diameter: **1"** Depth: **5' to 15' bgs** REA Representative: **A. Torizzo**

Screen Type/Size: **0.010 slot schedule 40 PVC** Drilling Company: **Technical Drilling Services**

Riser Diameter: **1"** Depth: **0.5' to 5' bgs** Sampling Method: **Geoprobe**

Riser Type/Size: **schedule 40 PVC** Reference Point (RP): **none**

Depth (ft)	Sample Depth (ft)	Blows/6" and Recovery (in)	Sample Description / Notes	PID (ppm)	Well Profile	Legend
0	0-5		Top 1": Soil.	0.2		<input checked="" type="checkbox"/> Concrete
1			Bottom: Coarse brown SAND with some pebbles.			<input type="checkbox"/> Native Material
2						<input type="checkbox"/> Bentonite
3						<input type="checkbox"/> Filter Sand
4				<input type="checkbox"/> Riser		
5	5-10		Same as above.	0.1		<input checked="" type="checkbox"/> Screen
6						<input checked="" type="checkbox"/> Water Level
7						
8						
9	▼					
10	10-15		Same as above.	0.1		
11						
12						
13						
14						
15			Well set at 15'.			
PROPORTIONS USED		BLOW COUNT (COHESIVE SOILS)		BLOW COUNT (GRANULAR SOILS)		NOTES:
AND 33-50% SOME 20-33%	LITTLE 10-20% TRACE 0-10%	<2 VERY SOFT 2-4 SOFT 4-8 MEDIUM STIFF	8-15 STIFF 15-30 VERY STIFF >30 HARD	0-4 VERY LOOSE 4-10 LOOSE 10-30 MEDIUM DENSE	30-50 DENSE >50 VERY DENSE	Mini RAE 2000 used.



BORING / WELL IDENTIFICATION: MW-4

Site Name: **Germaine Spill**

Site Location: **North Hyde Park, VT**

Well Depth: **12'**

Boring Depth: **12'**

Installation Date: **November 24, 2003**

Depth to Water (during drilling): **6'**

Job Number: **23-140**

Screen Diameter: **1"**

Depth: **2' to 12' bgs**

REA Representative: **A. Torizzo**

Screen Type/Size: **0.010 slot schedule 40 PVC**

Drilling Company: **Technical Drilling Services**

Riser Diameter: **1"**

Depth: **0.5' to 2' bgs**

Sampling Method: **Geoprobe**

Riser Type/Size: **schedule 40 PVC**

Reference Point (RP): **none**

Depth (ft)	Sample Depth (ft)	Blows/6" and Recovery (in)	Sample Description / Notes	PID (ppm)	Well Profile	Legend
0	0-5		Top 12": Soil.	0.0		Concrete
1			Middle 2'-4": Fine brown SAND with some pebbles.			Native Material
2						Bentonite
3						Filter Sand
4			Bottom 1": Coarse brown SAND.			Riser
5	5-10		Fine brown and white SAND with coarse SAND interbeds.	0.0		Screen
6	▼					Water Level
7						
8						
9						
10						
11						
12			Well set at 12'.			

PROPORTIONS USED

BLOW COUNT (COHESIVE SOILS)

BLOW COUNT (GRANULAR SOILS)

NOTES:

AND 33-50%
SOME 20-33%

LITTLE 10-20%
TRACE 0-10%

<2 VERY SOFT
2-4 SOFT
4-8 MEDIUM STIFF

8-15 STIFF
15-30 VERY STIFF
>30 HARD

0-4 VERY LOOSE
4-10 LOOSE
10-30 MEDIUM DENSE

30-50 DENSE
>50 VERY DENSE

Mini RAE 2000 used.



BORING / WELL IDENTIFICATION: MW-5

Site Name: **Germaine Spill**

Site Location: **North Hyde Park, VT**

Well Depth: **12'**

Boring Depth: **12'**

Installation Date: **November 24, 2003**

Depth to Water (during drilling): **6'**

Job Number: **23-140**

Screen Diameter: **1"**

Depth: **2' to 12' bgs**

REA Representative: **A. Torizzo**

Screen Type/Size: **0.010 slot schedule 40 PVC**

Drilling Company: **Technical Drilling Services**

Riser Diameter: **1"**

Depth: **0.5' to 2' bgs**

Sampling Method: **Geoprobe**

Riser Type/Size: **schedule 40 PVC**

Reference Point (RP): **none**

Depth (ft)	Sample Depth (ft)	Blows/6" and Recovery (in)	Sample Description / Notes	PID (ppm)	Well Profile	Legend
0	0-5		Top 6": Soil.	0.0		Concrete
1			Bottom: Coarse brown SAND with some pebbles.			Native Material
2						Bentonite
3						Filter Sand
4						Riser
5	5-10		Same as above.	0.0		Screen
6	▼					Water Level
7						
8						
9						
10						
11						
12			Well set at 12'.			
PROPORTIONS USED		BLOW COUNT (COHESIVE SOILS)		BLOW COUNT (GRANULAR SOILS)		NOTES:
AND 33-50%	LITTLE 10-20%	<2 VERY SOFT	8-15 STIFF	0-4 VERY LOOSE	30-50 DENSE	Mini RAE 2000 used.
SOME 20-33%	TRACE 0-10%	2-4 SOFT	15-30 VERY STIFF	4-10 LOOSE	>50 VERY DENSE	
		4-8 MEDIUM STIFF	>30 HARD	10-30 MEDIUM DENSE		



BORING / WELL IDENTIFICATION: SB-1

Site Name: **Germaine Spill**
 Site Location: **North Hyde Park, VT**

Well Depth:	NA	Boring Depth:	15'	Installation Date:	November 24, 2003
Depth to Water (during drilling):			12'	Job Number:	23-140
Screen Diameter:	NA	Depth:	NA	REA Representative:	A. Torizzo
Screen Type/Size:	NA			Drilling Company:	Technical Drilling Services
Riser Diameter:	NA	Depth:	NA	Sampling Method:	Geoprobe
Riser Type/Size:	schedule 40 PVC			Reference Point (RP):	none

Depth (ft)	Sample Depth (ft)	Blows/6" and Recovery (in)	Sample Description / Notes	PID (ppm)	Well Profile	Legend
0	0-5		Top 1': Soil.	0.0		Concrete
1			Bottom: Coarse brown SAND with some pebbles.			Native Material
2						Bentonite
3						Filter Sand
4			Same as above.			Riser
5	5-10					Screen
6						Water Level
7			Same as above.			
8						
9						
10	10-15		Bottom of Boring at 15'.			
11						
12	▼					
13						
14						
15						

PROPORTIONS USED		BLOW COUNT (COHESIVE SOILS)		BLOW COUNT (GRANULAR SOILS)		NOTES:
AND 33-50%	LITTLE 10-20%	<2 VERY SOFT	8-15 STIFF	0-4 VERY LOOSE	30-50 DENSE	Mini RAE 2000 used.
SOME 20-33%	TRACE 0-10%	2-4 SOFT	15-30 VERY STIFF	4-10 LOOSE	>50 VERY DENSE	
		4-8 MEDIUM STIFF	>30 HARD	10-30 MEDIUM DENSE		

**LABORATORY
ANALYTICAL REPORTS**

**A
T
T
A
C
H
M
E
N
T
D**



LABORATORY REPORT

CLIENT: Ross Environ. Assoc., Inc.

ORDER ID: 26616

PROJECT: Germaine Spill #23-140

ANAL. METHOD: SW 8260

DATE RECEIVED: November 25, 2003

SAMPLER: AT

REPORT DATE: December 2, 2003

ANALYST: 725

Site: Heath Supply Ref. Number: 222195 Date Sampled: 11/17/03 Time Sampled: 10:30 AM Analysis Date: 11/26/03	Site: Stotesbury Inf Ref. Number: 222198 Date Sampled: 11/19/03 Time Sampled: 9:40 AM Analysis Date: 11/27/03	Site: Dup-1 Ref. Number: 222201 Date Sampled: 11/19/03 Time Sampled: NI Analysis Date: 12/1/03																																																																		
<table border="1"> <thead> <tr> <th>Parameter</th> <th>Results ug/L</th> </tr> </thead> <tbody> <tr><td>MTBE</td><td><2.0</td></tr> <tr><td>Benzene</td><td><1.0</td></tr> <tr><td>Toluene</td><td><1.0</td></tr> <tr><td>Ethylbenzene</td><td><1.0</td></tr> <tr><td>Xylenes, Total</td><td><2.0</td></tr> <tr><td>1,3,5 Trimethyl Benzene</td><td><1.0</td></tr> <tr><td>1,2,4 Trimethyl Benzene</td><td><1.0</td></tr> <tr><td>Naphthalene</td><td><2.0</td></tr> <tr><td>UIP's</td><td>0.</td></tr> <tr><td>Surrogate 1</td><td>99.0%</td></tr> </tbody> </table>	Parameter	Results ug/L	MTBE	<2.0	Benzene	<1.0	Toluene	<1.0	Ethylbenzene	<1.0	Xylenes, Total	<2.0	1,3,5 Trimethyl Benzene	<1.0	1,2,4 Trimethyl Benzene	<1.0	Naphthalene	<2.0	UIP's	0.	Surrogate 1	99.0%	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Results ug/L</th> </tr> </thead> <tbody> <tr><td>MTBE</td><td><2.0</td></tr> <tr><td>Benzene</td><td>28.4</td></tr> <tr><td>Toluene</td><td>17.7</td></tr> <tr><td>Ethylbenzene</td><td>54.1</td></tr> <tr><td>Xylenes, Total</td><td>301.</td></tr> <tr><td>1,3,5 Trimethyl Benzene</td><td>32.5</td></tr> <tr><td>1,2,4 Trimethyl Benzene</td><td>91.3</td></tr> <tr><td>Naphthalene</td><td>74.2</td></tr> <tr><td>UIP's</td><td>>10.</td></tr> <tr><td>Surrogate 1</td><td>105.0%</td></tr> </tbody> </table>	Parameter	Results ug/L	MTBE	<2.0	Benzene	28.4	Toluene	17.7	Ethylbenzene	54.1	Xylenes, Total	301.	1,3,5 Trimethyl Benzene	32.5	1,2,4 Trimethyl Benzene	91.3	Naphthalene	74.2	UIP's	>10.	Surrogate 1	105.0%	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Results ug/L</th> </tr> </thead> <tbody> <tr><td>MTBE</td><td><2.0</td></tr> <tr><td>Benzene</td><td>39.8</td></tr> <tr><td>Toluene</td><td>22.8</td></tr> <tr><td>Ethylbenzene</td><td>63.1</td></tr> <tr><td>Xylenes, Total</td><td>346.</td></tr> <tr><td>1,3,5 Trimethyl Benzene</td><td>40.0</td></tr> <tr><td>1,2,4 Trimethyl Benzene</td><td>124.</td></tr> <tr><td>Naphthalene</td><td>96.1</td></tr> <tr><td>UIP's</td><td>>10.</td></tr> <tr><td>Surrogate 1</td><td>104.0%</td></tr> </tbody> </table>	Parameter	Results ug/L	MTBE	<2.0	Benzene	39.8	Toluene	22.8	Ethylbenzene	63.1	Xylenes, Total	346.	1,3,5 Trimethyl Benzene	40.0	1,2,4 Trimethyl Benzene	124.	Naphthalene	96.1	UIP's	>10.	Surrogate 1	104.0%
Parameter	Results ug/L																																																																			
MTBE	<2.0																																																																			
Benzene	<1.0																																																																			
Toluene	<1.0																																																																			
Ethylbenzene	<1.0																																																																			
Xylenes, Total	<2.0																																																																			
1,3,5 Trimethyl Benzene	<1.0																																																																			
1,2,4 Trimethyl Benzene	<1.0																																																																			
Naphthalene	<2.0																																																																			
UIP's	0.																																																																			
Surrogate 1	99.0%																																																																			
Parameter	Results ug/L																																																																			
MTBE	<2.0																																																																			
Benzene	28.4																																																																			
Toluene	17.7																																																																			
Ethylbenzene	54.1																																																																			
Xylenes, Total	301.																																																																			
1,3,5 Trimethyl Benzene	32.5																																																																			
1,2,4 Trimethyl Benzene	91.3																																																																			
Naphthalene	74.2																																																																			
UIP's	>10.																																																																			
Surrogate 1	105.0%																																																																			
Parameter	Results ug/L																																																																			
MTBE	<2.0																																																																			
Benzene	39.8																																																																			
Toluene	22.8																																																																			
Ethylbenzene	63.1																																																																			
Xylenes, Total	346.																																																																			
1,3,5 Trimethyl Benzene	40.0																																																																			
1,2,4 Trimethyl Benzene	124.																																																																			
Naphthalene	96.1																																																																			
UIP's	>10.																																																																			
Surrogate 1	104.0%																																																																			
Site: Stotesbury Eff-2 Ref. Number: 222196 Date Sampled: 11/19/03 Time Sampled: 9:30 AM Analysis Date: 11/27/03	Site: Lyon Supply Ref. Number: 222199 Date Sampled: 11/19/03 Time Sampled: 1:00 PM Analysis Date: 12/1/03	Site: TB-1 Ref. Number: 222202 Date Sampled: 11/24/03 Time Sampled: 12:00 PM Analysis Date: 12/1/03																																																																		
<table border="1"> <thead> <tr> <th>Parameter</th> <th>Results ug/L</th> </tr> </thead> <tbody> <tr><td>MTBE</td><td><2.0</td></tr> <tr><td>Benzene</td><td><1.0</td></tr> <tr><td>Toluene</td><td><1.0</td></tr> <tr><td>Ethylbenzene</td><td><1.0</td></tr> <tr><td>Xylenes, Total</td><td><2.0</td></tr> <tr><td>1,3,5 Trimethyl Benzene</td><td><1.0</td></tr> <tr><td>1,2,4 Trimethyl Benzene</td><td><1.0</td></tr> <tr><td>Naphthalene</td><td><2.0</td></tr> <tr><td>UIP's</td><td>0.</td></tr> <tr><td>Surrogate 1</td><td>100.0%</td></tr> </tbody> </table>	Parameter	Results ug/L	MTBE	<2.0	Benzene	<1.0	Toluene	<1.0	Ethylbenzene	<1.0	Xylenes, Total	<2.0	1,3,5 Trimethyl Benzene	<1.0	1,2,4 Trimethyl Benzene	<1.0	Naphthalene	<2.0	UIP's	0.	Surrogate 1	100.0%	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Results ug/L</th> </tr> </thead> <tbody> <tr><td>MTBE</td><td><2.0</td></tr> <tr><td>Benzene</td><td><1.0</td></tr> <tr><td>Toluene</td><td><1.0</td></tr> <tr><td>Ethylbenzene</td><td><1.0</td></tr> <tr><td>Xylenes, Total</td><td><2.0</td></tr> <tr><td>1,3,5 Trimethyl Benzene</td><td><1.0</td></tr> <tr><td>1,2,4 Trimethyl Benzene</td><td><1.0</td></tr> <tr><td>Naphthalene</td><td><2.0</td></tr> <tr><td>UIP's</td><td>0.</td></tr> <tr><td>Surrogate 1</td><td>96.0%</td></tr> </tbody> </table>	Parameter	Results ug/L	MTBE	<2.0	Benzene	<1.0	Toluene	<1.0	Ethylbenzene	<1.0	Xylenes, Total	<2.0	1,3,5 Trimethyl Benzene	<1.0	1,2,4 Trimethyl Benzene	<1.0	Naphthalene	<2.0	UIP's	0.	Surrogate 1	96.0%	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Results ug/L</th> </tr> </thead> <tbody> <tr><td>MTBE</td><td><2.0</td></tr> <tr><td>Benzene</td><td><1.0</td></tr> <tr><td>Toluene</td><td><1.0</td></tr> <tr><td>Ethylbenzene</td><td><1.0</td></tr> <tr><td>Xylenes, Total</td><td><2.0</td></tr> <tr><td>1,3,5 Trimethyl Benzene</td><td><1.0</td></tr> <tr><td>1,2,4 Trimethyl Benzene</td><td><1.0</td></tr> <tr><td>Naphthalene</td><td><2.0</td></tr> <tr><td>UIP's</td><td>0.</td></tr> <tr><td>Surrogate 1</td><td>97.0%</td></tr> </tbody> </table>	Parameter	Results ug/L	MTBE	<2.0	Benzene	<1.0	Toluene	<1.0	Ethylbenzene	<1.0	Xylenes, Total	<2.0	1,3,5 Trimethyl Benzene	<1.0	1,2,4 Trimethyl Benzene	<1.0	Naphthalene	<2.0	UIP's	0.	Surrogate 1	97.0%
Parameter	Results ug/L																																																																			
MTBE	<2.0																																																																			
Benzene	<1.0																																																																			
Toluene	<1.0																																																																			
Ethylbenzene	<1.0																																																																			
Xylenes, Total	<2.0																																																																			
1,3,5 Trimethyl Benzene	<1.0																																																																			
1,2,4 Trimethyl Benzene	<1.0																																																																			
Naphthalene	<2.0																																																																			
UIP's	0.																																																																			
Surrogate 1	100.0%																																																																			
Parameter	Results ug/L																																																																			
MTBE	<2.0																																																																			
Benzene	<1.0																																																																			
Toluene	<1.0																																																																			
Ethylbenzene	<1.0																																																																			
Xylenes, Total	<2.0																																																																			
1,3,5 Trimethyl Benzene	<1.0																																																																			
1,2,4 Trimethyl Benzene	<1.0																																																																			
Naphthalene	<2.0																																																																			
UIP's	0.																																																																			
Surrogate 1	96.0%																																																																			
Parameter	Results ug/L																																																																			
MTBE	<2.0																																																																			
Benzene	<1.0																																																																			
Toluene	<1.0																																																																			
Ethylbenzene	<1.0																																																																			
Xylenes, Total	<2.0																																																																			
1,3,5 Trimethyl Benzene	<1.0																																																																			
1,2,4 Trimethyl Benzene	<1.0																																																																			
Naphthalene	<2.0																																																																			
UIP's	0.																																																																			
Surrogate 1	97.0%																																																																			
Site: Stotesbury Eff-1 Ref. Number: 222197 Date Sampled: 11/19/03 Time Sampled: 9:35 AM Analysis Date: 11/27/03	Site: Hurlburt Supply Ref. Number: 222200 Date Sampled: 11/24/03 Time Sampled: 1:00 PM Analysis Date: 12/1/03																																																																			
<table border="1"> <thead> <tr> <th>Parameter</th> <th>Results ug/L</th> </tr> </thead> <tbody> <tr><td>MTBE</td><td><2.0</td></tr> <tr><td>Benzene</td><td><1.0</td></tr> <tr><td>Toluene</td><td><1.0</td></tr> <tr><td>Ethylbenzene</td><td><1.0</td></tr> <tr><td>Xylenes, Total</td><td><2.0</td></tr> <tr><td>1,3,5 Trimethyl Benzene</td><td><1.0</td></tr> <tr><td>1,2,4 Trimethyl Benzene</td><td><1.0</td></tr> <tr><td>Naphthalene</td><td><2.0</td></tr> <tr><td>UIP's</td><td>0.</td></tr> <tr><td>Surrogate 1</td><td>103.0%</td></tr> </tbody> </table>	Parameter	Results ug/L	MTBE	<2.0	Benzene	<1.0	Toluene	<1.0	Ethylbenzene	<1.0	Xylenes, Total	<2.0	1,3,5 Trimethyl Benzene	<1.0	1,2,4 Trimethyl Benzene	<1.0	Naphthalene	<2.0	UIP's	0.	Surrogate 1	103.0%	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Results ug/L</th> </tr> </thead> <tbody> <tr><td>MTBE</td><td><2.0</td></tr> <tr><td>Benzene</td><td><1.0</td></tr> <tr><td>Toluene</td><td><1.0</td></tr> <tr><td>Ethylbenzene</td><td><1.0</td></tr> <tr><td>Xylenes, Total</td><td><2.0</td></tr> <tr><td>1,3,5 Trimethyl Benzene</td><td><1.0</td></tr> <tr><td>1,2,4 Trimethyl Benzene</td><td><1.0</td></tr> <tr><td>Naphthalene</td><td><2.0</td></tr> <tr><td>UIP's</td><td>0.</td></tr> <tr><td>Surrogate 1</td><td>98.0%</td></tr> </tbody> </table>	Parameter	Results ug/L	MTBE	<2.0	Benzene	<1.0	Toluene	<1.0	Ethylbenzene	<1.0	Xylenes, Total	<2.0	1,3,5 Trimethyl Benzene	<1.0	1,2,4 Trimethyl Benzene	<1.0	Naphthalene	<2.0	UIP's	0.	Surrogate 1	98.0%																							
Parameter	Results ug/L																																																																			
MTBE	<2.0																																																																			
Benzene	<1.0																																																																			
Toluene	<1.0																																																																			
Ethylbenzene	<1.0																																																																			
Xylenes, Total	<2.0																																																																			
1,3,5 Trimethyl Benzene	<1.0																																																																			
1,2,4 Trimethyl Benzene	<1.0																																																																			
Naphthalene	<2.0																																																																			
UIP's	0.																																																																			
Surrogate 1	103.0%																																																																			
Parameter	Results ug/L																																																																			
MTBE	<2.0																																																																			
Benzene	<1.0																																																																			
Toluene	<1.0																																																																			
Ethylbenzene	<1.0																																																																			
Xylenes, Total	<2.0																																																																			
1,3,5 Trimethyl Benzene	<1.0																																																																			
1,2,4 Trimethyl Benzene	<1.0																																																																			
Naphthalene	<2.0																																																																			
UIP's	0.																																																																			
Surrogate 1	98.0%																																																																			



LABORATORY REPORT

EPA 524.2

 CLIENT: Ross Environ. Assoc., Inc.
 PROJECT: Germaine Spill #23-140
 SITE: Germaine Supply
 DATE RECEIVED: November 25, 2003
 REPORT DATE: December 2, 2003
 ANALYSIS DATE: December 1, 2003

 ORDER ID: 26616
 REFERENCE NUMBER: 222194
 DATE SAMPLED: November 17, 2003
 TIME SAMPLED: 11:00 AM
 SAMPLER: AT
 ANALYST: 725

<u>Parameter</u>	<u>Result</u> <u>ug/L</u>	<u>Parameter</u>	<u>Result</u> <u>ug/L</u>
Benzene	< 0.5	Hexachlorobutadiene	< 0.5
Bromobenzene	< 0.5	Isopropylbenzene	< 0.5
Bromochloromethane	< 0.5	4-Isopropyltoluene	< 0.5
Bromomethane	< 0.5	MTBE	< 1.0
n-Butylbenzene	< 0.5	Naphthalene	< 1.0
sec-Butylbenzene	< 0.5	n-Propylbenzene	< 0.5
tert-Butylbenzene	< 0.5	Styrene	< 0.5
Carbon tetrachloride	< 0.5	1,1,1,2-Tetrachloroethane	< 0.5
Chlorobenzene	< 0.5	1,1,2,2-Tetrachloroethane	< 1.0
Chloroethane	< 0.5	Tetrachloroethene	< 0.5
Chloromethane	< 0.5	Toluene	< 0.5
2-Chlorotoluene	< 0.5	1,2,3-Trichlorobenzene	< 0.5
4-Chlorotoluene	< 0.5	1,2,4-Trichlorobenzene	< 0.5
Dibromomethane	< 1.0	1,1,1-Trichloroethane	< 0.5
1,2-Dichlorobenzene	< 0.5	1,1,2-Trichloroethane	< 0.5
1,3-Dichlorobenzene	< 0.5	Trichloroethene	< 0.5
1,4-Dichlorobenzene	< 0.5	Trichlorofluoromethane	< 1.0
Dichlorodifluoromethane	< 0.5	1,2,3-Trichloropropane	< 0.5
1,1-Dichloroethane	< 0.5	1,2,4-Trimethylbenzene	< 0.5
1,2-Dichloroethane	< 0.5	1,3,5-Trimethylbenzene	< 0.5
1,1-Dichloroethene	< 0.5	Vinyl Chloride	< 0.5
cis-1,2-Dichloroethene	< 0.5	Xylenes, Total	< 1.0
trans-1,2-Dichloroethene	< 0.5	Bromodichloromethane	< 0.5
Dichloromethane	< 1.0	Bromoform	< 0.5
1,2-Dichloropropane	< 0.5	Chloroform	< 0.5
1,3-Dichloropropane	< 0.5	Dibromochloromethane	< 0.5
2,2-Dichloropropane	< 0.5	Total Trihalomethanes	< 0.5
1,1-Dichloropropene	< 0.5	Surrogate 1	102.0%
cis-1,3-Dichloropropene	< 0.5	Surrogate 2	96.0%
trans-1,3-Dichloropropene	< 0.5	UIP's	0.
Ethylbenzene	< 0.5		



LABORATORY REPORT

CLIENT: Ross Environ. Assoc., Inc.

ORDER ID: 26950

PROJECT: Germaine Spill #23-140

ANAL. METHOD: SW 8021B

DATE RECEIVED: December 16, 2003

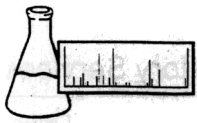
SAMPLER: AT

REPORT DATE: December 30, 2003

ANALYST: 420

Site: MW-1 Ref. Number: 223150 Date Sampled: 12/12/03 Time Sampled: 12:00 PM Analysis Date: 12/23/03	Site: MW-4 Ref. Number: 223153 Date Sampled: 12/12/03 Time Sampled: 12:30 PM Analysis Date: 12/23/03	Site: TB-1 Ref. Number: 223156 Date Sampled: 12/12/03 Time Sampled: 10:00 AM Analysis Date: 12/23/03																																																																		
<table border="1"> <thead> <tr> <th>Parameter</th> <th>Results ug/L</th> </tr> </thead> <tbody> <tr><td>MTBE</td><td>< 2.0</td></tr> <tr><td>Benzene</td><td>< 1.0</td></tr> <tr><td>Toluene</td><td>< 1.0</td></tr> <tr><td>Ethylbenzene</td><td>< 1.0</td></tr> <tr><td>Xylenes, Total</td><td>< 2.0</td></tr> <tr><td>1,3,5 Trimethyl Benzene</td><td>< 1.0</td></tr> <tr><td>1,2,4 Trimethyl Benzene</td><td>< 1.0</td></tr> <tr><td>Naphthalene</td><td>< 1.0</td></tr> <tr><td>UIP's</td><td>0.</td></tr> <tr><td>Surrogate 1</td><td>97.0%</td></tr> </tbody> </table>	Parameter	Results ug/L	MTBE	< 2.0	Benzene	< 1.0	Toluene	< 1.0	Ethylbenzene	< 1.0	Xylenes, Total	< 2.0	1,3,5 Trimethyl Benzene	< 1.0	1,2,4 Trimethyl Benzene	< 1.0	Naphthalene	< 1.0	UIP's	0.	Surrogate 1	97.0%	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Results ug/L</th> </tr> </thead> <tbody> <tr><td>MTBE</td><td>< 2.0</td></tr> <tr><td>Benzene</td><td>< 1.0</td></tr> <tr><td>Toluene</td><td>< 1.0</td></tr> <tr><td>Ethylbenzene</td><td>< 1.0</td></tr> <tr><td>Xylenes, Total</td><td>< 2.0</td></tr> <tr><td>1,3,5 Trimethyl Benzene</td><td>< 1.0</td></tr> <tr><td>1,2,4 Trimethyl Benzene</td><td>< 1.0</td></tr> <tr><td>Naphthalene</td><td>< 1.0</td></tr> <tr><td>UIP's</td><td>0.</td></tr> <tr><td>Surrogate 1</td><td>100.0%</td></tr> </tbody> </table>	Parameter	Results ug/L	MTBE	< 2.0	Benzene	< 1.0	Toluene	< 1.0	Ethylbenzene	< 1.0	Xylenes, Total	< 2.0	1,3,5 Trimethyl Benzene	< 1.0	1,2,4 Trimethyl Benzene	< 1.0	Naphthalene	< 1.0	UIP's	0.	Surrogate 1	100.0%	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Results ug/L</th> </tr> </thead> <tbody> <tr><td>MTBE</td><td>< 2.0</td></tr> <tr><td>Benzene</td><td>< 1.0</td></tr> <tr><td>Toluene</td><td>< 1.0</td></tr> <tr><td>Ethylbenzene</td><td>< 1.0</td></tr> <tr><td>Xylenes, Total</td><td>< 2.0</td></tr> <tr><td>1,3,5 Trimethyl Benzene</td><td>< 1.0</td></tr> <tr><td>1,2,4 Trimethyl Benzene</td><td>< 1.0</td></tr> <tr><td>Naphthalene</td><td>< 1.0</td></tr> <tr><td>UIP's</td><td>0.</td></tr> <tr><td>Surrogate 1</td><td>100.0%</td></tr> </tbody> </table>	Parameter	Results ug/L	MTBE	< 2.0	Benzene	< 1.0	Toluene	< 1.0	Ethylbenzene	< 1.0	Xylenes, Total	< 2.0	1,3,5 Trimethyl Benzene	< 1.0	1,2,4 Trimethyl Benzene	< 1.0	Naphthalene	< 1.0	UIP's	0.	Surrogate 1	100.0%
Parameter	Results ug/L																																																																			
MTBE	< 2.0																																																																			
Benzene	< 1.0																																																																			
Toluene	< 1.0																																																																			
Ethylbenzene	< 1.0																																																																			
Xylenes, Total	< 2.0																																																																			
1,3,5 Trimethyl Benzene	< 1.0																																																																			
1,2,4 Trimethyl Benzene	< 1.0																																																																			
Naphthalene	< 1.0																																																																			
UIP's	0.																																																																			
Surrogate 1	97.0%																																																																			
Parameter	Results ug/L																																																																			
MTBE	< 2.0																																																																			
Benzene	< 1.0																																																																			
Toluene	< 1.0																																																																			
Ethylbenzene	< 1.0																																																																			
Xylenes, Total	< 2.0																																																																			
1,3,5 Trimethyl Benzene	< 1.0																																																																			
1,2,4 Trimethyl Benzene	< 1.0																																																																			
Naphthalene	< 1.0																																																																			
UIP's	0.																																																																			
Surrogate 1	100.0%																																																																			
Parameter	Results ug/L																																																																			
MTBE	< 2.0																																																																			
Benzene	< 1.0																																																																			
Toluene	< 1.0																																																																			
Ethylbenzene	< 1.0																																																																			
Xylenes, Total	< 2.0																																																																			
1,3,5 Trimethyl Benzene	< 1.0																																																																			
1,2,4 Trimethyl Benzene	< 1.0																																																																			
Naphthalene	< 1.0																																																																			
UIP's	0.																																																																			
Surrogate 1	100.0%																																																																			
Site: MW-2 Ref. Number: 223151 Date Sampled: 12/12/03 Time Sampled: 12:10 PM Analysis Date: 12/23/03	Site: MW-5 Ref. Number: 223154 Date Sampled: 12/12/03 Time Sampled: 12:40 PM Analysis Date: 12/23/03																																																																			
<table border="1"> <thead> <tr> <th>Parameter</th> <th>Results ug/L</th> </tr> </thead> <tbody> <tr><td>MTBE</td><td>< 2.0</td></tr> <tr><td>Benzene</td><td>< 1.0</td></tr> <tr><td>Toluene</td><td>< 1.0</td></tr> <tr><td>Ethylbenzene</td><td>< 1.0</td></tr> <tr><td>Xylenes, Total</td><td>< 2.0</td></tr> <tr><td>1,3,5 Trimethyl Benzene</td><td>< 1.0</td></tr> <tr><td>1,2,4 Trimethyl Benzene</td><td>< 1.0</td></tr> <tr><td>Naphthalene</td><td>< 1.0</td></tr> <tr><td>UIP's</td><td>0.</td></tr> <tr><td>Surrogate 1</td><td>102.0%</td></tr> </tbody> </table>	Parameter	Results ug/L	MTBE	< 2.0	Benzene	< 1.0	Toluene	< 1.0	Ethylbenzene	< 1.0	Xylenes, Total	< 2.0	1,3,5 Trimethyl Benzene	< 1.0	1,2,4 Trimethyl Benzene	< 1.0	Naphthalene	< 1.0	UIP's	0.	Surrogate 1	102.0%	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Results ug/L</th> </tr> </thead> <tbody> <tr><td>MTBE</td><td>< 2.0</td></tr> <tr><td>Benzene</td><td>< 1.0</td></tr> <tr><td>Toluene</td><td>< 1.0</td></tr> <tr><td>Ethylbenzene</td><td>< 1.0</td></tr> <tr><td>Xylenes, Total</td><td>< 2.0</td></tr> <tr><td>1,3,5 Trimethyl Benzene</td><td>< 1.0</td></tr> <tr><td>1,2,4 Trimethyl Benzene</td><td>< 1.0</td></tr> <tr><td>Naphthalene</td><td>< 1.0</td></tr> <tr><td>UIP's</td><td>0.</td></tr> <tr><td>Surrogate 1</td><td>101.0%</td></tr> </tbody> </table>	Parameter	Results ug/L	MTBE	< 2.0	Benzene	< 1.0	Toluene	< 1.0	Ethylbenzene	< 1.0	Xylenes, Total	< 2.0	1,3,5 Trimethyl Benzene	< 1.0	1,2,4 Trimethyl Benzene	< 1.0	Naphthalene	< 1.0	UIP's	0.	Surrogate 1	101.0%																							
Parameter	Results ug/L																																																																			
MTBE	< 2.0																																																																			
Benzene	< 1.0																																																																			
Toluene	< 1.0																																																																			
Ethylbenzene	< 1.0																																																																			
Xylenes, Total	< 2.0																																																																			
1,3,5 Trimethyl Benzene	< 1.0																																																																			
1,2,4 Trimethyl Benzene	< 1.0																																																																			
Naphthalene	< 1.0																																																																			
UIP's	0.																																																																			
Surrogate 1	102.0%																																																																			
Parameter	Results ug/L																																																																			
MTBE	< 2.0																																																																			
Benzene	< 1.0																																																																			
Toluene	< 1.0																																																																			
Ethylbenzene	< 1.0																																																																			
Xylenes, Total	< 2.0																																																																			
1,3,5 Trimethyl Benzene	< 1.0																																																																			
1,2,4 Trimethyl Benzene	< 1.0																																																																			
Naphthalene	< 1.0																																																																			
UIP's	0.																																																																			
Surrogate 1	101.0%																																																																			
Site: MW-3 Ref. Number: 223152 Date Sampled: 12/12/03 Time Sampled: 12:20 PM Analysis Date: 12/23/03	Site: Dup-1 Ref. Number: 223155 Date Sampled: 12/12/03 Time Sampled: NI Analysis Date: 12/23/03																																																																			
<table border="1"> <thead> <tr> <th>Parameter</th> <th>Results ug/L</th> </tr> </thead> <tbody> <tr><td>MTBE</td><td>< 2.0</td></tr> <tr><td>Benzene</td><td>< 1.0</td></tr> <tr><td>Toluene</td><td>< 1.0</td></tr> <tr><td>Ethylbenzene</td><td>< 1.0</td></tr> <tr><td>Xylenes, Total</td><td>< 2.0</td></tr> <tr><td>1,3,5 Trimethyl Benzene</td><td>< 1.0</td></tr> <tr><td>1,2,4 Trimethyl Benzene</td><td>< 1.0</td></tr> <tr><td>Naphthalene</td><td>< 1.0</td></tr> <tr><td>UIP's</td><td>0.</td></tr> <tr><td>Surrogate 1</td><td>98.0%</td></tr> </tbody> </table>	Parameter	Results ug/L	MTBE	< 2.0	Benzene	< 1.0	Toluene	< 1.0	Ethylbenzene	< 1.0	Xylenes, Total	< 2.0	1,3,5 Trimethyl Benzene	< 1.0	1,2,4 Trimethyl Benzene	< 1.0	Naphthalene	< 1.0	UIP's	0.	Surrogate 1	98.0%	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Results ug/L</th> </tr> </thead> <tbody> <tr><td>MTBE</td><td>< 2.0</td></tr> <tr><td>Benzene</td><td>< 1.0</td></tr> <tr><td>Toluene</td><td>< 1.0</td></tr> <tr><td>Ethylbenzene</td><td>< 1.0</td></tr> <tr><td>Xylenes, Total</td><td>< 2.0</td></tr> <tr><td>1,3,5 Trimethyl Benzene</td><td>< 1.0</td></tr> <tr><td>1,2,4 Trimethyl Benzene</td><td>< 1.0</td></tr> <tr><td>Naphthalene</td><td>< 1.0</td></tr> <tr><td>UIP's</td><td>0.</td></tr> <tr><td>Surrogate 1</td><td>101.0%</td></tr> </tbody> </table>	Parameter	Results ug/L	MTBE	< 2.0	Benzene	< 1.0	Toluene	< 1.0	Ethylbenzene	< 1.0	Xylenes, Total	< 2.0	1,3,5 Trimethyl Benzene	< 1.0	1,2,4 Trimethyl Benzene	< 1.0	Naphthalene	< 1.0	UIP's	0.	Surrogate 1	101.0%																							
Parameter	Results ug/L																																																																			
MTBE	< 2.0																																																																			
Benzene	< 1.0																																																																			
Toluene	< 1.0																																																																			
Ethylbenzene	< 1.0																																																																			
Xylenes, Total	< 2.0																																																																			
1,3,5 Trimethyl Benzene	< 1.0																																																																			
1,2,4 Trimethyl Benzene	< 1.0																																																																			
Naphthalene	< 1.0																																																																			
UIP's	0.																																																																			
Surrogate 1	98.0%																																																																			
Parameter	Results ug/L																																																																			
MTBE	< 2.0																																																																			
Benzene	< 1.0																																																																			
Toluene	< 1.0																																																																			
Ethylbenzene	< 1.0																																																																			
Xylenes, Total	< 2.0																																																																			
1,3,5 Trimethyl Benzene	< 1.0																																																																			
1,2,4 Trimethyl Benzene	< 1.0																																																																			
Naphthalene	< 1.0																																																																			
UIP's	0.																																																																			
Surrogate 1	101.0%																																																																			





LABORATORY REPORT

CLIENT: Ross Environ. Assoc., Inc.
PROJECT: Germaine Spill #23-140
REPORT DATE: December 30, 2003

ORDER ID: 26950
DATE RECEIVED: December 16, 2003
SAMPLER: AT
ANALYST: 333

Ref. Number: 223150

Site: MW-1

Date Sampled: December 12, 2003 Time: 12:00 PM

<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>	<u>Analysis Date</u>
TPH 8015 DRO	< 0.40	mg/L	SW 8015B	12/23/03

Ref. Number: 223151

Site: MW-2

Date Sampled: December 12, 2003 Time: 12:10 PM

<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>	<u>Analysis Date</u>
TPH 8015 DRO	< 0.40	mg/L	SW 8015B	12/24/03

Ref. Number: 223152

Site: MW-3

Date Sampled: December 12, 2003 Time: 12:20 PM

<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>	<u>Analysis Date</u>
TPH 8015 DRO	< 0.40	mg/L	SW 8015B	12/24/03

Ref. Number: 223153

Site: MW-4

Date Sampled: December 12, 2003 Time: 12:30 PM

<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>	<u>Analysis Date</u>
TPH 8015 DRO	< 0.40	mg/L	SW 8015B	12/24/03

Ref. Number: 223154

Site: MW-5

Date Sampled: December 12, 2003 Time: 12:40 PM

<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>	<u>Analysis Date</u>
TPH 8015 DRO	< 0.40	mg/L	SW 8015B	12/24/03

Ref. Number: 223155

Site: Dup-1

Date Sampled: December 12, 2003 Time: NI

<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>	<u>Analysis Date</u>
TPH 8015 DRO	< 0.40	mg/L	SW 8015B	12/24/03

