



## Environmental Services of America, Inc.

### ENSA Environmental, Inc.

205 Main Street  
P.O. Box 1760  
Brattleboro, VT 05302  
Phone: (802) 254-3677  
1-800-359-3677  
Fax: (802) 254-7630

January 4, 1995

Dan & Robin Wells  
D & R General Store  
Route 121  
Cambridgeport, VT 05141

RE: "Environmental Site Investigation Report of D & R General Store" dated  
December 29, 1994

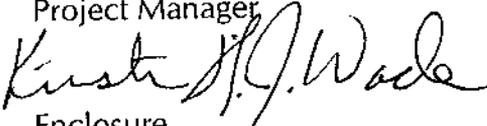
Dear Mr. & Mrs. Wells:

Enclosed please find the above-referenced report for your review. If you agree with its contents, please sign the approval form enclosed and return one copy to our office. Upon receipt of this approval, we will forward the report to Richard Spiese, VT DEC HMMMD.

Should you find any incongruities in this report please call me at 254-3677 and I will make the corrections.

Sincerely,  
ENSA Environmental, Inc.

Kirsten H. J. Wade  
Project Manager



Enclosure

KHJW/taw

cc: Richard Spiese, VT DEC HMMMD

\\466\approval.let

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Environmental Site Investigation Report  
D & R General Store  
Route 121  
Cambridgeport, Vermont  
DEC Site # 94-1580

December 29, 1994

*Prepared for*

Daniel and Robin Wells  
Route 121  
Cambridgeport, VT 05141

by

ENSA Environmental, Inc.  
205 Main Street  
Brattleboro, VT 05301

## EXECUTIVE SUMMARY

In a letter dated April 14, 1994, the Sites Management Section (SMS) of the Vermont Department of Environmental Conservation (VT DEC) requested additional investigation of the extent of petroleum related contamination in the soils and groundwater at the D&R General Store located on Route 121 Cambridgeport, Vermont. The letter was issued to Mr. Daniel Wells proprietor of the General Store based on a limited subsurface investigation performed by the Vermont Department of Environmental Conservation Technical Services Section (TSS).

The two, 1,000 gallon underground gasoline storage tanks (USTs) on site were decommissioned and removed (tank 1 was removed and tank 2 was closed in place) on September 19, 1994 by Champlain Electric of Milton Vermont. Based on the very good condition of the tanks and other findings at the time of tank removal, leaking connecting lines, vent lines and/or distribution pumps are the probable cause of petroleum contamination in the soils and groundwater at the site.

A total of approximately 84 cubic yards of contaminated soils, excavated during the tank removal, were polyencapsulated and stockpiled onsite. These stockpiled soils were sampled and screened on November 17, 1994 for volatile organic compounds (VOCs) via Vermont DEC headspace protocol. Contaminant levels found in the soils sampled, from five separate locations in the pile, range from 4.2 ppm to 58 ppm.

Four groundwater monitoring wells were installed at the site and on abutting properties on October 17, 1994. Groundwater samples from all of these wells, were analyzed via US EPA Method 8020 for Aromatic Volatile Organic Compounds. Laboratory results revealed the presence of BTEX and MTBE constituents in several wells.

The subject property is served by a private drinking water well and a private septic/leachfield. Approximately 10 to 12 other private drinking water wells are known to be located in the immediate vicinity of the site. The site is located in a flat, low lying, area between the Saxtons River and Weaver Brook. Both water bodies are potential sensitive receptors.

Conclusions and recommendations for further assessment activities are presented at the end of this report.

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*where is the wells residence*

## I. INTRODUCTION

### A. Setting and Layout

*where is it?*  
*not on the map*

The subject property is currently the site of D&R General Store which is owned and operated by Robin and Daniel Wells. The store provides US postal services for the town of Cambridgeport and sells groceries and gasoline. It is located on Route 121 in Cambridgeport, Vermont. Route 121 abuts the site immediately to the south. Residential properties abut the site to the north, east, and west. Robin and Dan Wells also own the property and houses to the north and east of the store. These three buildings all share the on-site drinking water supply. The house to the east is rented out as apartments and the house to the north is the Wells' residence. The Tapper family, whose residence is located directly across Route 121 from the site, have their own private drinking water well and use their surrounding acreage to grow produce for a community supported agriculture (CSA) program in the area (providing produce for up to 15 different families during the summer months). The Saxtons River is located approximately 600 feet west of the site and curves around to the southwest, and south. Weaver Brook is located approximately 550 feet to the east and southeast of the site. A Site Location Map is presented in Appendix A of this report.

*where is it?*

The subject property is served by a private drinking water well and a private septic system with a leachfield. There are also approximately 10 to 12 other private drinking water wells located in the immediate vicinity of the site. The layout of the site is shown on the Groundwater Potentiometric Map presented in Appendix B of this report.

### B. Background Information

On April 14, 1994, in a letter to Daniel Wells of D&R General Store, the Vermont Department of Environmental Conservation (DEC) Sites Management Section (SMS) requested further investigation at the site in response to a limited subsurface assessment conducted by Tim Cropley of the DEC Technical Services Section (TSS); four groundwater monitoring wells were installed around the existing USTs to provide release detection pursuant to the Vermont UST regulations: petroleum contamination was detected in samples collected from these wells. In response to the SMS request for additional assessment, ENSA Environmental Inc. (ENSA) was contacted and asked to submit a preliminary work plan for the additional work requested.

On September 19, 1994, two (2) 1,000 gallon gasoline USTs were decommissioned at the site in order to install a 6,000 gallon baffled gasoline UST. One tank was removed and the second tank was closed in place (with permission of the DEC) because of its close proximity to a utility pole. The tank removal and closure in place was performed by Champlain Electric Inc. of Milton, Vermont and observed by ENSA personnel. The USTs were located to the south of the general store building between the store and Route 121. According to David Balk, of ENSA, who prepared the tank removal forms following the UST removal, contaminated soil was encountered directly adjacent to connective piping and fill pipes as well as around the USTs and in the new excavation for the replacement tank (located immediately east of the pump island). A total of approximately 84 cubic yards of contaminated soil was polyencapsulated and stockpiled on site. Groundwater was encountered during tank excavations at a depth of approximately 7 feet below grade. A sheen was present on the groundwater surface at both excavation sites. Upon the screening of the soil samples with a Thermo Environmental Instruments Model 580B Organic Vapor Meter (OVM), headspace volatiles ranging from 55 ppm to 291 ppm were detected in the soil samples collected. The USTs were both in very good condition upon inspection. It was concluded that the soil and groundwater contamination was most likely caused by leaks in the piping and/or pump dispenser.

In a letter to Daniel and Robin Wells of D&R General Store, dated October 6, 1994, the SMS determined that additional work was necessary at the subject property. ENSA wrote a supplemental section to be added to the initial work plan. The Supplemental Work Plan (dated October 20, 1994) included the additional tasks requested by the SMS.

Based on information from the limited subsurface investigation performed by the TSS and a review of the tank closure report submitted by ENSA, the SMS required the following work to be done:

- *Actively recover any free product measured in the ground in excess of 1/8".*
- *Further determine the degree and extent of contamination to the groundwater at the site, through the installation and sampling of a sufficient number of additional monitoring wells and sampling of the four existing monitoring wells. Samples should be analyzed for BTEX and MTBE.*

- *Perform an assessment of the site to determine the potential for sensitive receptors to be impacted by the contamination (basements, adjacent buildings, nearby surface water, and any public or private drinking water wells). Sample and analyze any potentially impacted water supplies for BTEX and MTBE including the onsite drinking water well.*
- *Determine the need for a long term treatment and/or monitoring plan which addresses the contamination present at the site.*
- *Develop a plan to treat or dispose of the 84 cubic yards of contaminated soils stockpiled on site as per DEC protocol.*
- *Submit a summary report outlining work performed at the site as well as analytical results, site maps, receptor assessments, and appropriate conclusions and recommendations.*

ENSA submitted a proposal, work plan and supplemental work plan to perform the above described work. The proposal and work plans were verbally approved by Chuck Schwer of the SMS during a telephone conversation with ENSA personnel on September 7, 1994.

## II. SITE ACTIVITIES

On September 19, 1994, ENSA sampled the four 4 existing monitoring wells due to potential loss of these wells through the UST removals. One of the four monitoring wells (MW-1) was found to be dry at the time and a second well (MW-2) had 1/8" of free floating product on the surface so only two samples were collected. ENSA was hired by the site owner (Daniel Wells) to screen the soils and submit the tank pull report to the state. Another firm (Champlain Electric Inc.) was hired by the owner to complete the actual tank decommissioning and removal. The monitoring wells were not damaged during the decommissioning of the USTs.

On October 17, 1994, ENSA and T&K Drilling of Troy, NH completed the installation of four additional groundwater monitoring wells at the site; these wells are labeled DR-5 through -8. Well locations are shown on the Groundwater Potentiometric Map presented in Appendix B. Soil samples collected during the advancement of the well borings ranged from 0.0 ppm to 166.0 ppm and were screened on site according to headspace analysis protocol with a Thermo Environmental Instruments Model 580B Organic Vapor Meter (OVM) calibrated to 255 ppm of an Isobutylene span gas. Headspace screening results are included on the Soil Boring/Monitoring Well Construction Logs presented in Appendix C.

On October 26, 1994, all of the site monitoring wells and other prominent features were surveyed, and the groundwater levels in the monitoring wells were gauged. Depth to groundwater was measured at each well using a Solinst Model 101 electronic water level indicator capable of measuring levels to the nearest 0.01 foot. After removal of three well volumes of groundwater from each of the wells, groundwater samples were collected for laboratory analysis. Samples were also collected from the on-site water supply well and the water supply well at the Tapper residence located immediately across Route 121 and downgradient of the site. All samples were refrigerated and sent to Alpha Analytical Laboratories in Westborough, Massachusetts for analysis of aromatic volatile organic compounds (VOCs) via EPA Method 8020 + MTBE.

### III. RESULTS

#### A. Soil Conditions

Upon the installation of the four new monitoring wells (DR-5 through DR-7), soil conditions were found to be consistent with those of the previously installed wells (MW-1 through MW-4). The top 10 to 13 feet of unconsolidated material consists of a poorly sorted, dark brown to light brown, medium to fine sand and silt with a trace of fine to coarse gravel. At the depth of 10 to 13 feet, soils became denser with refusals encountered in both wells DR-6 and DR-7. The poorly sorted dense soils at the site could be classified as glacial till. Soil Boring/Monitoring Well Construction Logs are presented in Appendix C.

#### B. Site Hydrology

Depths to groundwater in the monitoring wells were gauged on 9/19/94 and 10/26/94. Groundwater elevations are presented in Table I.

**Table I**  
**Groundwater Potentiometric Data**

Elevation of:	MW-1	MW-2	MW-3	MW-4	DR-5	DR-6	DR-7	DR-8
Top of PVC	99.60	99.42	99.29	99.33	98.37	98.54	98.37	98.70
10/26/94 Groundwater	93.07	93.08	93.07	93.11	93.07	93.01	93.02	93.00
9/19/94 Groundwater	92.85	92.37	91.81	92.51	Not installed	Not installed	Not installed	Not installed
<i>All elevations are reported in feet from an arbitrary datum point.</i>								

A groundwater potentiometric map (Appendix B), constructed based on the above information, indicates that at the time of data collection, groundwater flow was in a south/southeasterly direction at the site.

The hydraulic gradient between wells MW-4 and DR-8 was determined to be 0.002 cm/cm. Based on a hydraulic conductivity value of  $10^{-3}$  cm/sec for fine grained silty sand (soil conditions at the groundwater table), and an effective porosity estimate of 35% for soils in the vicinity of the groundwater table, groundwater velocity was determined using the following variation of Darcy's Equation:

$$GW_{vel} = \text{Hydraulic Gradient} \times \text{Hydraulic Conductivity} / \text{Effective Porosity}$$

$$GW_{vel} = 0.002 \text{ cm/cm} \times 0.001 \text{ cm/sec} / 0.35$$

$$GW_{vel} = 5.7 \times 10^{-6} \text{ cm/sec}$$

$$GW_{vel} = 0.5 \text{ cm/day}$$

### *C. Analytical Testing Results*

#### 1. Soil Contamination

During monitoring well installation split spoon soil samples were collected at five (5) foot intervals. Soils were screened for the presence of volatile organic compounds (VOCs) via headspace screening protocol using an OVM. Overall readings ranged from 0.0 ppm to 166.0 ppm with the highest reading (166.0 ppm) found in well DR-8. Complete records of OVM soil screening readings for each well are included in the Soil Boring/Monitoring Well Construction Logs in Appendix C.

The 84 cubic yards of stockpiled soils at the site were screened on 11/17/94 via DEC headspace screening protocol using an Thermo Environmental Instruments OVM calibrated to Isobutylene. Readings of the soil samples ranged from 4.2 ppm to 58 ppm when screened. Samples were collected from the pile at five different locations at depths ranging from 1.5 feet to 4 feet.

#### 2. Groundwater Contamination

The results of the analytical testing performed on the groundwater samples collected at the site are summarized in Table II.

**Table II**  
**Aromatic Volatile Organic Compound Concentrations in Groundwater (ug/l)**

Date	Compound	MW-1	MW-2	MW-3	MW-4	DR-5	DR-6	DR-7	DR-8
10/26/94	Benzene	1200	6600	14000	2.2	<1.0	<1.0	1.0	690
	Toluene	8000	18000	30000	<1.0	<1.0	<1.0	<1.0	160
	Ethylbenzene	750	1100	1700	<1.0	<1.0	<1.0	<1.0	72
	Xylenes	6800	6300	8400	<1.0	<1.0	1.3	<1.0	110
	Methyl tert butyl ether (MTBE)	<100	2900	7700	35	<1.0	<1.0	120	93
9/19/94	Benzene	Not	Not	9400	<1.0	Well	Well	Well	Well
	Toluene	Sampled	Sampled	18000	<1.0	not	not	not	not
	Ethylbenzene	Dry	1/8"	2000	<1.0	Installed	Installed	Installed	Installed
	Xylenes	Well	Free	12000	<1.0				
	Methyl tert butyl ether (MTBE)		Product in well	10000	11				
All compounds measured in micrograms per liter									

Complete laboratory reports and a chain of custody statement are included in Appendix D. A BTEX and MTBE isoconcentration map was constructed from these results and is presented in Appendix E.

### 3. Drinking Water Supply Wells

Drinking water samples were collected at the kitchen faucets of the Tapper residence and the rental apartments owned by the Wells. The water at both taps was turned on and allowed to run for 25 to 30 minutes before a sample was collected. Both wells are bedrock wells. No compounds tested for in either of the drinking water samples were detected. According to Ms. Tapper, their well is relatively new. The Tapper residence had previously drawn its drinking water from the Wells' supply well located across the street, the old PVC connecting pipe still enters the basement of the Tapper residence through the stones in the center front wall (the wall towards the street). This piping is apparently still in place under the road (route 121) and could be creating a preferential pathway for contaminant migration.

### D. Initial Risk Evaluation

The site is served by a private drinking water well and septic system with a leachfield. There are several private drinking water wells known to be located in the vicinity of the site.

*Where is it on the map?*

Based on the analytical testing conducted to date, significant amounts of gasoline related contaminants (BTEX and MTBE) have been detected in the groundwater from three wells on site (MW-1, MW-2, and MW-3). Nearby residential basements (the Wells' rental house to the east and the Tapper Residence to the south) were screened with an OVM due to their close proximity to the contaminant area. Readings from the rental house basement and the Tapper's basement were all below detectability with the exception of a 1.0 ppm reading taken in between the stones in the dry wall on the north side of the Tapper's house. The groundwater flow direction is to the south and southeast towards these residences.

The nearest sensitive human receptors would be site owners/operators and residents located downgradient (south/southeast) of the subject property. The nearest sensitive environmental receptors are the private drinking water supply wells, as well as an intermittent tributary which flows into the Saxtons River and Weaver Brook which flows to the south/southwest of the site. Based on the levels of BTEX compounds detected in the samples collected from the site monitoring wells, a potential for gasoline vapor migration into the basement of nearby residences does exist.

#### IV. CONCLUSIONS AND RECOMMENDATIONS

The conclusions and recommendations of ENSA Environmental, Inc. are based on the premise that all information obtained during these environmental investigations is accurate. Conditions may change with time that may necessitate a re-evaluation of certain conclusions and recommendations.

##### *A. Conclusions*

A release of petroleum related volatile organic compounds apparently occurred in the area of the former gasoline USTs and pump island. The highest level of contamination (54,100 ppb BTEX and 7,700 ppb MTBE) was detected in well MW-3 located between the old USTs and the pump island.

Hydrologic investigations indicate that at the time of data collection, groundwater was present approximately 6 to 7 feet below the ground surface. Groundwater velocity was estimated to be approximately 0.5 cm/day flowing in a south/southeasterly direction. Contaminant migration appears to be following the groundwater flow direction. Contaminants were not detected in the two drinking water wells that were sampled but downgradient monitoring wells revealed significant contaminant levels especially well DR-8.

The 84 cubic yards of stockpiled soils from the tank decommissioning and removal at the site were screened with an OVM. Readings from the samples ranged from 4.2 ppm to 58 ppm when screened. According to the DEC's "Agency Guidelines for Petroleum Contaminated Soil and Carbon Media", contaminant levels in the soils fall within the range of soils needing treatment either on-site or off-site.

**B. Recommendations**

ENSA Environmental, Inc. recommends that a soil vapor study be carried out with soil vapor points driven into the ground directly adjacent to the rental apartment building and the Tapper residence foundations to determine to a greater degree the actual extent of contaminants migrating in this area. Depending on the results of this soil vapor study, if levels of VOCs exceeding 10 ppm are detected indoor air monitoring should be conducted in the basement and first floor of any affected residence.

*Include Pesticide  
Partners*

Based on the degree of groundwater contamination present and the sensitive nature of the site (shallow groundwater, close proximity of drinking water wells, and the presence of a CSA program downgradient of the source area) ENSA recommends the immediate preparation of a Corrective Action Plan (CAP) which will include an evaluation of soil vapor extraction technology as a means to remediate site soils and groundwater as well as to create a subsurface barrier between the contamination plume and the Tapper property.

A full round of sampling should be conducted at all of the site monitoring wells for the detection of VOCs via EPA Method 8260, for detection of more water soluble gasoline constituents.

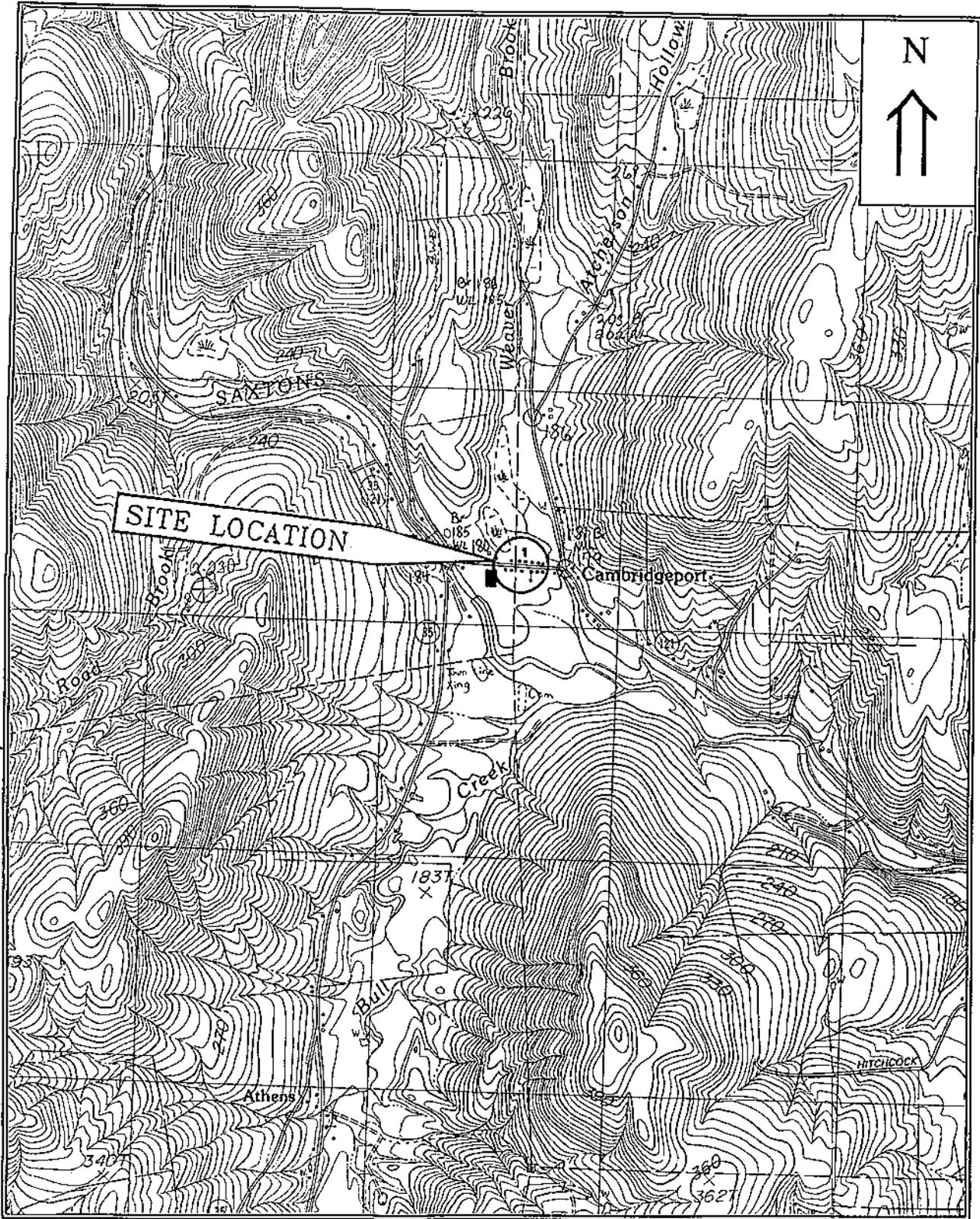
The drinking water wells (both on site and downgradient) should be sampled on a monthly basis with monthly letter reports containing the results submitted to the State DEC SMS. ~~These drinking water well locations should be surveyed and included on the site maps.~~ Depths of these wells should also be determined.

*How many*

The 84 cubic yards of stockpiled soils on site should be screened in the spring (May-June, 1995) via DEC headspace sampling protocol using a OVM to detect any remaining VOCs in the soil.

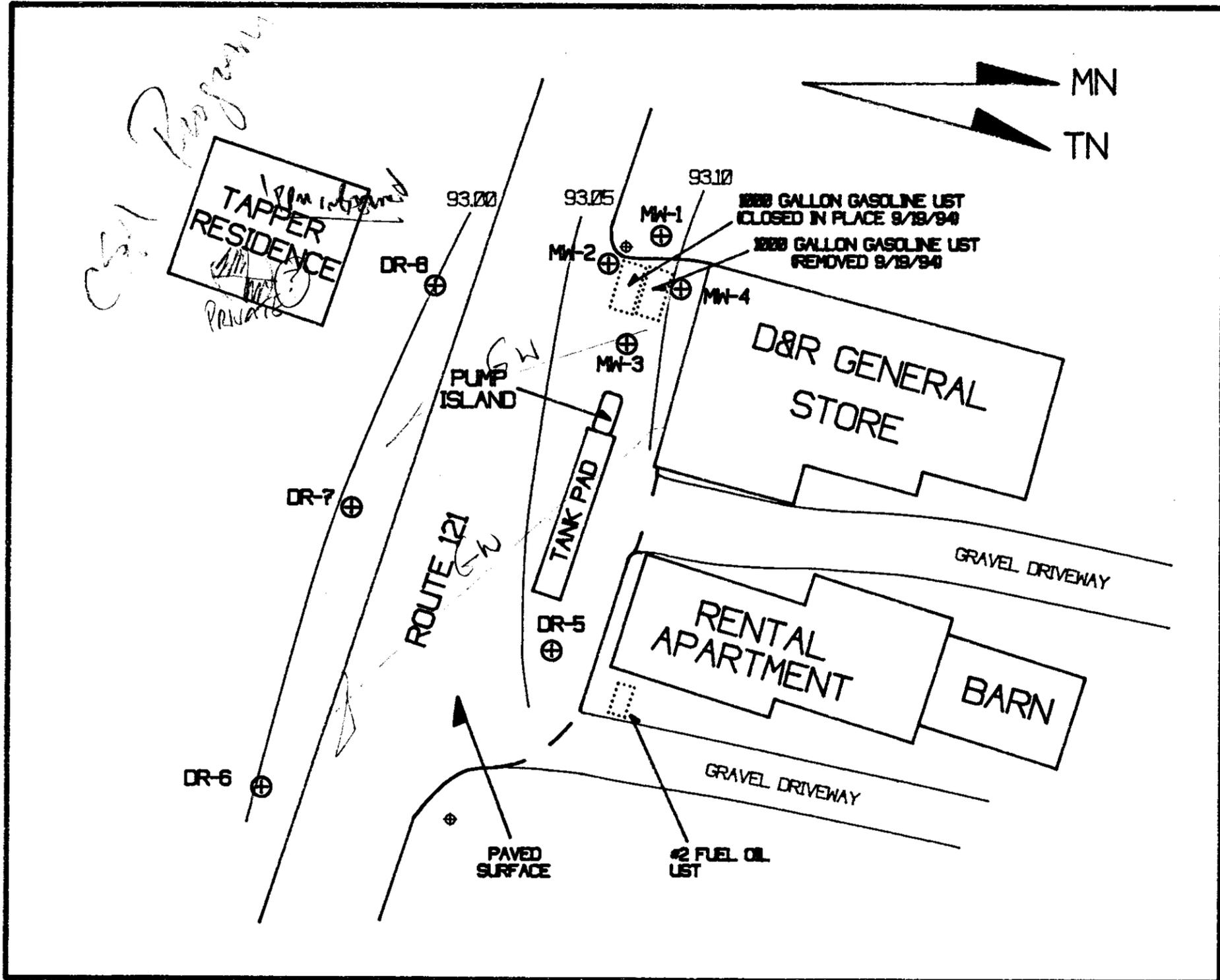
*DO NOT  
DO SLY  
SVE  
Pilot  
TEST*

**Appendix A**  
**Site Location Map**



Site Locus Scale 1:25,000	USGS Topographic Map Saxtons River, Vermont 7.5 X 15 minute series 1984	D& R General Store Route 121 Cambridgeport, Vermont
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**Appendix B**  
**Groundwater Potentiometric Map**



GROUNDWATER POTENTIOMETRIC  
MAP FOR 10/26/94

D & R GENERAL STORE  
ROUTE 121  
CAMBRIDGEPORT, VERMONT

LEGEND

- ⊕ DR-7 MONITORING WELL DR-7
- 93.25 | GROUNDWATER CONTOUR AT 93.25 FEET  
( CONTOUR INTERVAL OF .25 FOOT )
- ⊕ UTILITY POLE

MONITORING WELL GROUNDWATER ELEVATIONS ( IN FEET )

MW-1	93.07	DR-5	93.07
MW-2	93.06	DR-6	93.01
MW-3	93.07	DR-7	93.02
MW-4	93.11	DR-8	93.00

ARTIFICIAL DATUM - WELL TOP MW-1 = 100 FEET

SCALE 1 : 300



PREPARED BY:  
ENSA ENVIRONMENTAL INC.  
P.O. BOX 1760, 205 MAIN STREET  
BRATTLEBORO, VT 05302

? Supply wells  
? PVC Pipe - For Supply @ TAPPER  
? OTHER RESIDENCES  
? International Tributary

**Appendix C**  
**Soil Boring/Monitoring Well Construction Logs**

**ENSA ENVIRONMENTAL, INC.**  
**SOIL BORING/MONITORING WELL LOG**

Project #: <u>466</u> Date: <u>10/17/94</u> Project Name: <u>D&amp;R General Store</u> Location: <u>Cambridgeport, Vermont</u> Driller: <u>T &amp; K Drilling</u> TEC Personnel: <u>KHJW</u> Boring/Well #: <u>DR-5</u> Sheet <u>1</u> of <u>1</u>					<b>SITE LOCUS</b>				
Depth	Blow Counts				Rec.	OVM	Soil Characterization	As Built	
	0-6	6-12	12-18	18-24					
0-2	Grab	Sample				0.0	Dark brown medium to fine sand and silt few fine to coarse gravel	Flush Mount Rod Box Native Backfill Bentonite	
5-7	3	8	14	30	18"	0.5	Light brown medium to fine sand and silt few coarse gravel	Grade I silica Sand Pack	
10-11	31	60					Brown 10-11' medium to fine sand some silt		
11-12			57	40	20"	0.5	Wet at 11' 11-12' medium to fine sand silt and coarse to fine gravel  End of boring		
Drilling Method: <u>HSA</u> Total Well Depth: <u>13'</u> Groundwater Depth: <u>10-11'</u> PVC Elevation: _____					Screen Diameter: <u>2"</u> Length: <u>10'</u> Riser Diameter: <u>2"</u> Length: <u>3'</u> Slot Size: <u>10</u> Ground Elevation: _____				

Notes:

1. Split spoon soil samples are screened for organic vapors via headspace method using a Thermo Environmental Instruments Inc. Organic Vapor Meter Model 580B.
2. ND indicates nondetectable contaminant concentrations as read by the OVM.
3. Samples are collected using a Split Spoon Sampler unless otherwise indicated.
4. Split Spoon Sampler has a 2" diameter and is driven using a 140 lb. hammer falling 30 inches.
5. HSA - Hollow Stem Auger, AR - Air Rotary

**ENSA ENVIRONMENTAL, INC.**  
**SOIL BORING/MONITORING WELL LOG**

Project #: <u>466</u> Date: <u>10/17/94</u> Project Name: <u>D&amp;R General Store</u> Location: <u>Cambridgeport, Vermont</u> Driller: <u>T &amp; K Drilling</u> TEC Personnel: <u>KHJW</u> Boring/Well #: <u>DR-6</u> Sheet <u>1</u> of <u>1</u>					<u>SITE LOCUS</u>				
Depth	Blow Counts				Rec.	OVM	Soil Characterization	As Built	
	0-6	6-12	12-18	18-24					
0-2	Crab	Sample				0.5	Dark brown /brown fine to coarse sand and silt some fine to coarse gravel	<div style="border: 1px solid black; padding: 2px; font-size: small;">           Flush Bent Rod            Native Backfill            Bentonite         </div>	
5-7	4	7	14	27"	18"	0.0			Damp
10-12	10	50/Ref.			6"	0.0	Brown wet Fine to coarse sand silt and fine to coarse gravel End of boring	<div style="border: 1px solid black; padding: 2px; font-size: small;">             Grade 1              Silica              Sand              Pack           </div>	
Drilling Method: <u>HSA</u> Total Well Depth: <u>13'</u> Groundwater Depth: _____ PVC Elevation: _____					Screen Diameter: <u>2"</u> Length: <u>10'</u> Riser Diameter: <u>2"</u> Length: <u>3'</u> Slot Size: <u>10</u> Ground Elevation: _____				

- Notes:
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  5. HSA = Hollow Stem Auger, AR = Air Rotary

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**SOIL BORING/MONITORING WELL LOG**

Project #: <u>466</u> Date: <u>10/17/94</u> Project Name: <u>D&amp;R General Store</u> Location: <u>Cambridgeport, Vermont</u> Driller: <u>T &amp; K Drilling</u> TEC Personnel: <u>KHJW</u> Boring/Well #: <u>DR-7</u> Sheet <u>1</u> of <u>1</u>						<b>SITE LOCUS</b>					
Depth	Blow Counts				Rec.	OVM	Soil Characterization	As Built			
	0-6	6-12	12-18	18-24							
0-2	Grab	Sample				0.0	Dark brown Medium to fine sand and silt and organics few fine gravel  Light brown medium to fine sand and silt some coarse to fine gravel	Elush Mount Road Box Native Backfill Bentonite  Grade I silica Sand Pack			
5-7	3	3	7	65	6"	0.0					
10-12	41	110/Ref	Ledge		10"	1.7	Brown Coarse to fine sand silt and coarse to fine gravel  End of Boring	Screen			
Drilling Method: <u>HSA</u> Total Well Depth: <u>10'</u> Groundwater Depth: _____ PVC Elevation: _____						Screen Diameter: <u>2"</u> Length: <u>7'</u> Riser Diameter: <u>2"</u> Length: <u>3'</u> Slot Size: <u>10</u> Ground Elevation: _____					

- Notes:
1. Split spoon soil samples are screened for organic vapors via headspace method using a Thermo Environmental Instruments Inc. Organic Vapor Meter Model 580B.
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Depth	Blow Counts				Rec.	OVM	Soil Characterization	As Built	
	0-6	6-12	12-18	18-24					
0-2	Grab	Sample				0.0	Dark brown medium to fine sand and silt little clay few fine gravel	<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;"> <del>Flush Head Rod Box</del>            Native Backfill            Bentonite         </div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">           Grade I            silica            Sand            Pack         </div>	
5-6	1	2				52.0	Brown/ olive gray fine sand and silt some clay gasoline odor at 6 1/2		
6-7			6	10	10"		6 1/2-7' Brown/olive gray coarse to fine sand and silt some coarse to fine gravel		
10-11	19	24				166.0	10-11 1/2 olive gray/brown coarse to fine sand and silt few coarse to fine gravel		
11-12			38	62	16"		11 1/2-12 Light brown/brown fine sand and silt little clay few fine gravel		
							End of Boring		
Drilling Method: <u>HSA</u> Total Well Depth: <u>12'</u> Groundwater Depth: _____ PVC Elevation: _____					Screen Diameter: <u>2"</u> Length: <u>9'</u> Riser Diameter: <u>2"</u> Length: <u>3'</u> Slot Size: <u>10</u> Ground Elevation: _____				

- Notes:
1. Split spoon soil samples are screened for organic vapors via headspace method using a Thermo Environmental Instruments Inc. Organic Vapor Meter Model 580B.
  2. ND indicates nondetectable contaminant concentrations as read by the OVM.
  3. Samples are collected using a Split Spoon Sampler unless otherwise indicated.
  4. Split Spoon Sampler has a 2" diameter and is driven using a 140 lb. hammer falling 30 inches.
  5. HSA - Hollow Stem Auger, AR - Air Rotary

**Appendix D**  
**Analytical Laboratory Reports**

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive  
Westborough, Massachusetts 01581-1019  
(508) 898-9220

RECEIVED OCT 06 1994

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

CERTIFICATE OF ANALYSIS

Client: ENSA Environmental, Inc. Laboratory Job Number: L9407704  
Address: 205 Main Street; 3rd Floor Invoice Number: 67157  
Brattleboro, VT 05301 Date Received: 20-SEP-94  
Attn: Kirsten Wade Date Reported: 04-OCT-94  
Project Number: 466 Delivery Method: Alpha  
Site: D&R General Store

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ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L9407704-01	MW-3-91994-466	Cambridgeport, VT
L9407704-02	MW-4-91994-466	Cambridgeport, VT
L9407704-03	MW-02-91994-466	Cambridgeport, VT
L9407704-04	MW-01-91994-466	Cambridgeport, VT

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Authorized by: James R. Roth

James R. Roth, PhD - Laboratory Manager

ALPHA ANALYTICAL LABORATORIES  
 CERTIFICATE OF ANALYSIS

RECEIVED OCT 06 1994

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9407704-01 Date Collected: 19-SEP-94  
 MW-3-91994-466 Date Received : 20-SEP-94  
 Sample Matrix: WATER Date Reported : 04-OCT-94  
 Condition of Sample: Satisfactory Field Prep: None

Number & Type of Containers: 2 Vial

PARAMETER	RESULT	UNITS	REF	METHOD	DATES PREP ANALYSIS
Aromatic Volatile Organics			1	8020	27-SEP
Benzene	9400	ug/l			
Toluene	18000	ug/l			
Ethylbenzene	2000	ug/l			
Xylenes	12000	ug/l			
1,2-Dichlorobenzene	< 100	ug/l			
1,3-Dichlorobenzene	< 100	ug/l			
1,4-Dichlorobenzene	< 100	ug/l			
Chlorobenzene	< 100	ug/l			
Methyl tert butyl ether	10000	ug/l			

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES  
 CERTIFICATE OF ANALYSIS

RECEIVED OCT 05 1994

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9407704-02 Date Collected: 19-SEP-94  
 MW-4-91994-466 Date Received : 20-SEP-94  
 Sample Matrix: WATER Date Reported : 04-OCT-94  
 Condition of Sample: Satisfactory Field Prep: None  
 Number & Type of Containers: 2 Vial

PARAMETER	RESULT	UNITS	REF	METHOD	DATES PREP ANALYSIS
Aromatic Volatile Organics			1	8020	28-SEP
Benzene	< 1.0	ug/l			
Toluene	< 1.0	ug/l			
Ethylbenzene	< 1.0	ug/l			
Xylenes	< 1.0	ug/l			
1,2-Dichlorobenzene	< 1.0	ug/l			
1,3-Dichlorobenzene	< 1.0	ug/l			
1,4-Dichlorobenzene	< 1.0	ug/l			
Chlorobenzene	< 1.0	ug/l			
Methyl tert butyl ether	11.	ug/l			

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES  
 CERTIFICATE OF ANALYSIS

RECEIVED OCT 06 1994

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9407704-03  
 MW-02-91994-466  
 Sample Matrix: WATER

Date Collected: 19-SEP-94  
 Date Received : 20-SEP-94  
 Date Reported : 04-OCT-94

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Vial

PARAMETER	RESULT	UNITS	REF	METHOD	DATES PREP ANALYSIS
Aromatic Volatile Organics			1	8020	28-SEP
Benzene	9900	ug/l			
Toluene	19000	ug/l			
Ethylbenzene	1600	ug/l			
Xylenes	10000	ug/l			
1,2-Dichlorobenzene	< 100	ug/l			
1,3-Dichlorobenzene	< 100	ug/l			
1,4-Dichlorobenzene	< 100	ug/l			
Chlorobenzene	< 100	ug/l			
Methyl tert butyl ether	7300	ug/l			

*Duplicate*

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS

RECEIVED OCT 06 1994

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9407704-04  
MW-01-91994-466  
Sample Matrix: WATER

Date Collected: 19-SEP-94  
Date Received : 20-SEP-94  
Date Reported : 04-OCT-94

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Vial

PARAMETER	RESULT	UNITS	REF	METHOD	DATES PREP ANALYSIS
Aromatic Volatile Organics			1	8020	28-SEP
Benzene	< 1.0	ug/l			
Toluene	< 1.0	ug/l			
Ethylbenzene	< 1.0	ug/l			
Xylenes	< 1.0	ug/l			
1,2-Dichlorobenzene	< 1.0	ug/l			
1,3-Dichlorobenzene	< 1.0	ug/l			
1,4-Dichlorobenzene	< 1.0	ug/l			
Chlorobenzene	< 1.0	ug/l			
Methyl tert butyl ether	< 1.0	ug/l			

Trip Blank

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES  
QUALITY ASSURANCE MS/MSD ANALYSIS

RECEIVED OCT 06 1994

Laboratory Job Number: L9407704

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Parameter	MS %	MSD %	RPD
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Volatile Organics Spike Recovery by GC MS/MSD for sample(s) 01-04

1,1-Dichloroethene	96	98	2
Trichloroethene	90	88	2
Chlorobenzene	93	98	5
Benzene	101	99	2
Toluene	101	99	2
Ethylbenzene	99	101	2

RECEIVED OCT 06 1994

REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. 1986.

GLOSSARY OF TERMS AND SYMBOLS

< Indicates analyte not detected at stated value, i.e. Reporting Detection Limit.

REF Reference number in which test method may be found.

METHOD Method number by which analysis was performed.

25 607157

<b>ALPHA</b> Analytical Laboratories, Inc.	Eight Walkup Drive Westborough, MA 01581-1019 508-898-9220 FAX 508-898-9193	<b>RECEIVED</b> OCT 06 1994	<b>CHAIN OF CUSTODY RECORD</b> and ANALYSIS REQUEST RECORD	No. 36493 Sheet 1 of 1
-----------------------------------------------	-----------------------------------------------------------------------------------	--------------------------------	---------------------------------------------------------------	---------------------------

Company Name: ENSA Environmental, Inc.	Project Number: 466 P.O. Number: 2519	Project Name/Location: Dr R General Store Cambridgeport, VT	Date Received in Lab: 9/20	Date Due: 10/4
Company Address: 205 Main St, 3rd Floor Brattleboro, VT 05301	Phone Number: 802 254 3677 FAX No.: 254 7630	Project Manager: KHS Wade	Alpha Job Number: (Lab use only) 9407704	

ALPHA Lab # (Lab Use Only)	Sample I.D.	Containers (number/type)	Matrix/Source	Method Preserve. (number of containers)						Solubles - F.F.	Sampling		Analysis Requested	
				Unpres.	Ice	Nitric	Sulfuric	HCl	Other		Date	Time	MATRIX / SOURCE CODES	
													X1 = Other	X2 = Other
7704.1	MW-3-91994-466	2/V	MW					X			9/19/94	8:50	8020 (G only)	N/C
2	MW-4-91994-466	2/V	MW					X			✓	9:10	↓	↓
3	MW-02-91994-466	2/V	MW					X			↓	8:52	↓	↓
4	MW-01-91994-466	1/V	MW					X			✓	-	↓	↓

Sampler's Signature <i>Kirsten H. Jeppesen</i>	Affiliation	Date 9/19/94	Time —	NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME
ADDITIONAL COMMENTS: Includes TB + Dup.				1	<i>Kirsten H. Jeppesen</i>	<i>Paul [Signature]</i>	9-20-94	3:25
				2	<i>Paul [Signature]</i>	<i>J. McGehee</i>	9-20-94	5:55
				3				

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive  
Westborough, Massachusetts 01581-1019  
(508) 898-9220

RECEIVED NOV 14 1994

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

CERTIFICATE OF ANALYSIS

Client: ENSA Environmental, Inc.

Laboratory Job Number: L9408908

Address: 205 Main Street; 3rd Floor  
Brattleboro, VT 05301

Invoice Number: 68414

Date Received: 27-OCT-94

Attn: Kirsten Wade

Date Reported: 10-NOV-94

Project Number: 466

Delivery Method: Alpha

Site: D + R General Store

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L9408908-01	MW-1-102694-466	Cambridgeport, VT
L9408908-02	MW-2-102694-466	Cambridgeport, VT
L9408908-03	MW-3-102694-466	Cambridgeport, VT
L9408908-04	MW-4-102694-466	Cambridgeport, VT
L9408908-05	DR-5-102694-466	Cambridgeport, VT
L9408908-06	DR-6-102694-466	Cambridgeport, VT
L9408908-07	DR-7-102694-466	Cambridgeport, VT
L9408908-08	DR-8-102694-466	Cambridgeport, VT
L9408908-09	DW-TAPPER-102694-466	Cambridgeport, VT
L9408908-10	DW-D+R-102694-466	Cambridgeport, VT
L9408908-11	DR-02-102694-466	Cambridgeport, VT
L9408908-12	DR-01-102694-466	Cambridgeport, VT

Authorized by: James R. Roth

James R. Roth, PhD - Laboratory Manager

ALPHA ANALYTICAL LABORATORIES  
 CERTIFICATE OF ANALYSIS

RECEIVED NOV 14 1994

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9408908-01  
 Date Collected: 26-OCT-94  
 MW-1-102694-466  
 Date Received : 27-OCT-94  
 Sample Matrix: WATER  
 Date Reported : 10-NOV-94  
 Condition of Sample: Satisfactory  
 Field Prep: None  
 Number & Type of Containers: 2 Vial

PARAMETER	RESULT	UNITS	REF	METHOD	DATES PREP ANALYSIS
Aromatic Volatile Organics			1	8020	01-NOV
Benzene	1200	ug/l			
Toluene	8000	ug/l			
Ethylbenzene	750	ug/l			
Xylenes	6800	ug/l			
1,2-Dichlorobenzene	< 100	ug/l			
1,3-Dichlorobenzene	< 100	ug/l			
1,4-Dichlorobenzene	< 100	ug/l			
Chlorobenzene	< 100	ug/l			
Methyl tert butyl ether	< 100	ug/l			

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES  
 CERTIFICATE OF ANALYSIS

RECEIVED NOV 1 1994

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9408908-02 Date Collected: 26-OCT-94  
 MW-2-102694-466 Date Received : 27-OCT-94  
 Sample Matrix: WATER Date Reported : 10-NOV-94  
 Condition of Sample: Satisfactory Field Prep: None  
 Number & Type of Containers: 2 Vial

PARAMETER	RESULT	UNITS	REF	METHOD	DATES PREP ANALYSIS
Aromatic Volatile Organics			1	8020	02-NOV
Benzene	6600	ug/l			
Toluene	18000	ug/l			
Ethylbenzene	1100	ug/l			
Xylenes	6300	ug/l			
1,2-Dichlorobenzene	< 500	ug/l			
1,3-Dichlorobenzene	< 500	ug/l			
1,4-Dichlorobenzene	< 500	ug/l			
Chlorobenzene	< 500	ug/l			
Methyl tert butyl ether	2900	ug/l			

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES  
 CERTIFICATE OF ANALYSIS

RECEIVED NOV 14 1994

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9408908-03 Date Collected: 26-OCT-94  
 MW-3-102694-466 Date Received : 27-OCT-94  
 Sample Matrix: WATER Date Reported : 10-NOV-94  
 Condition of Sample: Satisfactory Field Prep: None  
 Number & Type of Containers: 2 Vial

PARAMETER	RESULT	UNITS	REF	METHOD	DATES PREP ANALYSIS
Aromatic Volatile Organics			1	8020	02-NOV
Benzene	14000	ug/l			
Toluene	30000	ug/l			
Ethylbenzene	1700	ug/l			
Xylenes	8400	ug/l			
1,2-Dichlorobenzene	< 500	ug/l			
1,3-Dichlorobenzene	< 500	ug/l			
1,4-Dichlorobenzene	< 500	ug/l			
Chlorobenzene	< 500	ug/l			
Methyl tert butyl ether	7700	ug/l			

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES  
 CERTIFICATE OF ANALYSIS

RECEIVED NOV 1 1994

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9408908-04 Date Collected: 26-OCT-94  
 MW-4-102694-466 Date Received : 27-OCT-94  
 Sample Matrix: WATER Date Reported : 10-NOV-94  
 Condition of Sample: Satisfactory Field Prep: None  
 Number & Type of Containers: 2 Vial

PARAMETER	RESULT	UNITS	REF	METHOD	DATES PREP ANALYSIS
Aromatic Volatile Organics			1	8020	02-NOV
Benzene	2.2	ug/l			
Toluene	< 1.0	ug/l			
Ethylbenzene	< 1.0	ug/l			
Xylenes	< 1.0	ug/l			
1,2-Dichlorobenzene	< 1.0	ug/l			
1,3-Dichlorobenzene	< 1.0	ug/l			
1,4-Dichlorobenzene	< 1.0	ug/l			
Chlorobenzene	< 1.0	ug/l			
Methyl tert butyl ether	35.	ug/l			

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES  
 CERTIFICATE OF ANALYSIS

RECEIVED Nov 14 1994

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9408908-05 Date Collected: 26-OCT-94  
 DR-5-102694-466 Date Received : 27-OCT-94  
 Sample Matrix: WATER Date Reported : 10-NOV-94  
 Condition of Sample: Satisfactory Field Prep: None  
 Number & Type of Containers: 2 Vial

PARAMETER	RESULT	UNITS	REF	METHOD	DATES PREP ANALYSIS
Aromatic Volatile Organics			1	8020	01-NOV
Benzene	< 1.0	ug/l			
Toluene	< 1.0	ug/l			
Ethylbenzene	< 1.0	ug/l			
Xylenes	< 1.0	ug/l			
1,2-Dichlorobenzene	< 1.0	ug/l			
1,3-Dichlorobenzene	< 1.0	ug/l			
1,4-Dichlorobenzene	< 1.0	ug/l			
Chlorobenzene	< 1.0	ug/l			
Methyl tert butyl ether	< 1.0	ug/l			

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES  
 CERTIFICATE OF ANALYSIS

RECEIVED NOV 14 1994

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9408908-06  
 DR-6-102694-466  
 Date Collected: 26-OCT-94  
 Date Received : 27-OCT-94  
 Date Reported : 10-NOV-94  
 Sample Matrix: WATER  
 Condition of Sample: Satisfactory  
 Field Prep: None  
 Number & Type of Containers: 2 Vial

PARAMETER	RESULT	UNITS	REF	METHOD	DATES PREP ANALYSIS
Aromatic Volatile Organics			1	8020	01-NOV
Benzene	< 1.0	ug/l			
Toluene	< 1.0	ug/l			
Ethylbenzene	< 1.0	ug/l			
Xylenes	1.3	ug/l			
1,2-Dichlorobenzene	< 1.0	ug/l			
1,3-Dichlorobenzene	< 1.0	ug/l			
1,4-Dichlorobenzene	< 1.0	ug/l			
Chlorobenzene	< 1.0	ug/l			
Methyl tert butyl ether	< 1.0	ug/l			

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES  
CERTIFICATE OF ANALYSIS

RECEIVED NOV 1 4 1994

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9408908-07  
DR-7-102694-466  
Sample Matrix: WATER

Date Collected: 26-OCT-94  
Date Received : 27-OCT-94  
Date Reported : 10-NOV-94

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2 Vial

PARAMETER	RESULT	UNITS	REF	METHOD	DATES PREP ANALYSIS
Aromatic Volatile Organics			1	8020	02-NOV
Benzene	1.0	ug/l			
Toluene	< 1.0	ug/l			
Ethylbenzene	< 1.0	ug/l			
Xylenes	< 1.0	ug/l			
1,2-Dichlorobenzene	< 1.0	ug/l			
1,3-Dichlorobenzene	< 1.0	ug/l			
1,4-Dichlorobenzene	< 1.0	ug/l			
Chlorobenzene	< 1.0	ug/l			
Methyl tert butyl ether	120	ug/l			

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES  
 CERTIFICATE OF ANALYSIS

RECEIVED NOV 14 1994

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9408908-08 Date Collected: 26-OCT-94  
 DR-8-102694-466 Date Received : 27-OCT-94  
 Sample Matrix: WATER Date Reported : 10-NOV-94  
 Condition of Sample: Satisfactory Field Prep: None  
 Number & Type of Containers: 2 Vial

PARAMETER	RESULT	UNITS	REF	METHOD	DATES PREP ANALYSIS
Aromatic Volatile Organics			1	8020	03-NOV
Benzene	690	ug/l			
Toluene	160	ug/l			
Ethylbenzene	72.	ug/l			
Xylenes	110	ug/l			
1,2-Dichlorobenzene	< 25.	ug/l			
1,3-Dichlorobenzene	< 25.	ug/l			
1,4-Dichlorobenzene	< 25.	ug/l			
Chlorobenzene	< 25.	ug/l			
Methyl tert butyl ether	93.	ug/l			

Comments: Complete list of References and Glossary of Terms found in Addendum I



ALPHA ANALYTICAL LABORATORIES  
 CERTIFICATE OF ANALYSIS

RECEIVED NOV 14 1994

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9408908-10  
 DW-D+R-102694-466  
 Sample Matrix: WATER  
 Condition of Sample: Satisfactory  
 Number & Type of Containers: 2 Vial

Date Collected: 26-OCT-94  
 Date Received : 27-OCT-94  
 Date Reported : 10-NOV-94  
 Field Prep: None

PARAMETER	RESULT	UNITS	REF	METHOD	DATES PREP ANALYSIS
Aromatic Volatile Organics			1	8020	02-NOV
Benzene	< 1.0	ug/l			
Toluene	< 1.0	ug/l			
Ethylbenzene	< 1.0	ug/l			
Xylenes	< 1.0	ug/l			
1,2-Dichlorobenzene	< 1.0	ug/l			
1,3-Dichlorobenzene	< 1.0	ug/l			
1,4-Dichlorobenzene	< 1.0	ug/l			
Chlorobenzene	< 1.0	ug/l			
Methyl tert butyl ether	< 1.0	ug/l			

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES  
 CERTIFICATE OF ANALYSIS

RECEIVED NOV 14 1994

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9408908-11  
 Date Collected: 26-OCT-94  
 DR-02-102694-466  
 Date Received : 27-OCT-94  
 Sample Matrix: WATER  
 Date Reported : 10-NOV-94  
 Condition of Sample: Satisfactory  
 Field Prep: None  
 Number & Type of Containers: 2 Vial

PARAMETER	RESULT	UNITS	REF	METHOD	DATES PREP ANALYSIS
Aromatic Volatile Organics			1	8020	02-NOV
Benzene	710	ug/l			
Toluene	160	ug/l			
Ethylbenzene	84.	ug/l			
Xylenes	93.	ug/l			
1,2-Dichlorobenzene	< 10.	ug/l			
1,3-Dichlorobenzene	< 10.	ug/l			
1,4-Dichlorobenzene	< 10.	ug/l			
Chlorobenzene	< 10.	ug/l			
Methyl tert butyl ether	170	ug/l			

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES  
 CERTIFICATE OF ANALYSIS

RECEIVED NOV 14 1994

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9408908-12 Date Collected: 26-OCT-94  
 DR-01-102694-466 Date Received : 27-OCT-94  
 Sample Matrix: WATER Date Reported : 10-NOV-94  
 Condition of Sample: Satisfactory Field Prep: None  
 Number & Type of Containers: 1 Vial

PARAMETER	RESULT	UNITS	REF	METHOD	DATES PREP ANALYSIS
Aromatic Volatile Organics			1	8020	02-NOV
Benzene	< 1.0	ug/l			
Toluene	< 1.0	ug/l			
Ethylbenzene	< 1.0	ug/l			
Xylenes	< 1.0	ug/l			
1,2-Dichlorobenzene	< 1.0	ug/l			
1,3-Dichlorobenzene	< 1.0	ug/l			
1,4-Dichlorobenzene	< 1.0	ug/l			
Chlorobenzene	< 1.0	ug/l			
Methyl tert butyl ether	< 1.0	ug/l			

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES  
 QUALITY ASSURANCE MS/MSD ANALYSIS

RECEIVED NOV 14 1994

Laboratory Job Number: L9408908

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Parameter	MS %	MSD %	RPD
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Volatile Organics Spike Recovery by GC MS/MSD for sample(s) 01-03, 05-06

1,1-Dichloroethene	99	91	8
Trichloroethene	101	92	9
Chlorobenzene	109	94	15
Benzene	102	99	3
Toluene	102	104	2
Ethylbenzene	98	96	2

Volatile Organics Spike Recovery by GC MS/MSD for sample(s) 09-12

1,1-Dichloroethene	100	105	5
Trichloroethene	103	114	10
Chlorobenzene	82	86	5
Benzene	102	109	7
Toluene	104	109	5
Ethylbenzene	103	109	6

Volatile Organics Spike Recovery by GC MS/MSD for sample(s) 07-08

1,1-Dichloroethene	88	72	20
Trichloroethene	102	82	22
Chlorobenzene	106	86	21
Benzene	102	84	19
Toluene	100	81	21
Ethylbenzene	102	81	23

Volatile Organics Spike Recovery by GC MS/MSD for sample(s) 04

1,1-Dichloroethene	99	91	8
Trichloroethene	101	92	9
Chlorobenzene	109	94	15
Benzene	102	99	3
Toluene	102	104	2
Ethylbenzene	98	96	2

RECEIVED MAY 14 1994

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REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. 1986.

GLOSSARY OF TERMS AND SYMBOLS

- < Indicates analyte not detected at stated value, i.e. Reporting Detection Limit.
- REF Reference number in which test method may be found.
- METHOD Method number by which analysis was performed.

08414

# ALPHA

Light walkup drive  
 Westborough, MA 01581-1019  
 508-898-9220 FAX 508-898-9193

## CHAIN OF CUSTODY RECORD and ANALYSIS REQUEST RECORD

No. \_\_\_\_\_  
 Sheet 1 of 2

Company Name:  
 TRI-S, Inc. Environmental  
 Consulting

Project Number: 466  
 P.O. Number: 2625

Project Name/Location:  
 D & R GENERAL STORE  
 CAMBRIDGEPORT, VT

Date Received in Lab: 10/27  
 Date Due: 11/10

Company Address:  
 205 Main Street 3rd Floor  
 Brattleboro, VT 05301

Phone Number: (802)  
 254-3677  
 FAX No.: 254-7630

Project Manager:  
 KIRSTEN WADE

Alpha Job Number: (Lab use only)  
 940 8908

ALPHA Lab # (Lab Use Only)	Sample I.D.	Containers (number/type)	Matrix / Source	Method Preserve. (number of containers)						Solubles - F.F.	Sampling		MATRIX / SOURCE CODES				
				Unpres.	Ice	Nitric	Sulfuric	HCl	Other		Date	Time	Analysis Requested				
8908.1	MW-1-10269A-466	(2/V)	MW					X			10/26	12:04	8020 (GC ONLY) N/C				
2	MW-2-10269A-466	(2/V)	MW					X			"	"	12:15	"	"		
3	MW-3-10269A-466	(2/V)	MW					X			"	"	12:20	"	"		
4	MW-4-10269A-466	(2/V)	MW					X			"	"	12:10	"	"		
5	DR-5-10269A-466	(2/V)	MW					X			"	"	12:47	"	"		
6	DR-6-10269A-466	(2/V)	MW					X			"	"	12:49	"	"		
7	DR-7-10269A-466	(2/V)	MW					X			"	"	12:50	"	"		
8	DR-8-10269A-466	(2/V)	MW					X			"	"	12:52	"	"		
9	DW-TAPPER-10269A-466	(2/V)	MW					X			"	"	1:40	"	"		
10	DW-D+R-10269A-466	(2/V)	MW					X			"	"	1:14	"	"		

Sampler's Signature: *Daniel C. Fall* Affiliation: ENSA Date: 10/26/98 Time: 3:40

ADDITIONAL COMMENTS:

NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME
1	<i>Louise Wender</i>	<i>[Signature]</i>	10-27	12:00
2	<i>[Signature]</i>	<i>P. McNeil</i>	10-27	4:20
3				
4				

# ALPHA

Analytical Laboratories, Inc.

Eight walkup Drive  
Westborough, MA 01581-1019  
508-898-9220 FAX 508-898-9193

RECEIVED NOV 10 1994

## CHAIN OF CUSTODY RECORD and ANALYSIS REQUEST RECORD

No.

Sheet 2 of 2

Company Name:  
**TRI-S, Inc. Environmental Consulting**

Project Number: 466

Project Name/Location:  
**D & R GENERAL STORE  
CAMBRIDGEPORT, VT**

Date Received in Lab:

Date Due:

10/27

11/10

Company Address:  
**205 Main Street 3rd Floor  
Brattleboro, VT 05301**

P.O. Number:

Phone Number: (802)

254-3677

Project Manager:  
**KIRSTEN WADE**

Alpha Job Number: (Lab use only)

9408908

FAX No.: 254-7630

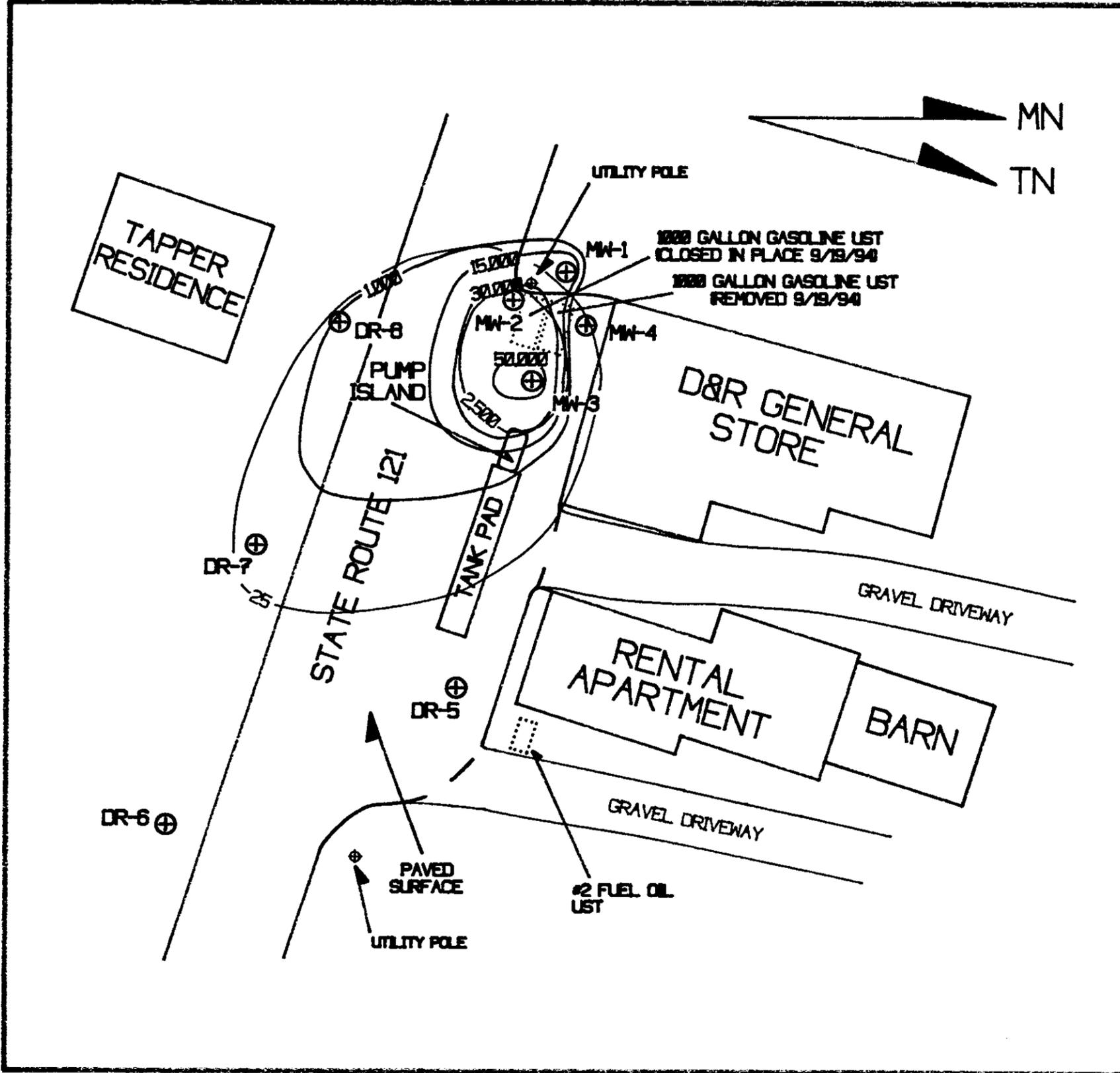
ALPHA Lab # (Lab Use Only)	Sample I.D.	Containers (number/type)	Matrix / Source	Method Preserve. (number of containers)						Solubles - F.F.	Sampling		Analysis Requested
				Unpres.	Ice	Nitric	Sulfuric	HCl	Other		Date	Time	
<u>8908</u>	<u>SW DR MW-02-102694-466</u>	<u>(2/V)</u>	<u>MW</u>								<u>10/26</u>	<u>12:59</u>	<u>8020 (GC ONLY)</u>
<u>10</u>	<u>SW DR MW-01-102694-466</u>	<u>(1/V)</u>	<u>MW</u>								<u>" "</u>	<u>12:00</u>	<u>" " N/C</u>

Sampler's Signature: D. C. T. ENSA Affiliation: ENSA Date: 10/26/94 Time: 3:40

ADDITIONAL COMMENTS:  
1 DUPLICATE  
1 TRIP BLANK

NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME
<u>1</u>	<u>Kirsten Wade</u>	<u>[Signature]</u>	<u>10-27-94</u>	<u>2:00</u>
<u>2</u>		<u>[Signature]</u>	<u>10/27</u>	<u>4:20</u>
<u>3</u>				
<u>4</u>				

**Appendix E**  
**BTEX and MTBE Isoconcentration Map**



TOTAL BTEX AND MTBE  
ISOCONCENTRATION CONTOUR MAP  
FOR 10/26/94

D & R GENERAL STORE  
ROUTE 121  
CAMBRIDGEPORT, VERMONT

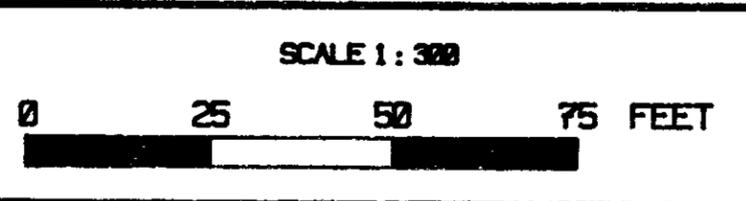
**LEGEND**

DR-6 ⊕ MONITORING WELL DR-6

— 10000 BTEX ISOCONCENTRATION CONTOUR OF 10000 PPB

— 25 MTBE ISOCONCENTRATION CONTOUR OF 25 PPB

CONTAMINANT CONCENTRATIONS PPB				
	BTEX		MTBE	
MW-1	16,750		MW-1	ND
MW-2	32,000		MW-2	2,900
MW-3	54,000		MW-3	7,700
MW-4	22		MW-4	35
DR-5	ND		DR-5	ND
DR-6	ND		DR-6	ND
DR-7	10		DR-7	120
DR-8	1032		DR-8	93



PREPARED BY:  
ENSA ENVIRONMENTAL INC.  
P.O. BOX 1760, 205 MAIN STREET  
BRATTLEBORO, VT 05302