



MAR 1 10 32 AM '04 27 February 2004

WASTE MANAGEMENT  
DIVISION

Mr. Adam Hilliker  
Hilliker's General Store  
2519 VT Route 105  
Newport Center, Vermont 05857

RE: *Initial Site Investigation - Hilliker's General Store  
Newport Center, VT (SMS Site # 97-2262)*

Dear Adam:

On 20 January 2004, Ross Environmental Associates, Inc. (*R.E.A.*) provided oversight during the installation of three soil borings at Hilliker's General Store located at 2519 Vermont Route 105 in Newport Center, Vermont (Figure 1, Attachment A). The soil borings were installed following the discovery of subsurface petroleum contamination during the routine closure of three underground storage tanks (USTs) on 20 October 1997. Two 4,000-gallon gasoline USTs (UST #1 and #2), and one 2,000-gallon diesel UST (UST #3) were removed during the closure activities. Photo-ionization detector (PID) readings on soil in the vicinity of the UST #2 were measured up to 415 ppmv, and measured up to 1,352 ppmv in the vicinity of UST #3. These peak readings were recorded at depths between 10 and 14 feet below ground surface (bgs). The limits of the contamination resulting from UST #3 could not be defined, due to the onsite building foundation. During the UST closure activities, approximately 60 cubic yards of petroleum contaminated soil (PCS) were excavated and stockpiled onsite. On 13 January 1998, the Vermont DEC requested in a letter to Mr. Adam Hilliker that additional work was necessary at the site to determine the severity of the contamination. In October 2003, Mr. Adam Hilliker obtained the services of *R.E.A.* to complete an Initial Site Investigation to address the contamination discovered during the UST closures on 20 October 1997.

## CONCLUSIONS AND RECOMMENDATIONS

At this time, residual contamination from the operation of the former UST system has not impacted the underlying ground water formation, and does not appear to threaten nearby sensitive receptors. Available information indicates that the elevated PID readings obtained during the UST closures are related to the three USTs removed in October 1997. Based on information collected as part of the Initial Site Investigation (ISI), no further subsurface investigation is warranted; however, *R.E.A.* recommends that the onsite soil pile be inspected and screened with a PID in the spring. Providing all PID readings are below the Vermont DEC action level of 1.0 ppmv, *R.E.A.* recommends thin spreading the soil pile and that the site be considered for Site Management Activities Completed (SMAC) status.

Significant findings from the Initial Site Investigation are summarized below:

- Benzene was detected at 485 micrograms per kilogram ( $\mu\text{g}/\text{Kg}$ ) in the soil sample collected from SB-1 at a depth of approximately 23 feet, which is below the U.S. EPA Preliminary Remedial Goals (PRG) for industrial and residential soil.

- Benzene and toluene were detected at 18.9 and 51.7  $\mu\text{g}/\text{Kg}$ , respectively, in the soil sample collected approximately 24 feet below ground surface (bgs) from SB-3. These concentrations are below the corresponding PRGs for industrial and residential soil.
- No volatile petroleum compounds were detected in the SB-2 sample collected at approximately 24 feet bgs.
- No total petroleum hydrocarbons (TPH) were detected in any of the soil samples collected from the bottom of the soil borings.
- PID readings on soil samples collected from SB-1 ranged between 0.4 and 141 ppmv. The highest PID reading in SB-1 was collected at approximately 10 feet bgs.
- PID readings on soil samples collected from SB-2 ranged between 0.1 and 79.9 ppmv. The highest PID reading in SB-2 was collected at approximately 5 feet bgs.
- PID readings on soil samples collected from SB-3 ranged between 0.2 and 56.6 ppmv. The highest PID reading in SB-3 was collected at approximately 14 feet bgs.
- The degree and extent of subsurface petroleum contamination has been adequately defined and appears to be limited to the area immediately adjacent to the former USTs.
- Ground water was not encountered in any boring at the time of drilling, and is estimated to be greater than 30 feet bgs, based on available information.
- No VOCs were detected in the water sample collected from the back up drinking water supply well serving Hilliker's General Store, which is located approximately 80 feet southwest of the former UST system.
- No sensitive receptors appear to be impacted or threatened by the residual contamination.
- Removal of the PCS during the UST closure has greatly reduced the potential long-term threat to nearby sensitive receptors.

## SITE LOCATION AND SETTING

The Hilliker's General Store is located at 2159 Vermont Route 105 in Newport Center, Vermont (Figure 1, Attachment A). The majority of the surrounding property is farm land and residential lots. The former UST system, which was used for gasoline and diesel, was located directly north of the store. Drinking water for the site is provided by a spring located on the eastern side of Route 105; a backup bedrock supply well is also located approximately 80 feet southwest of the former UST system. Surrounding properties also utilize private drinking water supply wells. Figure 2 in Attachment A shows the approximate locations of various site features. A copy of the photographs of the site and surrounding area taken in January 2004 are included in Attachment B.

The ground surface generally slopes to the south of the store, and has an average elevation of approximately 900 feet above mean sea level (Maptech, 1998). Ground water flow direction is unknown, and an unnamed tributary to Mud Brook is located approximately 300 feet south of the store. The surficial-geology in the vicinity of the site is mapped as glacial till (Stewart and MacClintock, 1970). Bedrock in the Newport Center area is mapped as the Moretown

member of the Missisquoi formation, which consists of quartzite and quartz plagioclase of Ordovician age (Doll, 1961). No bedrock outcrops were observed on the site or adjacent properties. The geographic coordinates of the site are: latitude 44° 56' 1.2" N, and longitude 72° 17' 30" W.

## SOIL BORING/WATER SUPPLY SAMPLING AND ANALYSIS

On 20 January 2004, *R.E.A.* provided oversight during the installation of three soil borings to evaluate the possible extent of subsurface contamination discovered during the routine closure of two 4,000-gallon gasoline USTs and one 2,000-gallon diesel UST. The upper three to five feet of soils consisted primarily of coarse sand, with silt and clay encountered below approximately 5 feet to the bottom of the borings between 24 and 25 feet. Groundwater was not encountered during the installation of any of the soil borings and is presumed to be greater than 30 feet based on topography and the site setting. Due to the presence of over 10 feet of a relatively continuous clay layer and decreasing PID readings with depth, the soil borings were terminated to eliminate the possibility of penetrating the clay material.

No PRGs<sup>1</sup> were exceeded based on laboratory analysis of soil samples collected from the bottom of each soil boring. Benzene was detected at 485 micrograms per kilogram ( $\mu\text{g}/\text{Kg}$ ) in the soil sample collected from SB-1 at a depth of approximately 23 feet. Benzene and toluene were detected in the soil sample collected from SB-3 at 18.9 and 51.7  $\mu\text{g}/\text{Kg}$ , respectively. The sample was collected at a depth of approximately 24 feet. No volatile petroleum compounds were detected in the SB-2 sample collected at approximately 24 feet bgs and no total petroleum hydrocarbons (TPH) were detected in any of the soil samples collected from the bottom of each soil boring. A summary of the analytical results is included on Table 1 in Attachment A. Approximate soil boring locations are shown on Figure 2 in Attachment A.

Photo-ionization detector (PID) readings on soil samples collected during the completion of SB-1 ranged between 0.4 and 141 ppmv. The highest PID reading in SB-1 was collected at approximately 10 feet bgs. PID readings on soil samples collected from SB-2 ranged between 0.1 and 79.9 ppmv. The highest PID reading in SB-2 was collected at approximately 5 feet bgs. PID readings on the soil samples collected from SB-3 ranged between 0.2 and 56.6 ppmv. The highest PID reading in SB-3 was collected at approximately 14 feet bgs. PID screening results are included on the soil boring logs in Attachment C.

Soil boring/sampling equipment was decontaminated between each location to minimize the possibility of cross-contamination. Soil descriptions are included on the soil boring logs in Attachment C. Technical Drilling Services of Sterling, Massachusetts completed the soil boring installation under the direct supervision of an *R.E.A.* hydrogeologist.

*R.E.A.*'s hydrogeologist screened soil samples from the soil borings for the possible presence of volatile organic compounds (VOCs) using a MiniRAE model 2000 portable PID. A portion of each soil sample was placed in a resealable bag and allowed to equilibrate for 10 to 15 minutes. The headspace of the plastic baggie was then screened for the possible presence of VOCs. The PID was field-calibrated with an isobutylene standard gas to a benzene reference.

<sup>1</sup> The State of Vermont has not established enforceable standards or guidelines for soils. The VT DEC commonly references the Preliminary Remedial Goals (PRGs) established by U.S. EPA Region IX (10/01/02).

Soil samples for laboratory analysis were collected from the bottom of the SB-1, SB-2, and SB-3 soil borings between 23 and 24 feet bgs. The soil samples collected from SB-1 and SB-3 were analyzed for the possible presence of volatile organic compounds and total petroleum hydrocarbons (TPH) in accordance with U.S. EPA Methods 8021B and 8015GRO (gasoline range organics), respectively. The soil sample collected from SB-2 was analyzed for the possible presence of volatile organic compounds and total petroleum hydrocarbons (TPH) in accordance with U.S. EPA Methods 8021B and 8015DRO (diesel range organics), respectively.

As a precautionary measure, a water sample was also collected from the backup bedrock water supply well located approximately 80 feet southwest of the former UST system. The sample was analyzed for the possible presence of volatile organic compounds (VOCs) accordance with U.S. EPA Method 524.2; no VOCs were detected in this sample. All samples were transported under chain-of-custody in an ice-filled cooler to Endyne, Inc. of Williston, Vermont for laboratory analysis. Copies of the laboratory reports are included in Attachment D.

### ONSITE SOIL PILE

Approximately 60 cubic yards of PCS was stockpiled on the Hilliker's General Store property for treatment, following the UST closures in October, 1997. During the site visit on 20 January, 2004, the location of the soil pile was identified, although the soil was covered under snow; therefore, the condition of the soil pile could not be determined. The approximate location of the soil pile is shown on Figure 2 in Attachment A, and a photograph of the pile taken in January 2004 is included in Attachment B.

### SENSITIVE RECEPTOR IDENTIFICATION AND RISK ASSESSMENT

At this time, none of the sensitive receptors in the general vicinity of the Hilliker's General Store appear to be impacted or threatened by the residual contamination discovered during the routine UST closure completed at the store in October 1997. In addition, the possibility of direct contact with residual petroleum contamination is limited since the area of the former USTs is located beneath the parking lot and existing UST pad.

The following sensitive receptors were identified in the vicinity of the Hilliker's General Store:

- Ambient air in the basement of the store.
- Subsurface soils within the immediate vicinity of the former USTs.
- The store backup water supply well located approximately 80 feet southwest of the former UST system.
- The unnamed tributary to Mud Creek, located approximately 300 feet south of the former UST system.

No significant subsurface petroleum contamination was identified during soil boring at the site; therefore, ambient air in the basement, the back up supply well and the Mud Creek tributary are not likely to be impacted. Ambient air in the basement of the store was screened with a PID for the possible presence of petroleum compounds on 20 January 2004; all readings

were 0.0 ppmv. No VOCs were detected in the sample collected from the backup bedrock water supply on 20 January 2004. In addition, groundwater was not encountered during the completion of any of the soil borings and is presumed to be greater than 30 feet based on topography and the site setting.

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Please call me if you have any questions or concerns regarding the findings or recommendations.

Sincerely,

*Ross Environmental Associates, Inc.*



Andres O. Torizzo  
Hydrogeologist

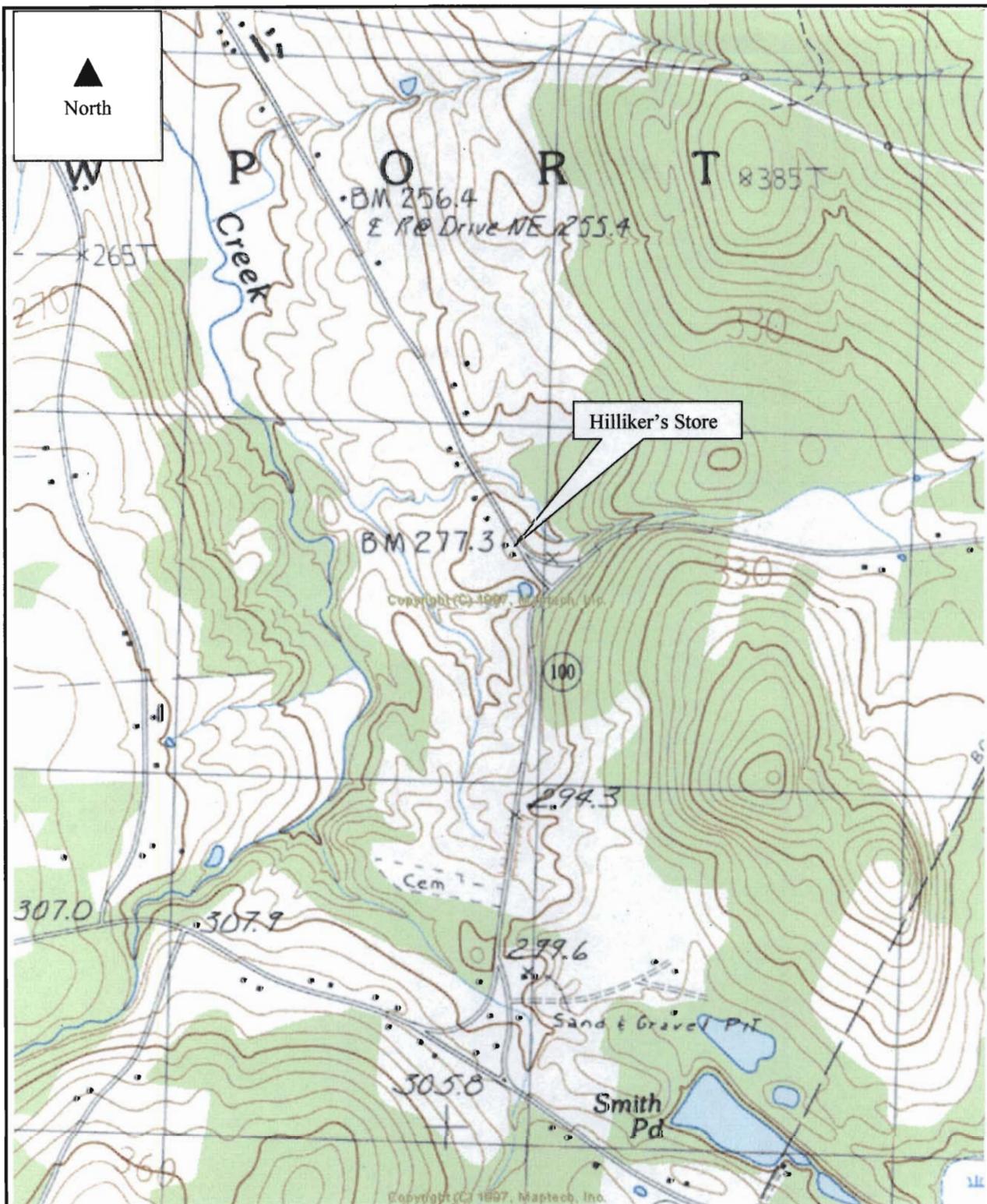
Attachments

cc. Chuck Schwer, VT DEC

Aot/ref: 23137ISI

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**FIGURES**



Approximate Scale: 1 inch = 1,400 feet

Site Coordinates: 44° 56' 1.2" N, 72° 17' 30" W

Source: USGS 1986. Newport Center Quadrangle, VT.  
 Topographic map (7.5 minute series).  
 Maptech, Inc. 1998.  
 R.E.A. Project No 23-137

**Figure 1**  
 Site Location Map  
 Hilliker's Store  
 Newport Center, Vermont



Approx. location of soil pile

Existing UST Pad

SB-3

Pump Island

SB-2

SB-1

HILLIKER'S STORE

VERMONT ROUTE 105

Approximate location of backup supply well

**Legend**

-  Soil Boring Location
-  Supply Well Location

All locations are approximate

**SITE PLAN**  
 (with Monitoring Well Locations)  
 Hilliker's Store  
 Newport Center, Vermont

Scale 1"=40'-0"	Date 1/21/2004	Drawn By T.F.M.D.
File Name 23-137	Approved By	

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

**FIGURE 2**

**TABLE 1  
SUBSURFACE SOIL ANALYTICAL RESULTS**

Hilliker's General Store  
Newport Center, VT

Monitoring Date: 20 January 2004

Sample ID	Sample Depth (ft, bgs)	MTBE	Benzene	Toluene	Ethyl benzene	Total Xylenes	1,3,5 TMB	1,2,4 TMB	Napthalene	TPH
SB-1	23	ND<0.076	<b>0.485</b>	ND<0.038	ND<0.038	ND<0.076	ND<0.038	ND<0.038	ND<0.076	<b>ND&lt;2</b>
SB-2	24	ND<0.086	ND<0.043	ND<0.043	ND<0.043	ND<0.086	ND<0.043	ND<0.043	ND<0.086	<b>ND&lt;5</b>
SB-3	24	ND<0.024	<b>0.0189</b>	<b>0.0517</b>	ND<0.012	ND<0.024	ND<0.012	ND<0.012	ND<0.024	<b>ND&lt;2</b>
<b>PRGs for Industrial Soil</b>		<b>160</b>	<b>1.3</b>	<b>520</b>	<b>20</b>	<b>420</b>	<b>70</b>	<b>170</b>	<b>190</b>	<b>--</b>
<b>PRGs for Residential Soil</b>		<b>62</b>	<b>0.600</b>	<b>520</b>	<b>8.9</b>	<b>270</b>	<b>21</b>	<b>52</b>	<b>56</b>	<b>--</b>

Notes: All results reported as milligrams per kilogram (mg/Kg).  
 ND: Not detected at indicated detection limit.  
 1,3,5-TMB = 1,3,5-trimethylbenzene and 1,2,4-TMB = 1,2,4-trimethylbenzene.  
 PRGs - U.S. EPA Region IX Preliminary Remedial Goals for soil (10/01/02).

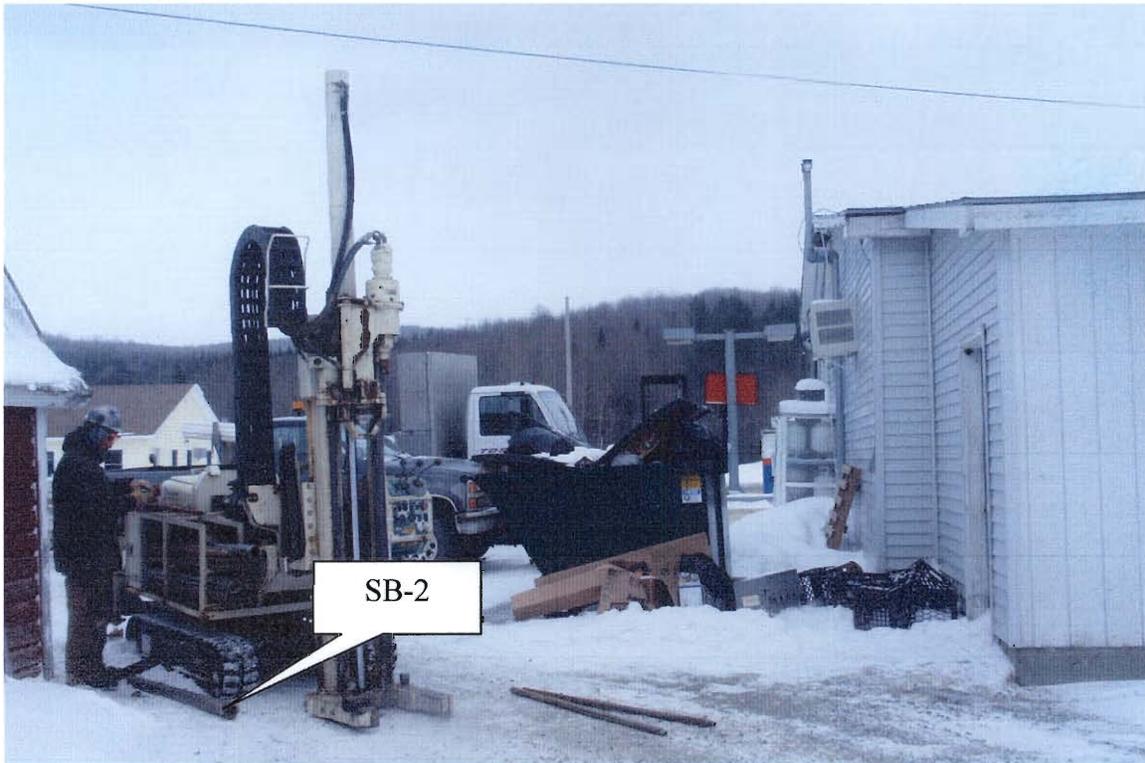


**SITE PHOTOGRAPHS**

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HILLIKER'S GENERAL STORE – NEWPORT CENTER, VT  
SB-1 Installation - View Toward North



HILLIKER'S GENERAL STORE – NEWPORT CENTER, VT  
SB-2 Installation - View Toward West



HILLIKER'S GENERAL STORE – NEWPORT CENTER, VT  
SB-3 Installation - View Toward South



HILLIKER'S GENERAL STORE – NEWPORT CENTER, VT  
Onsite Soil Pile - View Toward Southwest

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**SOIL BORING LOGS**



**BORING / WELL IDENTIFICATION: SB-1**

Site Name: **Hilliker's General Store**

Site Location: **Newport Center, VT**

Well Depth: **NA** Boring Depth: **23'**

Installation Date: **January 20, 2004**

Depth to Water (during drilling): **NA**

Job Number: **23-137**

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: **NA**

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 4': Coarse brown SAND with some gravel.			<ul style="list-style-type: none"> <li> Concrete</li> <li> Native Material</li> <li> Bentonite</li> <li> Filter Sand</li> <li> Riser</li> <li> Screen</li> <li> Water Level</li> </ul>
1						
2						
3						
4						
5	5-10		Bottom: Silt	0.4		
6			CLAY.			
7						
8						
9						
10	10-15		Same as above.	141		
11						
12						
13						
14						
15	15-20		Same as above.	83.2		
16						
17						
18						
19						
20	20-23		Same as above.	2.0		
21						
22						
23			Bottom of Boring	0.8		
24						
25						

PROPORTIONS USED		BLOW COUNT (COHESIVE SOILS)		BLOW COUNT (GIRANULAR 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-2**

Site Name: **Hilliker's General Store**

Site Location: **Newport Center, VT**

Well Depth: **NA** Boring Depth: **24'**

Installation Date: **January 20, 2004**

Depth to Water (during drilling): **NA**

Job Number: **23-137**

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: **NA**

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		Coarse brown SAND with trace gravel.			<input checked="" type="checkbox"/> Concrete	
1							<input type="checkbox"/> Native Material
2							<input type="checkbox"/> Bentonite
3							<input type="checkbox"/> Filter Sand
4							<input type="checkbox"/> Riser
5	5-10			<b>79.9</b>		<input type="checkbox"/> Screen	
6			Same as above to 6'			<input type="checkbox"/> Water Level	
7			Bottom 4': CLAY with some silt.				
8							
9							
10	10-15		Same as above.	<b>0.0</b>			
11							
12							
13							
14							
15	15-20		No recovery.	<b>0.1</b>			
16							
17							
18							
19							
20	20-22		Same as above.				
21							
22			Same as above.	<b>0.3</b>			
23							
24			Bottom of Boring	<b>0.0</b>			
25							

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-3**

Site Name: **Hilliker's General Store**

Site Location: **Newport Center, VT**

Well Depth: **NA** Boring Depth: **24'**

Installation Date: **January 20, 2004**

Depth to Water (during drilling): **NA**

Job Number: **23-137**

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: **NA**

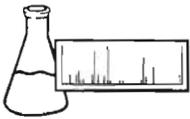
Reference Point (RP): **none**

Depth (ft)	Sample Depth (ft)	Blows/6" and Recovery (In)	Sample Description / Notes	PID (ppm)	Well Profile	Legend
0	0-4		Top 1': GRAVEL.			Concrete
1			Bottom: CLAY with some silt and fine sand.			Native Material
2						Bentonite
3						Filter Sand
4	4-8		CLAY with some silt.	0.2		Riser
5						Screen
6						Water Level
7						
8	8-12		Same as above.	42.5		
9						
10						
11						
12	12-14		Same as above.	22.4		
13						
14	14-18		Same as above with trace sand.	56.6		
15						
16						
17						
18	18-20		Same as above.	13.8		
19						
20	20-24		Same as above.	11.1		
21						
22						
23						
24			Bottom of Boring	0.9		
25						

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**

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

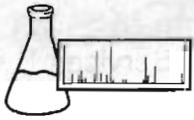
### LABORATORY REPORT

CLIENT: Ross Environ. Assoc., Inc.  
PROJECT: Hillikens Store/23-137  
REPORT DATE: February 4, 2004

ORDER ID: 27527  
DATE RECEIVED: January 21, 2004  
SAMPLER: AT

Site: SB-1 Ref. Number: 224691 Anal. Method: SW 8260 Analyst: 725 Date Sampled: 1/20/04 Time Sampled: 11:00 AM Analysis Date: 1/30/04	Site: SB-3 Ref. Number: 224693 Anal. Method: SW 8260 Analyst: 725 Date Sampled: 1/20/04 Time Sampled: 2:30 PM Analysis Date: 1/30/04																																																
<table border="1"> <thead> <tr> <th>Parameter</th> <th>Results ug/kg, dry</th> </tr> </thead> <tbody> <tr><td>MTBE</td><td>&lt; 76.0</td></tr> <tr><td>Benzene</td><td>485.</td></tr> <tr><td>Toluene</td><td>&lt; 38.0</td></tr> <tr><td>Ethylbenzene</td><td>&lt; 38.0</td></tr> <tr><td>Xylenes, Total</td><td>&lt; 76.0</td></tr> <tr><td>1,3,5 Trimethyl Benzene</td><td>&lt; 38.0</td></tr> <tr><td>1,2,4 Trimethyl Benzene</td><td>&lt; 38.0</td></tr> <tr><td>Naphthalene</td><td>&lt; 76.0</td></tr> <tr><td>UIP's</td><td>0.</td></tr> <tr><td>Surrogate 1</td><td>90.0%</td></tr> <tr><td>Percent Solid</td><td>88.</td></tr> </tbody> </table>	Parameter	Results ug/kg, dry	MTBE	< 76.0	Benzene	485.	Toluene	< 38.0	Ethylbenzene	< 38.0	Xylenes, Total	< 76.0	1,3,5 Trimethyl Benzene	< 38.0	1,2,4 Trimethyl Benzene	< 38.0	Naphthalene	< 76.0	UIP's	0.	Surrogate 1	90.0%	Percent Solid	88.	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Results ug/kg, dry</th> </tr> </thead> <tbody> <tr><td>MTBE</td><td>&lt; 24.0</td></tr> <tr><td>Benzene</td><td>18.9</td></tr> <tr><td>Toluene</td><td>51.7</td></tr> <tr><td>Ethylbenzene</td><td>&lt; 12.0</td></tr> <tr><td>Xylenes, Total</td><td>&lt; 24.0</td></tr> <tr><td>1,3,5 Trimethyl Benzene</td><td>&lt; 12.0</td></tr> <tr><td>1,2,4 Trimethyl Benzene</td><td>&lt; 12.0</td></tr> <tr><td>Naphthalene</td><td>&lt; 24.0</td></tr> <tr><td>UIP's</td><td>0.</td></tr> <tr><td>Surrogate 1</td><td>88.0%</td></tr> <tr><td>Percent Solid</td><td>91.</td></tr> </tbody> </table>	Parameter	Results ug/kg, dry	MTBE	< 24.0	Benzene	18.9	Toluene	51.7	Ethylbenzene	< 12.0	Xylenes, Total	< 24.0	1,3,5 Trimethyl Benzene	< 12.0	1,2,4 Trimethyl Benzene	< 12.0	Naphthalene	< 24.0	UIP's	0.	Surrogate 1	88.0%	Percent Solid	91.
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Percent Solid	91.																																																

Site: SB-2 Ref. Number: 224692 Anal. Method: SW 8260 Analyst: 725 Date Sampled: 1/20/04 Time Sampled: 1:10 PM Analysis Date: 1/30/04																								
<table border="1"> <thead> <tr> <th>Parameter</th> <th>Results ug/kg, dry</th> </tr> </thead> <tbody> <tr><td>MTBE</td><td>&lt; 86.0</td></tr> <tr><td>Benzene</td><td>&lt; 43.0</td></tr> <tr><td>Toluene</td><td>&lt; 43.0</td></tr> <tr><td>Ethylbenzene</td><td>&lt; 43.0</td></tr> <tr><td>Xylenes, Total</td><td>&lt; 86.0</td></tr> <tr><td>1,3,5 Trimethyl Benzene</td><td>&lt; 43.0</td></tr> <tr><td>1,2,4 Trimethyl Benzene</td><td>&lt; 43.0</td></tr> <tr><td>Naphthalene</td><td>&lt; 86.0</td></tr> <tr><td>UIP's</td><td>0.</td></tr> <tr><td>Surrogate 1</td><td>88.0%</td></tr> <tr><td>Percent Solid</td><td>90.</td></tr> </tbody> </table>	Parameter	Results ug/kg, dry	MTBE	< 86.0	Benzene	< 43.0	Toluene	< 43.0	Ethylbenzene	< 43.0	Xylenes, Total	< 86.0	1,3,5 Trimethyl Benzene	< 43.0	1,2,4 Trimethyl Benzene	< 43.0	Naphthalene	< 86.0	UIP's	0.	Surrogate 1	88.0%	Percent Solid	90.
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LABORATORY REPORT

CLIENT: Ross Environ. Assoc., Inc.  
PROJECT: Hillikens Store/23-137  
REPORT DATE: February 4, 2004

ORDER ID: 27527  
DATE RECEIVED: January 21, 2004  
SAMPLER: AT  
ANALYST: 725

Ref. Number: 224691

Site: SB-1

Date Sampled: January 20, 2004

Time: 11:00 AM

<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>	<u>Analysis Date</u>
TPH 8015 GRO	< 2.00	mg/Kg	SW 8015B	1/30/04

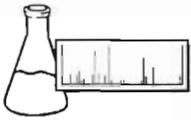
Ref. Number: 224693

Site: SB-3

Date Sampled: January 20, 2004

Time: 2:30 PM

<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>	<u>Analysis Date</u>
TPH 8015 GRO	< 2.00	mg/Kg	SW 8015B	1/30/04



### LABORATORY REPORT

CLIENT: Ross Environ. Assoc., Inc.  
PROJECT: Hillikens Store/23-137  
REPORT DATE: February 10, 2004

ORDER ID: 27527  
DATE RECEIVED: January 21, 2004  
SAMPLER: AT  
ANALYST: 333

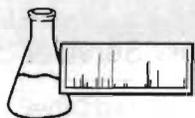
Ref. Number: 224692

Site: SB-2

Date Sampled: January 20, 2004

Time: 1:10 PM

<u>Parameter</u>	<u>Result</u>	<u>Unit</u>	<u>Method</u>	<u>Analysis Date</u>
TPH 8015 DRO	< 5.0	mg/Kg	SW 8015B	2/5/04



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

### LABORATORY REPORT

EPA 524.2

CLIENT: Ross Environ. Assoc., Inc.  
PROJECT: Hillikens Store/23-137  
SITE: Hillikens Bedrock Supply  
DATE RECEIVED: January 21, 2004  
REPORT DATE: February 5, 2004  
ANALYSIS DATE: February 3, 2004

ORDER ID: 27527  
REFERENCE NUMBER: 224694  
DATE SAMPLED: January 20, 2004  
TIME SAMPLED: 1:00 PM  
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	90.0%
cis-1,3-Dichloropropene	< 0.5	Surrogate 2	85.0%
trans-1,3-Dichloropropene	< 0.5	UIP's	0.0%
Ethylbenzene	< 0.5		