

FEB 16 1999

## **INITIAL SITE INVESTIGATION**

**Bear Mountain Maintenance Garage  
Bear Mountain Access Road  
Killington, VT 05751**

SMS Site #98-2533  
UST Facility #508

Longitude 72° 46' 45"  
Latitude 43° 36' 13"

A Facility Owned By:  
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Killington Road  
Killington, VT 05751  
(802) 422-6264  
Contact: John Cole

Prepared By:  
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**January 26, 1999**

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## EXECUTIVE SUMMARY

Malter Consulting, Inc. (MCI) has performed an Initial Site Investigation for the Bear Mountain Maintenance Garage located on the Bear Mountain Access Road in Sherburne, Vermont. The purpose of this investigation was to determine the magnitude and extent of a release of petroleum products from this facility.

The facility has been a maintenance garage since 1984 served by a 4,000 gallon diesel underground storage tank (UST) and a 2,000 gallon gasoline UST. During the removal of the single walled USTs and their related piping and dispensers, in August, 1998, levels of soil contamination in excess of the Vermont Guidelines were identified with the highest levels beneath the area of the gasoline dispenser. No free product was encountered. Approximately 10 cubic yards of contaminated soil was collected and polyencapsulated on site. The soil will be monitored semiannually with a photoionization detector (PID).

Between October 28, 1998 and November 3, 1998 as part of the subsurface investigation of this site three subsurface borings were accomplished to a depth of 12 to 27 feet and monitoring wells were installed, sampled and surveyed. Soil samples were collected during the boring activities and screened using a PID. Groundwater samples were collected and analyzed for Volatile Organic Compounds (VOCs) using EPA Method 8260 and for Total Petroleum Hydrocarbons (TPH) using EPA Method 8100.

The soils that were monitored during the borings ranged from silty sands to coarse gravel and glacial till. Bedrock was not present throughout the borings. The water table was present at 3.66 feet at MW-1 and at 9.84 feet at MW-2 and was not encountered at MW-3 to the bottom of the well at 24.65 feet. PID readings taken during the soil borings had levels to 10 ppm in MW-2 to less than 1 at MW-3 and non detect at MW-1. In the groundwater at MW-2, Benzene was present at 11 parts per billion (ppb) which exceeds the Vermont Primary Groundwater Quality Enforcement Standard (VPGQES) of 5 ppb; Naphthalene was present at 207 ppb which exceeds the VPGQES of 20.0 ppb; 1,2,4 Trimethylbenzene was present at 590 ppb which exceeds the VPGQES of 5.0 ppb; 1,3,5-Trimethylbenzene was present at 470 ppb which exceed the VPGQES of 4.0 ppb; Methyl tertiary Butyl Ether was present at 2.6 ppb; Toluene was present at 105 ppb; Ethyl Benzene was present at 18 ppb and Total Xylenes were present at 722 ppb. TPH for MW-2 was 4.7 parts per million (ppm). TPH and VOCs were not detected in MW-1. Groundwater was not encountered to the bottom of MW-3 at a depth of 24.65 feet. Groundwater flow is to the south.

The source of the contamination was believed to be related to spills during fueling of vehicles or from a previously repaired fitting associated with the dispensers. The USTs and related appurtenances were removed during the UST closure and the majority of the contaminated soil in the area of the dispensers was removed and polyencapsulated. There are no sensitive receptors within 800 feet of the site.

Quarterly groundwater sampling and analysis and water level monitoring should be initiated for this site to establish that the groundwater contamination levels are declining over time and monitoring the soil pile semiannually. No additional actions appear warranted at this time.

## **1.0 INTRODUCTION**

The following report provides information on the Initial Site Investigation performed at the Bear Mountain Maintenance Garage located on the Bear Mountain Access Road in the Town of Sherburne, Vermont (See Figure A). The purpose of this investigation was to determine the degree and extent of petroleum contamination following the closure and removal of a 2,000 gallon gasoline UST and a 4,000 gallon diesel UST and related appurtenances. This work was being accomplished using the Site Investigation Expressway Process.

This report documents the geology and hydrogeology of the site, environmental monitoring and sampling, conclusions and recommendations concerning the site.

### **1.1 SCOPE OF WORK**

The information used to develop this report was obtained through the following activities: (1) drilling three soil borings and installing three monitoring wells; (2) collection and analysis of groundwater and soil samples from the monitoring well points; (3) well elevation and location survey; and (4) reporting of results summarizing the investigation and providing conclusions and recommendations.

## **2.0 SITE DESCRIPTION**

The Bear Mountain Vehicle Maintenance Garage is located north of the Bear Mountain Access Road in Sherburne, Vermont (See Figure 1). The garage is a metal sided structure built on a concrete slab on grade. The facility is located on a 1,026 acre parcel in a rural setting. The site is bordered by the Bear Mountain Access Road to the south, and forested property to the north, east and west. A work road associated with the ski area traverses east west through the site. The site is served by an 8 foot deep dug gravel well located ~ 40 feet northwest of the vehicle maintenance building and a septic system located northeast of the building. The nearest public water supply is located ~1,300 feet west of the site at the Bear Mountain Base Lodge. The garage is located on a level site along a steeply north-south sloping hillside. A salt shed is located ~90 feet to the east of the maintenance building. Groundwater flow is to the south. A tributary of Falls Brook is located ~ 10 feet north of the maintenance building and flows both east and west at the topographic divide behind the building. Falls Brook is located more than 800 feet to the south of the site.

## **3.0 SITE HISTORY**

The Bear Mountain Maintenance Garage has operated as a vehicle maintenance facility for Killington Ltd. since 1984. The 2,000 gallon gasoline UST and 4,000 gallon diesel UST and related appurtenances were installed in 1984.

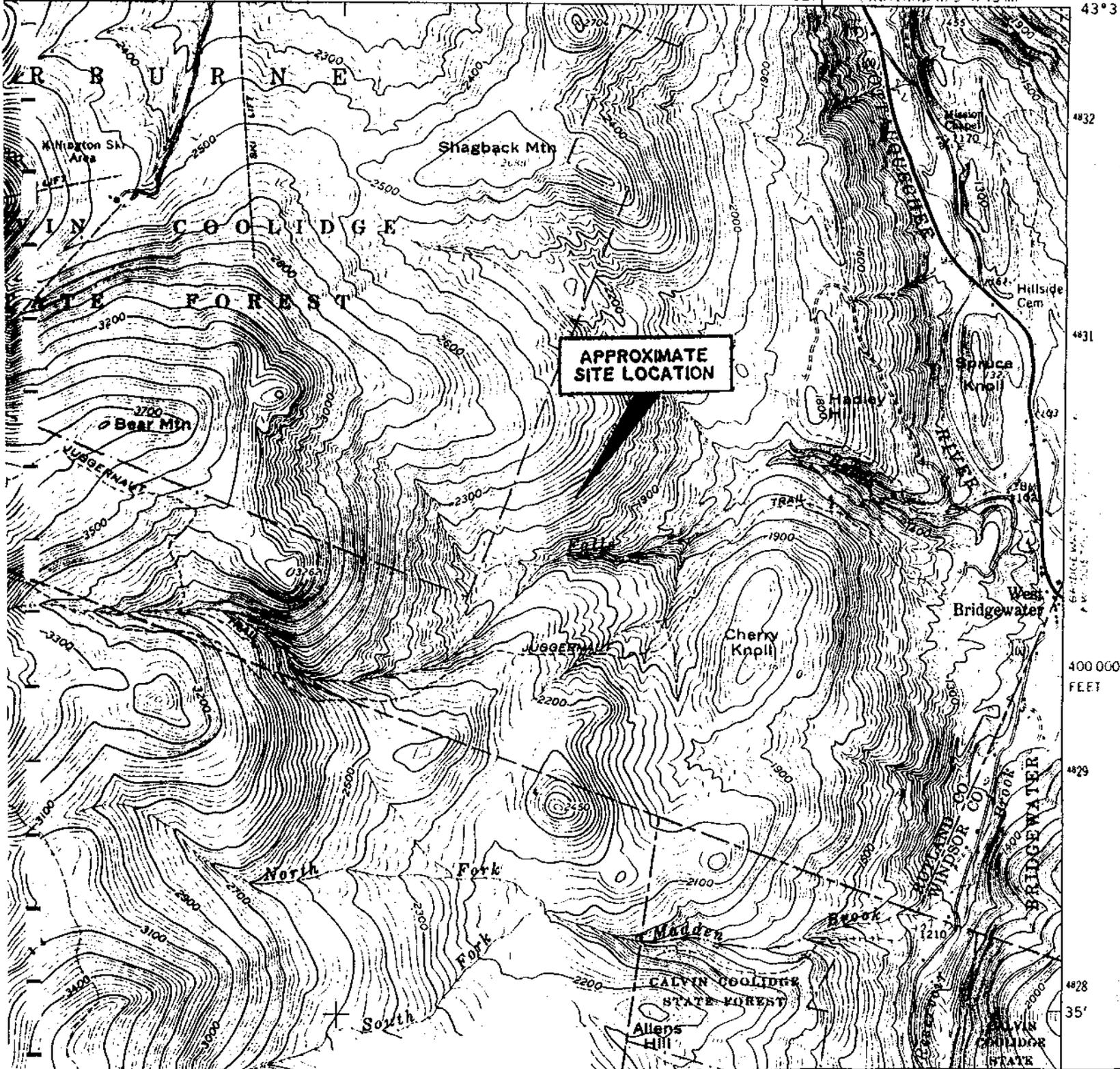
On August 3 and 4, 1998 the USTs and related appurtenances were taken out of service as part of the removal activities associated with the facility. The USTs were pumped out by Owner Services, Inc. personnel. The dispensers were de-energized and removed by Techtron Environmental

KILLINGTON PEAK QUADRANGLE  
VERMONT

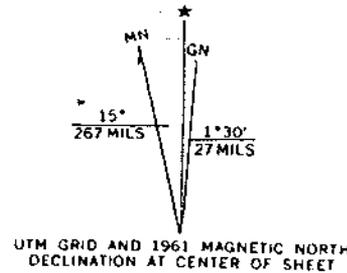
7.5 MINUTE SERIES (TOPOGRAPHIC)

SE/4 RUTLAND 15' QUADRANGLE

477 478 479 430 000 FEET 431 432 433 72° 45' 43° 3'



**FIGURE A**  
**MALTER CONSULTING, INC.**  
**BEAR MOUNTAIN MAINTENANCE GARAGE**  
**SHERBURNE, VERMONT**  
**SITE LOCATION MAP**  
**1" = 2,000'**

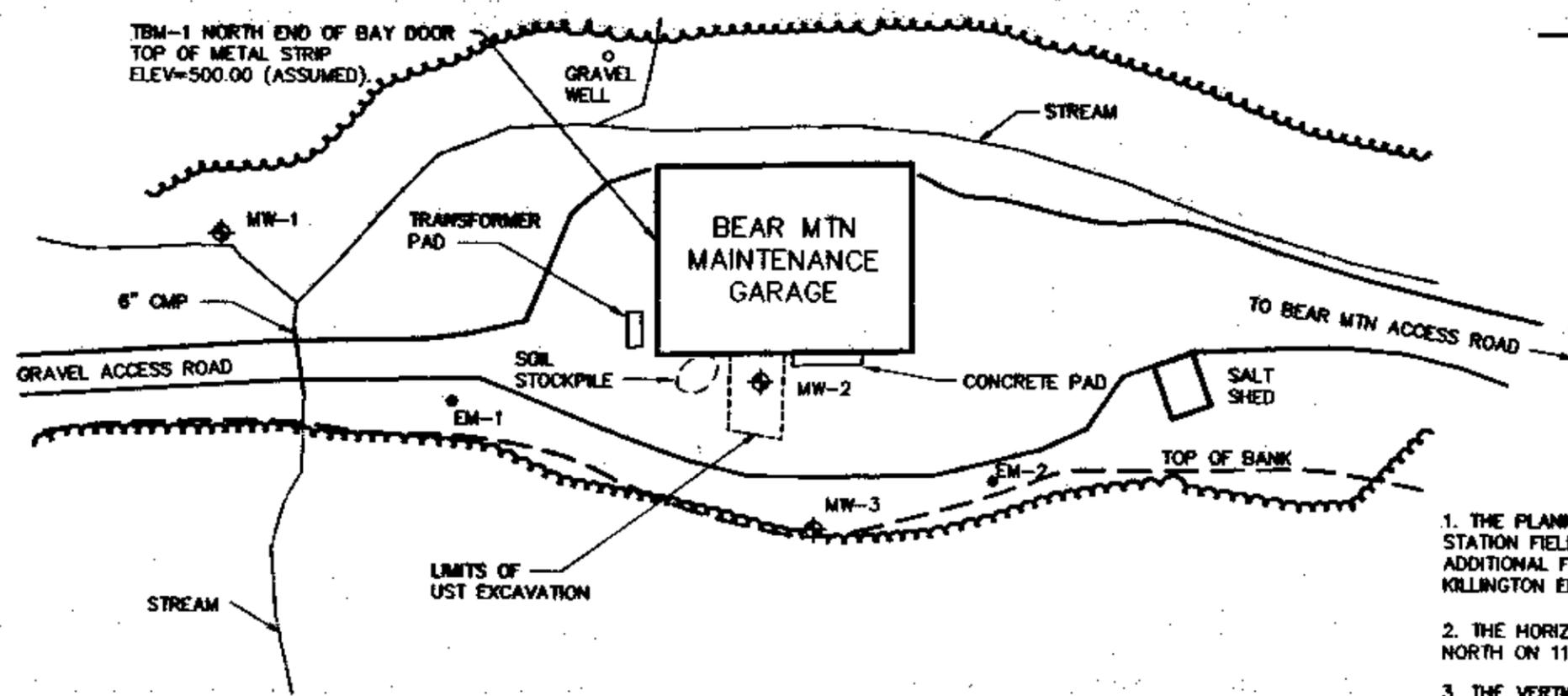




MAGNETIC NORTH 1998

### LEGEND

-  MW-2 MONITORING WELL
-  SURVEY CONTROL POINT-REBAR
-  EDGE OF WOODS
-  STREAM
-  EDGE OF ROAD



### NOTES

1. THE PLANIMETRIC FEATURES AS SHOWN BASED UPON A TOTAL STATION FIELD SURVEY CONDUCTED BY EMCON ON 11-5-98. ADDITIONAL FEATURES ADDED BASED UPON A MAP PROVIDED BY KILLINGTON ENTITLED "FACILITY F LIFT MAINT. AND VEHICLE MAINT."
2. THE HORIZONTAL DATUM IS BASED UPON OBSERVED MAGNETIC NORTH ON 11-5-98.
3. THE VERTICAL DATUM IS ASSUMED AND BASED UPON AN ELEVATION OF 500.00 FEET AT THE TOP NORTH END OF A METAL STRIP ON THE WESTERN BAY DOOR OF THE BLDG.
4. THE HORIZONTAL AND VERTICAL SURVEY CONTROL AS SHOWN ON THIS PLAN WAS CORRECT AT THE TIME THIS PLAN WAS PRODUCED. SURVEY CONTROL DATA IS SUBJECT TO CHANGE AND EMCON ASSUMES NO RESPONSIBILITY FOR THE USE OF INCORRECT OR OUTDATED INFORMATION.



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**FIGURE 1**  
MALTER CONSULTING INC.  
KILLINGTON SKI AREA  
SHERBURNE VERMONT  
MONITORING WELL LOCATIONS  
BEAR MTN MAINTENANCE GARAGE

personnel. The concrete pad associated with the site was removed by Giancola Construction. Giancola Construction also performed the excavation activities associated with the UST removals. Techtron personnel removed the piping and cleaned the USTs. The environmental site monitoring activities were performed by Malter Consulting, Inc.. Heritage Environmental, Inc., a certified hazardous waste hauler, removed the tank bottom wastes for proper off site disposal.

During the removal activities approximately 10 cubic yards of petroleum contaminated soils above Vermont Department of Environmental Conservation (VTDEC) threshold action levels were excavated and placed in a polyencapsulated stockpile approximately five feet west of the limits of the UST excavation. No free product was found in the ground or around the dispensers. This soil was primarily sand and fine gravel from the area in the vicinity of the gasoline and diesel dispensers and from the north end of the gasoline UST and east of the north end of the gasoline UST. The source of the contamination was believed to be related to spills during fueling of vehicles or from a previously repaired fitting associated with the dispensers. Clean fill was placed in the excavation following the removal activities.

#### **4.0 FIELD INVESTIGATION METHODOLOGY AND RESULTS**

The following sections provide a summary of the work conducted at the site and the results of the field investigation.

##### **4.1 SOIL BORINGS/MONITORING WELL INSTALLATIONS**

In order to determine the degree and extent of possible groundwater and soil contamination at the Bear Mountain Maintenance Garage, on October 28, 1998 a boring that was completed as a monitoring well, MW-3 was accomplished. On November 3, 1998 two additional borings were completed as monitoring wells, MW-1 and MW-2. These wells were drilled by Green Mountain Boring of East Barre, Vermont and were supervised by Malter Consulting, Inc.'s geologist. Green Mountain Boring utilized an Aker AD2 drill rig with 4 1/4" inside diameter hollow stem augers. Split spoon soil samples were collected every five feet and were used for geologic descriptions and to collect samples in zip lock bags for PID headspace readings. The soil samples monitored at MW-1 were all nondetectable on the PID. At MW-2 the readings were ranged from 0.3 ppm to 10 ppm at 15 feet. At MW-3 the PID readings ranged from nondetectable to 0.5 ppm at 20 to 22 feet below grade.

The monitoring wells were developed using a Whale pump. This was done to remove cuttings, clean the well screen and improve the hydraulic connection between the monitoring well and the adjacent water bearing strata.

Geologic descriptions of the samples were made in the field in accordance with the Unified Soil Classification System. A drillers boring log was maintained for each well (See Appendix A).

To prevent cross contamination all of Green Mountain Boring's downhole tools and equipment were steam cleaned prior to drilling each well.

The monitoring wells were established to determine the possible degree and extent of petroleum contamination and the direction of groundwater flow. MW-1 was installed approximately 170 feet northwest of the limits of the UST excavation and serves as the up gradient monitoring well. MW-2 was installed in the area of the UST excavation in the vicinity of the gasoline and diesel fuel dispensers. MW-3 was installed approximately 30 feet south of the south limit of the UST excavation at the edge of the bank. Ten feet of well screen was installed in monitoring wells MW-1 and MW-3. Thirteen feet of well screen was installed in MW-2. MW-1 was screened from 14 to 4 feet below ground surface. MW-2 was screened from 16 to 3 feet below ground surface. MW-3 was screened from 25 to 15 feet below the ground surface. Cone caps were installed on the bottom of each well.

Each of the wells was constructed of 2 inch ID Schedule 40, flush threaded PVC riser pipe and factory slotted 0.010 inch commercial flush threaded PVC well screen. With the well screen in place, a clean silica sand pack was installed in the annular space from 14 to 2 feet below ground surface with a bentonite slurry seal placed between 2 feet and 0.5 feet below ground surface and native backfill and concrete to the ground surface for MW-1. A 4.18 foot high protective casing surrounds the PVC stick up on MW-1. The silica sand pack for MW-2 was installed between 16 feet and 2 feet below ground surface with a bentonite slurry between 2 feet and 0.5 feet and native backfill and concrete to the ground surface. A 4.57 foot high protective casing surrounds the PVC stick up on MW-2. The silica sand pack for MW-3 was installed between 25 and 15 feet below ground surface with native soil backfill between 15 feet and 2.5 feet below the ground surface and a bentonite slurry from 2.5 to 0.5 feet below the ground surface and native backfill and concrete to the ground surface. A 4.33 foot high protective casing surrounds the PVC stick up on MW-3.

#### **4.2 SITE GEOLOGY**

The surficial geology, at the site was documented by examining and classifying soil samples collected during the subsurface drilling program. From 0 to 5 feet at MW-1 was predominantly silty sand and gravel over till with coarse sand and gravel with sand lenses in till at 10 to 12 feet. Refusal was at 14 feet below the ground surface. From 0 to 5 feet at MW-2 was peastone over silty sand over fine to coarse gravel with silty sand and gravel over till from 10 to 12 feet. Refusal was at 17 feet and there was no sample from 15 to 17 feet. From 0 to 5 feet at MW-3 was silty sand and fine gravel and from 10 to 12 feet there was medium to coarse sand and coarse gravel. There was no recovery from 15 to 17 feet with medium sand and gravel till from 20 to 22 feet and medium sand and some silt and gravel till from 25 to 27 feet.

The Surficial Geologic Map of Vermont (1970) identifies the surficial materials in the vicinity of the site as glacial till.

Bedrock was not encountered in any of the wells on site. The predominant bedrock in the area is the Mount Holly Complex primarily a quartzite.

#### **4.3 SITE HYDROGEOLOGY**

Water level data recorded from onsite monitoring wells MW-1, MW-2 and MW-3 on November 6, 1998, was used to construct a groundwater contour map across the site (See Figure 2). Depths to

groundwater at these wells ranged from approximately 3.66 feet below the ground surface at MW-1 and 9.84 feet below the ground surface at MW-2. The water table was not detected at 24.65 feet below the ground surface at MW-3 (See Table 1). The hydraulic gradient is calculated as 0.2 feet per foot (ft/ft), with flow to the south towards Falls Brook.

#### 4.4 ENVIRONMENTAL MONITORING AND SAMPLE COLLECTION

To characterize the site, a series of monitoring activities were undertaken. These included: photoionization detector screening of the split spoon samples collected every five feet during the soil boring activities and collection and analysis of groundwater samples from monitoring wells MW-1 and MW-2.

During the drilling activities split spoon soil samples recovered were placed in a zip lock bag and the head space was then monitored using a 10.6eV Photovac 2020 PID which was calibrated at the beginning of the day.

On November 6, 1998, groundwater quality samples were collected from MW-1 and MW-2 using dedicated PVC bailers for the wells. MW-3 was dry. Each of the functioning monitoring wells was bailed until the pH, specific conductance and the temperature values stabilized to within 10 percent variation. A minimum of three well volumes of water were purged from each well prior to sampling. Water levels were measured using a Monoflex Water Level Indicator and measuring tape. Samples were collected and analyzed for aromatic organic hydrocarbons and Methyl tertiary Butyl Ether using EPA Method 8260B and for Total Petroleum Hydrocarbons using EPA Method 8100.

As part of the quality assurance and quality control protocol during the sampling round, a trip blank was carried to the site and a duplicate sample was collected at one of the three sampling sites at the Killington Ski Area. Duplicate samples were collected at each monitoring site.

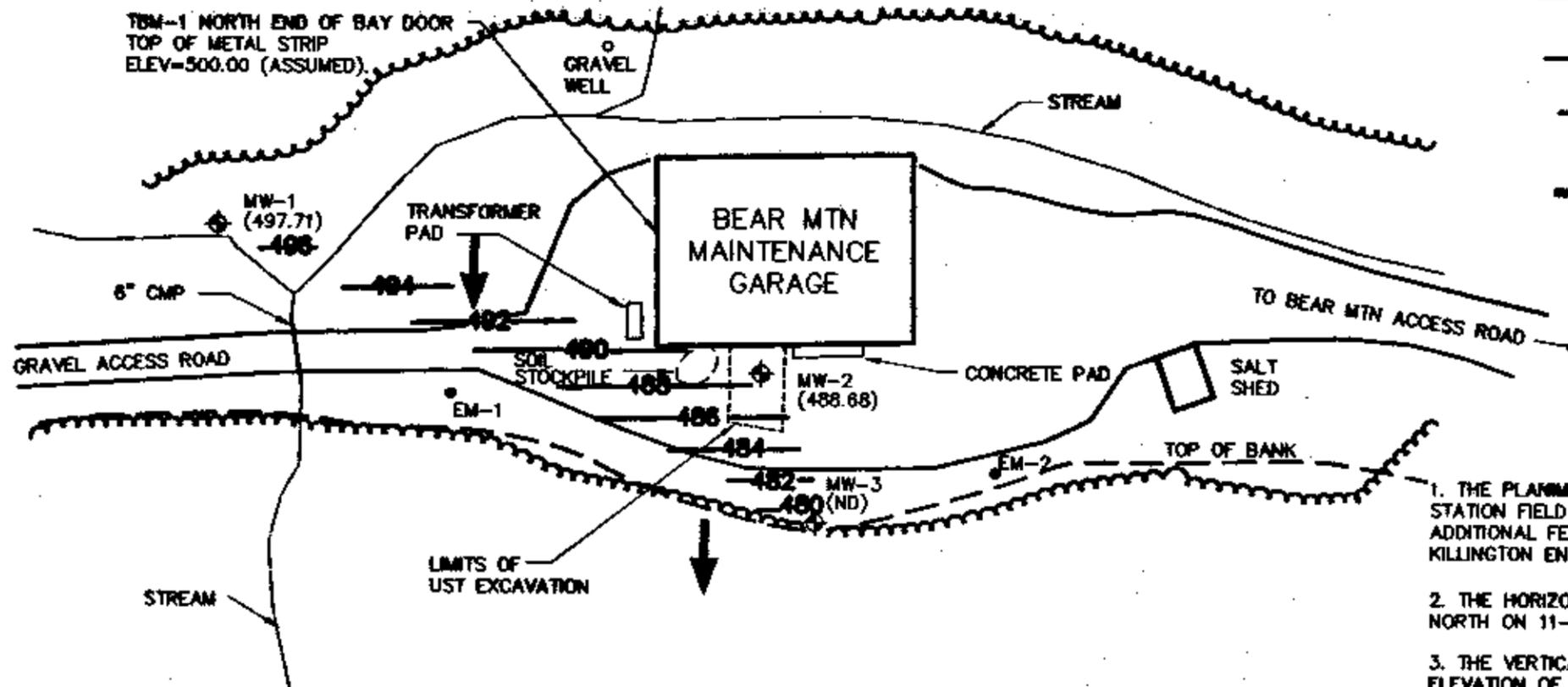
All samples were packed on ice and delivered in coolers accompanied by a completed chain of custody from the time of sample collection to the time of delivery to the laboratory. The analytical testing was performed by SciTest, Inc. of Randolph, Vermont.

Groundwater analytical results showed some contamination in MW-2 with Benzene present at 11 parts per billion (ppb) which exceeds the Vermont Primary Groundwater Quality Enforcement Standard (VPGQES) of 5 ppb; Naphthalene was present at 207 ppb which exceeds the VPGQES of 20.0 ppb; 1,2,4 Trimethylbenzene was present at 590 ppb which exceeds the VPGQES of 5.0 ppb; 1,3,5-Trimethylbenzene was present at 470 ppb which exceed the VPGQES of 4.0 ppb; Methyl tertiary Butyl Ether was present at 2.6 ppb; Toluene was present at 105 ppb; Ethyl Benzene was present at 18 ppb and Total Xylenes were present at 722 ppb. TPH for MW-2 was 4.7 parts per million (ppm). TPH and VOCs were not detected above the method reporting limit for MW-1. MW-3 was dry (See Table 2 and Appendix B). The Total BTEX concentrations for the monitoring wells is shown on Figure 3.

MAGNETIC NORTH 1998

**LEGEND**

- ◆ MW-2 (488.71) MONITORING WELL
- SURVEY CONTROL POINT-REBAR
- ~ EDGE OF WOODS
- STREAM
- EDGE OF ROAD
- 480 — GROUNDWATER CONTOUR 11-6-98
- GROUNDWATER FLOW DIRECTION



**NOTES**

1. THE PLANIMETRIC FEATURES AS SHOWN BASED UPON A TOTAL STATION FIELD SURVEY CONDUCTED BY EMCON ON 11-5-98. ADDITIONAL FEATURES ADDED BASED UPON A MAP PROVIDED BY KILLINGTON ENTITLED "FACILITY F LIFT MAINT. AND VEHICLE MAINT."
2. THE HORIZONTAL DATUM IS BASED UPON OBSERVED MAGNETIC NORTH ON 11-5-98.
3. THE VERTICAL DATUM IS ASSUMED AND BASED UPON AN ELEVATION OF 500.00 FEET AT THE TOP NORTH END OF A METAL STRIP ON THE WESTERN BAY DOOR OF THE BLDG.
4. THE HORIZONTAL AND VERTICAL SURVEY CONTROL AS SHOWN ON THIS PLAN WAS CORRECT AT THE TIME THIS PLAN WAS PRODUCED. SURVEY CONTROL DATA IS SUBJECT TO CHANGE AND EMCON ASSUMES NO RESPONSIBILITY FOR THE USE OF INCORRECT OR OUTDATED INFORMATION.
5. GROUNDWATER ELEVATIONS EXPRESSED IN FEET AND PROVIDED TO EMCON BY MALTER CONSULTING INC.



0 50 100  
SCALE IN FEET

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**FIGURE 2**  
MALTER CONSULTING INC.  
KILLINGTON SKI AREA  
SHERBURNE VERMONT  
GROUNDWATER CONTOURS 11-6-98  
BEAR MTN MAINTENANCE GARAGE

1" 0" 1/2"

Table 1

**Monitoring Well & Groundwater Elevation Data  
Bear Mountain Maintenance Garage, Killington Ski Area**

Monitoring Well Designation	Ground Surface	Top of PVC Pipe	Top of Casing	Depth to Groundwater	Groundwater Elevation	Description
MW-1	501.37	505.37	505.55	7.66	497.71	2" diameter PVC well with stickup protective casing
MW-2	498.52	502.90	503.09	14.22	488.68	2" diameter PVC well with stickup protective casing
MW-3	497.17	501.34	501.50	ND	ND	2" diameter PVC well with stickup protective casing

Note:

1. Elevations expressed in feet. Based upon assumed datum.
2. Top of PVC pipe and top of casing elevations are with cap removed.
3. Depth to groundwater measurement taken on November 6, 1998
4. ND = groundwater not detected to 28.82'.
5. Groundwater measurements are from top of PVC pipe.

TABLE 2

GROUNDWATER ANALYTICAL RESULTS, NOVEMBER 6, 1998  
BEAR MOUNTAIN MAINTENANCE GARAGE

Analyte	Enforcement Standard (ug/L)	MW-1	MW-2	MW-3	Trip Blank
Acetone	700		25.0	Dry	
Methyl tertiary Butyl Ether	40		2.6	Dry	
Benzene	5		11.0	Dry	
Toluene	1,000.0		105	Dry	
Ethylbenzene	700		18.0	Dry	
Total Xylenes	10,000.0		722	Dry	
Isopropylbenzene	NS		5.0	Dry	
n-Propylbenzene	NS		3.9	Dry	
1,3,5-Trimethylbenzene	4.0		470	Dry	
1,2,4-Trimethylbenzene	5.0		590	Dry	
sec-Butylbenzene	NS		1.8	Dry	
p-Isopropyltoluene	NS		8.3	Dry	
n-Butylbenzene	NS		3.9	Dry	
Naphthalene	20.0		207	Dry	
TPH	NS		4.7	Dry	

NS=No Enforcement Standard Set, Standards are from the Vermont Groundwater Protection Rule and Strategy.

Analytical results are EPA Method 8260B except for TPH which was done using EPA Method 8100. MW-3 was dry.

All blank spaces were below the method reporting level.

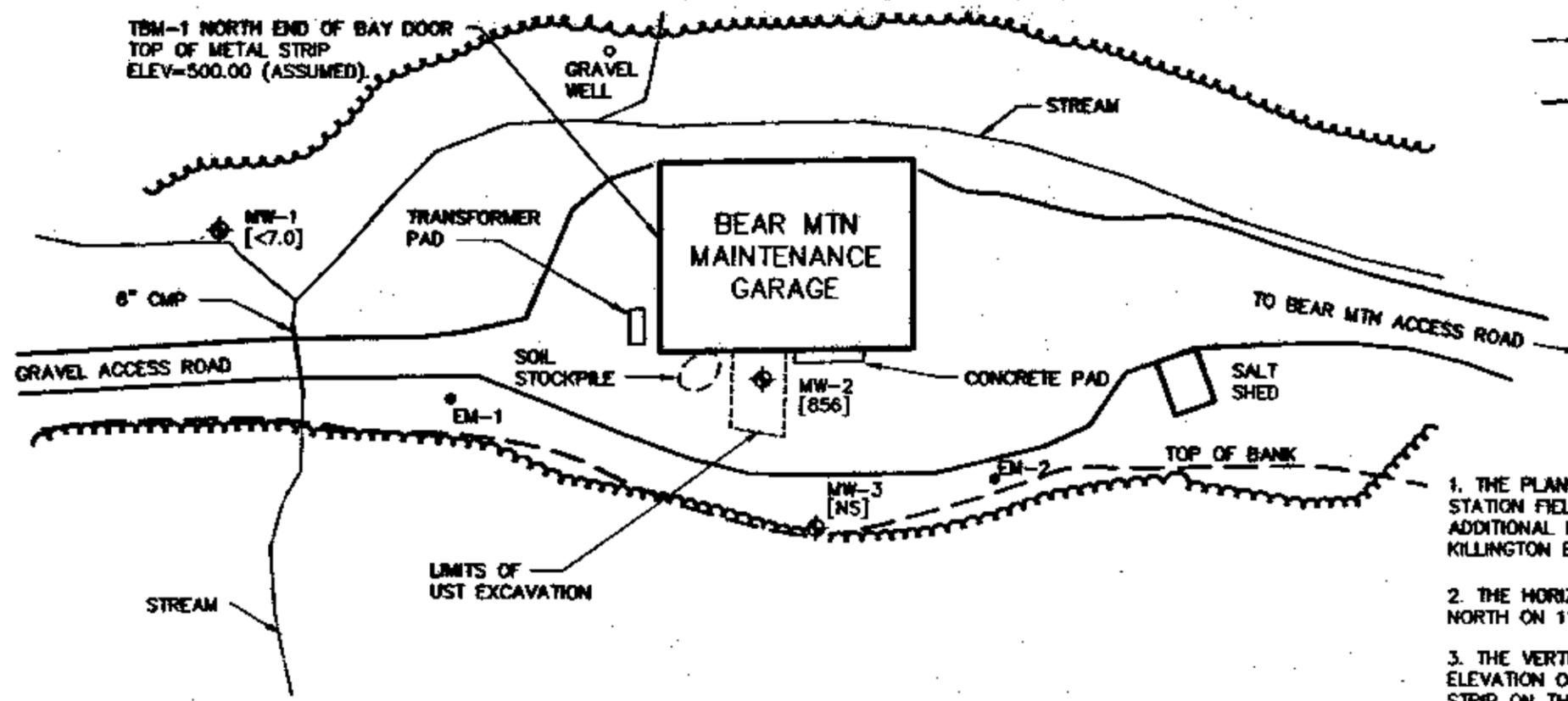
All results are in micrograms per liter (ug/L), equivalent to parts per billion (ppb), except TPH reported in milligrams per liter, equivalent to parts per million.



MAGNETIC NORTH 1998

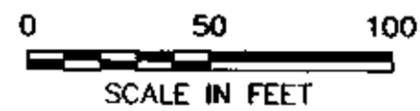
**LEGEND**

- ◆ MW-2 MONITORING WELL
- [ND] NOT SAMPLED
- [856] TOTAL BTEX CONCENTRATION (PPB)
- SURVEY CONTROL POINT-REBAR
- ~~~~~ EDGE OF WOODS
- STREAM
- EDGE OF ROAD



**NOTES**

1. THE PLANIMETRIC FEATURES AS SHOWN BASED UPON A TOTAL STATION FIELD SURVEY CONDUCTED BY EMCON ON 11-5-98. ADDITIONAL FEATURES ADDED BASED UPON A MAP PROVIDED BY KILLINGTON ENTITLED "FACILITY F LIFT MAINT. AND VEHICLE MAINT."
2. THE HORIZONTAL DATUM IS BASED UPON OBSERVED MAGNETIC NORTH ON 11-5-98.
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4. THE HORIZONTAL AND VERTICAL SURVEY CONTROL AS SHOWN ON THIS PLAN WAS CORRECT AT THE TIME THIS PLAN WAS PRODUCED. SURVEY CONTROL DATA IS SUBJECT TO CHANGE AND EMCON ASSUMES NO RESPONSIBILITY FOR THE USE OF INCORRECT OR OUTDATED INFORMATION.
5. BTEX CONCENTRATIONS PROVIDED BY MALTER CONSULTING INC. EXPRESSED IN MICROGRAMS PER LITER (ug/l) AND ANALYZED BY EPA METHOD 8021B.



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**FIGURE 3**  
 MALTER CONSULTING INC.  
 KILLINGTON SKI AREA  
 SHERBURNE VERMONT  
**TOTAL BTEX CONCENTRATIONS**  
**BEAR MTN MAINTENANCE GARAGE**

1" = 1/2" = 0"

## 4.5 LOCATION AND ELEVATION SURVEY

On November 5, 1998 a location and elevation survey of the monitoring wells was conducted at the Bear Mountain Maintenance Garage. The vertical datum is expressed in feet and is based upon an assumed elevation of 500 feet at the top north end of a metal strip on the western bay door of the maintenance garage. Elevations at the top of the PVC riser pipe and protective well casing and the ground surface were determined for the three monitoring wells.

## 5.0 SUMMARY AND CONCLUSIONS

The Bear Mountain Vehicle Maintenance Garage has had some impact by petroleum contamination in the soil and groundwater in the vicinity of the gasoline and diesel fuel dispenser just south of the maintenance garage. The hydraulic gradient for groundwater flow is to the south. MW-3 which was drilled to a depth of 24.65 feet below the ground surface was dry during the groundwater sampling and surveying activities.

Field investigations were begun on October 28, 1998. A total of 3 soil borings were finished as monitoring wells on the site. These were used to characterize the soil and groundwater conditions on the site. The groundwater monitoring wells were also used to determine the groundwater flow direction and the degree of groundwater contamination.

Based on the results of the first round of groundwater sampling, MW-2, has Benzene present at 11 parts per billion (ppb) which exceeds the Vermont Primary Groundwater Quality Enforcement Standard (VPGQES) of 5 ppb; Naphthalene was present at 207 ppb which exceeds the VPGQES of 20.0 ppb; 1,2,4 Trimethylbenzene was present at 590 ppb which exceeds the VPGQES of 5.0 ppb; and 1,3,5-Trimethylbenzene was present at 470 ppb which exceed the VPGQES of 4.0 ppb. Other contaminants included Methyl tertiary Butyl Ether present at 2.6 ppb; Toluene was present at 105 ppb; Ethyl Benzene was present at 18 ppb and Total Xylenes were present at 722 ppb. TPH for MW-2 was 4.7 parts per million (ppm). TPH and VOCs were not detected in MW-1.

There are no sensitive receptors in the immediate area of the Bear Mountain Maintenance Garage. Falls Brook is located approximately 800 feet south of the facility.

Based on the initial investigation of this site, quarterly water quality and water level monitoring of the three monitoring wells should be undertaken for at least one year of sampling. Monitoring of the 10 cubic yard soil stockpile should be accomplished semiannually until the PID levels are below Vermont DEC action levels.

## 6.0 RECOMMENDATIONS

Malter Consulting, Inc. recommends that quarterly groundwater sampling and analyses and water level monitoring should be undertaken for the three monitoring wells. This sampling should be accomplished for at least one year in order to establish trends in the groundwater quality. The polyencapsulated soil stockpile should be monitored by PID on a semiannual basis until the PID levels are below Vermont DEC action levels. No other actions appear necessary at this time.

## 7.0 REFERENCES

Doll, Charles G. et al (1961) Centennial Geologic Map of Vermont 1:250,000, Vermont Geological Survey

Doll, Charles G. Et al (1970) Surficial Geologic Map of Vermont, Vermont Geologic Survey

Vermont Department of Environmental Conservation, Waste Management Division, Hazardous and Petroleum Sites List, Vermont Spills Data Base Listing

Vermont Department of Environmental Conservation, Chapter 12, Groundwater Protection Rule and Strategy, Effective : November 15, 1997

**APPENDIX A**

**GREEN MOUNTAIN BORING**  
 PO Box 218 ° East Barre, Vermont 05649 ° 802 476-5073

TO: Malter Consulting Inc. ATTN: John Malter P O. Box 176 Waterbury, VT 05676	PROJECT NAME: Killington Wells Bear Mountain Vehicle Maintenance LOCATION: Sherburne, Vermont GMB JOB #: 98115	SHEET: 5 DATE: 11/03/98 HOLE #: MW-1 LINE & STA. OFFSET: None
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Ground Water Observations  At None at 0 Hours	Augers-Size I.D. 4.25" Split Spoon 13/8" Hammer Wt. 140# Hammer Fall 30"	Surface Elev.: Date Started: 11/03/98 Date Completed: 11/03/98 Boring Foreman: Ronald Garneau Inspector: John Malter Soils Engineer:
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**LOCATION OF BORING:**

Depth	Casing Blows Per Foot	Sample Depths From/To	Type of Sample	Blows per 6" on Sampler	Moisture Density or Consist.	Strata Change Elev.	Soil Identification	Sample		
								No.	Pen.	Rec.
		5'-7'	D	16/19/18/25	Dry		Till/Fine to coarse sand and stone with gravel	1	24"	16"
		10'-12'	D	21/24/35/26	Dry		Till/with fine sand lens 4"	2	24"	15"
							Auger refusal @ 14' Offset -redrilled Refusal at 14'. Set Well 2/5' .010 Screen 8' Riser 3 Bags silica 1/2 Bag chips 1 Cone Cap 1 Top Plug Stand-up casing			

Ground Surface to 14'

Used 4.25" Augers, then Set Well

**SUMMARY:** Earth Boring: 14'

Rock Coring:

Samples: 2

**HOLE # MW-1**

Sample Type Definitions: D = Dry C = Cored W = Washed UT = Undisturbed Thinwall



**GREEN MOUNTAIN BORING**

PO Box 218 ° East Barre, Vermont 05649 ° 802 476-5073

TO: Malter Consulting Inc. ATTN: John Malter P.O. Box 176 Waterbury, VT 05676	PROJECT NAME: Killington Wells Bear Mountain Vehicle Maintenance	SHEET: 4 DATE: 10/28/98 HOLE #: MW-3 LINE & STA. OFFSET: None
	LOCATION: Sherburne, Vermont  GMB JOB #: 98115	

Ground Water <u>Observations</u>  None at 0 Hours	Augers-Size I.D. 4.25" Split Spoon 13/8" Hammer Wt. 140# Hammer Fall 30"	Surface Elev.: Date Started: 10/28/98 Date Completed: 10/28/98 Boring Foreman: Ronald Garneau Inspector: John Malter Soils Engineer:

**LOCATION OF BORING:**

Depth	Casing Blows Per Foot	Sample Depths From/To	Type of Sample	Blows per 6" on Sampler	Moisture Density or Consist.	Strata Change Elev.	Soil Identification	Sample		
								No.	Pen.	Rec.
		5'-7'	D	0/1/2/8	Wet		Silty fine sand and gravel	1	24"	2"
		10'-12'	D	26/47/25/70	Dry		Silty fine sand and gravel	2	24"	12"
		15'-15'	D	100 for 0"			No recovery	3	0"	0"
		20'-22'	D	28/100	Dry		Till	4	12"	4"
		25'-27'	D	47/100/29/38	Dry		Till	5	24"	8"
							SET WELL @ 25' 10' .010 Screen 18' Riser Top Plug Cone Cap 3 Bags sand 1 Bag chips Stand-up casing			

Ground Surface to 25'

Used 4.25" Augers, then Split spoon to 27'/Set Well

**SUMMARY:** Earth Boring: 27'

Rock Coring:

Samples: 5

**HOLE # MW-3**

Sample Type Definitions: D = Dry C = Cored W = Washed UT = Undisturbed Thinwall

**APPENDIX B**

## ANALYTICAL REPORT

Project Name: Killington VMG & Bear Mountain MG  
 Project No.: 070321

Work Order No.: 9811-04073

Sample Desc.:	Method	Results	Units	Analyst	Analysis Date
Bear Mountain MG, MW-1					
Sample Nos: 005					
Test Performed					
Volatiles	EPA 8260B			RJS	11/13/98
Dichlorodifluoromethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Chloromethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Vinyl chloride	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Bromomethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Chloroethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Trichlorofluoromethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
1,1-Dichloroethene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Diethyl ether	EPA 8260B	< 5.0	ug/L	RJS	11/13/98
Iodomethane	EPA 8260B	< 10	ug/L	RJS	11/13/98
Acetone	EPA 8260B	< 10	ug/L	RJS	11/13/98
Carbon disulfide	EPA 8260B	< 10	ug/L	RJS	11/13/98
Methylene chloride	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Methyl tertiary Butyl Ether	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
trans-1,2-Dichloroethene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Acrylonitrile	EPA 8260B	< 20	ug/L	RJS	11/13/98
1,1-Dichloroethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Vinyl acetate	EPA 8260B	< 20	ug/L	RJS	11/13/98
cis-1,2-Dichloroethene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
2,2-Dichloropropane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
2-Butanone (MEK)	EPA 8260B	< 10	ug/L	RJS	11/13/98



## ANALYTICAL REPORT

Project Name: Killington VMG & Bear Mountain MG  
Project No.: 070321

Work Order No.: 9811-04073

Sample Desc.: Bear Mountain MG, MW-1	Method	Results	Units	Analyst	Analysis Date
Sample Nos: 005					
Test Performed					
Bromochloromethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Chloroform	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Tetrahydrofuran	EPA 8260B	< 10	ug/L	RJS	11/13/98
1,1,1-Trichloroethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Carbon tetrachloride	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
1,1-Dichloropropene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Benzene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
1,2-Dichloroethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Trichloroethene (TCE)	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
1,2-Dichloropropane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Dibromomethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Bromodichloromethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
2-Chloroethyl vinyl ether	EPA 8260B	< 20	ug/L	RJS	11/13/98
cis-1,3-Dichloropropene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
4-Methyl-2-pentanone (MIBK)	EPA 8260B	< 10	ug/L	RJS	11/13/98
Toluene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
trans-1,3-Dichloropropene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
1,1,2-Trichloroethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Tetrachloroethene (PCE)	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
1,3-Dichloropropane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
2-Hexanone	EPA 8260B	< 10	ug/L	RJS	11/13/98
Dibromochloromethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
1,2-Dibromoethane (EDB)	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Chlorobenzene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
1,1,1,2-Tetrachloroethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Ethylbenzene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Xylenes-m,p	EPA 8260B	< 2.0	ug/L	RJS	11/13/98
o-Xylene	EPA 8260B	< 2.0	ug/L	RJS	11/13/98
Styrene	EPA 8260B	< 2.0	ug/L	RJS	11/13/98
Bromoform	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Isopropylbenzene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Bromobenzene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
1,2,3-Trichloropropane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
1,1,2,2-Tetrachloroethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
trans-1,4-Dichloro-2-butene	EPA 8260B	< 20	ug/L	RJS	11/13/98
n-Propylbenzene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
2-Chlorotoluene (ortho)	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
4-Chlorotoluene (para)	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
1,3,5-Trimethylbenzene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
tert-Butylbenzene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98

## ANALYTICAL REPORT

Project Name: Killington VMG & Bear Mountain MG  
Project No.: 070321

Work Order No.: 9811-04073

Sample Desc.: Bear Mountain MG, MW-1				Sample Date: 11/06/98	
Sample Nos: 005				Collection Time: 13:34	
Test Performed	Method	Results	Units	Analyst	Analysis Date
1,2,4-Trimethylbenzene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
sec-Butylbenzene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
1,3-Dichlorobenzene (meta)	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
1,4-Dichlorobenzene (para)	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
p-Isopropyltoluene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
1,2-Dichlorobenzene (ortho)	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
n-Butylbenzene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
1,2-Dibromo-3-chloropropane	EPA 8260B	< 2.0	ug/L	RJS	11/13/98
1,2,4-Trichlorobenzene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Hexachlorobutadiene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Naphthalene	EPA 8260B	< 2.0	ug/L	RJS	11/13/98
1,2,3-Trichlorobenzene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Surrogate:					
***Dibromofluoromethane		94	% Recovery	RJS	11/13/98
***Toluene-d8		70	% Recovery	RJS	11/13/98
***Bromofluorobenzene		93	% Recovery	RJS	11/13/98
TPH, Estimated - Water	MODIFIED8100 GC/FID	< 1.5	mg/L	JPM	11/24/98

Sample Desc.: Bear Mountain MG, MW-2				Sample Date: 11/06/98	
Sample Nos: 006				Collection Time: 14:03	
Test Performed	Method	Results	Units	Analyst	Analysis Date
Volatiles	EPA 8260B			RJS	11/13/98
Dichlorodifluoromethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Chloromethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Vinyl chloride	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Bromomethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Chloroethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Trichlorofluoromethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
1,1-Dichloroethene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Diethyl ether	EPA 8260B	< 5.0	ug/L	RJS	11/13/98
Iodomethane	EPA 8260B	< 10	ug/L	RJS	11/13/98
Acetone	EPA 8260B	25	ug/L	RJS	11/13/98
Carbon disulfide	EPA 8260B	< 10	ug/L	RJS	11/13/98
Methylene chloride	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Methyl tertiary Butyl Ether	EPA 8260B	2.6	ug/L	RJS	11/13/98
trans-1,2-Dichloroethene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Acrylonitrile	EPA 8260B	< 20	ug/L	RJS	11/13/98
1,1-Dichloroethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Vinyl acetate	EPA 8260B	< 20	ug/L	RJS	11/13/98

## ANALYTICAL REPORT

Project Name: Killington VMG & Bear Mountain MG  
 Project No.: 070321

Work Order No.: 9811-04073

Sample Desc.:	Method	Results	Units	Analyst	Analysis Date
Bear Mountain MG, MW-2					
Sample Nos: 006					
Test Performed	Method	Results	Units	Analyst	Analysis Date
cis-1,2-Dichloroethene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
2,2-Dichloropropane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
2-Butanone (MEK)	EPA 8260B	< 10	ug/L	RJS	11/13/98
Bromochloromethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Chloroform	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Tetrahydrofuran	EPA 8260B	< 10	ug/L	RJS	11/13/98
1,1,1-Trichloroethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Carbon tetrachloride	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
1,1-Dichloropropene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Benzene	EPA 8260B	11	ug/L	RJS	11/13/98
1,2-Dichloroethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Trichloroethene (TCE)	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
1,2-Dichloropropane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Dibromomethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Bromodichloromethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
2-Chloroethyl vinyl ether	EPA 8260B	< 20	ug/L	RJS	11/13/98
cis-1,3-Dichloropropene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
4-Methyl-2-pentanone (MIBK)	EPA 8260B	< 10	ug/L	RJS	11/13/98
Toluene	EPA 8260B	105	ug/L	RJS	11/13/98
trans-1,3-Dichloropropene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
1,1,2-Trichloroethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Tetrachloroethene (PCE)	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
1,3-Dichloropropane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
2-Hexanone	EPA 8260B	< 10	ug/L	RJS	11/13/98
Dibromochloromethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
1,2-Dibromoethane (EDB)	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Chlorobenzene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
1,1,1,2-Tetrachloroethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Ethylbenzene	EPA 8260B	18	ug/L	RJS	11/13/98
Xylenes-m,p	EPA 8260B	419	ug/L	RJS	11/13/98
o-Xylene	EPA 8260B	303	ug/L	RJS	11/13/98
Styrene	EPA 8260B	< 2.0	ug/L	RJS	11/13/98
Bromoform	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Isopropylbenzene	EPA 8260B	5.0	ug/L	RJS	11/13/98
Bromobenzene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
1,2,3-Trichloropropane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
1,1,2,2-Tetrachloroethane	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
trans-1,4-Dichloro-2-butene	EPA 8260B	< 20	ug/L	RJS	11/13/98
n-Propylbenzene	EPA 8260B	3.9	ug/L	RJS	11/13/98
2-Chlorotoluene (ortho)	EPA 8260B	< 1.0	ug/L	RJS	11/13/98

## ANALYTICAL REPORT

Project Name: Killington VMG & Bear Mountain MG  
Project No.: 070321

Work Order No.: 9811-04073

Sample Desc.: Bear Mountain MG, MW-2				Sample Date: 11/06/98	
Sample Nos: 006				Collection Time: 14:03	
Test Performed	Method	Results	Units	Analyst	Analysis Date
4-Chlorotoluene (para)	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
1,3,5-Trimethylbenzene	EPA 8260B	470	ug/L	RJS	11/13/98
tert-Butylbenzene	EPA 8260B	< 10	ug/L	RJS	11/13/98
1,2,4-Trimethylbenzene	EPA 8260B	590	ug/L	RJS	11/13/98
sec-Butylbenzene	EPA 8260B	1.8	ug/L	RJS	11/13/98
1,3-Dichlorobenzene (meta)	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
1,4-Dichlorobenzene (para)	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
p-Isopropyltoluene	EPA 8260B	8.3	ug/L	RJS	11/13/98
1,2-Dichlorobenzene (ortho)	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
n-Butylbenzene	EPA 8260B	3.9	ug/L	RJS	11/13/98
1,2-Dibromo-3-chloropropane	EPA 8260B	< 2.0	ug/L	RJS	11/13/98
1,2,4-Trichlorobenzene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Hexachlorobutadiene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Naphthalene	EPA 8260B	207	ug/L	RJS	11/13/98
1,2,3-Trichlorobenzene	EPA 8260B	< 1.0	ug/L	RJS	11/13/98
Surrogate:					
***Dibromofluoromethane		93	% Recovery	RJS	11/13/98
***Toluene-d8		104	% Recovery	RJS	11/13/98
***Bromofluorobenzene		98	% Recovery	RJS	11/13/98
TPH, Estimated - Water	MODIFIED8100 GC/FID4.7		mg/L	JPM	11/24/98

Note: The Trimethylbenzene values of 470 and 590 ppb exceeded the high check standard upon a check of the integration. Therefore these values are approximate.

Sample Desc.: Trip Blank				Sample Date: 11/06/98	
Sample Nos: 007				Collection Time: 0:00	
Test Performed	Method	Results	Units	Analyst	Analysis Date
Volatiles	EPA 8260B			RJS	11/18/98
Dichlorodifluoromethane	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
Chloromethane	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
Vinyl chloride	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
Bromomethane	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
Chloroethane	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
Trichlorofluoromethane	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
1,1-Dichloroethene	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
Diethyl ether	EPA 8260B	< 5.0	ug/L	RJS	11/18/98
Iodomethane	EPA 8260B	< 10	ug/L	RJS	11/18/98
Acetone	EPA 8260B	< 10	ug/L	RJS	11/18/98

## ANALYTICAL REPORT

Project Name: Killington VMG & Bear Mountain MG  
 Project No.: 070321

Work Order No.: 9811-04073

Sample Desc.: Trip Blank	Method	Results	Units	Analyst	Analysis Date
Sample Nos: 007					
Test Performed					
Carbon disulfide	EPA 8260B	< 10	ug/L	RJS	11/18/98
Methylene chloride	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
Methyl tertiary Butyl Ether	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
trans-1,2-Dichloroethene	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
Acrylonitrile	EPA 8260B	< 20	ug/L	RJS	11/18/98
1,1-Dichloroethane	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
Vinyl acetate	EPA 8260B	< 20	ug/L	RJS	11/18/98
cis-1,2-Dichloroethene	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
2,2-Dichloropropane	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
2-Butanone (MEK)	EPA 8260B	< 10	ug/L	RJS	11/18/98
Bromochloromethane	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
Chloroform	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
Tetrahydrofuran	EPA 8260B	< 10	ug/L	RJS	11/18/98
1,1,1-Trichloroethane	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
Carbon tetrachloride	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
1,1-Dichloropropene	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
Benzene	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
1,2-Dichloroethane	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
Trichloroethene (TCE)	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
1,2-Dichloropropane	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
Dibromomethane	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
Bromodichloromethane	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
2-Chloroethyl vinyl ether	EPA 8260B	< 20	ug/L	RJS	11/18/98
cis-1,3-Dichloropropene	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
4-Methyl-2-pentanone (MIBK)	EPA 8260B	< 10	ug/L	RJS	11/18/98
Toluene	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
trans-1,3-Dichloropropene	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
1,1,2-Trichloroethane	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
Tetrachloroethene (PCE)	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
1,3-Dichloropropane	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
2-Hexanone	EPA 8260B	< 10	ug/L	RJS	11/18/98
Dibromochloromethane	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
1,2-Dibromoethane (EDB)	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
Chlorobenzene	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
1,1,1,2-Tetrachloroethane	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
Ethylbenzene	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
Xylenes-m,p	EPA 8260B	< 2.0	ug/L	RJS	11/18/98
o-Xylene	EPA 8260B	< 2.0	ug/L	RJS	11/18/98
Styrene	EPA 8260B	< 2.0	ug/L	RJS	11/18/98
Bromoform	EPA 8260B	< 1.0	ug/L	RJS	11/18/98

## ANALYTICAL REPORT

Project Name: Killington VMG & Bear Mountain MG  
 Project No.: 070321

Work Order No.: 9811-04073

Sample Desc.: Trip Blank	Method	Results	Units	Analyst	Analysis Date
Sample Nos: 007					
Test Performed	Method	Results	Units	Analyst	Analysis Date
Isopropylbenzene	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
Bromobenzene	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
1,2,3-Trichloropropane	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
1,1,2,2-Tetrachloroethane	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
trans-1,4-Dichloro-2-butene	EPA 8260B	< 20	ug/L	RJS	11/18/98
n-Propylbenzene	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
2-Chlorotoluene (ortho)	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
4-Chlorotoluene (para)	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
1,3,5-Trimethylbenzene	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
tert-Butylbenzene	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
1,2,4-Trimethylbenzene	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
sec-Butylbenzene	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
1,3-Dichlorobenzene (meta)	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
1,4-Dichlorobenzene (para)	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
p-Isopropyltoluene	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
1,2-Dichlorobenzene (ortho)	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
n-Butylbenzene	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
1,2-Dibromo-3-chloropropane	EPA 8260B	< 2.0	ug/L	RJS	11/18/98
1,2,4-Trichlorobenzene	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
Hexachlorobutadiene	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
Naphthalene	EPA 8260B	< 2.0	ug/L	RJS	11/18/98
1,2,3-Trichlorobenzene	EPA 8260B	< 1.0	ug/L	RJS	11/18/98
Surrogate:					
***Dibromofluoromethane		93	% Recovery	RJS	11/18/98
***Toluene-d8		98	% Recovery	RJS	11/18/98
***Bromofluorobenzene		95	% Recovery	RJS	11/18/98

Note: Some matrix effect was noted on surrogate Toluene-d8 for this sample set.

Authorized by: 