

HOFFER CONSULTING INC.

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July 16, 1999

Bruce Linton
Sites Management Section
VT DEC - Waste Management Division
103 South Main Street/West Building
Waterbury, VT 05671-0404

Re: Stowe Auto Service Investigation/Remediation,
SMS Site #96-1957

Dear Bruce:

Enclosed is a status report on remedial efforts and monitoring at the Stowe Auto Service. This report summarizes all existing data for the site to date.

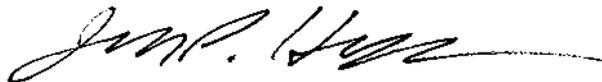
Last week a contractor was excavating on the Stowe Auto property to connect the site to the municipal sewer line that is being installed along the Mountain Road. During site work, the contractor dug up the electrical conduit that brings power to the catalytic oxidizer in the rear of the property. The power to the catalytic oxidizer was shut down at that time. We plan to assess the situation next week and hope to have the SVE system back on-line shortly.

We also plan to remove the hardware that has been stuck in recovery well RW-1. Once we regain access to this well, we will make an assessment as to whether or not to re-install the product recovery pumps in RW-1 and MW-5. A pump was not re-installed in MW-5 last winter due to potential freezing problems and the fact that Stowe Auto had disconnected the power/compressor lines that were used to operate the unit.

We will keep you informed as to our efforts at the site. We also plan to perform another round of groundwater monitoring this Fall, preferably during a high groundwater stand.

If you have any questions, please feel free to call me or Tim Schmalz at 229 - 1113.

Sincerely,
HOFFER CONSULTING INC.



Jefferson P. Hoffer, P.G.
Principal Hydrogeologist

enc.

cc: Fred Leikert

GROUNDWATER & ENVIRONMENTAL SERVICES



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STATUS REPORT ON CORRECTIVE ACTION ACTIVITIES

Stowe Auto Service
Stowe, Vermont
SMS Site # 96-1957

JULY 1999

Jan 19 10:22 AM '99

STATUS REPORT ON
CORRECTIVE ACTION ACTIVITIES

Stowe Auto Service
Stowe, Vermont
SMS SITE #96-1957

July 1999

Prepared on Behalf of:
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1.0 INTRODUCTION

1.1 Introduction and Background

This report summarizes corrective action efforts implemented at the Stowe Auto Service to remediate a release of 1750 +/- gallons of gasoline from an underground storage tank (UST). The release occurred between March 28 and 29, 1996. The release occurred from a hole in a 30-year old, single-walled, steel, 4,000-gallon UST. After removing the tank from the ground, a hole was observed on the bottom of the tank underneath the drop tube used to "stick" or gauge the contents of the tank. During the evening "sticking" on March 28, 1996, a hole was apparently formed at the bottom of the tank. When the tank was gauged on the morning of March 29, 1996, a large inventory loss was noted. A second measurement taken approximately one hour later confirmed that the tank was still leaking. This tank, along with a companion tank which was manifolded to it, was excavated and removed from the ground on March 29, 1996. During the removal of the tanks, 124 gallons of gasoline and sludge were vacuumed from the tanks and pit.

Investigation and corrective action response efforts included numerous soil borings, and the construction of monitoring wells and recovery wells. A soil vapor extraction (SVE) system was installed and operating by April 15, 1996. Active free product recovery efforts have included hand-bailing and various product pumping systems.

The purpose of this report is to present and summarize all existing site data into one document. Previous reports prepared for the report have focused solely on providing updates on remedial efforts.

Figure 1 is a site location map, and Figure 2 is a vicinity map. The Stowe Auto Service is located on Mountain Road (Route 108) in the Town of Stowe, Vermont. Development along Route 108 in the vicinity includes residences, condominiums, lodges, hotels, stores, and shops. In the vicinity of Stowe Auto, Route 100 is situated along the southern terrace of the West Branch of the Waterbury River, which flows eastward.

A site basemap is provided on Figure 3 which shows the locations of former USTs, buildings, and monitoring wells.

1.2 Potential Receptors

Potential receptors in the vicinity of the site are summarized below.

Water Supplies

Municipal water is provided in the vicinity by the Stowe municipal water system, although not all residences and businesses are connected to this system. One of the municipal system's sources is a gravel well located on the Village Green approximately 2000 feet west of the Stowe Auto property. This well is constructed as a gravel-packed well in a sand and gravel formation at a depth of 180 feet, below overlying silty clay.

Until November of 1997, the adjoining Town & Country Motor Lodge (TCML) utilized a drilled well (completed in gravel). The Gray Fox Inn, the adjoining parcel to the west of Stowe Auto, utilizes a drilled bedrock well to supply a condominium development. The location of these wells are included on Figure 2. The Stowe Auto garage and store/apartments are connected to the municipal water system.

Indoor Air Quality

The site is located in a commercial and residential area with the potential for petroleum vapors to migrate in the subsurface to adjacent buildings and basements. Underground utilities in the area include water and stormwater lines. As of June 1999, there have no complaints, problems, or indications of impact to indoor air spaces resulting from the 1996 release.

Surface Water

The nearest mapped hydrologic feature is the West Branch of the Waterbury River, which is located about 1000 feet north of the Stowe Auto site. A small stream is located west of the site, and traverses the property of the Gray Fox Inn, and flows northward into the West Branch.

Based on groundwater monitoring data for the site up to June 1999, the plume of dissolved phase contamination resulting from the 1996 release does not appear to reach surface water.

Other Receptors

No other sensitive environmental receptors such as wetlands or ecological areas were identified in the immediate vicinity of the site.

2.0 SITE INVESTIGATION/CORRECTIVE ACTION ACTIVITIES

2.1 Hydrogeologic Characterization

Subsurface characterization efforts included the installation of numerous groundwater monitoring wells, recovery wells, soil borings, and GeoProbe™ wells. Table 1 summarizes data for all soil borings and wells at the site. Monitoring well logs and construction details are provided in Appendix A.

Stratigraphy

Samples collected during monitoring well drilling efforts define two units; a thin surficial layer of fluvial sand and gravel (with some silt lenses) to depths of about 10 feet in the vicinity of the leaking UST, underlain by lacustrine silt and silty fine sand. Figure 4 provides an elevation contour map for the contact between the sand and gravel unit and the underlying silt, which indicates that the thickness of the sand/gravel unit thins toward the east. Based on soil samples retrieved from the contact, this surface probably represents an erosional surface where more recent fluvial activity eroded the glacial lake-bottom sediments (silt and fine sand). The younger sand and gravel deposits were likely derived from the higher elevations to the south (Cady Hill), or represent meander deposits of the West Branch.

None of the monitoring wells drilled at the site penetrated deeper than about 35 feet, so the thickness of the silt unit is unknown. The TCML well and the Stowe Village Green wells are completed in gravels beneath the silt unit. No log has been found for the TCML well, but it is reportedly completed in gravel. The logs for the Village Green and Gray Fox wells are summarized below:

Village Green		Gray Fox Inn	
Depth	Description	Depth	Description
0-8 ft	brown sand	0-18 ft	gravel
8-18 ft	gravel	18-86 ft	clay & hardpan
18-142	silty clay	86-146	gray sand
142-172	gravel	146-298	gray shale bedrock

Based on Gray Fox Inn well log, the silt and fine sand unit beneath the Stowe Auto site likely extends to at least 90 feet or so.

Water-Table Conditions

Groundwater levels measured in the site monitoring wells show an average water-table depth of about 20 feet below grade, within the silt and fine sand unit. During monitoring well drilling at the site, evidence of shallow perched layers were observed on top of silt lenses within the sand and gravel unit and the underlying silt and fine sand unit. Anomalously high water levels have been observed in some of the GeoProbe monitoring wells (particularly GP-3), perhaps representing small perched zones above the more regional water-table in the silt and fine sand unit.

Table 2 summarizes groundwater elevation data for the site. Water-table elevations measured during the most recent groundwater monitoring event (6/22/99) are shown on Figure 5. Water-table elevations at the site have not depicted a consistently-sloping surface. Possible explanations include stratigraphic heterogeneity, the presence of small perched layers, differing well construction techniques, and vertical gradients. Horizontal groundwater flow direction beneath the site is interpreted to be northeastward, under a relatively shallow gradient. This flow direction is generally consistent with the site topographic setting, and proximity of the West Branch, located about 1000 feet to the north. The distribution of contamination in groundwater is consistent with a northeastern (horizontal) flow direction as interpreted from the water levels. No attempt has been made to characterize vertical flow components at the site.

A graph of groundwater level fluctuations for selected wells is provided on 6, which shows a seasonal fluctuation on the order of two or three feet for most of the wells.

2.2 Extent of Contamination

Free Product

Accumulations of floating gasoline were found in monitoring wells RW-1 and MW-5 one day after the wells were installed. RW-1 was drilled three days after the release, and a one foot thickness of gasoline was measured next day. MW-5 was drilled seven days after the release, and showed a few inches of gasoline immediately following its installation, and over 2.5 feet of gasoline the next day. Other wells to exhibit free product accumulations include MW-4, RW-3, and RW-4. With the exception of RW-1, all of these wells are in relatively close proximity to the leaky UST. RW-1 is considerably further away from the leaky UST. Free product has never been found in well MW-6, which is located about 15 feet downgradient of RW-1. Product thickness variations are included on the product recovery logs in Appendix B.

These data indicate that the released gasoline dispersed rather quickly in a few days, and did not migrate much further after a few days. Figure 7 provides a schematic cross section illustrating potential pathways of free product migration. Gasoline released from the bottom of the UST likely flow downward through the sand and gravel unit and pooled at the contact with the underlying silt unit. As illustrated on Figure 4, this contact dips northward, which could promote product migration in this direction. Product was detected on the water table surface (20 feet) in RW-1 and MW-5. Product may have entered these wells in either of two mechanisms (or both); entering the well bore from the stratigraphic contact (A on Figure 7) and accumulating on the water surface in the well, or entering the well from the surface of the water table (B on Figure 7).

Once the product was initially dispersed, further migration was apparently inhibited by the low permeability of the silt/clay unit, the shallow hydraulic gradient, and eventual recovery efforts of direct removal and vapor-phase removal by soil vapor extraction.

Dissolved Contamination

Groundwater sampling and analysis for benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl-tert-butyl-ether (MTBE) has been performed on a periodic basis since the release. More recent analyses have included trimethylbenzenes (1,3,5- and 1,2,4-) and naphthalene. Table 3 provides a summary of BTEX and MTBE data for each sampling station. These data are provided along with time series concentration plots in Appendix C.

Figure 5 includes isoconcentration contours for MTBE for June 22, 1999. For comparison, Figures 8 and 9 show groundwater elevations and contaminant distribution for September 1996, and April 1998, respectively. The historical data indicate a significant reduction in contaminant concentrations in groundwater, particularly for downgradient wells RW-2 and MW-6. Relatively high dissolved concentrations persist in the wells near the 1996 release (RW-3 & RW-4), although these wells have shown slightly decreasing trends since the release. The full downgradient reach of the dissolved phase plume is uncertain.

No attempt was made to characterize vertical flow components at the site, thus the extent of contamination in the vertical plane is not known.

2.3 Remedial Efforts

Free Product Recovery

Free product recovery efforts have included both manual bailing and several automated product recovery systems. Initially, those wells exhibiting recoverable quantities of free product (MW-5 and RW-1) were equipped with Spillbuster Junior pumps (Clean Earth Technologies). These pumps operated for approximately one week after initiation of site activities, and were replaced with a portable, battery-operated device, the Site Buddy (Clean Earth Technologies)

The Site Buddy was used for approximately two weeks at the site. This device consists of a portable submersible pump with an attached measurement tape and water/petroleum detection sensor, allowing instantaneous determination of depths to water and product, and subsequent product removal. This system worked well initially, but the efficiency dropped off rapidly as the pump unit could not handle the suspended silt and sand present in the site wells. Wear on the pump occurred to the extent that the unit had to be replaced after about a week of use. The new pump unit also wore out quickly, and continued use of the Site Buddy had to be abandoned after approximately two weeks. Total volumes of product recovered at the site using the Site Buddy exclusively were negligible, and amounted to only one to two gallons. During this period, the most effective means of product removal was hand bailing.

After abandoning the Site Buddy, a Shippee Industries SWAP unit was installed in MW-5. This product recovery system relies on the differing densities of water and petroleum, and employs a siphon to exchange water for petroleum in a sealed system. Initial results with this system were productive enough to warrant deploying another SWAP in RW-1, and occasional attempts in MW-4 and RW-4. The first SWAP was installed in early May, 1996 (MW-5). Because the SWAP system relies on the establishment of a vacuum within the system of tubing and reservoirs in order to work efficiently, the presence of a large volatile component in the gasoline being recovered at the Stowe Auto site combined with the high vacuum necessary to pull gasoline into the surface reservoir hampered the effectiveness of this technology. After accumulation of gasoline in the reservoir, the vacuum deteriorated to the point that water moving into the well would no longer produce adequate suction to recover product. Several methods of removing vapors from the reservoir were attempted, but none were adequate to maintain the vacuum required to lift gasoline to the surface from 16 to 18 feet BGS, where it was occurring. The SWAP system was used with varying degrees of success until November 1996, when bladder pump systems were installed.

In December 1996, a bladder pump recovery system manufactured by Environmental Restoration Systems Inc. (ERS), was tested in RW-1. The ERS system, consisting of a downhole bladder pump and variable-depth product intake and a controller located above

ground, was tested as a more reliable alternative to the SWAP system. Initial results in RW-1 were promising; the intermittent entry of product into this well limited the amounts recovered initially to only a few gallons.

In January 1997, the ERS recovery pump was moved to MW-5, where the presence of free product was more constant. After dealing with condensate freezing difficulties in the pressure line (water was freezing in the pressure line at the point where the line exited the heated building), the system worked consistently and effectively, removing product as quickly as it entered the well. The system worked well enough to warrant purchase of a second pump system to be installed in RW-1.

The only problem encountered with the ERS pump recovery systems were problems in establishing the proper intake level. The float system supplied with the system quickly proved to be inadequate, as the float often became tangled in its return tubing or stuck on the rigid pipe it was suspended on, resulting in recovery of water, or nothing at all, as often as product. This problem was partially solved by installing free-floating intake devices at the end of the intake lines, which were weighted to automatically center themselves at the product-water interface. As well as these new intakes worked, there was still a tendency for the pump units to take in large quantities of water as the volumes of product available for recovery diminished. In some cases, the ratio of water to product recovered was as great as one to one. Nonetheless, these systems were far more effective than other methods tried at the site.

The ERS pump systems were removed from RW-1 and MW-5 in July of 1998 since product accumulations had diminished, and the system was needed at another site. Since that time, product accumulations have periodically been observed in MW-5, and have been recovered by hand bailing.

Soil Vapor Extraction System

To recover gasoline via vapor phase, a soil vapor extraction (SVE) system was constructed and operating by April 15, 1996. The withdrawal points include recovery wells and one trench (see Figures 10 and 11). Initially, a 5-horsepower positive displacement blower was used in conjunction with a Baker furnace to recover and treat gasoline vapors. Monitoring data for the SVE system is provided in Appendix D, and is summarized on Figure 12. Initial recovery rates were estimated to be in the 10 gallons/day (equivalent liquid gasoline) for several months. The Baker furnace was replaced with a Falmouth Products Falco 100 catalytic oxidizer and two one-horsepower blowers in May of 1997.

The SVE system has been periodically balanced to maximize the amount of gasoline recovery. As of June 1999, the influent concentration is in the 125 to 150 parts per million range as measured with a PID (Photovac 20/20) calibrated to benzene. The estimated flow rate is 100 cubic feet per minute. Estimated recovery rates as of June 1999 on the order of 1.0 gallons/day equivalent gasoline.

Total Volume Recovered

Table 4 summarizes the estimated total volume of gasoline recovered at the site. As of June 15, 1999, an estimated 3,000 gallons of liquid equivalent gasoline has been recovered at the site. The bulk of this amount has been recovered by the SVE system, and estimates of recovery rate may be perhaps plus or minus 25%.

3.0 CURRENT CONDITIONS

3.1 Current Conditions

As of June 1999, the SVE system is extracting about 100 CFM with a PID concentration of 125 to 150 ppm (benzene). This extraction rate is estimated to be equivalent to just under one gallon liquid equivalent of gasoline.

Free product is periodically observed in monitoring well MW-5. Recent groundwater monitoring results (Table 5) show dissolved petroleum compounds at concentrations exceeding VT groundwater enforcement standards. The full downgradient extent of the dissolved phase plume is uncertain.

3.2 Planned Remedial & Monitoring Efforts

The SVE system will continue to be monitored and balanced on a periodic basis to measure influent concentrations and system efficiency. When influent concentrations drop below about 50 ppm, we will evaluate the possibility of switching the treatment approach from the FALCO 100 to carbon (comparing electrical usage/costs of the FALCO at low concentrations verse the cost of carbon drums).

Groundwater monitoring will continue on a semi-annual basis to track groundwater levels and contaminant concentrations at the site. Groundwater samples from all wells where sufficient water is present will be analyzed by EPA Method 8021B for BTEX, MTBE, trimethylbenzenes (1,2,4- and 1,3,5-), and naphthalene.

Reports on the site remedial efforts and groundwater monitoring will be submitted on a semi-annual basis.

TABLE 1
Summary Data for Soil Borings and Monitoring Wells,
Stowe Auto Service, Stowe, VT, SMS Site #96-1957.

ID	Date Constructed	Driller	Type of Construction	Status as of 7/1/99	SVE Withdrawal Point?	Screened Interval (feet BGS)	Sand&Gravel / Silt Contact		Groundwater Elevation (ft)			Max. Free Product Thickness (ft)	Dissolved Benzene in ug/L		Dissolved MTBE in ug/L	
							Depth (ft)	Elevation (ft)	Minimum	Maximum	Range		Minimum	Maximum	Minimum	Maximum
RW-1	4/1/96	Cushing	2" PVC, Auger Boring	in use		15 - 25			78.85	80.75	1.90	1.21	23700	23700	10200	10200
RW-2	4/2/96	Cushing	4" PVC, Auger Boring	in use	Yes	15 - 35			77.68	80.83	3.15	0	2	278	< 10	1040
RW-3	4/2/96	Cushing	4" PVC, Auger Boring	in use	Yes	14 - 34			78.26	82.36	4.10	0.65	67	2830	163	5420
RW-4	7/12/96	Tri-State	4" PVC, Auger Boring	in use	Yes	10 - 30			78.05	79.89	1.84	4.09	271	4180	< 50	37100
MW-1	4/3/96	Cushing	2" PVC, Auger Boring	in use		15 - 25			78.04	81.24	3.20	0	< 1	< 1	< 1	4
MW-2	4/4/96	Adams	2" PVC, 2 nd Sample Barrel	in use		14.8 - 24.8	9.5	89.5	77.55	80.97	3.42	0	< 1	54	< 1	143
MW-3	4/4/96	Adams	2" PVC, 2 nd Sample Barrel	no well set			9.0	90.5								
MW-4	4/4/96	Adams	2" PVC, 2 nd Sample Barrel	in use	Yes	13 - 23	11.5	88.0	79.78	81.31	1.53	3.84	2160	2160	2420	2420
MW-5	4/5/96	Adams	2" PVC, 2 nd Sample Barrel	in use	Yes	13 - 23			79.31	81.36	2.05	4.30	Not Sampled (free product)			
MW-6	4/6/96	Adams	2" PVC, 2 nd Sample Barrel	in use		15 - 25	11.0	88.0	77.90	82.11	4.21	0	< 1	416	< 1	534
MW-7	4/17/96	Adams	2" PVC, 2 nd Sample Barrel	in use		5 - 15	10.0	83.5	78.69	85.90	6.21	0	< 1	1	< 1	2
MW-8	4/17/96	Adams	2" PVC, 2 nd Sample Barrel	in use		13 - 23	7.5	89.3	77.83	81.65	3.83	0	< 1	90	< 1	45
MW-9	4/17/96	Adams	2" PVC, 2 nd Sample Barrel	in use		14.5 - 24.5	7.0	92.5	79.58	81.09	1.51	0	1020	2090	< 100	153
MW-10	5/11/96	Adams	1" PVC, 2 nd Sample Barrel	in use		9 - 19	9.8	88.7	79.57	80.55	0.98	0	< 1	< 1	< 1	< 1
MW-11	5/11/96	Adams	2" PVC, 2 nd Sample Barrel	in use		10 - 20	12.5	86.3	80.20	83.95	3.75	0	< 1	< 1	< 1	< 1
GP-1	4/5/96	TwinState	1" PVC, GeoProbe	destroyed		15 - 25			79.33	87.23	7.90	0	< 1	1550	< 1	1480
GP-2	4/5/96	TwinState	1" PVC, GeoProbe	in use		15 - 25			78.17	80.80	2.63	0	< 1	4	< 1	87
GP-3	4/5/96	TwinState	1" PVC, GeoProbe	destroyed		15 - 25			78.05	86.67	8.62	0	< 1	< 1	< 1	1
GP-4	4/5/96	TwinState	1" PVC, GeoProbe	in use		15 - 25			78.80	81.87	3.07	0	< 1	1	< 1	933
GP-5	4/5/96	TwinState	1" PVC, GeoProbe	destroyed		15 - 25			80.20	81.87	1.67	0	< 1	< 1	< 1	< 1
SVE-1	4/5/96	Adams	2" PVC, 4-inch solid augers	in use	Yes	9.5 - 19.5			81.17	81.57	0.40	0	Not Sampled			
SVE-2	4/5/96	Adams	2" PVC, 4-inch solid augers	in use	Yes	9.5 - 19.5			81.10	81.36	0.26	0	Not Sampled			
SVE-3	4/5/96	Adams	2" PVC, 4-inch solid augers	destroyed		10.1 - 20.1			79.76	81.34	1.58	0	Not Sampled			
SB-A	4/4/96	Adams	2 nd Sample Barrel			No Well Set	9.9	99.0								
TCML	?	Manosh	8" Supply Well (gravel)	no longer in use		open-ended casing							< 1	< 1	< 1	< 1

NOTES:

TCML = Town & Country Motor Lodge Supply Well
 All elevations are relative to assumed datum of 100.00 feet
 < 1 = less than a detection limit of 1 ug/L

TABLE 2
Groundwater Elevation Data,
Stowe Auto Service, Stowe, VT, SMS Site #96-1957.

Date	RW-1	RW-2	RW-3	RW-4	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	GP-1	GP-2	GP-3	GP-4	GP-5	SVE-1	SVE-2	SVE-3
April 3, 1996		80.28														80.38	80.23	81.11	80.51	81.23			
April 4, 1996		80.26														80.40	80.19	81.19	80.48				
April 5, 1996	78.85	80.16			79.89	80.49	80.67									80.34	80.13	81.14	80.46	81.30			
April 7, 1996	78.94	80.08	80.89		80.51	80.40	80.63			80.10						80.28	79.93	80.86	80.43	81.13			
April 9, 1996		80.10	80.75		80.59	80.39				80.14						80.33	79.95	80.82	80.38				
April 11, 1996		80.10			80.58	80.39				80.13						80.25	79.98						
April 12, 1996		80.15	80.38		80.62	80.40	80.32			80.15						80.33	80.03	80.84	80.24	81.17			
April 15, 1996		80.30	80.46		80.69	80.53	80.40			80.28						80.38	80.16	81.00	80.49	81.25			
April 18, 1996		80.83	81.34		81.11	80.97	81.00			80.78	81.46	80.75	80.75				80.72	86.67	81.16	81.86			
April 25, 1996		80.23	82.26		80.70	80.38	81.31			80.62	84.46	80.85	80.51			80.48	80.23	85.96	81.00	80.31			
April 29, 1996	80.60	80.42	81.17		80.85	80.64	81.18	81.20		84.88	81.23	80.84				81.86	79.47	81.19	80.34	81.56	81.17	81.10	79.76
May 6, 1996	80.75	80.51	81.32		81.06	80.79	81.28	81.36	81.83	85.24	81.22	80.96				80.87	80.80	86.20	81.87	81.87	81.57	81.36	81.34
May 14, 1996		80.70			81.24	80.93				82.11	85.90	81.66											
May 29, 1996	79.91	79.00	82.36		80.45	80.18				80.48	81.42	80.38	80.45	80.55	82.33	80.19	79.95	85.14	80.86	81.15			81.06
June 19, 1996	78.94	79.00	79.79		79.62	79.33	79.78			79.12	79.94	79.19	79.58	79.57	80.20	79.33	78.93	80.44	79.80	80.20			
December 18, 1996		79.16	79.68	79.53	79.42	79.26	80.01	79.87	79.07	79.69	79.41						79.98	80.75	79.41				
March 19, 1997		78.55	78.97	79.89	78.90	78.72				78.35		78.57					78.17	78.90	78.80				
May 9, 1997		79.45	80.01	79.82	79.79	79.84	79.95			81.02	80.39	79.93	81.09	79.92	83.95	86.55	79.66	85.40	79.88				
July 8, 1997		77.98	78.76	78.39	78.44	77.55				77.93		78.12	81.08				87.23		78.31				
October 22, 1997		77.68	78.47	78.48	78.24	78.05				77.90		77.87							78.05				
January 12, 1998		79.42	79.73	79.61	79.55	79.47				79.58	81.99	80.08					79.67	85.73	79.84				
April 12, 1998		79.82	80.80	80.37	80.22	80.03	80.64	80.96	79.79	81.08	80.04			80.33	84.72		80.46	85.55	80.90				
October 2, 1998		78.20	79.36	79.29	78.57	78.42			79.67	78.57		79.08							83.76				
June 22, 1999		77.68	78.26	78.05	78.04	77.95			79.31			77.83											

minimum	78.85	77.68	78.26	78.05	78.04	77.55	79.78	79.31	77.90	79.69	77.83	79.58	79.57	80.20	79.33	78.17	78.05	78.80	80.20	81.17	81.10	79.76
maximum	80.75	80.83	82.36	80.37	81.24	80.97	81.31	81.36	82.11	85.90	81.66	81.09	80.55	84.72	87.23	80.80	86.67	81.87	81.87	81.57	81.36	81.34
range	1.90	3.15	4.10	2.32	3.20	3.42	1.53	2.05	4.21	6.21	3.83	1.51	0.98	4.52	7.90	2.63	8.62	3.07	1.67	0.40	0.26	1.58

TABLE 3
BTEX & MTBE Summary By Well,
Stowe Auto Service, Stowe, Vermont, SMS Site #96-1957
 (results in ug/L)

MW - 1

Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Water (feet)
4/9/96	<1	1	<1	<1	<1	20.68
5/29/96	<1	<1	<1	<1	<1	18.84
9/5/96	<1	<1	<1	<1	<1	19.98
12/18/96	<1	<1	<1	<1	3	20.41
3/19/97	<1	<1	<1	<1	4	20.93
5/9/97	<1	<1	<1	<1	1	20.04
7/8/97	<1	<1	<1	<1	2	21.39
10/22/97	<1	<1	<1	<1	<1	21.59
1/12/98	<1	<1	<1	<1	<1	20.28
4/14/98	<1	<1	<1	<1	<1	19.61
10/2/98	<0.5	<1	<1	<1	<1	21.26
6/22/99	<0.5	<1	<1	<1	<1	21.79

MW - 2

Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Water (feet)
4/9/96	14	12	2	5	15	19.52
5/29/96	54	5	<1	<1	143	18.48
9/5/96	17	3	<1	2	110	20.59
12/18/96	11	5	1	3	2	19.40
3/19/97	1	4	<1	<1	74	19.94
5/9/97	1	3	<1	<1	43	19.02
7/8/97	<1	1	<1	<1	7	21.11
10/22/97	<1	8	<1	<1	<1	20.61
1/12/98	<1	3	<1	2	<1	19.19
4/14/98	<1	<1	<1	<1	<1	18.63
10/2/98	<0.5	1.1	<1	<1	<1	20.24
6/22/99	0.8	<1	<1	<1	6.9	20.71

MW-4

Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Water (feet)
4/14/98	2,160	12,700	2,040	18,400	2,420	18.80

MW - 6

Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Water (feet)
4/9/96	96	148	27	117	94	19.45
5/29/96	106	114	22	64	30	17.82
9/5/96	416	843	145	708	534	20.53
12/18/96	115	176	49	204	115	19.23
3/19/97	342	518	51	183	275	19.95
5/9/97	<1	<1	<1	<1	<1	17.28
7/8/97	21	9	<1	5	5	20.37
10/22/97	<1	<1	<1	<1	<1	20.40
1/12/98	<1	<1	<1	<1	TRACE	18.72
4/14/98	<1	<1	<1	<1	<1	18.51
10/2/98	<0.5	<1	<1	<1	<1	19.73

MW-7

Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Water (feet)
4/17/96	1	6	2	5	2	12.47
5/29/96	<1	<1	<1	<1	1	11.48
12/18/96	<1	<1	<1	<1	<1	13.21
5/9/97	<1	<1	<1	<1	<1	12.52
1/12/98	<1	<1	<1	<1	<1	10.91
4/14/98	<1	<1	<1	<1	<1	11.82

< 1 = less than a laboratory detection limit of 1 ug/L

TABLE 3 (continued)
 Water Quality Summary By Well,
 Stowe Auto Service, Stowe, Vermont, SMS Site #96-1957
 (results in ug/L)

MW-8

Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Water (feet)
4/17/96	90	92	10	105	45	16.67
5/29/96	< 1	1	< 1	< 1	39	15.98
9/5/96	< 1	1	< 1	< 1	8	18.54
12/18/96	< 1	< 1	< 1	< 1	< 1	16.95
3/19/97	< 1	< 1	< 1	< 1	< 1	17.79
5/9/97	< 1	< 1	< 1	< 1	< 1	16.43
7/8/97	< 1	< 1	< 1	< 1	< 1	18.24
10/22/97	< 1	< 1	< 1	< 1	< 1	18.49
1/12/98	< 1	< 1	< 1	< 1	< 1	16.28
4/14/98	< 1	< 1	< 1	< 1	< 1	16.32
10/2/98	< 0.5	< 1	< 1	< 1	< 1	17.28
6/22/99	< 0.5	< 1	< 1	< 1	< 1	18.53

MW-9

Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Water (feet)
4/17/96	2,090	10,200	1,120	6,040	153	19.05
5/29/96	1,020	7,740	777	4,070	< 100	18.32

MW-10

Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Water (feet)
5/29/96	< 1	1	< 1	< 1	< 1	17.48
4/14/98	< 1	< 1	< 1	< 1	< 1	17.70

MW-11

Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Water (feet)
5/29/96	< 1	< 1	< 1	< 1	< 1	16.13

RW-1

Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Water (feet)
5/29/96	23,700	38,700	3,630	15,900	10,200	19.28

RW - 2

Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Water (feet)
4/9/96	278	313	81	550	< 10	20.79
5/29/96	210	464	56	414	69	18.94
9/5/96	166	118	28	180	228	21.02
12/18/96	40	6	2	13	92	19.68
3/19/97	23	< 10	< 10	< 10	204	20.29
5/9/97	13	< 10	< 10	< 10	317	19.39
7/8/97	8	6	1	3	889	20.86
10/22/97	2	3	< 1	< 1	1,040	20.96
1/12/98	2	1	< 1	2	294	19.42
4/14/98	< 1	< 1	< 1	< 1	14	19.02
10/2/98	2.5	< 1	< 1	< 1	220	20.64
6/22/99	1.0	< 1	< 1	< 1	51	21.16

RW - 3

Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Water (feet)
4/9/96	603	15,900	183	980	875	21.59
12/18/96	2,830	20,300	2,530	20,900	5,420	19.70
3/19/97	555	9,550	1,550	1,800	227	20.41
5/9/97	357	7,910	1,130	15,400	< 200	
7/8/97	585	12,100	1,610	21,900	258	20.62
10/22/97	338	5,860	906	20,000	1,390	20.91
1/12/98	67	1,360	489	11,100	163	19.65
4/14/98	7	118	13	173	600	18.58
10/2/98	57	1,300	200	9,500	190	20.02
6/22/99	< 50	690	300	8,100	150	21.12

< 1 = less than a laboratory detection limit of 1 ug/L.

TABLE 3 (continued)
 Water Quality Summary By Well,
 Stowe Auto Service, Stowe, Vermont, SMS Site #96-1957
 (results in ug/L)

RW - 4

Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Water (feet)
5/9/97	1,210	9,980	1,360	20,200	3,120	
7/8/97	4,180	19,400	2,490	22,200	37,100	20.91
10/22/97	998	12,500	1,630	16,200	1,330	
1/12/98	271	4,350	433	5,410	< 50	19.69
4/14/98	752	8,070	1,050	9,170	271	18.93
10/2/98	1,800	16,000	1,400	20,500	750	20.01
6/22/99	520	14,000	2,000	13,000	1,600	21.25

TCML - 1

Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Water (feet)
4/9/96	< 1	< 1	< 1	< 1	< 1	-
9/5/96	< 1	< 1	< 1	< 1	< 1	-
12/18/96	< 1	< 1	< 1	< 1	< 1	-
3/19/97	< 1	< 1	< 1	< 1	< 1	-
5/9/97	< 1	< 1	< 1	< 1	< 1	-
7/8/97	< 1	< 1	< 1	< 1	< 1	-
10/22/97	< 1	< 1	< 1	< 1	< 1	-

GP - 1

Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Water (feet)
4/9/96	1,550	2,680	331	1,450	1,480	19.67
5/29/96	6	5	< 3	6	45	18.17
5/9/97	< 1	< 1	< 1	< 1	< 1	11.07

GP - 2

Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Water (feet)
4/9/96	4	6	1	11	9	19.93
5/29/96	< 1	< 1	< 1	< 1	46	18.47
9/5/96	< 1	< 1	< 1	< 1	87	20.74
12/18/96	< 1	< 1	< 1	< 1	41	19.44
3/19/97	< 1	< 1	< 1	< 1	11	20.25
5/9/97	< 5	< 5	< 5	< 5	< 5	18.76
1/12/98	< 1	TRACE	< 1	< 1	1	18.75

GP - 3

Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Water (feet)
4/9/96	< 1	< 1	< 1	< 1	< 1	18.42
5/29/96	< 1	< 1	< 1	< 1	< 1	12.74
9/5/96	< 1	< 1	< 1	< 1	< 1	19.74
12/18/96	< 5	< 5	< 5	< 5	< 5	17.13
3/19/97	< 1	< 1	< 1	< 1	< 1	18.98
5/9/97	< 1	< 1	< 1	< 1	< 1	12.48
7/8/97	< 1	< 1	< 1	< 1	< 1	19.57
10/22/97	< 1	< 1	< 1	< 1	< 1	19.83
1/12/98	< 1	< 1	< 1	< 1	1	12.15
4/14/98	< 1	< 1	< 1	< 1	< 1	12.33
10/2/98	< 0.5	< 1	< 1	< 1	< 1	14.12

GP - 4

Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Depth to Water (feet)
4/9/96	< 1	< 1	< 1	< 1	< 1	19.64
5/29/96	< 1	< 1	< 1	< 1	47	17.63
9/5/96	< 1	< 1	< 1	< 1	47	20.18
12/18/96	TRACE	< 1	< 1	< 1	933	19.08
3/19/97	< 1	2	< 1	< 1	21	19.08
1/12/98	< 1	< 1	< 1	< 1	24	18.65
4/14/98	< 1	< 1	< 1	< 1	105	17.59

GP-5

Sample Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Depth to Water (feet)
5/29/96	< 1	< 1	< 1	< 1	< 1	19.03

< 1 = less than a laboratory detection limit of 1 ug/L

TABLE 4
Sum of Recovered Gasoline,
Stowe Auto Service, Stowe, Vermont,
SMS Site # 96-1957.

AS OF 6/22/99

<u>Source</u>	<u>Total Gallons</u>	<u>Type</u>
Initial (3/28/96)	124.0	vacuum truck
MW-5	484.5	bailing/pumping
MW-4	12.6	bailing
RW-1	92.6	bailing/pumping
RW-3	0.3	bailing
RW-4	16.0	bailing
SVE	2254	vapor extraction
TOTAL	2984	total gallons

TABLE 5
 Groundwater sampling results for June 22, 1999,
 Stowe Auto Service, Stowe, Vermont, SMS Site #96-1957
 (results in ug/L)

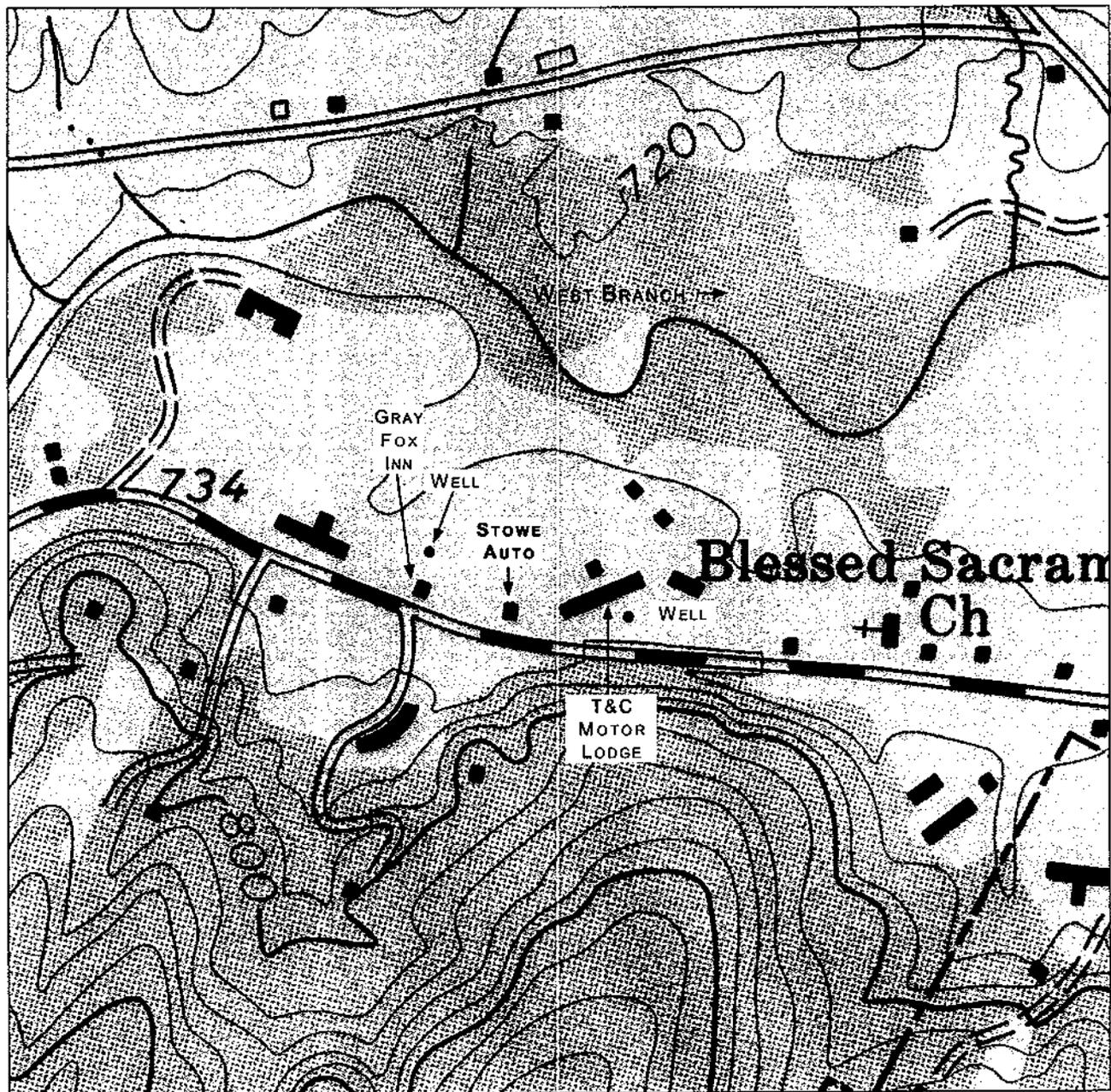
ANALYSES BY EPA METHOD 8021B (results in micrograms per liter)								
WELL ID	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes	1,3,5-Tri-methylbenzene	1,2,4-Tri-methylbenzene	Naphthalene
MW-1	< 1.0	< 0.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MW-2	6.9	0.8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MW-8	< 1.0	< 0.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
RW-2	51	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
RW-3	150 / 170	< 50 / < 50	690 / 850	300 / 330	8100 / 8500	1300 / 1400	3900 / 4000	750 / 770
RW-4	1600	520	14000	2000	13000	730	2200	420
Field Blank	< 1.0	< 0.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trip Blank	< 1.0	< 0.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
VTGES	40	5.0	1000	700	10000	4.0	5.0	20

NOTES:

< 1.0 = less than a detection limit of 1.0 micrograms per liter

VT GES = Vermont Primary Groundwater Enforcement Standard (Groundwater Protection Rule & Strategy, 11/15/97)

Analyses performed by SCITEST, Inc.

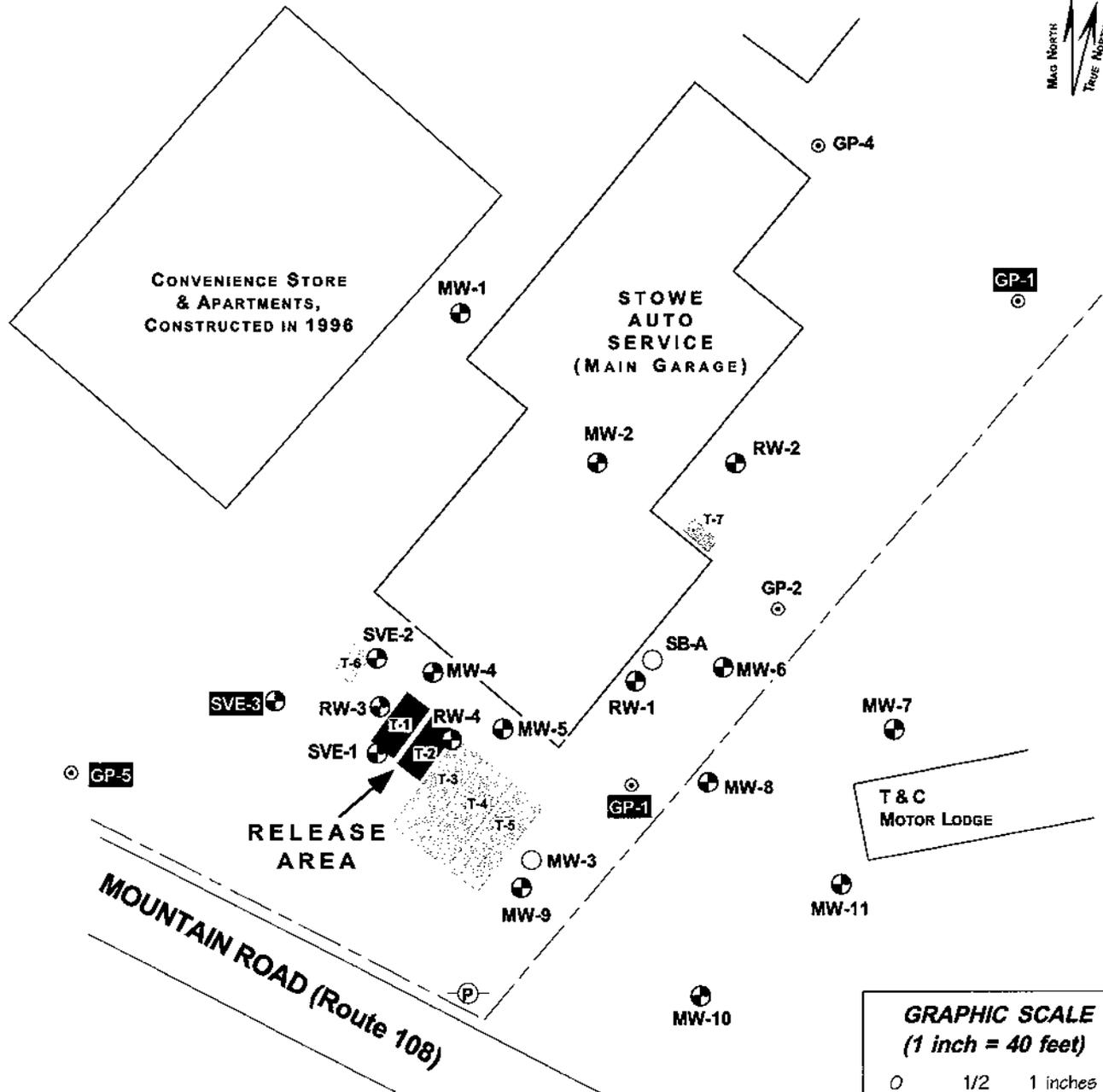


Base enlarged from USGS Quad, 1:24,000, Stowe, VT, 1968
 elevations in feet above mean sea level, 20-foot contour

0 250 500 Feet

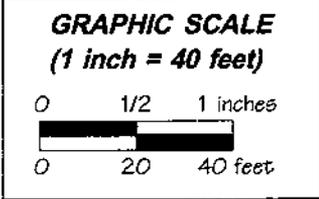
SCALE 1:6,000

FIGURE 2
 SITE VICINITY MAP, STOWE AUTO SERVICE
 STOWE, VERMONT, SMS SITE #96-1957



EXPLANATION

- RW-2 ⊕ RECOVERY WELL
- MW-2 ⊕ MONITORING WELL
- GP-2 ⊙ GEOPROBE WELL
- SOIL BORING
- SB-A DESTROYED WELL
- T-1 UST REMOVED IN 1996



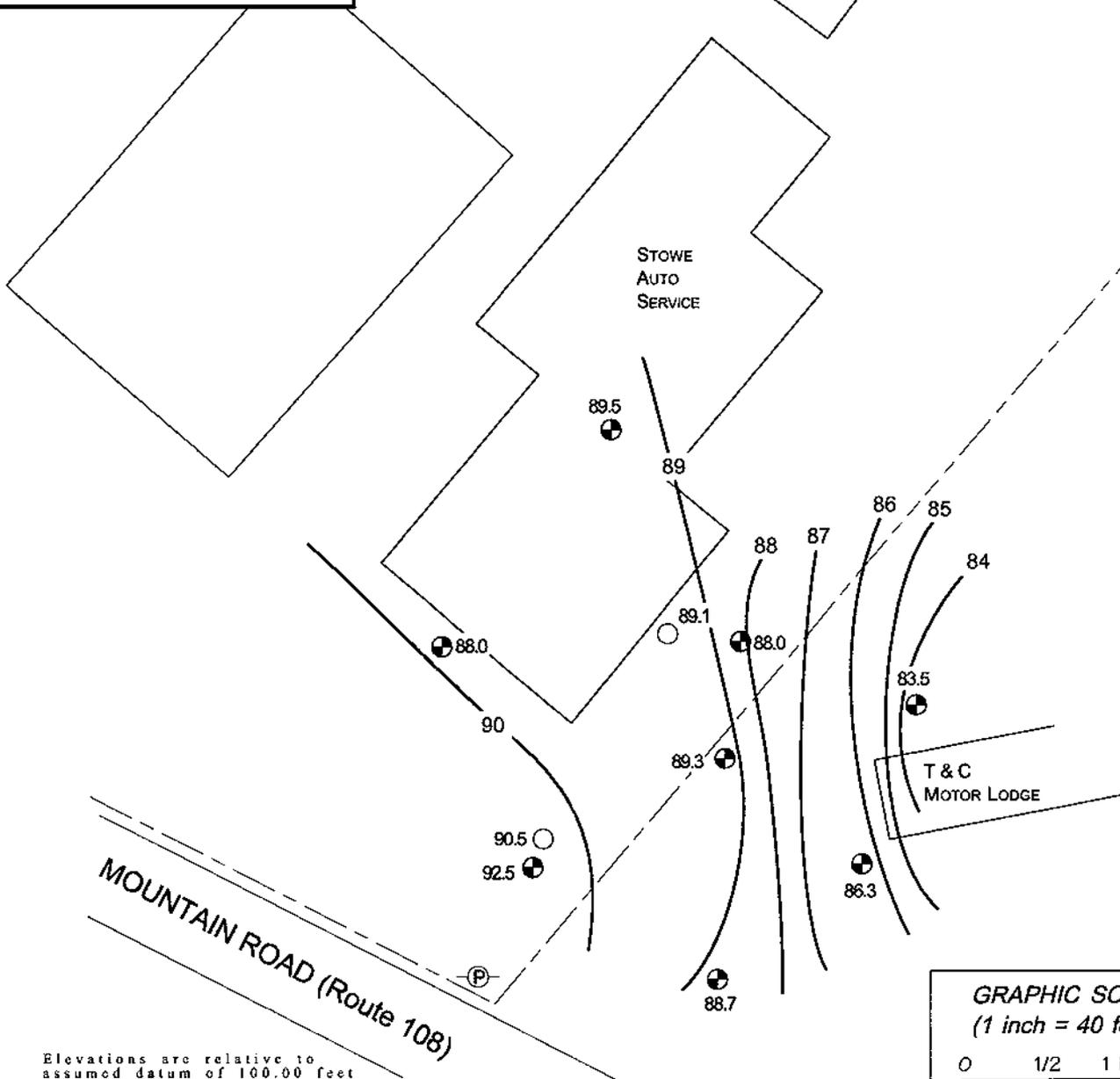
- T-1 (2 K GASOLINE) REMOVED 3/29/96
- T-2 (2 K GASOLINE) REMOVED 3/29/96
- T-3 (4 K GASOLINE) REMOVED 7/11/96
- T-4 (4 K GASOLINE) REMOVED 7/11/96
- T-5 (4 K DIESEL) REMOVED 7/11/96
- T-6 (550 G. HEATING OIL) REMOVED 7/11/96
- T-7 (150 G. HEATING OIL) REMOVED 1988

FIGURE 3
SITE MAP, STOWE AUTO SERVICE
STOWE, VERMONT, SMS SITE #96-1957

EXPLANATION

89.5 ● BORING AND ELEVATION OF SAND & GRAVEL/SILT CONTACT (FEET)

90 - - - CONTOUR OF SAND & GRAVEL/SILT CONTACT (FEET)



Elevations are relative to assumed datum of 100.00 feet

GRAPHIC SCALE
(1 inch = 40 feet)



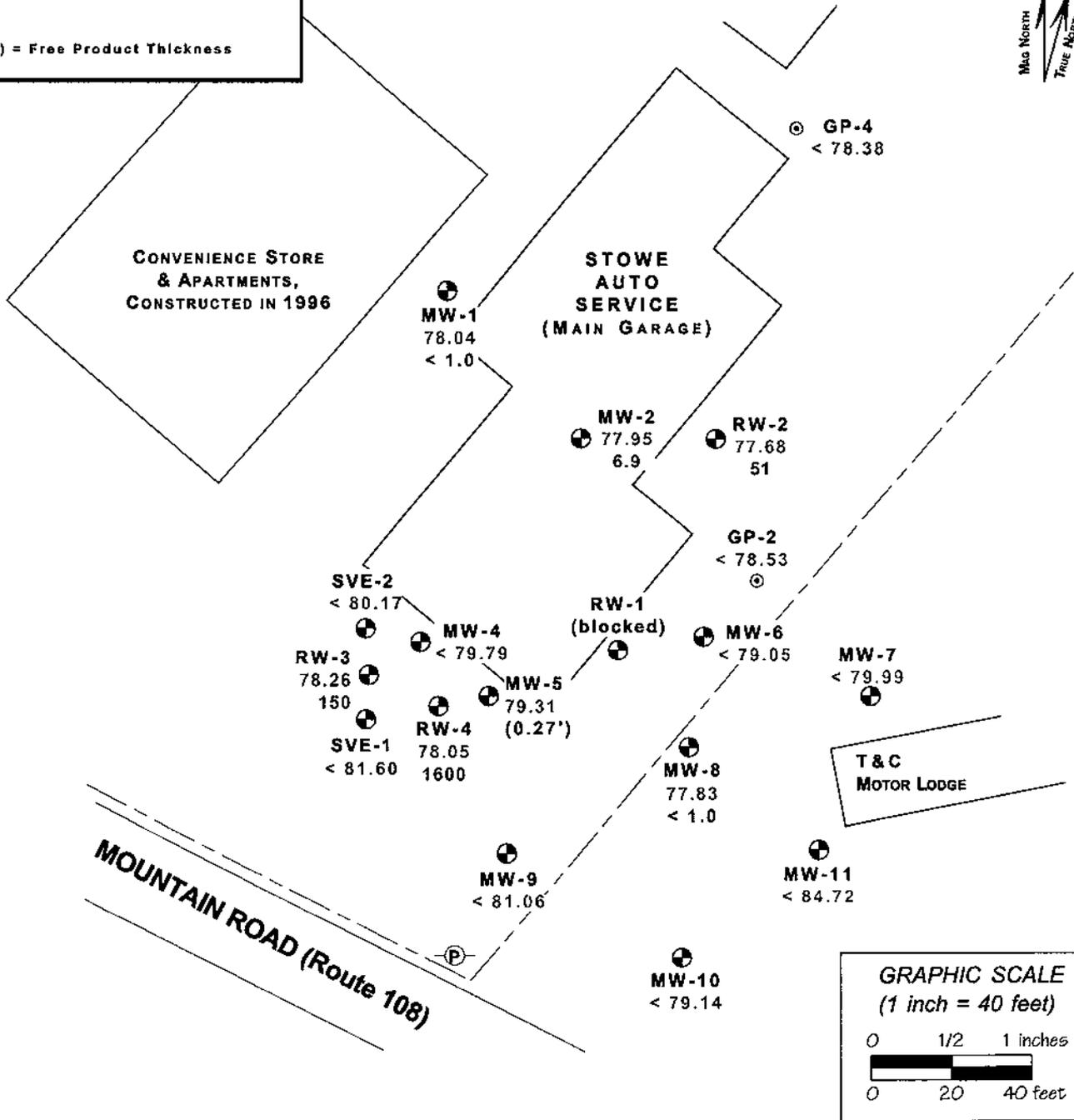
FIGURE 4
CONTOUR MAP FOR CONTACT BETWEEN SAND/GRAVEL & SILT UNIT, STOWE AUTO SERVICE STOWE, VERMONT, SMS SITE #96-1957.

EXPLANATION

RW-4
78.05
1600

Monitoring Well With
Groundwater Elevation (feet)
& MTBE Concentration (ug/L)

(0.27') = Free Product Thickness



GRAPHIC SCALE

(1 inch = 40 feet)



FIGURE 5
GROUNDWATER ELEVATIONS & MTBE CONCENTRATIONS
JUNE 22, 1999, STOWE AUTO SERVICE
STOWE, VERMONT, SMS SITE #96-1957

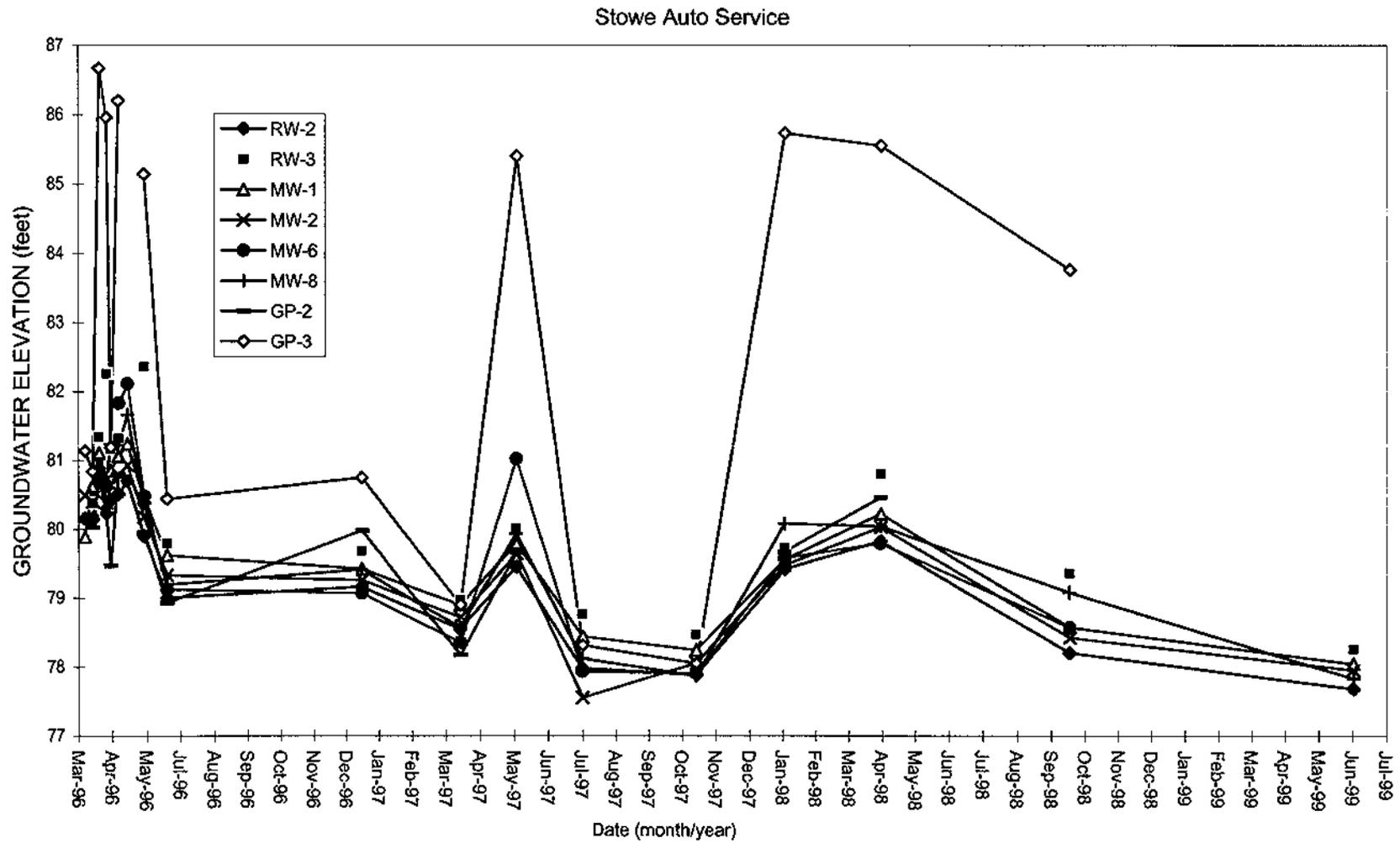


FIGURE 6
 Groundwater elevation fluctuations for selected wells,
 Stowe Auto Service, Stowe, VT,
 SMS Site #96-1957.

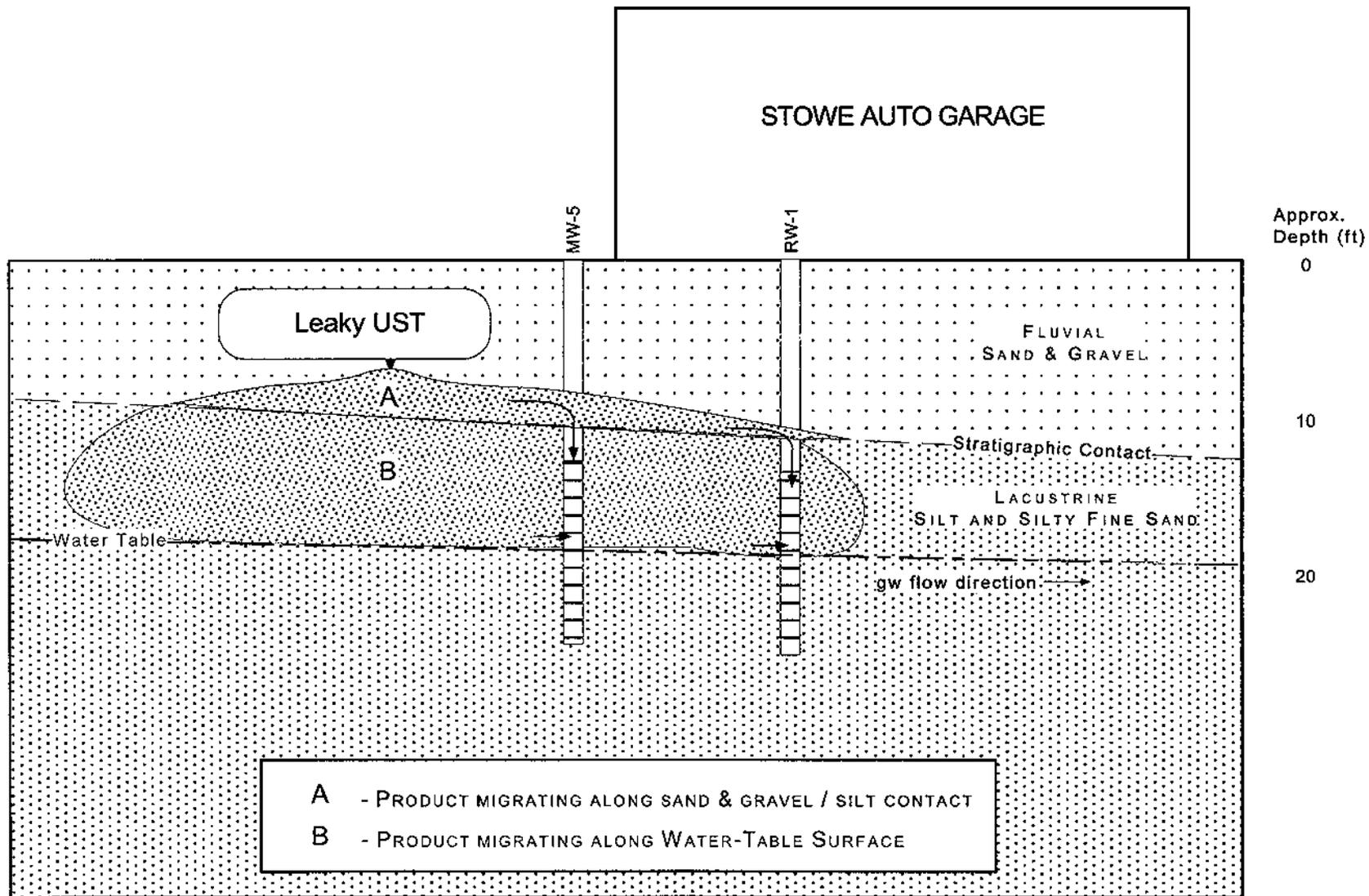
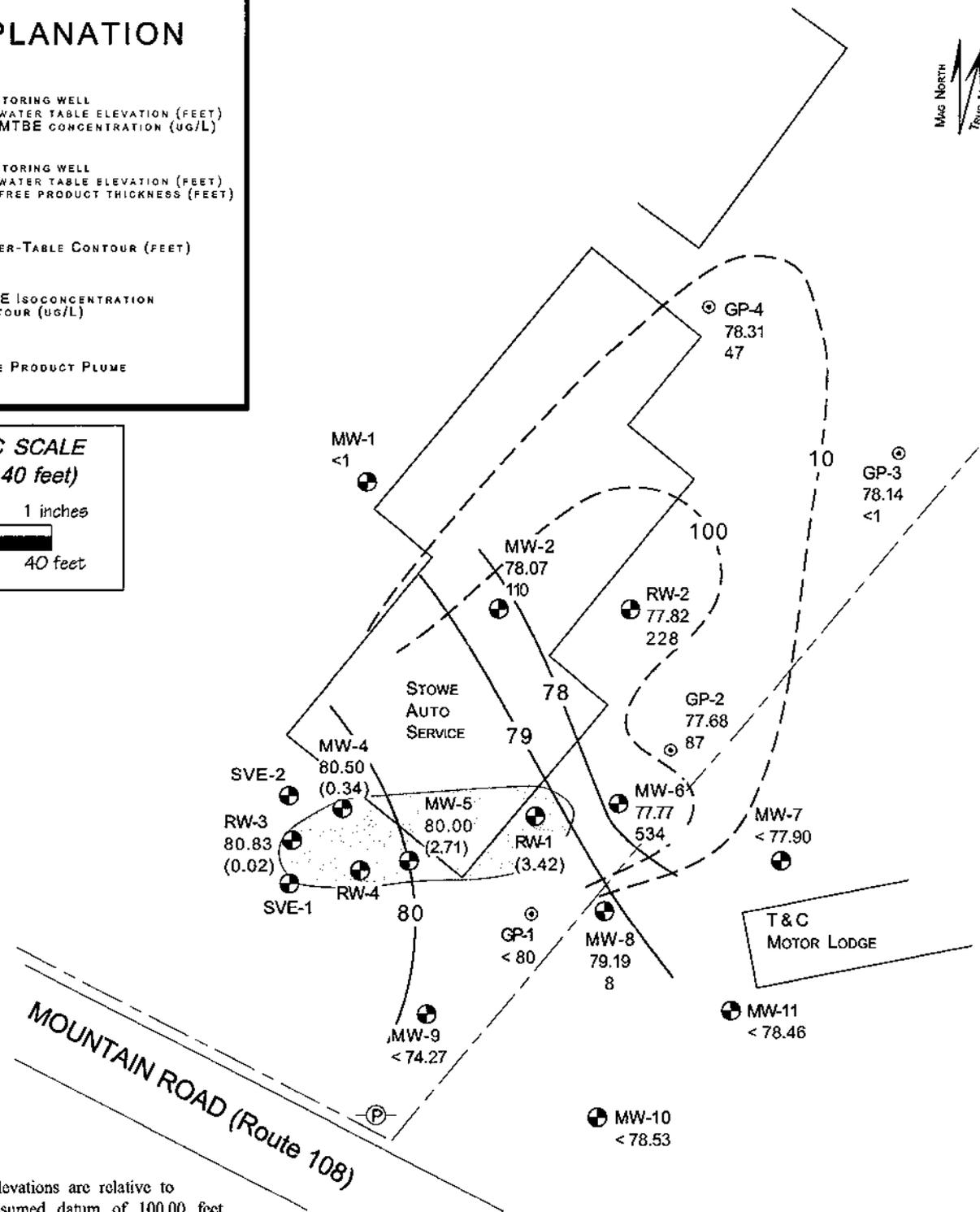


FIGURE 7
 Schematic Cross Section Illustrating Pathways of Product Migration
 Stowe Auto Service, Stowe, Vermont, SMS Site #96-1957.

EXPLANATION

- MW-6
77.77  MONITORING WELL
AND WATER TABLE ELEVATION (FEET)
AND MTBE CONCENTRATION (UG/L)
534
- RW-3
80.83  MONITORING WELL
AND WATER TABLE ELEVATION (FEET)
AND FREE PRODUCT THICKNESS (FEET)
(0.02)
- 78  WATER-TABLE CONTOUR (FEET)
- 10  MTBE ISOCONCENTRATION
CONTOUR (UG/L)
-  FREE PRODUCT PLUME

GRAPHIC SCALE (1 inch = 40 feet)



Elevations are relative to assumed datum of 100.00 feet

FIGURE 8
GROUNDWATER ELEVATIONS AND CONTAMINANT DISTRIBUTION,
SEPTEMBER 5, 1996, STOWE AUTO SERVICE
STOWE, VERMONT, SMS SITE #96-1957.

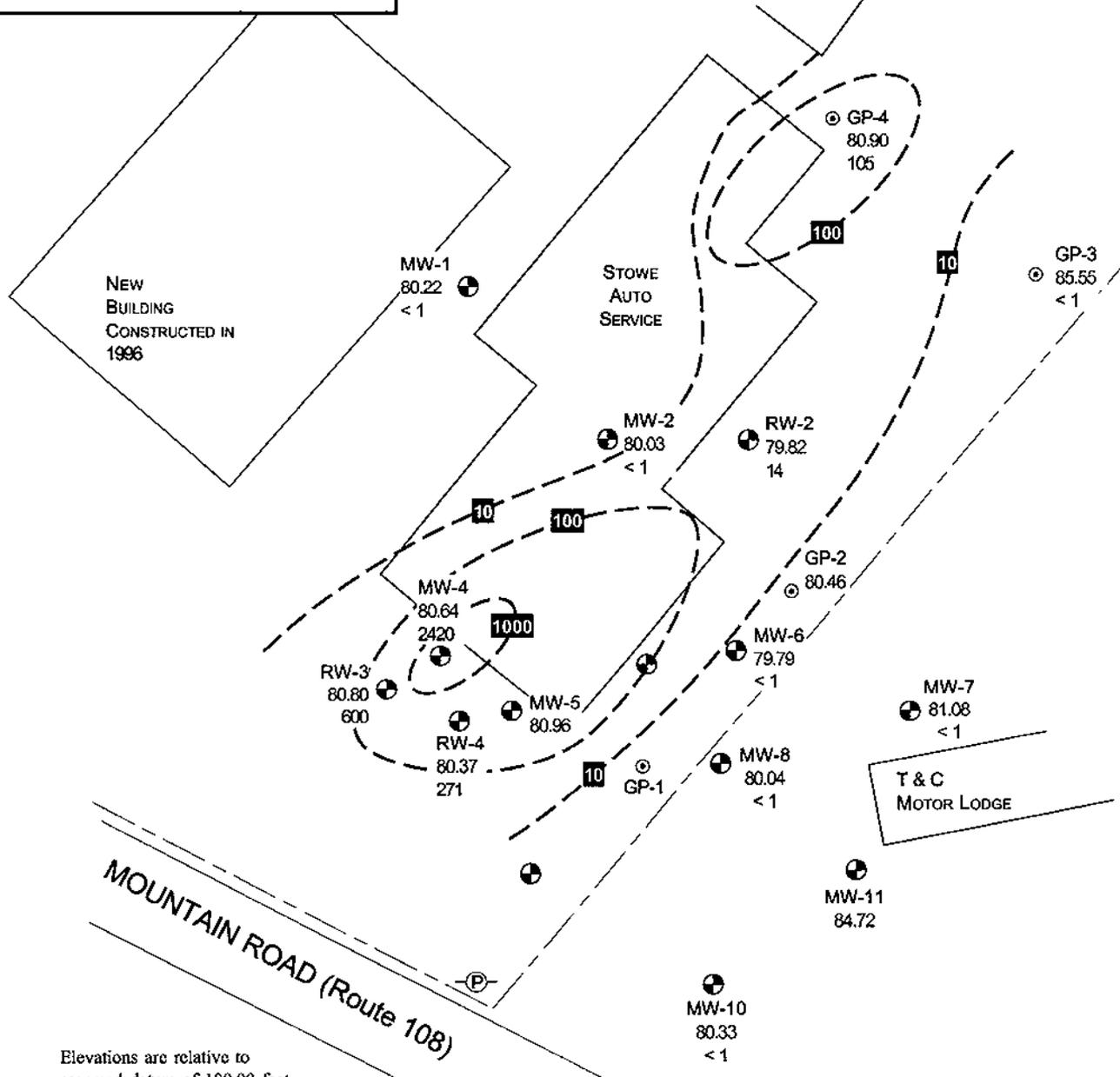
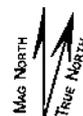
EXPLANATION

MW-6
77.77
534

MONITORING WELL
AND GROUNDWATER ELEVATION (FEET)
AND MTBE CONCENTRATION (UG/L)

10

MTBE ISOCONCENTRATION
CONTOUR (UG/L)



Elevations are relative to
assumed datum of 100.00 feet

FIGURE 9
GROUNDWATER ELEVATIONS AND CONTAMINANT DISTRIBUTION,
APRIL 14, 1998, STOWE AUTO SERVICE
STOWE, VERMONT, SMS SITE #96-1957.

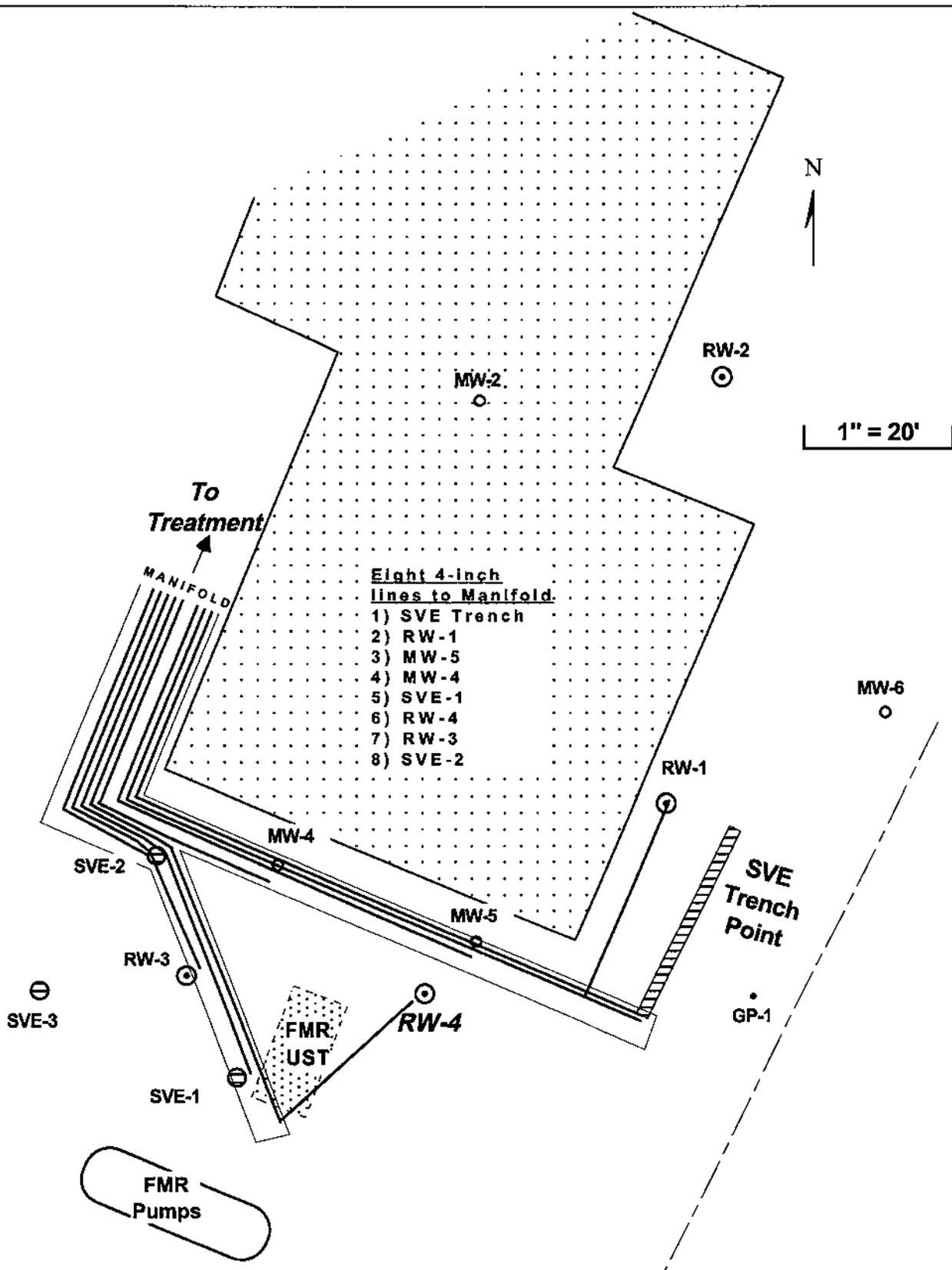
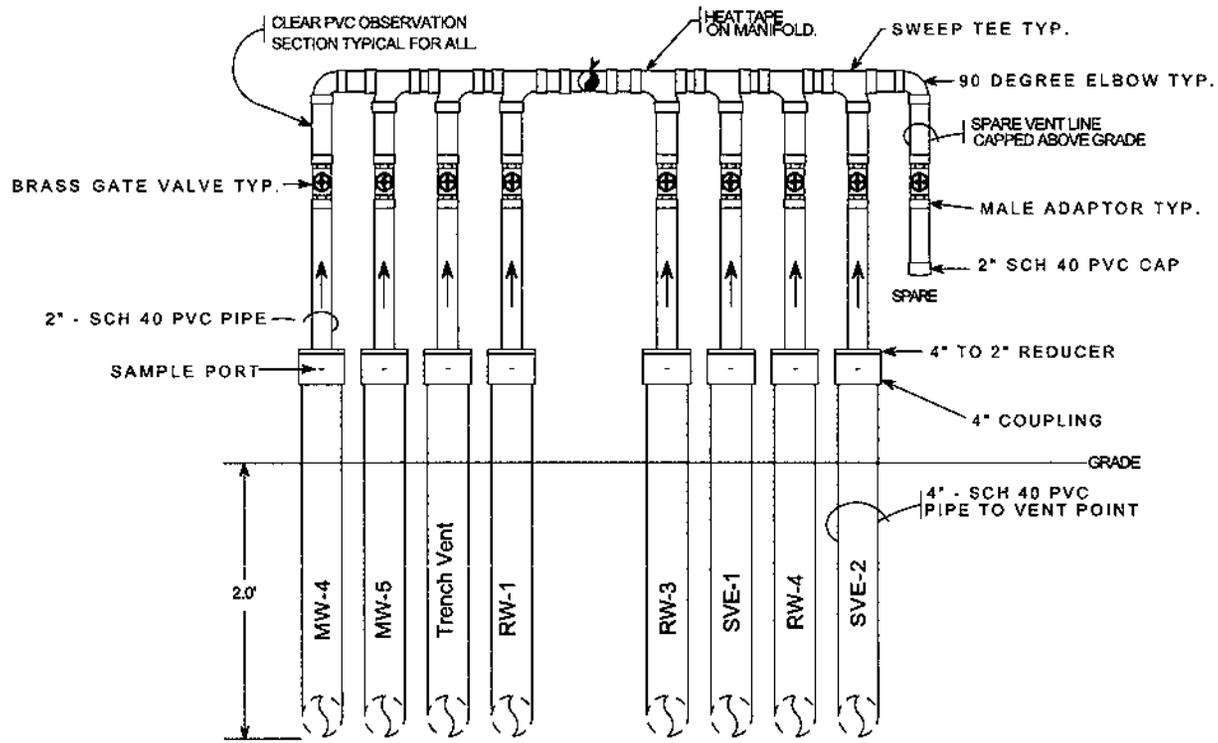


FIGURE 10
LAYOUT OF SVE EXTRACTION POINTS,
STOWE AUTO SERVICE
STOWE, VERMONT, SMS SITE #96-1957.



NOTE:
 VENT LINES INSULATED WITH
 2" R-10 POLYSTYRENE AND
 HEAT TAPE BELOW GRADE.

NOT TO SCALE

FIGURE 11
 SVE System Manifold As-Built Diagram,
 Stowe Auto Service, Stowe, Vermont,
 SMS Site #96-1957.

**STOWE AUTO SVE SYSTEM
SMS Site #96-1957**

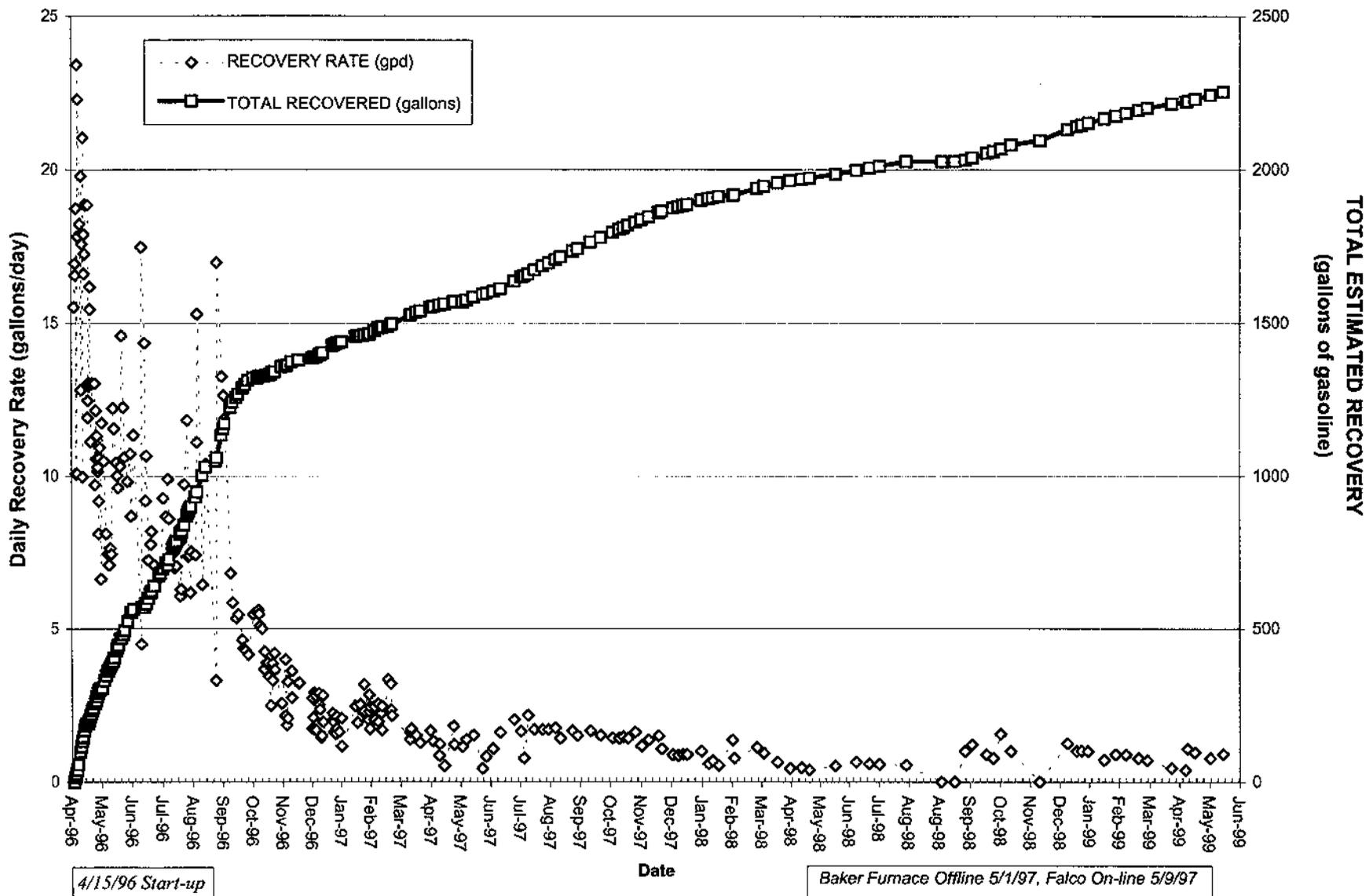


FIGURE 12
 Chart of SVE Recovery Rates and Total Recovery,
 Stowe Auto Service, Stowe, VT, SMS Site #96-1957.

SOIL BORING / MONITORING WELL CONSTRUCTION LOG

WELL BORING ID: RW-1

Client / Site:	Stowe Auto Service
Location:	Route 108, Stowe, Vermont
Project Number:	52-01
Driller:	Cushing & Sons
Drilling Method:	Hollow-stem auger
Geologist:	K. Underwood, Griffin Int.
Sampling Method:	split-spoon
Date:	4/1/96
Weather:	
Boring Location:	near building

Well Construction information	
Total Depth Drilled:	30.0 feet BGS
Screen Type/Interval:	2" PVC 20-slot, 15 - 25' BGS
Riser Type/Interval:	2" PVC, 0 - 15' BGS
Sandpack Type/Interval:	#0 sand from 13 - 30.0'
Seal Type/Interval:	Bentonite chips 11 - 13' feet
Other:	

Depth	Description
0 - 4/5"	pavement
1.5 - 4.5'	medium brown to yellowish brown fine sand, trace gravel, trace silt, no odor, no PID
4.5 - 5.0'	medium brown SILT, some clay, moist, no odor, no PID reading
12.5 - 14.0'	2 to 3 inch sub-rounded gravel (mica schist)
15.75'	2 to 3 inch perched water in silt, no PID reading
	medium gray to brown gray SILT, dry silt below perched zone
20 - 20.5'	gray silt to very fine sand
20.5 - 20.7'	dark gray stained, grain size slightly larger, slight-old odor to stained area
20.7 - 22'	gray silt to very fine sand
23'	grayish-brown silt and very fine sand, mild old petroleum odor, some dark petroleum staining at 23'

Augered to 30 feet, vapors at borehole pegged to 10 ppm sporadically

Depth	PiD (Hnu)
5 - 7	0
10 - 12	0.3
15 - 17	39
20 - 22	95

bailed well, strong fresh gas odor, sheen on bail water

Next Morning, 4/2/96, 25.1 feet to product, 25.65 feet to water (0.55 feet product)

SOIL BORING / MONITORING WELL CONSTRUCTION LOG

WELL BORING ID: RW-2

Client / Site:	Stowe Auto Service
Location:	Route 108, Stowe, Vermont
Project Number:	52-01
Driller:	Cushing & Sons
Drilling Method:	Hollow-stem auger
Geologist:	K. Underwood, Griffin Int.
Sampling Method:	split-spoon
Date:	4/1/96 & 4/2/96
Weather:	
Boring Location:	near building

Well Construction Information	
Total Depth Drilled:	35.0 feet BGS
Screen Type/Interval:	4" PVC 20-slot, 15 - 35' BGS
Riser Type/Interval:	4" PVC, 0 - 15' BGS
Sandpack Type/Interval:	#0 sand from 13 - 35.0'
Seal Type/Interval:	bentonite chips 11 - 13' feet
Other:	

Depth	Description
5 - 7'	reddish brown fine to coarse sand with fine gravel, dry, no odor
10 - 12'	medium brown to gray brown coarse to fine sand and coarse to fine gravel, dry, no odor
12 - 14.5'	2 to 3 inch gravel, sub-rounded to sub-angular
15 - 16.5'	medium gray to brown gray SILT, saturated (perched), no odor, no sheen,
16.5 - 17.0'	brown gray very fine sand, v. slightly moist spoon from 20 - 22, damp on outside, soil saturated
20 - 20.5'	medium gray to brown gray v. fine sand, minor silt
20.5 - 21.0'	medium gray to dark gray v. fine sand, petroleum staining, mild old petro. odor
21 - 21.7'	medium gray to gray brown very fine sand, no odor
21.7 - 22	medium gray very fine sand, no odor
21.6 - 21.7'	fresh gas smell, sheen

Depth	PID (Hnu)
5 - 7	0
10 - 12	0
15 - 17	0.1

bailed well, strong fresh gas odor, sheen on bail water

SOIL BORING / MONITORING WELL CONSTRUCTION LOG

WELL BORING ID: RW-3

Client / Site:	Stowe Auto Service
Location:	Route 108, Stowe, Vermont
Project Number:	52-01
Driller:	Cushing & Sons
Drilling Method:	Hollow-stem auger
Geologist:	K. Underwood, Griffin Int.
Sampling Method:	split-spoon
Date:	4/1/96 & 4/2/96
Weather:	
Boring Location:	near building

Well Construction Information	
Total Depth Drilled:	35.0 feet BGS
Screen Type/Interval:	4" PVC 20-slot, 14 - 34' BGS
Riser Type/Interval:	4" PVC, 0 - 14' BGS
Sandpack Type/Interval:	#0 sand from 12 - 35.0'
Seal Type/Interval:	bentonite chips 9.5 - 12' feet
Other:	

Depth	Description
20 - 22'	grayish brown SILT, trace v. fine sand, saturated, mild, old petroleum odor

SOIL BORING / MONITORING WELL CONSTRUCTION LOG

WELL BORING ID: RW-4

Client / Site:	Stowe Auto Service
Location:	Route 108, Stowe, Vermont
Project Number:	52-01
Driller:	Tri- State
Drilling Method:	Hollow-stem auger
Geologist:	T. Schmalz
Sampling Method:	split-spoon
Date:	7/12/96
Weather:	
Boring Location:	

Well Construction Information	
Total Depth Drilled:	30.0 feet BGS
Screen Type/Interval:	4" PVC 20-slot, 10 - 30' BGS
Riser Type/Interval:	4" PVC, 0 - 10' BGS
Sandpack Type/Interval:	Coarse sand to 7.5'
Seal Type/Interval:	bentonite chips 4.5 - 7.5 feet
Other:	

Sample Interval (feet BGS)	Blow Counts	Recovery (inches)	Sample Description	USDA / SCS Soil Classification	PID Reading* (ppm)
10 - 12	7/8/8/15	16	coarse sand and gravel, dry	sand	342
15 - 17	2/2/3/5	16	fine silty sand, strong gasoline odor, moist	sandy loam	1841
20 - 22	1/2/1/1	20	fine silty sand, wet	sandy loam	57.5

Notes:

* = Peak Headspace Reading, Photovac MicroTIP HL-2000, calibrated to isobutylene.

BGS = Below Ground Surface, AGS = Above Ground Surface, NR = No Recovery

SOIL BORING / MONITORING WELL CONSTRUCTION LOG

WELL BORING ID: MW-1

Client / Site:	Stowe Auto Service
Location:	Route 108, Stowe, Vermont
Project Number:	52-01
Driller:	Cushing & Sons
Drilling Method:	6.25" hollow stem auger
Geologist:	S. French, Hoffer & Associates
Sampling Method:	24" split spoons
Date:	4/3/96
Weather:	Sunny, windy and cool, 30°
Boring Location:	Off west side of main building

Well Construction Information	
Total Depth Drilled:	25.0' BGS; sampled to 27.0' BGS
Screen Type/Interval:	2" PVC 10-slot / 15.0 - 25.0' BGS
Riser Type/Interval:	2" PVC / 0 - 15' BGS
Sandpack Type/Interval:	Morie Co. #0 w.g. / 25.0' - 13.0'
Seal Type/Interval:	Bentonite chips / 13.0' - 11.0'

Sample Interval (feet BGS), Blow Counts	Total Driven / Recovery (inches)	Recovered Interval (inches)	Approximate Interval (feet BGS)	Sample Description	USDA / SCS Soil Classification	PID Reading* (ppm)
5.0 - 7.0 6-7-7-4	24 / 16	0 - 16	5.0 - 6.3	Yellowish brown with some red staining, medium to coarse sand and gravel, rounded pebbles to 3 cm, 5% fine sand, 5% silt, dry. Cobbles at approximately 8', augers grinding and popping.	gravelly loamy sand	0.0
10.0 - 12.0 4-6-7-8	24 / 24	0 - 24	10.0 - 12.0	Entire spoon dark greenish brown, very fine sandy silt, well-sorted with moist to wet section at upper end (perch zone?) and some red stained zones 0.5-1.0 cm thick. Entire sequence slightly moist.	silt loam	0.0
15.0 - 17.0 2-6-6-7	24 / 19	0 - 11	15.0 - 16.0	Wet, dark gray silt, extremely fine material which smears in hand. This material liquefies.	silt	0.0
		11 - 19	16.0 - 17.0	Moist, dark yellowish brown, silty (30%), fine sand (70%).	sandy loam	0.0
20.0 - 22.0	24 / 20	0 - 20	20.0 - 22.0	Same as above, but fully saturated. Based on moisture in rods and spoon, water table at approximately 18.0', sands are heaving?	sandy loam	0.0
25.0 - 27.0 2-3-4-4	24 / 24	0 - 24	25.0 - 27.0	Same as above.	sandy loam	0.0

Notes:

* = Peak Headspace Reading, HNU P101, calibrated to benzene

BGS = Below Ground Surface, AGS = Above Ground Surface, NR = No Recovery

SOIL BORING / MONITORING WELL CONSTRUCTION LOG

WELL BORING ID: MW-2

Client / Site:	Stowe Auto Service
Location:	Route 108, Stowe, Vermont
Project Number:	52-01
Driller:	G. Adams, Adams Engineering
Drilling Method:	2 3/4" vibratory spoon
Geologist:	S. French, Hoffer & Associates
Sampling Method:	2 3/8" vibratory spoon
Date:	4/4/96
Weather:	Clear and cool, 30°
Boring Location:	Inside garage in concrete well

Well Construction Information	
Total Depth Drilled:	24.8' BGS
Screen Type/Interval:	2" PVC 10-slot / 24.8' - 14.8' BGS
Riser Type/Interval:	2" PVC / 14.8' - 0.5' BGS
Sandpack Type/Interval:	Pool filter sand / 24.8' - 10.0' BGS
Seal Type/Interval:	Bentonite / 10.0' - ? BGS

Sample Interval (feet BGS)	Total Driven / Recovery (feet)	Recovered Interval (feet)	Approximate Interval (feet BGS)	Sample Description	USDA / SCS Soil Classification	PID Reading* (ppm)
3.0 - 5.0	2.0 / 1.5	0.0 - 0.5	3.0 - 3.5	Dark brown, moist, very fine sandy silt (old topsoil layer?)	silt loam	5.0
		0.5 - 0.9	3.5 - 4.0	Reddish, loose fine sand.	sandy loam	4.5
		0.9 - 1.5	4.0 - 5.0	Black and white, very loose and dry, medium to coarse sand with some fine gravel. Entire first sample likely fill.	gravelly sandy loam	4.0
5.0 - 10.0	5.0 / 4.1	0.0 - 2.3	5.0 - 8.0	Same as above, multi-colored, contains pebbles to 4 cm.	gravelly sandy loam	3.7
		2.3 - 3.8	8.0 - 9.5	Very loose and very coarse gravel zone containing 10% silt and 20% fine to coarse sands; cobbles to 6 cm.	gravel	8.2
		3.8 - 4.1	9.5 - 10.0	Greenish yellow, slightly moist, silty (30-40%), very fine sand.	sandy loam	4.7
10.0 - 15.0	5.0 / 4.5	0.0 - 3.4	10.0 - 13.5	Same as above.	sandy loam	4.8
		3.4 - 4.5	13.5 - 15.0	Darker, moister, very fine sandy (40%) silt.	silt loam	20.5
15.0 - 20.0	5.0 / 2.9	0.0 - 0.2	15.0 - 16.0	Same as above.	silt loam	12.2
		0.2 - 1.4	16.0 - 18.0	Wet, dark gray silt with minor (5-10%) fine sand; this material liquefies and 'flows,' perched zone.	silt	9.5
		1.4 - 2.9	18.0 - 20.0	Greenish yellow, slightly moist, silty (20-30%) fine sand.	sandy loam	112.0
20.0 - 24.8	4.8 / 3.2	0.0 - 3.2	20.0 - 25.0	Same as above.	sandy loam	83.0

Generalized Geologic Log and Other Observations:

- 0.0' - 8.5': Coarse sand and gravel.
- 8.5' - 9.5': Very coarse cobbly zone.
- 9.5' - 13.5': Silty very fine sand.
- 13.5' - 16.0': Silt, wet at bottom.
- 16.0' - 18.0': Silt, wet at bottom, liquefies and flows.
- 18.0' - 25.0': Silty fine sand.

Notes:

* = Peak Headspace Reading, Photovac MicroTIP HL-2000, calibrated to isobutylene. Background in garage fluctuating up to 10 ppm.
 BGS = Below Ground Surface, AGS = Above Ground Surface, NR = No Recovery

SOIL BORING / MONITORING WELL CONSTRUCTION LOG

BORING ID: MW-3 (no well set)

Client / Site:	Stowe Auto Service
Location:	Route 108, Stowe, Vermont
Project Number:	52-01
Driller:	G. Adams, Adams Engineering
Drilling Method:	2 3/4" vibratory spoon
Geologist:	S. French, Hoffer & Associates
Sampling Method:	2 3/8" vibratory spoon
Date:	4/4/96
Weather:	Clear and cool, 30°
Boring Location:	East of tank area

NO WELL SET

Sample Interval (feet BGS)	Total Driven / Recovery (feet)	Recovered Interval (feet)	Approximate Interval (feet BGS)	Sample Description	USDA / SCS Soil Classification	PID Reading* (ppm)
2.0 - 4.8	2.8 / 3.2	0.0 - 2.9	1.5 - 4.5	Very hard, compact and frozen, poorly sorted, silty fine to coarse sand and gravel, stones and pebbles to 4 cm (fill).	gravelly sand	3.2
		2.9 - 3.2	4.5 - 5.0	Brownish yellow, loose, dry, fine sandy silt (possibly still fill).	silt loam	3.2
4.8 - 9.8	5.0 / 4.2	0.0 - 4.0	5.0 - 9.0	Black, white, and multi-colored, very loose, dry, medium to coarse sand and gravel with pebbles to 4 cm.	gravelly sandy loam	3.4
		4.0 - 4.2	9.0 - 9.5	Greenish, slightly moist, fine sandy (20%) silt, with trace grit (larger coarse sand).	silt loam	3.4
9.8 - 14.8	5.0 / 4.1	0.0 - 4.1	10.0 - 14.8	Greenish, slightly moist, silty (30-40%) very fine sand. This sequence contains two almost pure silt lenses which are wet and 'flow,' approximately 0.05' thick (wet zone thicker).	sandy loam	2.8
14.8 - 19.8	5.0 / 3.9	0.0 - 3.9		Same as above, with one wet silt lens.	sandy loam	150.0
19.8 - 24.8	5.0 / 4.7	0.0 - 4.7		Same as above, but fully saturated throughout. Slight petrol odor but may be old?	sandy loam	176.0

Notes:

* = Peak Headspace Reading, Photovac MicroTIP HL-2000, calibrated to isobutylene. Background outside (with 5-10 mph wind) : 0.4 ppm.

BGS = Below Ground Surface, AGS = Above Ground Surface, NR = No Recovery

SOIL BORING / MONITORING WELL CONSTRUCTION LOG

WELL BORING ID: MW-4

Client / Site:	Stowe Auto Service
Location:	Route 108, Stowe, Vermont
Project Number:	52-01
Driller:	G. Adams, Adams Engineering
Drilling Method:	2 3/4" vibratory spoon
Geologist:	S. French, Hoffer & Associates
Sampling Method:	2 3/8" vibratory spoon
Date:	4/4/96
Weather:	Sunny but high clouds, 30°
Boring Location:	in front of coke machine by front door

Well Construction Information	
Total Depth Drilled:	25.0' BGS
Screen Type/Interval:	2" PVC 10-slot / 23.0' - 13.0' BGS
Riser Type/Interval:	2" PVC / 13.0' - 0.3' BGS
Sandpack Type/Interval:	Pool filter sand / 23.0' - 8.5' BGS
Seal Type/Interval:	Bentonite / 8.5' - 1.0' BGS

Sample Interval (feet BGS)	Total Driven / Recovery (feet)	Recovered Interval (feet)	Approximate Interval (feet BGS)	Sample Description	USDA / SCS Soil Classification	PID Reading* (ppm)
2.0 - 5.0	3.0 / 3.0	0.0 - 0.6	2.0 - 2.5	Multi-colored, very loose, dry, coarse sand and gravel (fill).	gravelly sand loam	3.2
		0.6 - 3.0	2.5 - 5.0	Yellowish brown, moist silt with gravel and some cobbles to 6 cm.	silt loam	3.1
5.0 - 10.0	5.0 / 3.8	0.0 - 2.3	5.0 - 7.5	Reddish yellow, dry, loose, poorly sorted fine to very coarse sand and gravel, cobbles to 4 cm (possibly still fill).	gravelly sandy loam	10.0
		2.3 - 3.0	7.5 - 10.0	Same as above, color is whiter and grayish.	gravelly sandy loam	45.5
10.0 - 15.0	5.0 / 4.2	0.0 - 1.2	10.0 - 11.5	Driller reports penetration slow (cobbles) from 10-15'. Same as above, bottom has big cobbles (6-8 cm).	gravelly sandy loam	1968.0
		1.2 - 4.2	11.5 - 15.0	Gray, slightly moist, loose, silty (15-20%) very fine sand (no silt lenses).	sandy loam	2500.0 (max.)
15.0 - 20.0	5.0 / 4.0	0.0 - 4.0	15.0 - 20.0	Same as above, no silt lenses. Last foot of sample is darker and moister with depth (cap fringe or staining?)	sandy loam (last foot)	2500.0
20.0 - 25.0	5.0 / 4.1	0.0 - 2.9	20.0 - 23.0	Same as above, fully saturated. This sequence contains black old product staining.	sandy loam	1938.0
		2.9 - 3.9	23.5 - 24.5	Gray, saturated, very fine sandy (20-30%) silt. This sequence has narrow (0.01') lenses of almost pure silt.	silt loam	
		3.9 - 4.1	24.5 - 25.0	Silty very fine sand.		

Notes:

* = Peak Headspace Reading, Photovac MicroTIP HL-2000, calibrated to isobutylene.
 BGS = Below Ground Surface, AGS = Above Ground Surface, NR = No Recovery

SOIL BORING / MONITORING WELL CONSTRUCTION LOG

WELL BORING ID: MW-5

Client / Site:	Stowe Auto Service
Location:	Route 108, Stowe, Vermont
Project Number:	52-01
Driller:	G. Adams, Adams Engineering
Drilling Method:	2 3/4" vibratory spoon
Geologist:	S. French, Hoffer & Associates
Sampling Method:	2 3/8" vibratory spoon
Date:	4/5/96
Weather:	Overcast and cool, light wind, 30°
Boring Location:	Directly in front of front desk

Well Construction Information	
Total Depth Drilled:	25.0' BGS
Screen Type/Interval:	2" PVC 10-slot / 23.0' - 13.0' BGS
Riser Type/Interval:	2" PVC / 13.0' - 0.3' BGS
Sandpack Type/Interval:	Pool filter sand / 23.0' - 5.0' BGS
Seal Type/Interval:	Bentonite / 8.5' - 5.0' BGS

Sample Interval (feet BGS)	Total Driven / Recovery (feet)	Recovered Interval (feet)	Approximate Interval (feet BGS)	Sample Description	USDA / SCS Soil Classification	PID Reading* (ppm)
2.0 - 5.0	3.0 / 2.7	0.0 - 1.2	2.0 - 3.5	Yellowish brown, moist silt with gravel and cobbles to 3 cm (fill).	silt loam	2.3
		1.2 - 2.7	3.5 - 5.0	Yellowish brown, dry and loose, medium to coarse sand with cobbles to 2 cm (fill).	sandy loam	3.9
5.0 - 10.0	5.0 / 3.9	0.0 - 3.9	5.0 - 10.0	Multi-colored, dry and loose, poorly sorted, fine to very coarse sand and gravel, cobbles to 6 cm.	gravelly sandy loam	5.5
10.0 - 15.0	5.0 / 0.9	0.0 - 0.9	10.0 - 11.0	Very little recovery. Same as above but mostly gray and whitish, petrol odors noted.	gravelly sandy loam	392.0
15.0 - 20.0	5.0 / 0.0			No recovery, rock in way, attempt to dislodge.		
20.0 - 25.0	5.0 / 0.0			No recovery, big cobble jammed in spoon.		

Notes:

* = Peak Headspace Reading, Photovac MicroTIP HL-2000, calibrated to isobutylene.

BGS = Below Ground Surface, AGS = Above Ground Surface, NR = No Recovery

SOIL BORING / MONITORING WELL CONSTRUCTION LOG

WELL BORING ID: MW-6

Client / Site:	Stowe Auto Service
Location:	Route 108, Stowe, Vermont
Project Number:	52-01
Driller:	G. Adams, Adams Engineering
Drilling Method:	2 3/4" vibratory spoon
Geologist:	S. French, Hoffer & Associates
Sampling Method:	2 3/8" vibratory spoon
Date:	4/6/96
Weather:	Partly cloudy, 30°
Boring Location:	East of building near property line

Well Construction Information	
Total Depth Drilled:	25.0' BGS
Screen Type/Interval:	2" PVC 10-slot / 25.0' - 15.0' BGS
Riser Type/Interval:	2" PVC / 15.0' - 0.3' BGS
Sandpack Type/Interval:	Natural pack/cave / 25.0' - 10.5' BGS
Seal Type/Interval:	Bentonite slurry / 10.5' - 1.0' BGS

Sample Interval (feet BGS)	Total Driven / Recovery (feet)	Recovered Interval (feet)	Approximate Interval (feet BGS)	Sample Description	USDA / SCS Soil Classification	PID Reading* (ppm)
2.0 - 5.0	3.0 / 3.0	0.0 - 0.6	2.0 - 2.5	Brown, moist, silt with gravel and cobbles to 3 cm (frozen).	silt loam	2.2
		0.6 - 3.0	2.5 - 5.0	Brown and yellow, dry, loose, medium to coarse sands with some layering of colors and grain size; last 0.2' is a cobble zone, to 5 cm.	gravelly sandy loam	1.8
5.0 - 10.0	5.0 / 4.0	0.0 - 4.0	5.0 - 10.0	Multi-colored, dry and loose, reasonably well stratified by grain size, coarse to very coarse sand and gravel, cobbles to 5 cm (river channel deposit).	gravelly loamy sand	1.3
10.0 - 15.0	5.0 / 4.2	0.0 - 1.0	10.0 - 11.0	Same as above.	gravelly loamy sand	2.2
		1.0 - 4.2	11.0 - 15.0	Greenish gray, moist, silty very fine sand with 2-3 silt lenses which are a lot moister, almost wet (lenses < 0.1' in width).	sandy loam	2.4
15.0 - 20.0	5.0 / 4.1	0.0 - 4.1	15.0 - 20.0	Same as above, but no silt lenses. This sequence moist at top, getting moister to 2' where it is wet, and saturated from 2.0' to end.	sandy loam	2.0
20.0 - 25.0	5.0 / 3.9	0.0 - 3.9	20.0 - 25.0	Same as above, fully saturated, with one silt lens approximately 0.05' in length.	sandy loam	2.0

Generalized Geologic Log and Other Observations:

- 0.0' - 2.5': Pavement, silty coarse fill.
- 2.5' - 11.0': Stratified medium to very coarse sands and gravels (buried stream deposits).
- 11.0' - 25.0': Silty very fine sand with occasional silt lenses (13.0' and 23.0'), water table at 17.0-18.0' BGS.

Notes:

* = Peak Headspace Reading, Photovac P101, calibrated to isobutylene. Background 5.0 ppm.
 BGS = Below Ground Surface, AGS = Above Ground Surface, NR = No Recovery

SOIL BORING / MONITORING WELL CONSTRUCTION LOG

WELL BORING ID: MW-7

Client / Site:	Stowe Auto Service
Location:	Route 108, Stowe, Vermont
Project Number:	52-01
Driller:	G. Adams, Adams Engineering
Drilling Method:	2 3/4" vibratory spoon
Geologist:	T. Schmalz
Sampling Method:	2 3/8" sample barrel
Date:	4/17/96
Weather:	Cold, cloudy, rainy
Boring Location:	Behind (to NW) Town & Country Inn

Well Construction Information	
Total Depth Drilled:	15.0' BGS
Screen Type/Interval:	2" PVC 0.010 inch / 15.0' - 5.0' BGS
Riser Type/Interval:	2" solid PVC / 5.0' - 0.5' BGS
Sandpack Type/Interval:	#1 filter sand / 15.0' - 4.0' BGS
Seal Type/Interval:	Bentonite slurry / 4.0' - 1.5' BGS

Sample Interval (feet BGS)	Total Driven / Recovery (feet)	Recovered Interval (feet)	Approximate Interval (feet BGS)	Sample Description	USDA / SCS Soil Classification	PID Reading* (ppm)
0 - 5.0	5.0 / 1.5	0 - 0.75		brown medium/coarse sand with fine gravel	sand	
		0.75 - 1.5		sand and fine/coarse gravel	gravelly sand	0.5
5.0 - 10.0	5.0 / 0.0	NR		NR		
10.0 - 15.0	5.0 / 4.0	0.0 - 4.0	10.0 - 14.0	Gray, soft, moist (becoming saturated) silt and firm sand; 20% very fine sand, 80% silt and clay (60/40 silt/clay). Coarser, reddish brown lenses present in sample above water table.	silty clay loam	0.3 0.5

Generalized Geologic Log and Other Observations:

0 - 5 sand and gravel

10.0' - 15.0': Firm, gray, sandy silts and silts, glacio-fluvial / alluvial deposits, some mottling present above water table.

Notes:

* = Peak Headspace Reading, Photovac MicroTIP HL-2000, calibrated to isobutylene.

BGS = Below Ground Surface, AGS = Above Ground Surface, NR = No Recovery

SOIL BORING / MONITORING WELL CONSTRUCTION LOG

WELL BORING ID: MW-8

Client / Site:	Stowe Auto Service
Location:	Route 108, Stowe, Vermont
Project Number:	52-01
Driller:	G. Adams, Adams Engineering
Drilling Method:	2 3/4" vibratory spoon
Geologist:	T. Schmalz / Hoffer & Associates
Sampling Method:	2 5/8" sample barrel
Date:	4/17/96
Weather:	Cold, cloudy, rainy
Boring Location:	Property line Stowe Auto / T & C Inn

Well Construction Information	
Total Depth Drilled:	25.0' BGS
Screen Type/Interval:	2" PVC 0.010 inch / 23.0' - 13.0' BGS
Riser Type/Interval:	2" solid PVC / 13.0' - 0.5' BGS
Sandpack Type/Interval:	#1 filter sand / 23.0' - 7.5' BGS
Seal Type/Interval:	Bentonite slurry / 7.5' - 1.5' BGS

Sample Interval (feet BGS)	Total Driven / Recovery (feet)	Recovered Interval (feet)	Approximate Interval (feet BGS)	Sample Description	USDA / SCS Soil Classification	PID Reading* (ppm)
0.0 - 5.0	5.0 / 3.0	0.0 - 3.0	0.0 - 1.0	Brown, moist silt with trace sand, soft (topsoil).	silt	
			1.0 - 2.5	Red-brown, medium silty sand; 60% fine to medium sands, 40% silt and clay, soft, moist.	sandy loam	0.4
			2.5 - 3.0	Gray-brown silty sand and gravel, moist; 50% well-graded rounded to subangular gravel, 30% well-graded sand, 20% silt and clay (50/50 silt/clay).	gravelly sandy loam	0.3
5.0 - 10.0	5.0 / 3.0	0.0 - 3.0	5.0 - 7.5	Brown-gray, gravelly silty sand, moist; 60% well-graded, rounded gravel, 30% fine to medium sand, 10% silt and clay.	gravelly sandy loam	0.1
			7.5 - 8.0	Brown-gray silt with fine sand; 60% silt and clay, firm, moist, low plasticity, tow toughness, 40% very fine sand.	silt loam	0.1
10.0 - 15.0	5.0 / 5.0	0.0 - 5.0	10.0 - 15.0	Same, as above.	silt loam	0.1
15.0 - 20.0	4.0 / 4.0	0.0 - 4.0	15.0 - 19.0	Same, as above, saturated at 18.0' BGS.		
20.0 - 25.0	NR			Same, as above.		

Generalized Geologic Log and Other Observations:

0.0 - 7.5': Brown, loose, alluvial sands and gravels.

7.5' - 25.0': Gray, firm sandy silts, glacio-fluvial.

Notes:

* = Peak Headspace Reading, Photovac MicroTIP HL-2000, calibrated to isobutylene.

BGS = Below Ground Surface, AGS = Above Ground Surface, NR = No Recovery

SOIL BORING / MONITORING WELL CONSTRUCTION LOG

WELL BORING ID: MW-9

Client / Site:	Stowe Auto Service
Location:	Route 108, Stowe, Vermont
Project Number:	52-01
Driller:	G. Adams, Adams Engineering
Drilling Method:	2 3/4" vibratory spoon
Geologist:	T. Schmalz / Hoffer & Associates
Sampling Method:	2 3/8" sample barrel
Date:	4/17/96
Weather:	Cold, cloudy, rainy
Boring Location:	By telephone pole at SE corner of lot

Well Construction Information	
Total Depth Drilled:	25.0' BGS
Screen Type/Interval:	2" PVC 0.010 inch / 24.5' - 14.5' BGS
Riser Type/Interval:	2" solid PVC / 14.5' - 0.5' BGS
Sandpack Type/Interval:	#1 filter sand / 24.5' - 13.0' BGS
Seal Type/Interval:	Bentonite slurry / 13.0' - 12.0' BGS (minimum)

Sample Interval (feet BGS)	Total Driven / Recovery (feet)	Recovered Interval (feet)	Approximate Interval (feet BGS)	Sample Description	USDA / SCS Soil Classification	PID Reading* (ppm)
0.0 - 5.0	5.0 / 2.0	0.0 - 2.0	0.0 - 2.0	Brown to gray, very firm gravelly dirt with sand (fill); 20% round to subrounded gravel, 10% sand, 70% silt and clay.	gravelly silt loam	0.1
5.0 - 10.0	5.0 / 2.0	0.0 - 2.0	5.0 - 7.0	Brown, gravelly silty sand; 50% medium to coarse, rounded to sub-rounded gravel, 30% sand, 20% silt and clay.	gravelly sandy loam	0.2
10.0 - 15.0	5.0 / 3.0	0.0 - 3.0	10.0 - 13.0	Gray to brown-gray silt with fine sand; 60% silt and clay, firm, dry to moist, 40% very fine sand.	silt loam	0.3
15.0 - 20.0	5.0 / 5.0	0.0 - 5.0	15.0 - 20.0	Same, as above, saturation at 17.0' BGS.	silt loam	0.2
20.0 - 25.0	NR			Same, as above.		

Generalized Geologic Log and Other Observations:

0.0 - 2.5': Asphalt and fill materials (coarse gravels and silty sands, moist).

2.5' - 7.0': Alluvial sands and gravels, loose.

7.0' - 25.0': Firm, alluvial / glacio-fluvial silty sands and silts, firm, gray, occasional silt and clay lenses. Water table at 17.0 - 18.0' BGS.

Notes:

* = Peak Headspace Reading, Photovac MicroTIP HL-2000, calibrated to isobutylene.

BGS = Below Ground Surface, AGS = Above Ground Surface, NR = No Recovery

SOIL BORING / MONITORING WELL CONSTRUCTION LOG

WELL BORING ID: MW-10

Client / Site:	Stowe Auto Service
Location:	Route 108, Stowe, Vermont
Project Number:	52-01
Driller:	G. Adams, Adams Engineering
Drilling Method:	2 3/4" vibratory spoon
Geologist:	J. Hoffer
Sampling Method:	2 7/8" sample barrel
Date:	5/11/96
Weather:	rain, 50 degrees
Boring Location:	T&CML property

Well Construction Information	
Total Depth Drilled:	20.0 feet BGS
Screen Type/Interval:	1" PVC slotted/wrapped from 9 - 19' BGS
Riser Type/Interval:	1" PVC riser from 0 - 9.0'
Sandpack Type/Interval:	fine sand
Seal Type/Interval:	bentonite slurry, 0 - 4.0'
Other:	developed with peristaltic, pumped clear

Sample Interval (feet BGS)	Total Driven / Recovery (feet)	Recovered Interval (feet)	Approximate Interval (feet BGS)	Sample Description	USDA / SCS Soil Classification	PID Reading* (ppm)
0.0 - 5.0	5.0 / 4.0	0-0.5	0-0.5	pavement	-	
		0.5 - 1.0	0.5 - 1.0	gray sand and gravel, loose, 2" mottled silt lense at 1.0'	sand	4.8
		1.0 - 3.0	1.0 - 3.0	tan medium sand, moist	sand	
		3.0 - 4.0	3.0 - 5.0	gray coarse/medium sand with medium gravel, dry	sand	
5.0 - 10.0	5.0 / 5.0	1.0 - 4.8	5.0 - 9.8	med/coarse sand and gravel, Fe-staining from 7.5 feet, wet at 9.6'	sand	1.0
		4.8 - 5.0	9.8 - 10.0	gray silt, wet	silt	2.0
10.0 - 15.0	5.0 / 5.0	0 - 4.0	10.0 - 14.0	dark gray silty fine sand (10-20% silt), some oxidized zones, wet	loamy sand	0.7
		4.0 - 5.0	14.0 - 15.0	light gray silt with fine sand (10-20% sand), wet	silt loam	3.2
15.0 - 20.0	5.0 / 5.0	0.0 - 5.0	15.0 - 20.0	gray fine sand some silt (varying from 10 - 45%), oxidized 15 - 16'	sandy loam	3.0

Generalized Geologic Log and Other Observations:

0 - 9.8' sands and gravels, loose, wet at bottom (from 9.6')

9.8 - 20.0' silt and fine sand, wet, oxidized zone at 15 - 16'

borehole collapsed while attempting to set 2" PVC well, well broke with bottom of screen at 13.0 feet (10 feet of screen) pushed drill rods through bottom of screen and set 10' of slotted 1-inch PVC from 9 - 19'

Notes:

* = Peak Headspace Reading, Photovac MicroTIP HL-2000, calibrated to isobutylene.

BGS = Below Ground Surface, AGS = Above Ground Surface, NR = No Recovery

SOIL BORING / MONITORING WELL CONSTRUCTION LOG

WELL BORING ID: MW-11

Client / Site:	Stowe Auto Service
Location:	Route 108, Stowe, Vermont
Project Number:	52-01
Driller:	G. Adams, Adams Engineering
Drilling Method:	2 3/4" vibratory spoon
Geologist:	J. Hoffer
Sampling Method:	2 3/8" sample barrel
Date:	5/11/96
Weather:	rain, 50 degrees
Boring Location:	T&CML property, 5' from bldg

Well Construction Information	
Total Depth Drilled:	20.0 feet BGS
Screen Type/Interval:	2" PVC 10-slot from 10 - 20
Riser Type/Interval:	2" PVC riser from 0 - 20
Sandpack Type/Interval:	fine sand
Seal Type/Interval:	bentonite slurry, 0 - 4.0'
Other:	developed with peristaltic, pumped clear

Sample Interval (feet BGS)	Total Driven / Recovery (feet)	Recovered Interval (feet)	Approximate Interval (feet BGS)	Sample Description	USDA / SCS Soil Classification	PID Reading* (ppm)
0.0 - 5.0	5.0 / 5.0	0 - 2.0	0 - 2.0	brown fine sand with silt, topsoil	3.03.0	
		2.0 - 5.0	2.0 - 5.0	brown med/coarse sand, some medium gravel, dry	sand	2.0
	5.0 / 0	-	5.0 - 10.0	brown sand and gravel (to cobble)	sand	-
10.0 - 15.0	5.0 / 2.5	0 - 2.3	10 - 12.5	brown sand and gravel, dry	sand	
		2.3 - 2.5	12.5 - 15	brown fine sand and silt, wet	sandy loam	5.1
15.0 - 20.0	5.0 / 3.0	0 - 3.0	15 - 20	gray fine sand and silt (10-25%), wet	sandy loam	3.0

Generalized Geologic Log and Other Observations:

- 0 - 13' sands and gravels, loose, wet at bottom (from 9.6')
- 13.0 - 20' fine sand silt, wet below 13'

Notes:

- * = Peak Headspace Reading, Photovac MicroTIP HL-2000, calibrated to isobutylene.
- BGS = Below Ground Surface, AGS = Above Ground Surface, NR = No Recovery

SOIL BORING / MONITORING WELL CONSTRUCTION LOG

BORING ID: SB-A (no well set)

Client / Site:	Stowe Auto Service
Location:	Route 108, Stowe, Vermont
Project Number:	52-01
Driller:	G. Adams, Adams Engineering
Drilling Method:	2 3/4" vibratory spoon
Geologist:	J. Hoffer / S. French, Hoffer & Assoc.
Sampling Method:	2 3/8" vibratory spoon
Date:	
Weather:	
Boring Location:	Two Feet North of RW-1

NO WELL SET

Sample Interval (feet BGS)	Total Driven / Recovery (feet)	Recovered Interval (feet)	Approximate Interval (feet BGS)	Sample Description	USDA / SCS Soil Classification	PID Reading* (ppm)
0.2 - 4.9	4.7 / 2.0	-	0 - 1.0	pavement/sub-base		
		1 - 1.3	1 - 3.0	wet brown silt with fine sand	silt	< 10
		1.3 - 2.0	3 - 4.7	brown f/m sand with some silt, dry, Fe-stained	sand	
4.9 - 9.9	5.0 / 3.0	0 - 0.3	4.9 - 5.2	olive-bn & reddish sand (f/m), moist in fines, otherwise dry	sand	
		0.3 - 0.6	5.2 - 5.8	orangish-bn medium sand, some pebble gravel, dry	sand	
		0.6 - 3.0	5.8 - 8.2	brown m/c sand, some fine sand, w/ cobble/pebbles, moist in fines, no odor	sand	< 1
9.9 - 14.9	5.0 / 5.0	0 - 4.0	9.9 - 14.9	grayish brown fine sand with silt (silt loam), dry	sandy loam	3.0
14.9 - 19.9	5.0 / 4.0	0 - 1	?	fluff from above?, moist yell-bn f/c sand & gravel	sand	
		1 - 1.8	15 - 16?	greenish-gray, moist at top, vfine sandy silt, layered	silt loam	
		1.8 - 4.0	16 - 19.9	greenish-gray silty fine - very fine sand, moist, wet at bottom of sequence	sandy loam	250
19.9 - 24.9	5.0 / 2.3	0 - 2.3	20 - 25?	as above, gray silty fine to very fine sand, wet,	sandy loam	
		1 - 1.8	15 - 16?	yellow-stained layering		

Notes:

* = Peak Headspace Reading, HNU P-101, calibrated to benzene.

BGS = Below Ground Surface, AGS = Above Ground Surface, NR = No Recovery

SOIL BORING / MONITORING WELL CONSTRUCTION LOG

BORING ID: SVE-1

Client / Site:	Stowe Auto Service
Location:	Route 108, Stowe, Vermont
Project Number:	52-01
Driller:	G. Adams, Adams Engineering
Drilling Method:	4" solid stem augers
Geologist:	S. French
Sampling Method:	No Samples
Date:	4/5/96
Weather:	
Boring Location:	release area

Well Construction Information	
Total Depth Drilled:	20 feet
Screen Type/Interval:	2" PVC 10-slot from 9.5 - 19.5' BGS
Riser Type/Interval:	2" PVC riser from 0 - 9.5' BGS
Sandpack Type/Interval:	#2 Sand to 10', filter sand to 9'
Seal Type/Interval:	bentonite slurry, 4 - 8' BGS
Other:	

SOIL BORING / MONITORING WELL CONSTRUCTION LOG

BORING ID: SVE-2

Client / Site:	Stowe Auto Service
Location:	Route 108, Stowe, Vermont
Project Number:	52-01
Driller:	G. Adams, Adams Engineering
Drilling Method:	4" solid stem augers
Geologist:	S. French
Sampling Method:	No Samples
Date:	4/5/96
Weather:	
Boring Location:	release area

Well Construction Information	
Total Depth Drilled:	20 feet
Screen Type/Interval:	2" PVC 10-slot from 9.5 - 19.5' BGS
Riser Type/Interval:	2" PVC riser from 0 - 9.5' BGS
Sandpack Type/Interval:	#2 Sand to 9.5', filter sand to 7.5'
Seal Type/Interval:	bentonite slurry, 4 - 7.5' BGS
Other:	

SOIL BORING / MONITORING WELL CONSTRUCTION LOG

BORING ID: SVE-3

Client / Site:	Stowe Auto Service
Location:	Route 108, Stowe, Vermont
Project Number:	52-01
Driller:	G. Adams, Adams Engineering
Drilling Method:	4" solid stem augers
Geologist:	S. French
Sampling Method:	No Samples
Date:	4/5/96
Weather:	
Boring Location:	release area

Well Construction Information	
Total Depth Drilled:	20 feet
Screen Type/Interval:	2" PVC 10-slot from 10.1 - 20.1' BGS
Riser Type/Interval:	2" PVC riser from 0 - 10.1' BGS
Sandpack Type/Interval:	#2 Sand to 10.1', filter sand to 8'
Seal Type/Interval:	bentonite slurry, 4 - 8' BGS
Other:	

SOIL BORING / MONITORING WELL CONSTRUCTION LOG

BORING ID: GeoProbe Monitoring Wells GP-1 through GP-5

Client / Site:	Stowe Auto Service
Location:	Route 108, Stowe, Vermont
Project Number:	52-01
Driller:	Twin State Environmental
Drilling Method:	GeoProbe
Geologist:	Jeff Hoffer
Sampling Method:	No Samples
Date:	4/5/96
Weather:	
Boring Location:	release area

Wells constructed with 1-inch diameter PVC well screens and riser
10 feet of screen for each well, screened from 15 to 25 feet below grade

SHELBURNE VT 05482

0' well

414

WELL OWNER Stone Club Assoc.

WELL DRILLER Dean

Name Mailing Address BILL ITEMS 1 & 2 OF PROPOSAL - SEE ATT.

Name Mailing Address 6660

PROPOSED USE OR USES: (Check):

- Domestic
- Agriculture
- Business Establishment
- Municipal
- Industrial
- Other (Specify use):

	CASING DETAILS (Inside)	YIELD TEST		WATER LEVEL (From land surface if possible)
<input checked="" type="checkbox"/> New Well	01-006 Length: <u>173</u> Feet	<input type="checkbox"/> Bailed or <input type="checkbox"/> Pumped or <input type="checkbox"/> Compressed Air	Hours GPM	Static _____ Feet During Yield Test: _____ Feet
<input type="checkbox"/> Replacement Well	Diameter: <u>8"</u> Inches	<u>Screen to be put in later</u>		DRILLING EQUIPMENT <input type="checkbox"/> Cable Tool <input type="checkbox"/> Rotary <input type="checkbox"/> Air Percussion <input type="checkbox"/> Other (Specify)
<input type="checkbox"/> Set-Over Existing Well	Kind: _____ Weight: _____ lbs./p.ft.			
	<input type="checkbox"/> New <input type="checkbox"/> Used	Yield:	GPM	

TOTAL DEPTH OF WELL 172 FEET TOWN WELL IS LOCATED IN: Stone
(Make sketch of well location on reverse side of sheet.)

01-006 - WELL LOG -

Depth From Ground Surface	Give description of formations penetrated, such as peat, silt, sand, gravel, clay, hardpan, shale, limestone, granite, etc. Include size of gravel (diameter) and sand (fine, medium, coarse) color of material, structure (loose, packed, cemented, hard). For example; 0 ft. to 27 ft. fine, packed, yellow sand; 27 ft. to 134 ft. gray granite.	
<u>0</u> ft. to <u>8</u> ft.	<u>Brown sand</u>	<u>Casing dropped 22' and</u>
<u>8</u> ft. to <u>15</u> ft.	<u>Gravel</u>	<u>with out drilling</u>
<u>18</u> ft. to <u>142</u> ft.	<u>inty clay</u>	<u>pulled back and welded.</u>
<u>142</u> ft. to <u>172</u> ft.	<u>Gravel</u>	<u>14" casing</u>
_____ ft. to _____ ft.	<u>they took samples to send soil</u>	

DATE WELL STARTED 11/9 DATE WELL COMPLETED 11/3

Bits Used # 15 Footage 39' Daily Footage _____
 # 10 5/8 172
 # _____
 # _____
 8" Bit _____

DRILLER'S HOURS 11 HELPER'S HOURS 11 Spib

WELL OWNER Stone Club Assoc.
Name

Mailing Address

WELL DRILLER Dean
Name

BILL ITEMS 1 & 2 OF PROPOSAL - SEE ATT.

Mailing Address

PROPOSED USE OR USES: (Check):

- Domestic
- Agriculture
- Business Establishment
- Municipal
- Industrial
- Other (Specify use): _____

6660

	CASING DETAILS (Inside)	YIELD TEST		WATER LEVEL (From land surface if possible)
<input checked="" type="checkbox"/> New Well	01-006 Length: <u>173</u> Feet	<input type="checkbox"/> Bailed or Pumped or Compressed Air	Hours	Static _____ Feet During Yield Test: _____ Feet
<input type="checkbox"/> Replacement Well	Diameter: <u>8</u> Inches		GPM	
<input type="checkbox"/> Set-Over Existing Well	Kind: _____ Weight: _____ lbs./pft.	Screen to be put in line		DRILLING EQUIPMENT
	<input type="checkbox"/> New <input type="checkbox"/> Used	Yield: _____ GPM		<input type="checkbox"/> Cable Tool <input type="checkbox"/> Rotary <input type="checkbox"/> Air Percussion <input type="checkbox"/> Other (Specify)

TOTAL DEPTH OF WELL 172 FEET TOWN WELL IS LOCATED IN: Stone
(Make sketch of well location on reverse side of sheet.)

01-006 - WELL LOG -

Depth From Ground Surface	Give description of formations penetrated, such as peat, silt, sand, gravel, clay, hardpan, shale, limestone, granite, etc. Include size of gravel (diameter) and sand (fine, medium, coarse) color of material, structure (loose, packed, cemented, hard). For example; 0 ft. to 27 ft. fine, packed, yellow sand; 27 ft. to 134 ft. gray granite.	
<u>0</u> ft. to <u>8</u> ft.	<u>Brown sand</u>	<u>Casing dropped 22'</u>
<u>8</u> ft. to <u>18</u> ft.	<u>Gravel</u>	<u>with set drilling</u>
<u>18</u> ft. to <u>142</u> ft.	<u>silty clay</u>	<u>pulled back and welded.</u>
<u>142</u> ft. to <u>172</u> ft.	<u>Gravel</u>	<u>14" casing</u>
ft. to ft.	<u>they took samples to send to lab</u>	

DATE WELL STARTED 11/2

DATE WELL COMPLETED 11/3

Bits Used # 15
10 5/8

Footage 39'
to 172

Daily Footage _____
40' of 14" working casing

8" Bit _____
DRILLER'S HOURS 11

HELPER'S HOURS 11 Strub

WELL OWNER

3448
Grey Fox Town

RPD/ Box 400, Stone

WELL DRILLER

Sammy
6375

PROPOSED USE OR USES (Check):

- Domestic
- Agriculture
- Business Establishment
- Municipal
- Industrial
- Other (specify use):

CASING DETAILS (Inside)	YIELD TEST		WATER LEVEL (From land surface if possible)	
Length: <i>147'4"</i> Feet	<input type="checkbox"/> Bailed or <input type="checkbox"/> Pumped or <input type="checkbox"/> Compressed Air	Hours	Static:	Feet
Diameter: <i>6</i> Inches		GPM	During Yield Test:	Feet
Kind:		DRILLING EQUIPMENT <input type="checkbox"/> Cable Tool <input type="checkbox"/> Rotary <input type="checkbox"/> Air Percussion <input type="checkbox"/> Other (specify)		
Weight: lbs./p.ft.	Yield: <i>18</i> GPM			
<input type="checkbox"/> New <input type="checkbox"/> Used	<i>well cap \$55</i>			

TOTAL DEPTH OF WELL

423 FEET

TOWN WELL IS LOCATED IN: *Stone*
(Make sketch of well location on reverse side of sheet)

#7 - - WELL LOG - -

Depth From Ground Surface	Give description of formations penetrated, such as: peat, silt, sand, gravel, clay, hardpan, shale, limestone, granite, etc. Include size of gravel (diameter) and sand (fine, medium, coarse) color of material, structure (loose, packed, cemented, hard). For example; 0 ft. to 27 ft. fine, packed, yellow sand; 27 ft. to 134 ft. gray granite.
<i>0</i> ft. to <i>18</i> ft.	<i>Gravel</i>
<i>18</i> ft. to <i>86</i> ft.	<i>clay + Hardpan</i>
<i>86</i> ft. to <i>123</i> ft.	<i>Grey Sand.</i>
ft. to ft.	
ft. to ft.	

DATE WELL STARTED

May 6

DATE WELL COMPLETED

5/7/87

Bits Used = *Galley*

Footage *27*

Daily Footage *128*

8" Bit

96

DRILLERS HOURS

HELPERS HOURS

MAY 12 1987

WELL OWNER

Sony Fox Inn

Name

Mailing Address

WELL DRILLER

Sony

Name

Mailing Address

PROPOSED USE OR USES (Check):

- Domestic
- Agriculture
- Business Establishment
- Municipal
- Industrial
- Other (specify use):

CASING DETAILS (Inside)		YIELD TEST		WATER LEVEL (From land surface if possible)	
Length: Feet	<input type="checkbox"/> Bailed or <input type="checkbox"/> Pumped or <input type="checkbox"/> Compressed Air	Hours	Static: Feet	During Yield Test: Feet	
Diameter: Inches		GPM			
Kind:		Yield: GPM	DRILLING EQUIPMENT <input type="checkbox"/> Cable Tool <input type="checkbox"/> Rotary <input type="checkbox"/> Air Percussion <input type="checkbox"/> Other (specify)		
Weight: lbs./p.ft.					
<input type="checkbox"/> New <input type="checkbox"/> Used					

TOTAL DEPTH OF WELL

FEET

TOWN WELL IS LOCATED IN: *Ston*

(Make sketch of well location on reverse side of sheet)

— WELL LOG —

Depth From Ground Surface	Give description of formations penetrated, such as: peat, silt, sand, gravel, clay, hardpan, shale, limestone, granite, etc. Include size of gravel (diameter) and sand (fine, medium, coarse) color of material, structure (loose, packed, cemented, hard). For example; 0 ft. to 27 ft. fine, packed, yellow sand; 27 ft. to 134 ft. gray granite.
<i>123 ft. to 146 ft.</i>	<i>Gray Sand</i>
<i>146 ft. to 298 ft.</i>	<i>Gray shale with bits & chert</i>
ft. to ft.	
ft. to ft.	
ft. to ft.	<i>Water at ¹⁰⁵ 244 + ³ 272</i>

DATE WELL STARTED *May 7*

DATE WELL COMPLETED

Bits Used # *244728*

Footage *175*

Daily Footage *175*

8" Bit

DRILLERS HOURS

10

HELPERS HOURS

10

OWNER Grey Fox Inn Name Mailing Address

WELL DRILLER Sonny Name Mailing Address

PROPOSED USE OR USES (Check):

Domestic Agriculture Business Establishment Municipal Industrial

Other (specify use):

CASING DETAILS (Inside)		YIELD TEST		WATER LEVEL (From land surface if possible)	
Length: Feet		<input type="checkbox"/> Baled or <input type="checkbox"/> Pumped or <input type="checkbox"/> Compressed Air	Hours	Static: Feet	
Diameter: Inches			GPM	During Yield Test: Feet	
Kind:				DRILLING EQUIPMENT	
Weight: lbs./p/ft.				<input type="checkbox"/> Cable Tool	
<input type="checkbox"/> New <input type="checkbox"/> Used		Yield: 18 GPM		<input type="checkbox"/> Rotary	
				<input type="checkbox"/> Air Percussion	
				<input type="checkbox"/> Other (specify)	

TOTAL DEPTH OF WELL 423 FEET TOWN WELL IS LOCATED IN: Stowe
 (Make sketch of well location on reverse side of sheet)

— WELL LOG —

Depth From Ground Surface	Give description of formations penetrated, such as: peat, silt, sand, gravel, clay, hard pan, shale, limestone, granite, etc. Include size of gravel (diameter) and sand (fine medium, coarse) color of material, structure (loose, packed, cemented, hard). For example; 0 ft. to 27 ft. fine, packed, yellow sand; 27 ft. to 134 ft. gray granite
<u>298</u> ft. to <u>423</u> ft.	<u>Grey Green shale</u>
ft. to ft.	
ft. to ft.	
ft. to ft.	
ft. to ft.	<u>Water at 418'</u>

DATE WELL STARTED _____ DATE WELL COMPLETED May 8

Bits Used # 244728 Footage 125 Daily Footage 125

8" Bit _____

DRILLERS HOURS 10 HELPERS HOURS 9 1/2

Sonny + Peers *Bob B.*

PUMP & WELL RECORD

OWNER: <u>GREY FOX INN</u>		DATE: <u>5/7/87</u>
ADDRESS: <u>RD#1 Box 400</u>		LOCATION OF WELL: <u>STOWE</u>
<u>Stowe VT 253-8921</u>		
<u>pump installed 6-10-87</u>		
WELL DEPTH: <u>423'</u>	PUMP <u>3/4 H.P. 7E H</u> MODEL: <u>V046742</u>	TANK SIZE & TYPE: <u>302 4/19/93</u>
FLOW RATE: <u>18 GPM</u>	PUMP SERIAL NO:	CABLE SIZE:
PUMPING WATER LEVEL:	HORSEPOWER:	CABLE LENGTH:
PUMP SETTING: <u>400'</u>	MOTOR MAKE:	HEATERS USED:
PIPE SIZE: <u>1" Super</u>	MOTOR DATE CODE:	CURRENT & VOLTAGE READING (BY LEG) } L-1 _____ L-2 _____ L-3 _____
CASING SIZE: <u>147'4"</u>	3 PHASE STARTER SIZE:	

DATE	MW-5				RW-1			
	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Bailed (gallons)	Depth to Free Product (ft)	Depth to Water (ft)	Free Product Thickness (ft)	Bailed (gallons)
4/14/98	-	18.41	0					
4/22/98	-	17.43	0					
5/19/98	18.05	18.82	0.77	0.125		dry to 16.5'		
6/22/98	17.8	18.52	0.72	0.12		dry to 16.4'		
7/2/98	17.67	18.12	0.45	0.0625				
10/2/98	19.62	20.21	0.59	0.0625		dry to 16'		
10/30/98	19.27	20.09	0.82	0.0625		dry to 16'		
2/11/99	18.2	18.78	0.58	0.0625				
6/10/99	18.36	19.16	0.8	0		dry to 16'		
6/22/99	20.02	20.29	0.27	0		dry to 16'		
			TOTAL	0.50				

7/7/98 - removed ERS recovery pumps from MW-5 and RW-1

RW-1				
DATE	DEPTH TO		PRODUCT THICKNESS (feet)	VOLUME OF PRODUCT REMOVED (gals)
	PRODUCT (feet)	WATER (feet)		
4/4/96	21.08	22.09	1.01	
4/7/96	21.36	22.10	0.74	
4/7/96	21.33	21.89	0.56	
4/8/96	21.11	22.32	1.21	1.00
4/17/96	20.10	20.91		
4/19/96			0.51	0.75
4/20/96	19.77	20.21	0.44	0.25
4/21/96			<i>total as of 4/21</i>	4.10
4/22/96	19.50	19.96	0.46	0.25
4/24/96	18.89	19.06	0.17	0.25
4/25/96	18.82	19.14	0.32	0.25
4/26/96	18.75	19.09	0.34	0.10
4/27/96	18.61	18.85	0.24	0.10
4/28/96	18.59	18.78	0.19	<0.1
4/29/96	18.56	18.75	0.19	<0.1
4/30/96	18.55	18.76	0.21	<0.1
5/1/96	18.46	18.61	0.15	<0.1
5/2/96	18.45	18.62	0.17	<0.1
5/3/96	18.48	18.57	0.09	<0.1
5/4/96	18.41	18.56	0.15	<0.1
5/5/96	18.40	18.53	0.13	<0.1
5/6/96	18.43	18.51	0.08	<0.1
5/7/96	18.55	18.64	0.09	<0.1
5/8/96	19.58	19.67	0.09	<0.1
5/9/96	18.64	18.75	0.11	<0.1
5/10/96	18.65	18.84	0.19	<0.1
5/11/96	18.52	18.72	0.20	<0.1
5/12/96	18.30	18.39	0.09	<0.1
5/13/96	18.34	18.43	0.09	<0.1
5/17/96	18.43	18.55	SOAKEASE INSTALLED	
5/19/96		18.49	<i>(water levels measured after removing soakease)</i>	
5/20/96				
5/21/96		18.54		
5/25/96		18.95		

Free Product Removed from RW-1 with ERS Recovery Pump installed on 7/10/97,
Stowe Auto Service, Stowe, Vermont.

Date/Time	Quantity FP in Drum (In.)	Quantity Recovered (Interval)	Gallons Recovered (Interval)	Gallons Recovered (total)	Hours Online	Recovery Rate (Interval, gpd)	Average Recovery Rate (gpd)	COMMENTS
7/10/97 11:30	0.00	0.00	0.00	0.00	0.0	0.000	0.00	Install pump, set to 3 hr. cycle
7/11/97 11:30	0.10	0.10	0.18	0.18	24.0	0.175	0.18	estimated volume in drum
7/14/97 13:00	2.50	2.40	4.20	4.38	97.5	1.371	1.08	2 hr. cycle
7/21/97 14:00	3.63	1.13	1.97	6.34	266.5	0.280	0.57	
7/24/97 9:00	4.25	0.63	1.09	7.44	333.5	0.392	0.54	
7/29/97 16:00	5.00	0.75	1.31	8.75	460.5	0.248	0.46	
8/4/97 16:00	6.25	1.25	2.19	10.94	604.5	0.365	0.43	
8/11/97 15:00	7.13	0.88	1.53	12.47	771.5	0.220	0.39	
8/16/97 9:00	7.50	0.38	0.66	13.13	885.5	0.138	0.36	
8/28/97 12:00	7.50	0.00	0.00	13.13	1176.5	0.000	0.27	
9/2/97 14:00	7.50	0.00	0.00	13.13	1298.5	0.000	0.24	
9/15/97 16:00	7.50	0.00	0.00	13.13	1612.5	0.000	0.20	
10/13/97 16:00	7.50	0.00	0.00	13.13	2284.5	0.000	0.14	
10/17/97 15:30	11.38	3.88	6.78	19.91	2380.0	1.704	0.20	
10/22/97 13:45	13.88	2.50	4.38	24.28	2498.3	0.888	0.23	
10/29/97 14:30	15.00	1.13	1.97	26.25	2667.0	0.280	0.24	
11/4/97 15:10	17.38	2.38	4.16	30.41	2811.7	0.690	0.26	
11/11/97 14:40	22.50	5.13	8.97	39.38	2979.2	1.285	0.32	
11/21/97 8:30	25.00	2.50	4.38	43.75	3213.0	0.449	0.33	
11/24/97 13:30	25.50	0.50	0.88	44.63	3290.0	0.273	0.33	
12/3/97 15:15	15.50	15.50	27.13	27.13	3507.8	0.186	0.19	corrected for 12.5" water in drum
12/10/97 14:30	1.00	1.00	1.75	28.88	3675.0	0.189	0.19	new drum
12/15/97 11:00	1.25	0.25	0.44	29.31	3791.5	0.090	0.19	
12/19/97 12:30	1.50	0.25	0.44	29.75	3889.0	0.108	0.18	
1/2/98 14:30	2.25	0.75	1.31	31.06	4227.0	0.093	0.18	
1/9/98 15:45	3.50	1.25	2.19	33.25	4396.3	0.310	0.18	ice melting-incorrect msmt of FP
1/12/98 15:30	3.00	-0.50	-0.88	32.38	4468.0	-0.293	0.17	ice melting-incorrect msmt of FP
1/19/98 14:30	2.63	-0.38	-0.66	31.72	4635.0	-0.094	0.16	ice melting-incorrect msmt of FP

Recovery Prior to Installation of Pump (up to 5/20/97) 60.2

TOTAL RECOVERED 92.6

MW-5				
DATE	DEPTH TO		PRODUCT THICKNESS (feet)	VOLUME OF PRODUCT REMOVED (gals)
	PRODUCT (feet)	WATER (feet)		
4/6/96	19.68	21.32		
4/7/96	20.28	20.57	0.29	
4/7/96	20.06	20.56	0.50	
4/8/96	18.95	21.53	2.58	0.25
4/9/96	19.89	22.30	2.41	0.25
4/10/96	20.89	21.67	0.78	0.10
4/15/96				
4/17/96				
4/19/96			2.80	0.75
4/20/96	19.45	22.00	2.55	0.75
4/21/96			<i>total as of 4/21</i>	<i>18.90</i>
4/22/96	18.85	21.32	2.47	0.66
4/24/96	17.37	21.67	4.30	0.75
4/25/96	17.92	21.28	3.36	0.60
4/26/96	17.68	21.31	3.63	0.75
4/27/96	17.81	21.45	3.64	0.75
4/28/96	17.74	21.45	3.71	0.75
4/29/96	17.74	20.84	3.10	1.75
4/30/96	17.47	21.40	3.93	0.75
5/1/96	17.59	21.23	3.64	0.75
5/2/96	17.56	21.35	3.79	0.75
5/3/96	17.49	21.38	3.89	0.75
5/4/96	17.44	21.58	4.14	0.75
5/5/96	17.46	21.47	4.01	1.75
5/6/96	17.44	21.50	4.06	SWAP

Free Product Removed from MW-5 with ERS Recovery Pump installed on 1/8/97,
Stowe Auto Service, Stowe, Vermont.

Date/Time	Quantity FP in Drum (in.)	Quantity Recovered (interval)	Gallons Recovered (interval)	Gallons Recovered (total)	Hours Online	Recovery Rate (interval, gpd)	Average Recovery Rate (gpd)	Notes
1/8/97 13:45	0.00	0.00	0.00	0.00	0.0	0.000	0.00	
1/13/97 11:00	2.75	2.75	4.81	4.81	117.3	0.565	0.99	
1/15/97 14:30	3.25	0.50	0.88	5.69	168.8	0.408	0.81	frost-proof lines, clean bladder in pump
1/17/97 9:00	6.75	3.50	6.13	11.81	211.3	3.459	1.34	
1/20/97 13:45	8.83	1.88	3.28	15.09	288.0	1.028	1.26	
1/21/97 9:30	9.00	0.38	0.66	15.75	307.8	0.797	1.23	set timer to 0.33/hr. purge
1/22/97 16:30	10.13	1.13	1.97	17.72	336.8	1.524	1.26	
1/24/97 13:30	11.25	1.13	1.97	19.69	363.8	1.050	1.23	
1/27/97 9:30	14.13	2.88	5.03	24.72	451.8	1.778	1.31	set timer to 0.25/hr purge
1/29/97 11:40	16.25	2.13	3.72	28.44	501.9	1.779	1.36	
1/30/97 14:15	17.50	1.25	2.19	30.63	528.5	1.975	1.39	
1/31/97 8:55	18.38	0.88	1.53	32.16	547.2	1.969	1.41	
2/3/97 8:40	21.13	2.75	4.81	36.97	618.9	1.610	1.43	
2/4/97 8:45	22.00	0.88	1.53	38.50	643.0	1.526	1.44	set to 1 sec. disch.
2/5/97 15:00	23.25	1.25	2.19	40.69	673.3	1.736	1.45	
2/6/97 8:25	23.75	0.50	0.88	41.56	690.7	1.206	1.44	
2/10/97 14:40	25.75	2.00	3.50	45.06	792.9	0.822	1.36	drum full, switch out
2/13/97 9:00	2.75	2.75	4.81	49.87	859.3	1.740	1.39	set to 2 sec. disch. 0.2 hr rech.
2/14/97 14:45	6.75	4.00	7.00	56.87	889.0	5.647	1.54	
2/17/97 16:10	15.83	8.88	15.53	72.40	952.4	5.077	1.61	
2/18/97 8:25	17.63	2.00	3.50	75.90	978.7	5.169	1.66	
2/20/97 16:55	24.63	7.01	12.26	88.16	1035.2	5.207	2.04	
2/21/97 9:15	25.50	0.87	1.52	89.69	1051.5	2.237	2.05	set to 2.5 sec. disch. 0.1 hr rech.
2/24/97 12:00	27.13	1.83	2.84	92.53	1126.3	0.913	1.97	drum full, switch out
2/25/97 18:00	5.13	5.13	8.97	101.50	1184.0	7.689	2.11	
2/27/97 11:45	14.63	9.50	16.63	118.12	1198.0	9.120	2.37	
2/28/97 9:30	18.88	4.25	7.44	125.56	1219.8	8.207	2.47	
3/4/97 9:00	27.38	8.50	14.88	140.44	1315.3	3.738	2.56	drum full, switch out, set to 0.25 hr. rech.
3/10/97 14:30	5.00	5.00	8.75	149.19	1464.8	1.406	2.44	
3/13/97 16:00	7.50	2.50	4.38	153.57	1538.3	1.429	2.40	drum full, sw. out, set to 0.4 hr. rech.
3/18/97 9:15	16.00	10.50	18.38	171.94	1651.5	3.694	2.50	
3/19/97 9:15	1.68	1.68	3.28	175.22	1675.5	3.281	2.51	
3/21/97 11:00	4.38	2.50	4.38	179.60	1725.3	2.111	2.50	
3/24/97 14:50	6.50	2.13	3.72	183.32	1801.1	1.177	2.44	
3/26/97 15:00	6.08	0.38	0.66	183.97	1849.3	0.327	2.39	airline broken; repaired, working ok
4/7/97 12:00	14.76	7.89	13.80	197.77	2134.3	1.162	2.22	
4/10/97 12:00	14.76	0.00	0.00	197.77	2206.3	0.000	2.15	
4/15/97 12:00	5.83	5.83	9.85	207.62	2326.3	1.971	2.14	new drum
4/21/97 13:00	8.88	4.25	7.43	215.05	2471.3	1.230	2.09	
5/1/97 9:45	18.76	8.88	15.53	230.58	2708.0	1.574	2.04	
5/5/97 8:30	22.63	3.88	6.78	237.36	2802.9	1.718	2.03	
5/13/97 11:00	27.06	4.38	7.68	245.02	2937.3	0.945	1.96	
5/22/97 14:00	0.13	0.13	0.23	206.26	3216.3	0.930	1.54	new drum, vol. adj. for water in drum
5/27/97 12:00	3.63	3.50	6.13	212.38	3334.3	1.246	1.53	install new skimmer/FFS prototype
5/28/97 16:30	4.50	0.88	1.53	213.92	3362.8	1.289	1.53	
5/30/97 15:30	4.50	0.00	0.00	213.92	3409.8	0.000	1.51	
6/2/97 10:00	4.50	0.00	0.00	213.92	3476.3	0.000	1.48	
6/4/97 8:00	4.88	0.38	0.66	214.57	3522.3	0.342	1.46	
6/5/97 14:23	6.63	1.75	3.06	217.63	3552.7	2.416	1.47	
6/6/97 14:00	11.50	4.88	8.53	226.17	3648.3	2.142	1.49	
6/16/97 13:00	18.25	6.75	11.81	237.98	3815.3	1.698	1.50	
6/18/97 10:25	20.63	2.38	4.16	242.13	3860.7	2.196	1.51	
6/20/97 14:50	20.76	0.14	0.24	242.37	3913.1	0.108	1.49	levels corrected for water
6/23/97 9:30	3.50	3.50	6.13	248.50	3978.8	2.206	1.50	new drum installed 6/20
6/27/97 9:15	8.00	4.50	7.88	256.37	4075.5	1.974	1.51	
6/30/97 15:00	12.13	4.13	7.22	263.59	4153.3	2.228	1.52	Palco shutdown 7/3/97, poor recovery
7/7/97 13:00	13.50	1.38	2.41	266.00	4319.3	0.348	1.48	
7/14/97 13:00	13.83	0.13	0.22	266.21	4487.3	0.031	1.42	reset downhole skimmer unit ballast
7/21/97 14:00	20.38	6.75	11.81	278.03	4656.3	1.678	1.43	
7/24/97 9:00	22.75	2.38	4.16	282.18	4723.3	1.469	1.43	
7/29/97 16:00	27.00	4.25	7.44	289.62	4850.3	1.406	1.43	new drum, 3" of liquids already in drum
8/4/97 16:00	9.25	6.25	10.94	300.56	4994.3	1.823	1.44	
8/11/97 15:00	16.00	6.75	11.81	312.37	5181.3	1.698	1.45	
8/16/97 9:00	23.00	7.00	12.25	324.62	5275.3	2.579	1.48	
8/26/97 12:00	27.50	4.50	7.88	332.50	5586.3	0.849	1.43	
9/2/97 15:30	28.13	0.63	1.09	333.59	5689.8	0.213	1.41	new drum
9/15/97 16:30	7.63	7.63	13.34	346.93	6002.8	1.023	1.39	
10/13/97 16:00	26.00	18.38	32.16	379.09	6674.3	1.149	1.36	
10/17/97 15:30	27.00	1.00	1.75	380.84	6769.8	0.440	1.35	
10/22/97 13:45	1.50	1.50	2.53	383.46	6868.0	0.533	1.34	new drum, reset to 2 hours
10/29/97 15:20	3.63	2.13	3.72	387.16	7057.6	0.526	1.32	
11/4/97 15:10	5.63	2.00	3.50	390.69	7291.4	0.584	1.30	
11/11/97 14:40	7.75	2.13	3.72	394.40	7368.9	0.533	1.28	
11/21/97 8:30	9.50	1.75	3.06	397.46	7602.8	0.314	1.25	
11/24/97 13:30	11.75	2.25	3.94	401.40	7679.8	1.227	1.25	
12/3/97 15:15	10.83	-1.13	-1.97	399.43	7897.5	-0.217	1.21	corrected for 1" water in drum
12/10/97 14:30	12.00	1.38	2.41	401.84	8064.8	0.345	1.20	
12/15/97 11:30	13.50	1.50	2.63	404.46	8181.8	0.538	1.19	
12/19/97 12:30	14.00	0.50	0.88	405.34	8278.8	0.216	1.18	
1/2/98 14:30	15.63	1.63	2.94	408.18	8416.8	0.202	1.14	
1/6/98 15:45	16.50	0.88	1.53	409.71	8786.0	-0.217	1.12	incorrect mount. ? due to melting of ice in drum
1/12/98 15:30	15.50	-1.00	-1.75	407.96	8657.8	-0.585	1.11	incorrect mount. ? due to melting of ice in drum
1/19/98 14:30	15.13	-0.38	-0.66	407.31	9024.8	-0.094	1.08	incorrect mount. ? due to melting of ice in drum

Volume Recovered Prior to ERS Pump (pre 1/8/97) 78

TOTAL RECOVERED 484

RW-3				
DATE	DEPTH TO		PRODUCT THICKNESS (feet)	VOLUME OF PRODUCT REMOVED (gals)
	PRODUCT (feet)	WATER (feet)		
6/20/96	19.55	20.20	0.65	0.25
7/3/96	18.19	18.30	0.11	
7/29/96		18.25	0.00	
8/5/96		18.90	0.00	
8/13/96				0.00
9/5/96	19.35	19.37	0.02	0.00
10/11/96	-	19.50	-	0.00

**TOTAL VOLUMES OF PRODUCT
 RECOVERED TO DATE (gals) 0.3
 RW-3**

RW-4				
DATE	DEPTH TO		PRODUCT THICKNESS (feet)	VOLUME OF PRODUCT REMOVED (gals)
	PRODUCT (feet)	WATER (feet)		
7/3/96	19.71	19.71	0.00	
7/29/96		19.74	0.00	
8/5/96	19.31	21.06	1.75	2.00
8/9/96				0.00
8/13/96				0.50
8/15/96				0.50
8/29/96				0.50
8/30/96				2.50
9/3/96				0.25
9/4/96				0.10
9/5/96				2.00
9/11/96				1.75
9/21/96	19.85	23.94	4.09	3.50
9/24/96	20.36	21.00	0.64	0.67
9/26/96			0.50	1.00
10/11/96	-	-	-	-
10/14/96				0.05
10/16/96			0.00	0.00
10/17/96		21.40	0.00	0.00
10/24/96				0.06
10/28/96				0.03
11/8/96				0.01
11/12/96				0.03
11/18/96				0.16
11/25/96				0.11
12/13/96				0.15
12/16/96				0.15
12/18/96	19.75	19.89	0.14	

**TOTAL VOLUMES OF PRODUCT
RECOVERED TO DATE (gals)**

**16.0
RW-4**

DATE	DEPTH TO		PRODUCT THICKNESS (feet)	VOLUME OF PRODUCT REMOVED (gals)
	PRODUCT (feet)	WATER (feet)		
4/29/96	17.72	21.56	3.84	0.50
4/30/96	17.09	20.79	3.70	0.75
5/1/96	17.45	19.46	2.01	0.50
5/2/96	17.85	19.19	1.34	0.25
5/3/96	17.80	18.89	1.09	0.25
5/4/96	18.03	18.92	0.89	0.30
5/5/96	18.12	18.80	0.68	0.25
5/6/96	18.07	18.83	0.76	0.10
5/7/96	17.82	18.54	0.72	0.10
5/8/96	17.99	19.06	1.07	0.10
5/9/96	18.10	19.34	1.24	0.10
5/10/96	18.13	19.29	1.16	0.10
5/11/96	18.12	19.08	0.96	0.10
5/12/96	17.05	17.88	0.83	0.10
5/13/96	17.71	18.18	0.47	0.10
5/17/96	16.65	18.61	1.96	0.50
5/19/96	16.65	18.43	1.78	0.50
5/21/96	16.42	18.48	2.06	0.50
5/24/96	17.28	18.36	1.08	0.25
5/25/96	17.62	18.66	1.04	0.25
5/27/96	16.64	18.56	1.92	0.25
5/29/96	17.96	19.26	1.30	0.25
5/31/96	17.70	19.65	1.95	0.50
6/3/96	18.69	20.26	1.57	0.25
6/7/96	17.79	21.25	3.46	0.50
6/10/96	18.09	20.91	2.82	0.50
6/11/96	18.44	19.97	1.53	0.50
6/13/96	18.85	20.19	1.34	0.50
6/20/96	19.69	19.90	0.21	0.10
6/24/96	19.70	20.26	0.56	0.25
7/1/96	17.98	21.35	3.37	0.75
7/3/96	18.05	20.96	2.91	0.50
7/18/96	19.31	20.32	1.01	0.25
7/29/96	18.35	21.65	3.30	0.50
8/2/96	20.53	20.62	0.09	0.00
8/5/96				0.25
8/8/96				0.25
8/9/96				0.00
8/13/96				0.13
8/19/96				0.25
8/30/96				0.25
9/9/96	19.01	19.95	0.94	0.15
9/20/96	18.70	19.80	1.10	0.00
9/30/96	19.36	19.67	0.31	0.00
10/11/96	-	-	0.00	0.00
12/10/96			0.08	0.00
12/18/96	19.40	19.59	0.19	0.10

TOTAL VOLUMES OF PRODUCT
RECOVERED TO DATE (gals)

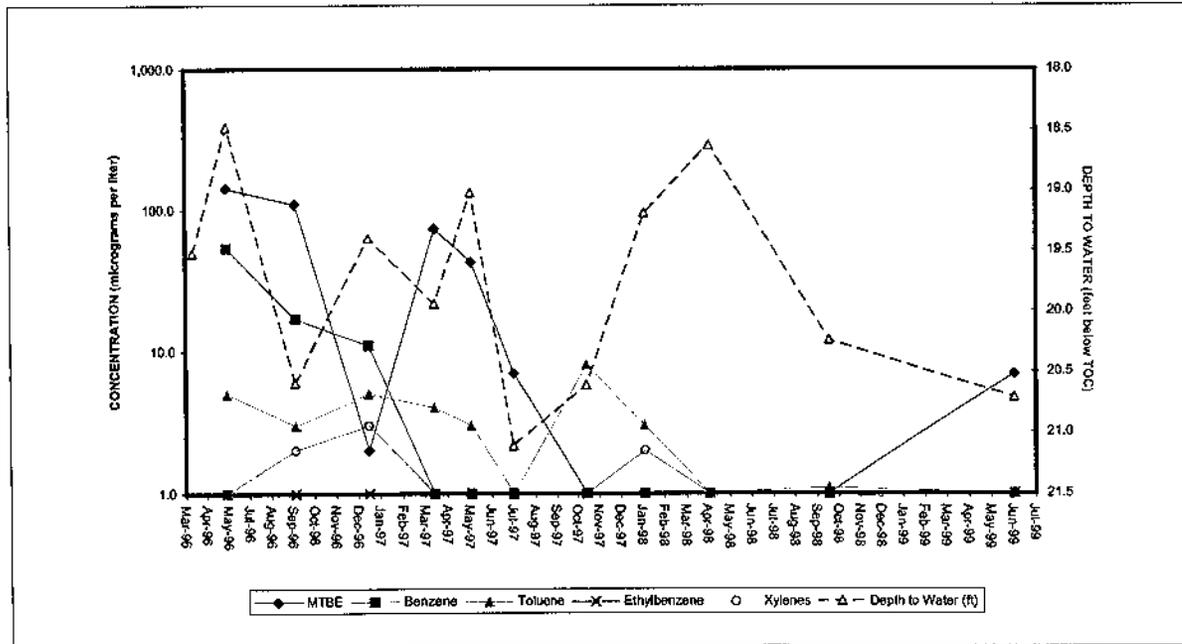
12.6
MW-4

WATER QUALITY SUMMARY
STOWE AUTO SERVICE, SMS SITE #96-1957

Monitoring Well MW-2

Sample Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Depth to Water (ft)	1,3,5-TMB	1,2,4-TMB	Naphthalene
4/9/96	15	14	12	2	5	19.52			
5/29/96	143	54	5	1	1	18.46			
9/5/96	110	17	3	1	2	20.59			
12/18/96	2	11	5	1	3	19.40			
3/19/97	74	1	4	1	1	19.94			
5/9/97	43	1	3	1	1	19.02			
7/8/97	7	1	1	1	1	21.11			
10/22/97	1	1	8	1	1	20.61			
1/12/98	1	1	3	1	2	19.19			
4/14/98	1	1	1	1	1	18.63			
10/2/98	1	1	1.1	1	1	20.24	1	1	1
6/22/99	6.9	0.8	1	1	1	20.71	1	1	1

1 shaded cell - below detection limit (used in graph below)



**WATER QUALITY SUMMARY
STOWE AUTO SERVICE, SMS SITE #96-1957**

Monitoring Well MW-4

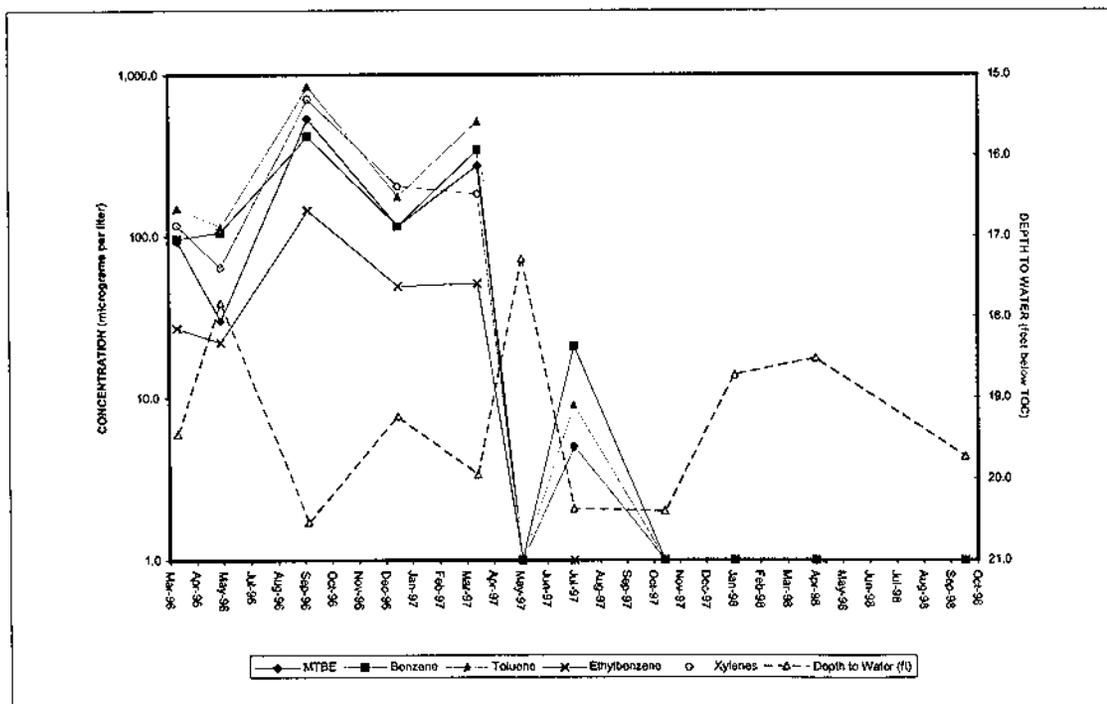
Sample Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Depth to Water (ft)	1,3,5-TMB	1,2,4,-TMB	Naphthalene
4/14/98	2,420	2,160	12,700	2,040	18,400	18.80			

WATER QUALITY SUMMARY
STOWE AUTO SERVICE, SMS SITE #96-1957

Monitoring Well MW-6

Sample Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Depth to Water (ft)	1,3,5-TMB	1,2,4-TMB	Naphthalene
4/8/96	94	96	148	27	117	19.45			
5/29/96	30	106	114	22	64	17.62			
9/5/96	534	416	643	145	706	20.53			
12/18/96	115	115	176	49	204	19.23			
3/19/97	275	342	518	51	183	19.05			
5/9/97	1	1	1	1	1	17.28			
7/8/97	5	21	9	1	5	20.37			
10/22/97	1	1	1	1	1	20.40			
1/12/98	1	1	1	1	1	18.72			
4/14/98	1	1	1	1	1	18.51			
10/2/98	1	1	1	1	1	19.73	1	1	1

1 shaded cell - below detection limit (used in graph below)

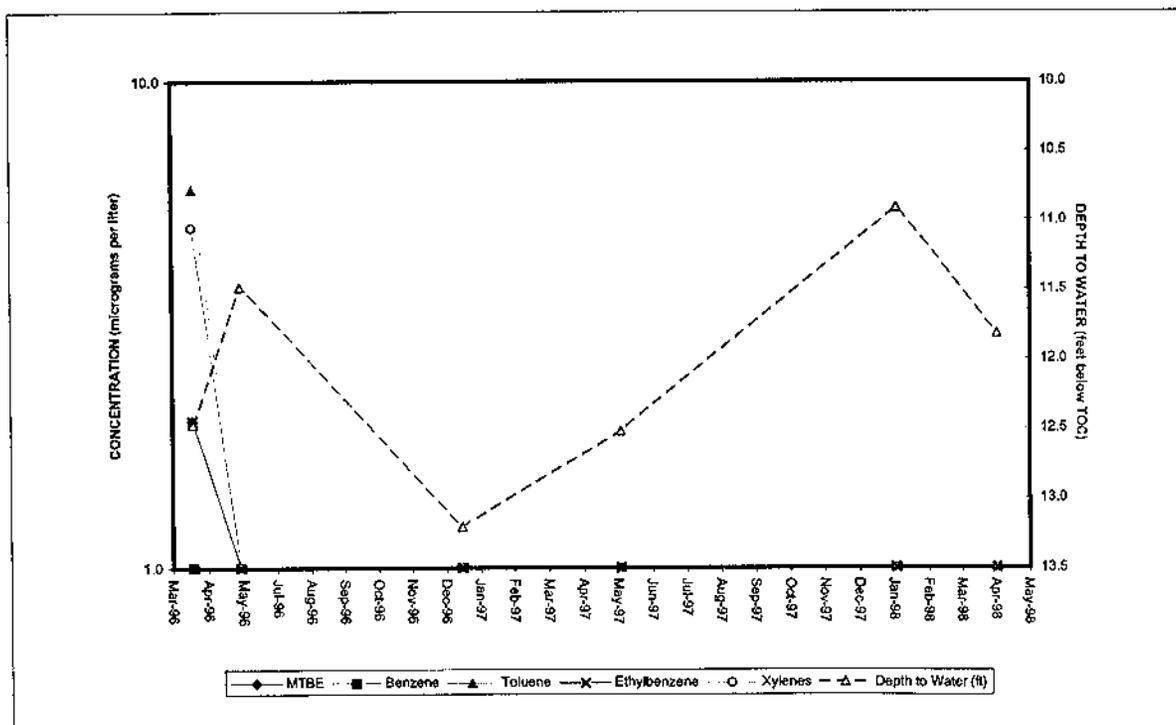


**WATER QUALITY SUMMARY
STOWE AUTO SERVICE, SMS SITE #96-1957**

Monitoring Well MW-7

Sample Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Depth to Water (ft)	1,3,5-TMB	1,2,4-TMB	Naphthalene
4/17/96	2	1	6	2	5	12.47			
5/29/96	1	1	1	1	1	11.48			
12/18/96	1	1	1	1	1	13.21			
5/9/97	1	1	1	1	1	12.52			
1/12/98	1	1	1	1	1	10.91			
4/14/98	1	1	1	1	1	11.82			

1 shaded cell - below detection limit (used in graph below)

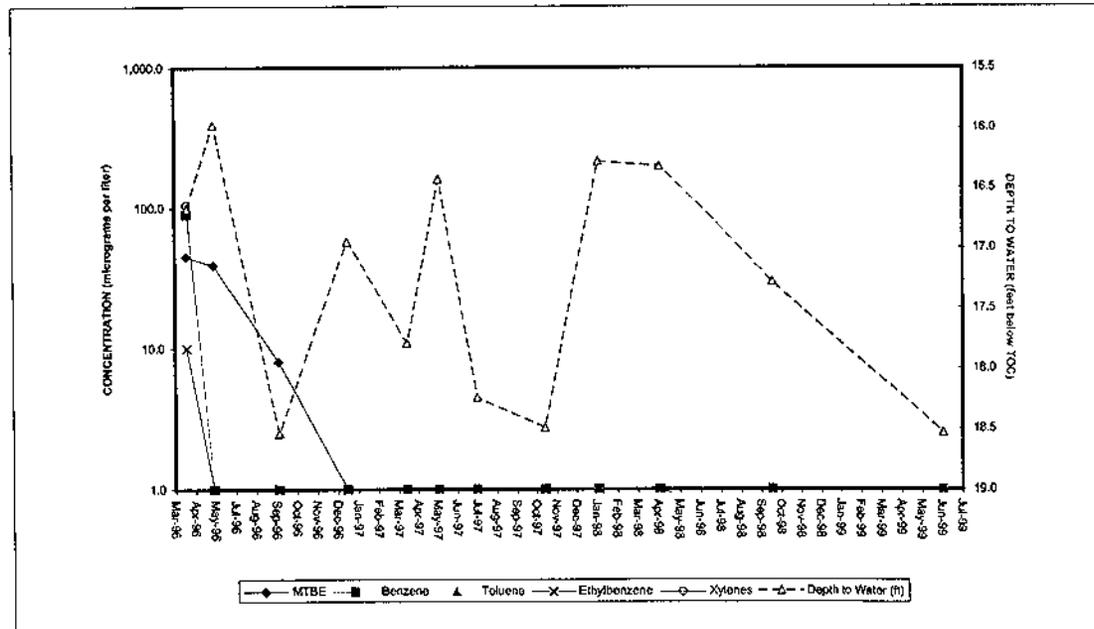


**WATER QUALITY SUMMARY
STOWE AUTO SERVICE, SMS SITE #96-1957**

Monitoring Well MW-8

Sample Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Depth to Water (ft)	1,3,5-TMB	1,2,4-TMB	Naphthalene
4/17/96	45	90	92	10	105	16.67			
5/29/96	39	1	1	1	1	15.98			
9/5/96	8	1	1	1	1	18.54			
12/18/96	1	1	1	1	1	16.95			
3/19/97	1	1	1	1	1	17.79			
5/9/97	1	1	1	1	1	16.43			
7/6/97	1	1	1	1	1	18.24			
10/22/97	1	1	1	1	1	18.49			
1/12/98	1	1	1	1	1	16.28			
4/14/98	1	1	1	1	1	16.32			
10/2/98	1	1	1	1	1	17.28	1	1	1
6/22/99	1	1	1	1	1	18.53	1	1	1

1 shaded cell - below detection limit (used in graph below)



**WATER QUALITY SUMMARY
STOWE AUTO SERVICE, SMS SITE #96-1957**

Monitoring Well MW-9

Sample Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Depth to Water (ft)	1,3,5-TMB	1,2,4,-TMB	Naphthalene
4/17/96	153	2,090	10,200	1,120	6,040	19.05			
5/29/96	100	1,020	7,740	777	4,070	18.32			

shaded cell - below detection limit (used in graph below)

**WATER QUALITY SUMMARY
STOWE AUTO SERVICE, SMS SITE #96-1957**

Monitoring Well MW-10

Sample Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Depth to Water (ft)	1,3,5-TMB	1,2,4-TMB	Naphthalene
5/29/96	1	1	1	1	1	17.48			
4/14/98	1	1	1	1	1	17.70			

1 shaded cell - below detection limit

WATER QUALITY SUMMARY
STOWE AUTO SERVICE, SMS SITE #96-1957

Monitoring Well MW-11

Sample Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Depth to Water (ft)	1,3,5-TMB	1,2,4-TMB	Naphthalene
5/29/96	1	1	1	1	1	16.13			

1 shaded cell - below detection limit

**WATER QUALITY SUMMARY
STOWE AUTO SERVICE, SMS SITE #96-1957**

Recovery Well RW-1

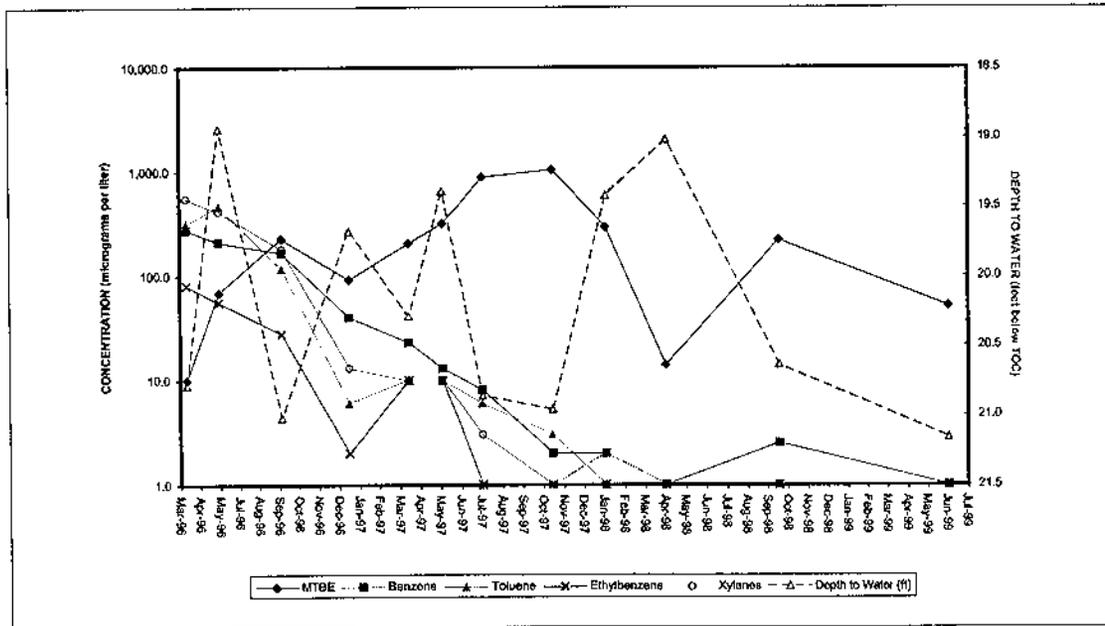
Sample Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Depth to Water (ft)	1,3,5-TMB	1,2,4,-TMB	Naphthalene
5/29/96	10,200	23,700	38,700	3,630	15,900	19.28			

**WATER QUALITY SUMMARY
STOWE AUTO SERVICE, SMS SITE #96-1957**

Recovery Well RW-2

Sample Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Depth to Water (ft)	1,3,5-TMB	1,2,4-TMB	Naphthalene
4/9/96	10	278	313	81	550	20.79			
5/29/96	69	210	464	58	414	18.84			
9/15/96	228	156	118	28	180	21.02			
12/18/96	92	40	6	2	13	19.68			
3/19/97	204	23	10	10	10	20.29			
5/9/97	317	13	10	10	10	19.39			
7/8/97	889	8	6	1	3	20.86			
10/22/97	1,040	2	3	1	1	20.96			
1/12/98	294	2	1	1	2	19.42			
4/14/98	14	1	1	1	1	19.02			
10/2/98	220	3	1	1	1	20.64	1	1	1
6/22/99	51	1	1	1	1	21.16	1	1	1

1 shaded cell - below detection limit (used in graph below)

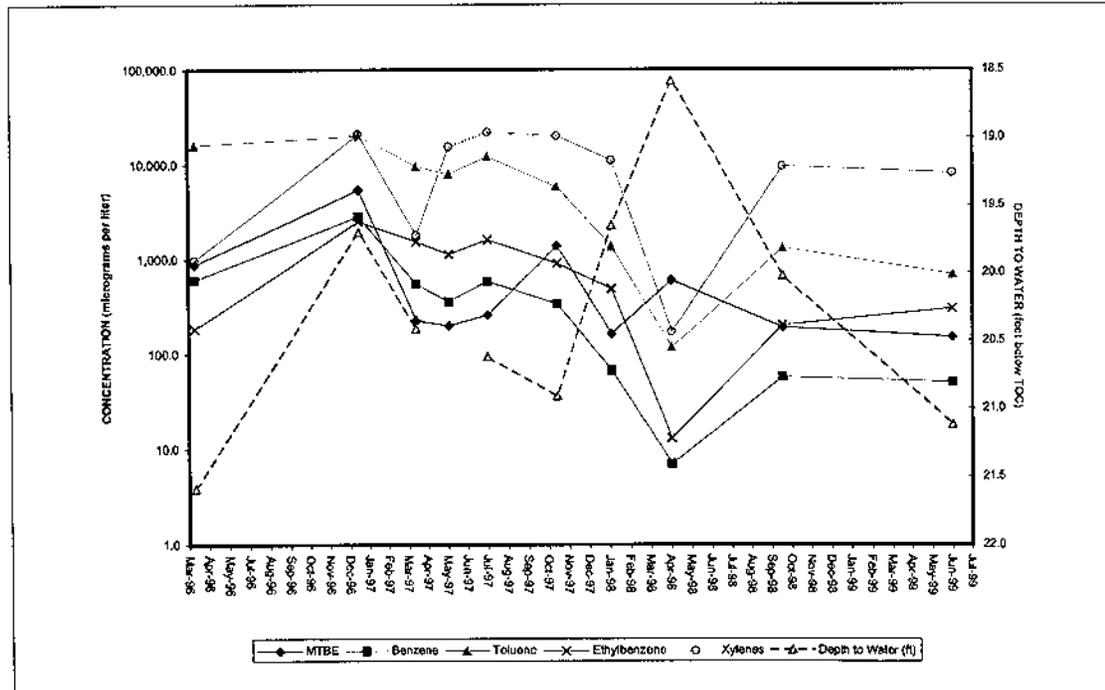


**WATER QUALITY SUMMARY
STOWE AUTO SERVICE, SMS SITE #96-1957**

Recovery Well RW-3

Sample Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Depth to Water (ft)	1,3,5-TMB	1,2,4-TMB	Naphthalene
4/9/96	875	603	15,900	183	980	21.59			
12/18/96	5,420	2,830	20,300	2,530	20,900	19.70			
3/19/97	227	555	9,550	1,550	1,800	20.41			
5/9/97	200	357	7,910	1,130	15,400				
7/8/97	258	585	12,100	1,610	21,900	20.62			
10/22/97	1,390	338	5,860	908	20,000	20.91			
1/12/98	163	67	1,360	489	11,100	19.65			
4/14/98	600	7	118	13	173	18.58			
10/2/98	190	57	1,300	209	9,500	20.02	940	3300	660
6/22/99	150	50	690	300	8,100	21.12	1300	3900	750

1 shaded cell - below detection limit (used in graph below)

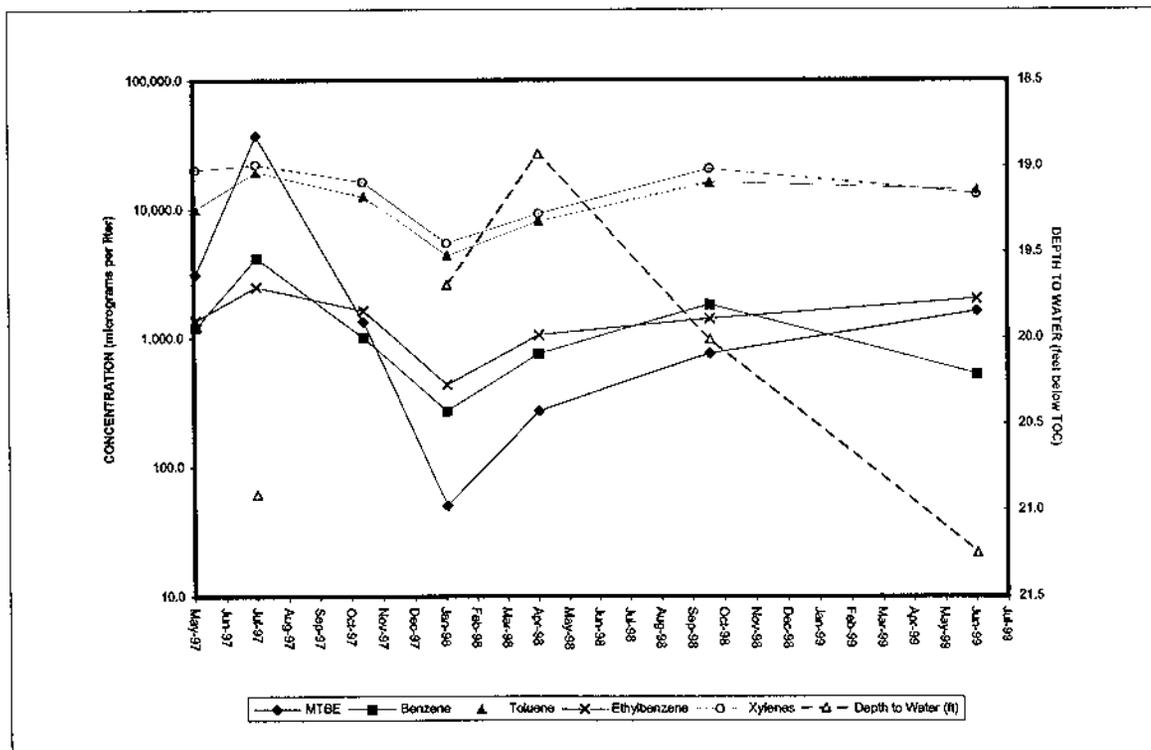


WATER QUALITY SUMMARY
STOWE AUTO SERVICE, SMS SITE #86-1957

Recovery Well RW-4

Sample Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Depth to Water (ft)	1,3,5-TMB	1,2,4-TMB	Naphthalene
5/9/97	3,120	1,210	9,980	1,360	20,200				
7/8/97	37,100	4,180	19,400	2,490	22,200	20.91			
10/22/97	1,330	998	12,500	1,630	16,200				
1/12/98	50	271	4,350	433	5,410	19.69			
4/14/98	271	752	6,070	1,050	9,170	18.93			
10/2/98	750	1,800	16,080	1,400	20,500	20.01	610	2000	290
6/22/99	1,600	520	14,000	2,000	13,000	21.25	730	2200	420

1 shaded cell - below detection limit (used in graph below)



**WATER QUALITY SUMMARY
STOWE AUTO SERVICE, SMS SITE #96-1957**

Town & Country Motor Lodge Well*

Sample Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Depth to Water (ft)
4/9/96	1	1	1	1	1	-
9/5/96	1	1	1	1	1	-
12/18/96	1	1	1	1	1	-
3/19/97	1	1	1	1	1	-
5/9/97	1	1	1	1	1	-
7/8/97	1	1	1	1	1	-
10/22/97	1	1	1	1	1	-

1 shaded cell - below detection limit

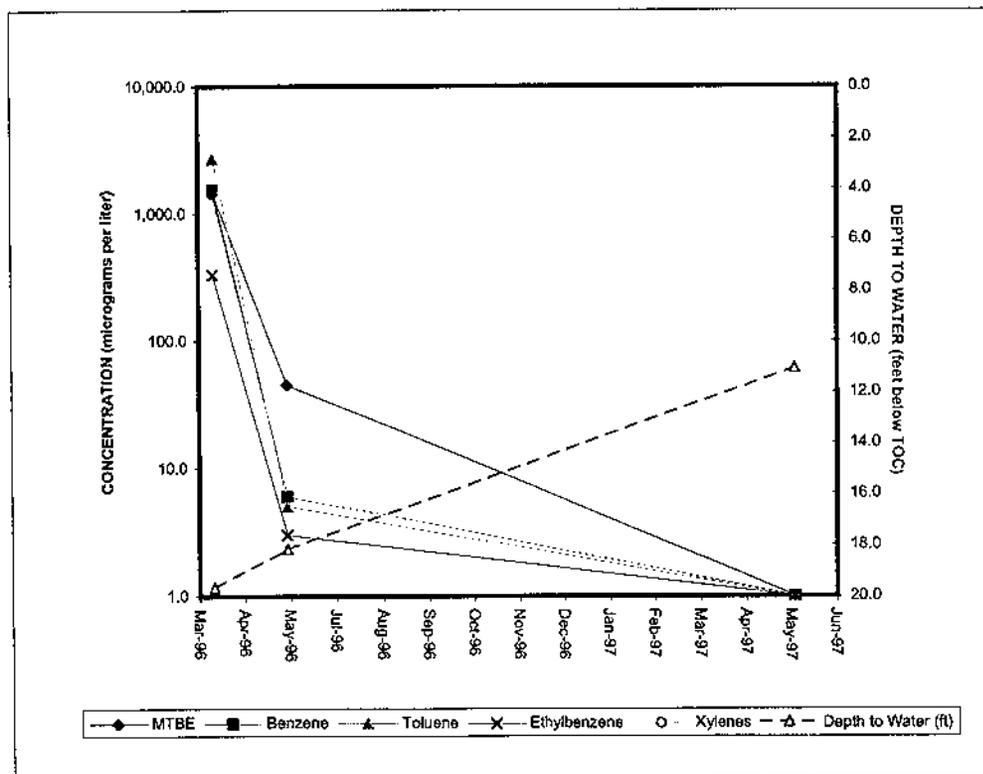
* Well No Longer in Use as of November 1997 (connected to Stowe Village Water System)

**WATER QUALITY SUMMARY
STOWE AUTO SERVICE, SMS SITE #96-1957**

GeoProbe Monitoring Well GP-1

Sample Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Depth to Water (ft)
4/9/96	1,480	1,550	2,680	331	1,450	19.67
5/29/96	45	6	5	3	6	18.17
5/9/97	1	1	1	1	1	11.07

1 shaded cell - below detection limit (used in graph below)

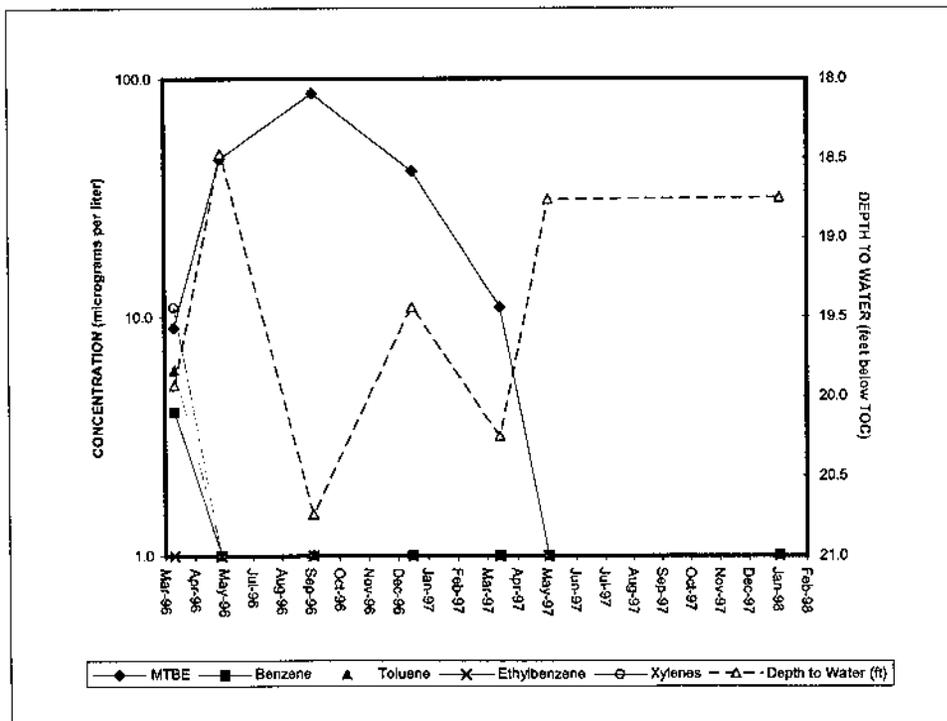


**WATER QUALITY SUMMARY
STOWE AUTO SERVICE, SMS SITE #96-1957**

GeoProbe Monitoring Well GP-2

Sample Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Depth to Water (ft)
4/9/96	9	4	6	1	11	19.93
5/29/96	46	1	1	1	1	18.47
9/5/96	87	1	1	1	1	20.74
12/18/96	41	1	1	1	1	19.44
3/19/97	11	1	1	1	1	20.25
5/9/97	1	1	1	1	1	18.76
1/12/98	1	1	1	1	1	18.75

1 shaded cell - below detection limit (used in graph below)



**WATER QUALITY SUMMARY
STOWE AUTO SERVICE, SMS SITE #96-1957**

GeoProbe Monitoring Well GP-3

Sample Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Depth to Water (ft)	1,3,5-TMB	1,2,4,-TMB	Naphthalene
4/9/96	1	1	1	1	1	18.42			
5/29/96	1	1	1	1	1	12.74			
9/5/96	1	1	1	1	1	19.74			
12/18/96	1	1	1	1	1	17.13			
3/19/97	1	1	1	1	1	18.98			
5/9/97	1	1	1	1	1	12.48			
7/8/97	1	1	1	1	1	19.57			
10/22/97	1	1	1	1	1	19.83			
1/12/98	1	1	1	1	1	12.15			
4/14/98	1	1	1	1	1	12.33			
10/2/98	1	1	1	1	1	14.12	1	1	1

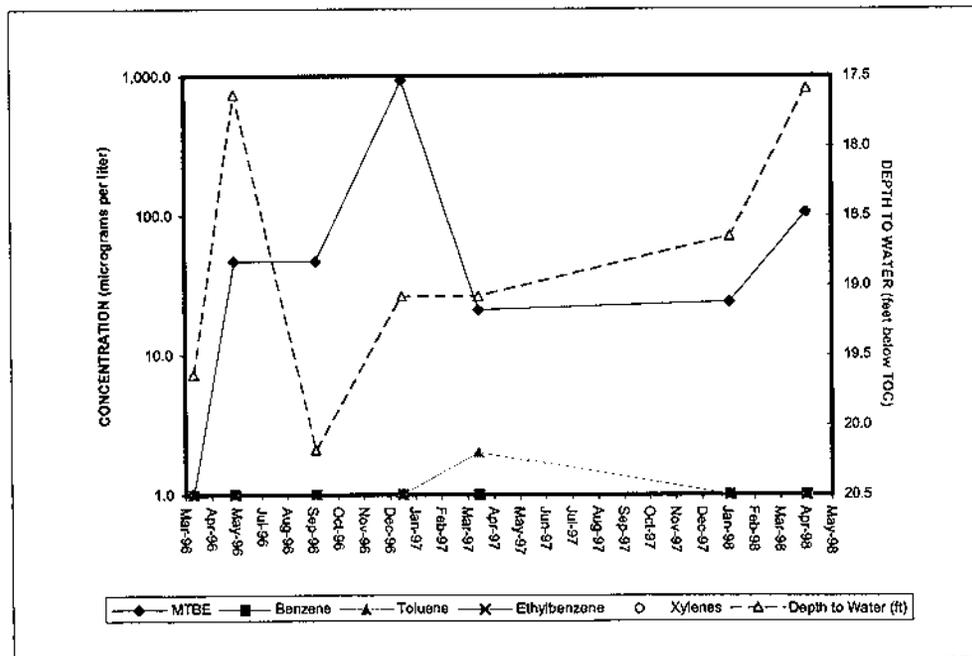
1 shaded cell - below detection limit

WATER QUALITY SUMMARY
STOWE AUTO SERVICE, SMS SITE #96-1957

GeoProbe Monitoring Well GP-4

Sample Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Depth to Water (ft)
4/9/96	1	1	1	1	1	19.64
5/29/96	47	1	1	1	1	17.63
9/5/96	47	1	1	1	1	20.18
12/18/96	933	1	1	1	1	19.08
3/19/97	21	1	2	1	1	19.08
1/12/98	24	1	1	1	1	18.65
4/14/98	105	1	1	1	1	17.59

1 shaded cell - below detection limit (used in graph below)



WATER QUALITY SUMMARY
STOWE AUTO SERVICE, SMS SITE #96-1957

GeoProbe Monitoring Well GP-5

Sample Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	Depth to Water (ft)
5/29/96	1	1	1	1	1	19.03

1 shaded cell - below detection limit

SOIL VAPOR EXTRACTION SYSTEM DATA
STOWE AUTO SERVICE, STOWE, VERMONT, SMS SITE #96-1957

DATE/TIME	HOUR METER	HOURS OPERATED (ELAPSED)	TOTAL HOURS OPERATED	HOURS ONLINE	SYSTEM AVAIL	AVERAGE FLOW RATE (SCFM)	BAKER LEL READINGS		ESTIMATED CONC. BASED ON LAB ANALYSIS (ppm)	EST. PRODUCT RECOVERY RATE (ppd)	EST. INCREMENTAL RECOVERY (ppd)	EST. TOTAL RECOVERY (ppd)
							LEL (%)	CONVERTED CONC. (ppm)				
4/15/96 14:00	14807.2	0.0	0.0	0.0	0.0%	180	44.0	6,072	1,585	15.5	0	0
4/16/96 10:15	14827.0	19.8	19.8	19.8	100.0%	180	48.0	6,624	1,729	16.9	13.40	13
4/16/96 17:00	14832.0	5.0	24.8	27.0	91.9%	176	48.0	6,624	1,729	16.6	3.49	17
4/17/96 10:49	14849.1	17.1	41.9	44.8	93.5%	170	30.2	4,168	1,088	10.1	9.49	26
4/17/96 12:36	14850.9	1.8	43.7	46.6	93.8%	170	56.2	7,766	2,024	18.7	1.08	27
4/18/96 7:45	14870.1	19.2	62.9	66.7	95.7%	149	34.5	4,761	1,243	10.1	11.53	39
4/18/96 14:00	14870.2	0.1	63.0	72.0	87.5%	149	34.5	4,761	1,243	10.1	0.04	39
4/18/96 14:41	14871.0	0.8	63.8	72.7	87.8%	199	60.0	8,280	2,161	23.4	0.56	40
4/19/96 9:50	14890.9	19.9	83.7	91.8	91.1%	195	46.6	6,431	1,678	17.8	17.10	57
4/19/96 10:27	14891.5	0.6	84.3	92.4	91.2%	196	58.0	8,004	2,089	22.3	0.50	57
4/21/96 9:00	14939.3	47.8	132.1	139.0	95.0%	174	53.4	7,369	1,923	18.2	40.36	98
4/22/96 13:39	14966.3	27.0	159.0	167.6	94.9%	201	32.5	4,485	1,171	12.8	17.43	115
4/22/96 14:18	14966.9	0.6	159.7	168.3	94.9%	201	50.2	6,928	1,808	19.8	0.44	115
4/23/96 12:00	14998.6	21.7	181.4	190.0	95.5%	192	46.7	6,445	1,682	17.6	16.90	132
4/24/96 8:05	15008.8	20.2	201.6	210.1	96.0%	121	42.0	5,796	1,513	10.0	11.60	144
4/24/96 11:15	15011.2	2.4	204.0	213.2	95.7%	156	58.6	8,087	2,111	17.9	1.39	145
4/24/96 12:40	15012.6	1.4	205.4	214.7	95.7%	180	59.6	8,225	2,147	21.0	1.14	146
4/25/96 14:47	15038.8	26.2	231.6	240.8	96.2%	184	49.6	6,845	1,786	17.9	21.26	168
4/25/96 16:00	15040.0	1.2	232.8	242.0	96.2%	178	47.6	6,569	1,714	16.6	0.86	169
4/26/96 10:10	15058.4	18.4	251.2	260.2	96.6%	193	45.6	6,293	1,642	17.3	12.99	182
4/26/96 12:26	15060.4	2.0	253.2	262.4	96.5%	190	50.6	6,983	1,823	18.9	1.51	183
4/27/96 13:20	15069.2	8.8	262.0	287.3	91.2%	190	50.6	6,983	1,823	18.9	6.91	190
4/29/96 10:20	15069.2	0.0	262.0	332.3	78.8%	190	50.6	6,983	1,823	18.9	0.00	190
4/29/96 12:18	15069.6	0.4	262.4	334.3	78.5%	184	33.0	4,554	1,189	11.9	0.26	190
4/29/96 17:39	15074.8	5.2	267.6	339.6	78.9%	133	47.8	6,596	1,722	12.5	2.64	193
4/30/96 8:23	15089.6	14.8	282.4	354.4	79.7%	138	47.8	6,596	1,722	12.9	7.83	201
4/30/96 10:26	15091.4	1.8	284.2	356.4	79.7%	162	41.1	5,672	1,480	13.1	0.97	202
5/1/96 16:45	15108.3	16.9	301.1	386.7	77.9%	181	45.6	6,293	1,642	16.2	10.30	212
5/1/96 17:34	15109.0	0.7	301.8	387.6	77.9%	182	43.3	5,975	1,560	15.5	0.46	212
5/2/96 8:38	15124.1	15.1	316.9	402.6	78.7%	144	39.4	5,437	1,419	11.1	8.36	221
5/3/96 8:47	15148.2	24.1	341.0	426.8	79.9%	180	36.9	5,062	1,329	13.0	12.13	233
5/4/96 11:30	15163.9	15.7	356.7	453.5	78.7%	180	36.9	5,062	1,329	13.0	8.52	241
5/6/96 11:30	15190.7	26.8	383.5	501.5	76.5%	180	36.9	5,062	1,329	13.0	14.55	256
5/6/96 17:15	15197.9	7.2	390.7	507.2	77.0%	144	34.4	4,747	1,239	9.7	3.41	259
5/7/96 9:20	15212.0	14.1	404.8	523.3	77.4%	180	34.4	4,747	1,239	12.1	6.42	266
5/8/96 8:45	15235.4	23.4	428.2	546.8	78.3%	171	31.5	4,347	1,135	10.8	11.07	277
5/8/96 10:38	15237.3	1.9	430.1	548.6	78.4%	191	30.2	4,168	1,088	11.3	0.87	278
5/9/96 11:58	15262.4	25.1	455.2	574.0	79.3%	181	28.6	3,947	1,030	10.2	11.23	289
5/9/96 13:30	15263.9	1.5	456.7	575.5	79.4%	188	27.9	3,850	1,005	10.3	0.64	290
5/10/96 8:51	15283.3	19.4	476.1	594.8	80.0%	144	28.7	3,961	1,034	8.1	7.43	297
5/10/96 10:20	15284.7	1.4	477.5	596.3	80.1%	174	26.9	3,712	969	9.2	0.50	298
5/10/96 19:55	15294.3	9.6	487.1	605.9	80.4%	177	30.5	4,209	1,099	10.6	3.95	302
5/11/96 14:25	15297.5	3.2	490.3	624.4	78.5%	172	32.4	4,471	1,167	10.9	1.43	303
5/12/96 12:45	15301.4	3.9	494.2	646.7	76.4%	164	20.6	2,843	742	6.6	1.43	304
5/13/96 11:38	15304.8	3.4	497.6	669.6	74.3%	172	34.8	4,802	1,253	11.7	1.30	306
5/15/96 16:25	15356.9	52.1	549.7	722.4	76.1%	187	28.6	3,947	1,030	10.5	24.13	330
5/17/96 12:05	15400.4	43.5	593.2	766.1	77.4%	182	22.7	3,133	818	8.1	16.85	347
5/19/96 10:24	15446.6	46.2	639.4	812.4	78.7%	195	20.5	2,829	738	7.4	14.96	362
5/20/96 15:50	15476.0	29.4	668.8	841.8	79.4%	172	21.0	2,898	756	7.1	8.90	371
5/21/96 15:08	15495.5	19.5	688.3	865.1	79.6%	180	21.6	2,981	778	7.6	5.98	377
5/22/96 13:15	15517.6	22.1	710.4	887.3	80.1%	179	21.2	2,926	764	7.4	6.94	383
5/24/96 12:00	15540.1	22.5	732.9	934.0	78.5%	178	35.0	4,830	1,281	12.2	9.22	393
5/25/96 11:38	15563.8	23.7	756.6	957.6	79.0%	183	32.2	4,444	1,160	11.6	11.74	404
5/27/96 15:30	15615.7	51.9	808.5	1009.5	80.1%	181	29.4	4,057	1,059	10.4	23.78	428
5/28/96 12:20	15636.5	20.8	829.3	1030.3	80.5%	176	29.0	4,002	1,045	10.0	8.86	437
5/29/96 9:20	15657.5	21.0	850.3	1051.3	80.9%	164	29.9	4,126	1,077	9.6	8.59	446
5/31/96 9:35	15705.7	48.2	898.5	1099.6	81.7%	182	28.8	3,988	1,041	10.3	20.02	466

SOIL VAPOR EXTRACTION SYSTEM DATA
STOWE AUTO SERVICE, STOWE, VERMONT, SMS SITE #96-1957

4/15/96 14:00

DATE/TIME	HOUR METER	HOURS OPERATED (ELAPSED)	TOTAL HOURS OPERATED	HOURS ONLINE	SYSTEM AVAIL	AVERAGE FLOW RATE (SCFM)	BAKER LEL READINGS		ESTIMATED CONC. BASED ON LAB ANALYSIS (ppm)	EST. PRODUCT RECOVERY RATE (gpd)	EST. INCREMENTAL RECOVERY (gal)	EST. TOTAL RECOV. (gal)
							LEL (%)	CONVERTED CONC. (ppm)				
6/1/96 15:20	15711.1	5.4	903.9	1129.3	80.0%	175	42.5	5,865	1,531	14.6	2.80	469
6/3/96 12:00	15733.9	22.8	926.7	1174.0	78.9%	182	34.3	4,733	1,235	12.2	12.75	482
6/4/96 17:45	15762.8	28.9	955.6	1203.8	79.4%	162	33.4	4,609	1,203	10.6	13.76	495
6/7/96 16:40	15832.9	70.1	1025.7	1274.7	80.5%	167	30.0	4,140	1,081	9.8	29.85	525
6/10/96 13:00	15898.6	65.7	1091.4	1343.0	81.3%	171	32.0	4,416	1,153	10.7	28.14	553
6/11/96 9:20	15900.4	1.8	1093.2	1363.3	80.2%	180	24.6	3,395	886	8.7	0.73	554
6/13/96 15:40	15921.6	21.2	1114.4	1417.7	78.6%	183	31.6	4,361	1,138	11.3	8.85	563
6/21/96 8:20	15940.4	18.8	1133.2	1602.3	70.7%	186	12.3	1,697	443	4.5	6.20	569
6/21/96 10:30	15942.5	2.1	1135.3	1604.5	70.8%	166	53.7	7,411	1,934	17.5	0.96	570
6/24/96 12:29	15943.2	0.7	1136.0	1678.5	67.7%	175	41.8	5,768	1,506	14.3	0.46	571
6/25/96 10:30	15965.3	22.1	1158.1	1700.5	68.1%	165	28.4	3,919	1,023	9.2	10.84	581
6/26/96 8:15	15966.1	0.8	1158.9	1722.2	67.3%	180	30.2	4,168	1,088	10.7	0.33	582
6/28/96 7:35	16013.1	47.0	1205.9	1769.6	68.1%	175	21.1	2,912	760	7.2	17.53	599
6/30/96 12:22	16065.8	52.7	1258.6	1822.4	69.1%	179	22.1	3,050	796	7.8	16.47	616
7/1/96 9:41	16087.1	21.3	1279.9	1843.7	69.4%	176	23.7	3,271	854	8.2	7.07	623
7/3/96 15:25	16140.8	53.7	1333.6	1897.4	70.3%	165	21.9	3,022	789	7.1	17.08	640
7/8/96 12:30	16258.1	117.3	1450.9	2014.5	72.0%	164	21.0	2,898	756	6.8	33.83	674
7/9/96 18:32	16288.0	29.9	1480.8	2044.5	72.4%	172	19.8	2,732	713	6.7	8.37	682
7/12/96 16:00	16334.7	46.7	1527.5	2114.0	72.3%	175	27.0	3,726	972	9.3	15.52	698
7/15/96 9:30	16384.3	49.6	1577.1	2179.5	72.4%	172	25.7	3,547	926	8.7	18.54	716
7/17/96 11:50	16412.4	28.1	1605.2	2229.8	72.0%	174	29.0	4,002	1,045	9.9	10.87	727
7/18/96 8:52	16421.2	8.8	1614.0	2250.9	71.7%	176	24.9	3,436	897	8.6	3.39	730
7/22/96 8:40	16515.5	94.3	1708.3	2346.7	72.8%	172	21.0	2,898	756	7.1	30.81	761
7/22/96 17:44	16524.5	9.0	1717.3	2355.7	72.9%	173	22.0	3,036	792	7.5	2.73	764
7/23/96 15:30	16546.2	21.7	1739.0	2377.5	73.1%	171	20.8	2,870	749	7.0	6.53	770
7/24/96 17:00	16571.8	25.6	1764.6	2403.0	73.4%	174	20.6	2,843	742	7.0	7.47	778
7/25/96 17:00	16595.6	23.8	1788.4	2427.0	73.7%	171	21.0	2,898	756	7.0	6.98	785
7/29/96 12:05	16686.8	91.2	1879.6	2518.1	74.6%	167	18.5	2,553	666	6.1	24.90	810
7/29/96 17:50	16689.4	2.6	1882.2	2523.8	74.6%	161	24.8	3,422	893	7.8	0.75	811
7/29/96 19:47	16689.7	0.3	1882.5	2525.8	74.5%	166	24.3	3,353	875	7.9	0.10	811
7/30/96 8:59	16702.8	13.1	1895.6	2539.0	74.7%	166	19.3	2,663	695	6.3	3.87	814
7/31/96 8:25	16722.4	19.6	1915.2	2562.4	74.7%	173	23.6	3,257	850	8.0	5.84	820
8/2/96 15:26	16777.4	55.0	1970.2	2617.4	75.3%	168	29.5	4,071	1,063	9.7	20.32	841
8/5/96 8:25	16842.4	65.0	2035.2	2682.4	75.9%	168	35.9	4,954	1,293	11.8	29.18	870
8/6/96 8:45	16866.7	24.3	2059.5	2706.8	76.1%	173	21.7	2,995	782	7.4	9.72	880
8/7/96 10:00	16890.2	23.5	2083.0	2732.0	76.2%	172	21.9	3,022	789	7.4	7.22	887
8/8/96 15:15	16919.4	29.2	2112.2	2761.2	76.5%	180	17.5	2,415	630	6.2	8.25	895
8/8/96 9:24	16937.6	18.2	2130.4	2779.4	76.6%	169	22.7	3,133	818	7.5	5.20	900
8/13/96 14:35	17037.6	100.0	2230.4	2880.6	77.4%	168	22.5	3,105	810	7.4	31.12	931
8/15/96 8:50	17079.8	42.2	2272.6	2922.8	77.8%	166	34.1	4,706	1,228	11.1	16.28	948
8/15/96 10:06	17081.0	1.2	2273.8	2924.1	77.8%	166	47.0	6,486	1,693	15.3	0.66	948
8/20/96 12:00	17200.6	119.6	2393.4	3046.0	78.6%	170	19.3	2,663	695	6.4	54.17	1,002
8/23/96 17:15	17277.3	76.7	2470.1	3123.2	79.1%	162	32.7	4,513	1,178	10.4	26.89	1,029
9/3/96 17:00	17346.5	69.2	2539.3	3387.0	75.0%	189	8.9	1,228	321	3.3	19.74	1,049
9/4/96 18:58	17372.5	26.0	2565.3	3413.0	75.2%	180	48.1	6,638	1,732	17.0	10.99	1,060
9/9/96 16:40	17490.2	117.7	2683.0	3530.7	76.0%	176	38.4	5,299	1,383	13.3	74.15	1,134
9/11/96 9:00	17530.2	40.0	2723.0	3571.0	76.3%	176	36.6	5,051	1,318	12.6	21.58	1,156
9/12/96 14:56	17560.3	30.1	2753.1	3600.9	76.5%	175	34.6	4,775	1,246	11.9	15.37	1,171

SOIL VAPOR EXTRACTION SYSTEM DATA
STOWE AUTO SERVICE, STOWE, VERMONT, SMS SITE #96-1957

DATE/TIME	HOUR METER	HOURS OPERATED (ELAPSED)	TOTAL HOURS OPERATED	HOURS ONLINE	SYSTEM AVAIL.	AVERAGE FLOW RATE (SCFM)	BAKER LEL (%)	BAKER LEL READINGS CONVERTED CONC. (ppm)	ESTIMATED CONC. BASED ON LAB ANALYSIS (ppm)	EST. PRODUCT RECOVERY RATE (gpd)	EST. INCREMENTAL RECOVERY (gal)	EST. TOTAL RECOV. (gal)
4/15/96 14:00 < start date												
On-board LEL recalibrated on 9/17/96, prior to calibration LEL = 35.8% with PID = 555 ppm, after calibration LEL = 26.8% with PID = 554 ppm												
9/18/96 16:45	17703.4	143.1	2896.2	3745.7	77.3%	163	30.9	4,264	768	6.8	54.26	1,225
9/20/96 10:14	17769.9	66.5	2962.7	3788.2	78.2%	167	25.9	3,574	643	5.9	17.55	1,243
9/24/96 9:24	17841.0	71.1	3033.8	3883.4	78.1%	163	24.2	3,340	601	5.3	16.57	1,259
9/26/96 14:15	17893.9	52.9	3086.7	3936.2	78.4%	166	24.3	3,353	604	5.5	11.89	1,271
9/30/96 14:45	17990.4	96.5	3183.2	4032.8	78.9%	166	20.6	2,843	512	4.6	20.27	1,292
10/1/96 17:40	18016.0	25.6	3208.8	4059.7	79.0%	166	19.4	2,677	482	4.4	4.79	1,296
10/3/96 13:30	18060.5	44.5	3253.3	4103.5	79.3%	163	19.4	2,677	482	4.3	8.00	1,304
10/6/96 8:22	18151.2	90.7	3344.0	4170.4	80.2%	150	20.4	2,815	507	4.1	15.90	1,320
10/11/96 14:00	18153.7	2.5	3346.5	4296.0	77.9%	161	25.1	3,464	623	5.5	0.50	1,321
10/15/96 12:45	18156.0	2.3	3348.8	4390.7	76.3%	163	25.0	3,450	621	5.5	0.53	1,321
10/16/96 11:30	18160.0	4.0	3352.8	4413.5	76.0%	163	25.4	3,505	631	5.6	0.93	1,322
10/17/96 11:16	18175.1	15.1	3367.9	4437.3	75.9%	166	24.4	3,367	606	5.5	3.49	1,326
10/18/96 16:00	18177.3	2.2	3370.1	4466.0	75.5%	162	23.2	3,202	576	5.1	0.48	1,326
10/20/96 15:44	18185.1	7.8	3377.9	4513.7	74.8%	157	23.5	3,243	584	5.0	1.64	1,328
10/22/96 9:00	18186.3	1.2	3379.1	4555.0	74.2%	153	17.7	2,443	440	3.7	0.22	1,328
10/24/96 9:34	18190.7	4.4	3383.5	4603.6	73.5%	155	20.2	2,788	502	4.2	0.72	1,329
10/25/96 13:20	18197.7	7.0	3390.5	4631.3	73.2%	159	18.0	2,484	447	3.9	1.18	1,330
10/26/96 18:30	18201.0	3.3	3393.8	4660.5	72.8%	156	18.4	2,539	457	3.9	0.53	1,330
10/28/96 16:52	18219.6	18.6	3412.4	4706.9	72.5%	159	16.0	2,208	397	3.4	2.84	1,333
10/30/96 12:55	18263.3	43.7	3456.1	4750.9	72.7%	157	11.7	1,615	291	2.5	5.40	1,339
10/30/96 13:40	18264.1	0.8	3456.9	4751.7	72.8%	152	16.1	2,222	400	3.3	0.10	1,339
11/1/96 10:17	18273.9	9.8	3466.7	4796.3	72.3%	156	18.3	2,525	455	3.9	1.46	1,340
11/1/96 16:34	18279.3	5.4	3472.1	4802.6	72.3%	146	21.2	2,926	527	4.2	0.91	1,341
11/8/96 13:45	18384.0	104.7	3576.8	4967.7	72.0%	158	17.1	2,360	425	3.7	17.11	1,358
11/12/96 8:40	18404.6	20.6	3597.4	5058.7	71.1%	151	12.5	1,725	311	2.6	2.66	1,361
11/12/96 9:21	18405.3	0.7	3598.1	5059.3	71.1%	148	19.9	2,746	494	4.0	0.10	1,361
11/13/96 15:31	18407.6	2.5	3600.6	5089.5	70.7%	150	10.6	1,463	263	2.2	0.32	1,361
11/14/96 16:20	18432.6	24.8	3625.4	5114.3	70.8%	144	9.5	1,311	236	1.9	2.07	1,363
11/14/96 16:40	18433.0	0.4	3625.8	5114.7	70.9%	150	16.1	2,222	400	3.3	0.04	1,363
11/16/96 14:48	18526.6	93.6	3719.4	5208.8	71.4%	153	10.0	1,380	248	2.1	10.41	1,374
11/18/96 15:56	18527.6	1.0	3720.4	5209.9	71.4%	149	13.6	1,877	338	2.7	0.10	1,374
11/25/96 14:50	18570.4	42.8	3763.2	5376.8	70.0%	150	17.8	2,456	442	3.6	5.66	1,380
11/26/96 9:25	18573.4	3.0	3766.2	5395.4	69.8%	154	15.4	2,125	383	3.2	0.43	1,380
12/9/96 15:10	18618.8	45.4	3811.6	5713.2	66.7%	147	16.2	2,236	402	3.2	6.08	1,386
12/10/96 9:30	18621.5	2.7	3814.3	5731.5	66.5%	157	12.8	1,766	318	2.7	0.33	1,386
12/10/96 0:00	18623.8	2.3	3816.6	5722.0	66.7%	136	11.4	1,573	283	2.1	0.23	1,387
12/11/96 8:46	18639.6	15.8	3832.4	5754.8	66.6%	141	9.1	1,256	226	1.7	1.26	1,388
12/11/96 9:05	18639.9	0.3	3832.7	5755.1	66.6%	137	15.6	2,153	388	2.9	0.03	1,388
12/12/96 9:10	18641.1	1.2	3833.9	5779.2	66.3%	137	9.2	1,270	229	1.7	0.11	1,388
12/13/96 10:30	18643.9	2.8	3836.7	5804.5	66.1%	156	13.3	1,835	330	2.8	0.26	1,388
12/16/96 8:23	18712.3	68.4	3905.1	5874.4	66.5%	143	8.7	1,201	216	1.7	6.40	1,395
12/16/96 9:57	18712.8	0.5	3905.6	5875.9	66.5%	143	14.9	2,056	370	2.9	0.05	1,395
12/17/96 8:25	18736.3	23.5	3929.1	5898.4	66.6%	141	13.2	1,822	328	2.5	2.64	1,397
12/18/96 12:54	18764.8	28.5	3957.6	5926.9	66.8%	148	11.8	1,628	293	2.4	2.90	1,400
12/19/96 8:25	18781.2	16.4	3974.0	5946.4	66.8%	102	10.5	1,449	261	1.4	1.30	1,402
12/20/96 8:30	18805.3	24.1	3998.1	5970.5	67.0%	102	10.9	1,504	271	1.5	1.48	1,403
12/20/96 13:00	18809.3	4.0	4002.1	5975.0	67.0%	100	20.8	2,870	517	2.8	0.36	1,403
12/30/96 8:56	19045.2	235.9	4238.0	6210.9	68.2%	100	14.4	1,987	358	1.9	23.40	1,427

SOIL VAPOR EXTRACTION SYSTEM DATA
STOWE AUTO SERVICE, STOWE, VERMONT, SMS SITE #96-1957

4/15/96 14:00 < -- start date

DATE/TIME	HOUR METER	HOURS OPERATED (ELAPSED)	TOTAL HOURS OPERATED	HOURS ONLINE	SYSTEM AVAIL.	AVERAGE FLOW RATE (SCFM)	BAKER LEL READINGS		ESTIMATED CONC. BASED ON LAB ANALYSIS (ppm)	EST. PRODUCT RECOVERY RATE (gpd)	EST. INCREMENTAL RECOVERY (gal)	EST. TOTAL RECOV. (gal)
							LEL (%)	CONVERTED CONC. (ppm)				
12/30/96 9:30	19045.8	0.6	4238.6	6211.5	68.2%	100	16.5	2,277	410	2.2	0.05	1,427
12/31/96 14:34	19073.9	28.1	4266.7	6240.6	68.4%	100	14.7	2,029	365	2.0	2.47	1,429
12/31/96 16:00	19074.5	0.6	4267.3	6242.0	68.4%	100	14.4	1,987	358	1.9	0.05	1,429
1/2/97 8:50	19115.4	40.9	4308.2	6282.8	68.6%	100	12.0	1,656	298	1.6	3.04	1,433
1/3/97 8:35	19139.2	23.8	4332.0	6306.6	68.7%	90	12.9	1,780	320	1.6	1.58	1,434
1/3/97 10:05	19140.4	1.2	4333.2	6308.1	68.7%	97	13.2	1,822	328	1.7	0.08	1,434
1/6/97 9:35	19149.8	9.4	4342.6	6379.6	68.1%	97	16.2	2,236	402	2.1	0.76	1,435
1/8/97 8:35	19196.9	47.1	4389.7	6426.6	68.3%	100	12.0	1,656	298	1.6	3.68	1,439
1/8/97 16:35	19204.5	7.6	4397.3	6434.6	68.3%	100	15.3	2,111	380	2.1	0.58	1,439
1/22/97 16:30	19466.2	261.7	4659.0	6770.5	68.8%	100	8.6	1,187	214	1.2	17.63	1,457
1/24/97 17:00	19471.4	5.2	4664.2	6819.0	68.4%	120	15.2	2,098	378	2.5	0.39	1,457
1/27/97 10:30	19494.3	22.9	4687.1	6884.5	68.1%	110	12.9	1,780	320	1.9	2.09	1,459
1/30/97 15:35	19498.8	4.5	4691.6	6961.6	67.4%	110	16.9	2,332	420	2.5	0.42	1,460
1/31/97 8:40	19516.1	17.3	4708.9	6978.7	67.5%	110	15.0	2,070	373	2.2	1.71	1,461
1/31/97 9:20	19516.6	0.5	4709.4	6979.3	67.5%	110	15.4	2,125	383	2.3	0.05	1,461
2/4/97 9:00	19518.2	1.6	4711.0	7075.0	66.6%	110	21.3	2,939	529	3.2	0.18	1,462
2/5/97 14:30	19542.5	24.3	4735.3	7104.5	66.7%	100	14.9	2,056	370	2.0	2.62	1,464
2/5/97 17:00	19542.9	0.4	4735.7	7107.0	66.6%	100	20.9	2,884	519	2.8	0.04	1,464
2/6/97 8:15	19558.1	15.2	4750.9	7122.2	66.7%	100	16.8	2,318	417	2.3	1.61	1,466
2/6/97 9:05	19558.9	0.8	4751.7	7123.1	66.7%	100	18.0	2,484	447	2.4	0.08	1,466
2/10/97 13:55	19659.8	100.9	4852.6	7223.9	67.2%	100	12.7	1,753	315	1.7	8.73	1,475
2/10/97 16:30	19662.0	2.2	4854.8	7226.5	67.2%	100	18.0	2,484	447	2.4	0.19	1,475
2/14/97 14:20	19755.8	93.8	4948.6	7320.3	67.6%	100	14.9	2,056	370	2.0	8.70	1,484
2/14/97 15:05	19756.2	0.4	4949.0	7321.1	67.6%	100	14.4	1,987	358	1.9	0.03	1,484
2/17/97 16:20	19774.4	18.2	4967.2	7394.3	67.2%	100	18.7	2,581	465	2.5	1.70	1,485
2/18/97 8:30	19790.6	16.2	4983.4	7410.5	67.2%	100	16.4	2,263	407	2.2	1.60	1,487
2/18/97 9:10	19790.8	0.2	4983.6	7411.2	67.2%	100	18.1	2,498	450	2.4	0.02	1,487

SOIL VAPOR EXTRACTION SYSTEM DATA
STOWE AUTO SERVICE, STOWE, VERMONT, SMS SITE #96-1957

4/15/96 14:00 <-- start date

DATE/TIME	HOUR METER	HOURS OPERATED (ELAPSED)	TOTAL HOURS OPERATED	HOURS ONLINE	SYSTEM AVAIL.	AVERAGE FLOWRATE (SCFM)	BAKER LEL READINGS		ESTIMATED CONC. BASED ON LAB ANALYSIS (ppm)	EST. PRODUCT RECOVERY RATE (gpd)	EST. INCREMENTAL RECOVERY (gal)	EST. TOTAL RECOV. (gal)
							LEL (%)	CONVERTED CONC. (ppm)				
2/17/97 16:20	19774.4	18.2	4967.2	7394.3	67.2%	100	18.7	2,581	465	2.5	1.70	1,485
2/18/97 8:30	19790.6	16.2	4983.4	7410.5	67.2%	100	16.4	2,263	407	2.2	1.60	1,487
2/18/97 9:10	19790.8	0.2	4983.6	7411.2	67.2%	100	18.1	2,498	450	2.4	0.02	1,487
2/24/97 17:00	19822.6	31.8	5015.4	7563.0	66.3%	100	12.4	1,711	308	1.7	2.73	1,490
2/27/97 11:35	19876.2	53.6	5069.0	7629.6	66.4%	125	19.7	2,719	489	3.3	5.59	1,495
2/27/97 12:15	19876.9	0.7	5069.7	7630.2	66.4%	137	17.2	2,374	427	3.2	0.10	1,495
2/28/97 8:55	19897.5	20.6	5090.3	7650.9	66.5%	120	14.4	1,987	358	2.3	2.37	1,498
2/28/97 9:45	19898.3	0.8	5091.1	7651.7	66.5%	120	13.2	1,822	328	2.1	0.07	1,498
3/18/97 8:30	20279.9	381.6	5472.7	8082.5	67.7%	100	10.1	1,394	251	1.4	27.90	1,526
3/18/97 10:00	20280.1	0.2	5472.9	8084.0	67.7%	100	11.9	1,642	296	1.6	0.01	1,526
3/19/97 8:15	20302.5	22.4	5495.3	8106.2	67.8%	100	12.3	1,697	306	1.7	1.53	1,527
3/19/97 17:00	20308.1	5.6	5500.9	8115.0	67.8%	100	12.7	1,753	315	1.7	0.39	1,528
3/24/97 14:48	20425.7	117.6	5618.5	8232.8	68.2%	100	11.1	1,532	276	1.5	7.89	1,536
3/28/97 14:10	20499.7	74.0	5692.5	8328.2	68.4%	107	8.7	1,201	216	1.3	4.26	1,540
4/7/97 12:00	20703.0	203.3	5895.8	8566.0	68.8%	100	12.2	1,684	303	1.7	12.32	1,552
4/10/97 11:00	20751.5	48.5	5944.3	8637.0	68.8%	100	9.7	1,339	241	1.3	2.99	1,555
4/16/97 13:50	20834.0	82.5	6026.8	8783.8	68.6%	113	5.5	759	137	0.8	3.70	1,559
4/16/97 14:20	20834.4	0.4	6027.2	8784.3	68.6%	131	6.9	952	171	1.2	0.02	1,559
4/21/97 12:45	20952.8	118.4	6145.6	8902.7	69.0%	65	5.8	800	144	0.5	4.27	1,563
4/30/97 13:45	21076.5	123.7	6269.3	9119.7	68.7%	114	11.7	1,615	291	1.8	5.96	1,569
5/1/97 8:00	21094.8	18.3	6287.6	9138.0	68.8%	93	9.6	1,325	238	1.2	1.15	1,570
BAKER FURNACE SHUT DOWN ON 5/1/97												

NOTES:

LEL (lower explosive limit) readings from Baker Furnace (propane callibrant), converted concentrations calculated as %LEL * 138
 SCFM = std. cubic feet per minute gal = gallons of gasoline equivalent gpd = gallons of gasoline equivalent per day

* actual concentrations/recovery rates calculated after 9/17/96 using laboratory results of vapor sampling/analysis conducted on 9/24/96.

Vapor sample analyzed by Endyne Laboratories, result reported as 553 ppmv based on response of gasoline from MW-4 and the molecular volume of m & p-Xylene, LEL reading at time of sampling was 21.4% (2953 ppm as calculated above), and Photovac 2020 PID (benzene) = 550 ppm.

$$\frac{\text{Concentration (ppm) reported by laboratory}}{\text{Concentration (ppm) calculated using Baker LEL}} = \frac{533}{2953} = 18.0\% \text{ of converted LEL}$$

$$\text{Recovery Rate (gal/day)} = \frac{(\text{ppm})(1E-6)(\text{scfm})(1440 \text{ min/day})(86 \text{ lbs gasoline/mole})}{(6 \text{ lbs gasoline/gallon})(379 \text{ cf/mole air})}$$

check on 1/22/97, on-board LEL = 8.6% (213 ppm as calculated above used in removal calculations), PID reading was 232 ppm

SOIL VAPOR EXTRACTION SYSTEM DATA
STOWE AUTO SERVICE, STOWE, VERMONT, SMS SITE #96-1957

1570 Gallons Recovered By Baker Furnace between 4/15/96 and 5/1/97
 FALCO Start Up on 5/9/97

Date & Time	Total Hours Operated	New Hour Meter (hrs)	Pilot Tube (ft/min)	Est. Flow Rate (cfm)	FALCO DATA			PID MEASUREMENTS*					Effluent Conc. (ppm)	Comments	
					T1 (°C)	T2 (°C)	Delta T (T2-T1)	Estimated Influent** (ppm)	Measured Influent (ppm)	Recovery Rate (gal/day)	Est. Incremental Recovery (gal)	Total Recovery (gal)			
5/9/97 17:00	0.0		2000	174.6	331	307	58	448	148	1.4			1570	0.0	
5/13/97 10:05	89.1		2500	218.3	330	371	41	378	115	1.4	5.15		1575	2.9	
5/20/97 10:00	257.0		2375	207.3	330	378	48	384	134	1.5	10.07		1585	0.8	
5/26/97 16:30	478.5		700	81.1	329	391	62	496	128	0.4	8.96		1594	0.8	estimated flow
6/2/97 10:00	598.0		700	81.1	330	419	89	712	245	0.8	2.31		1597	0.6	estimated flow
6/6/97 14:00	741.0		700	81.1	330	433	103	824	323	1.1	8.27		1603	0.6	estimated flow
6/18/97 13:00	908.0		1000	87.3	330	449	118	928	336	1.6	9.30		1613	0.6	pilot tube flow, new gauge
6/30/97 15:00	1248.0		1100	96.0	342	468	129	1008	387	2.0	25.50		1635	2.8	Falco shut down (7/3/97)
7/7/97 14:00	1413.0		1000	87.3	333	459	129	1008	345	1.6	12.75		1651	3.2	restarted 7/7/97
7/10/97 14:00	1485.0		400	34.9	330	444	114	912	409	0.8	3.61		1654	0.0	install RVV-1 pump
7/11/97 14:30	1581.5		1000	87.3	403	598	193	1274	454	2.2	5.88		1660	0.0	
7/12/97 14:00	1749.0		900	78.6	349	484	135	1080	387	1.7	13.31		1674	0.0	
7/21/97 16:00	1943.0		900	78.6	332	459	127	1016	381	1.7	13.45		1687	0.0	
8/4/97 16:00	2087.0		900	78.6	330	451	121	968	389	1.7	10.01		1697	5.1	
8/11/97 15:00	2254.0		900	78.6	333	462	129	1032	409	1.8	11.88		1708	3.6	
8/19/97 9:00	2398.0		900	78.6	330	450	120	980	332	1.4	7.53		1717	3.9	
8/28/97 11:45	2686.8		1000	87.3	330	440	110	900	348	1.7	18.63		1735	8.2	
9/2/97 14:00	2781.0		900	78.6	330	431	101	800	351	1.5	8.04		1743	4.5	
9/15/97 18:00	3086.0		1000	87.3	330	433	103	824	349	1.7	20.88		1754	3.8	
9/25/97 14:00	3333.0		900	78.6	330	432	102	816	352	1.5	15.70		1780	4.1	
10/7/97 14:00	3621.0		900	78.6	330	426	96	768	334	1.4	17.81		1787	4.2	
10/13/97 14:50	3765.8		900	78.6	330	425	95	760	330	1.4	8.57		1806	8.7	
10/17/97 14:30	3881.5		900	78.6	330	434	104	832	342	1.5	6.73		1811	4.2	
10/22/97 10:30	3977.5		800	78.6	330	428	99	792	332	1.4	6.87		1815	8.7	
10/29/97 12:30	4147.5		800	78.6	330	427	97	776	377	1.6	10.74		1829	3.9	
11/4/97 14:00	4293.0		800	78.6	330	406	76	632	272	1.2	8.42		1838	3.9	
11/11/97 14:40	4481.7		900	78.6	330	405	75	600	318	1.4	8.88		1848	3.6	
11/21/97 8:30	4695.5		900	78.6	330	418	89	712	348	1.5	13.92		1860	6.6	
11/24/97 13:00	4772.0		900	78.6	330	416	86	688	251	1.1	4.09		1865	3.9	
12/5/97 8:45	5032.7		900	78.6	330	381	51	408	204	0.9	10.58		1875	2.7	
12/10/97 14:00	5157.0		900	78.6	330	383	53	424	201	0.8	4.48		1880	1.1	
12/15/97 11:00	5274.0		900	78.6	330	386	56	448	206	0.9	4.27		1894	4.9	pid dead
12/19/97 12:30	5371.5		900	78.6	330	387	57	456	208	0.9	3.62		1887	4.9	
1/2/96 14:30	5709.5		900	78.6	330	389	59	472	233	1.0	13.29		1901	2.6	
1/8/96 16:45	5879.7		900	78.6	294	299	5	40	136	0.8	5.80		1906	14.9	T2 still rising at departure
1/13/96 15:30	5974.5		900	78.6	331	374	43	344	180	0.7	2.50		1909	0.5	
1/19/96 14:30	6117.5		900	78.6	330	363	33	264	126	0.5	3.85		1912	0.5	
2/2/96 15:00	6187.0		1000	87.3	333	466	133	1088	296	1.4	3.14		1918	0.5	Post m. fold adj.
2/4/96 8:15	6238.3		1000	87.3	330	377	47	376	162	0.6	1.83		1917	0.5	
2/27/96 14:40	6796.7		800	78.6	330	420	70	580	252	1.1	22.00		1938	0.3	restarts on 2/12/96 and 2/13/96
3/6/96 15:10	6995.2		800	78.6	328	354	65	520	217	0.8	7.19		1947	0.0	
3/20/96 14:00	7300.0		1000	87.3	330	371	41	376	135	0.8	10.95		1958	0.9	
4/2/96 14:00	7612.0		1000	87.3	330	357	27	216	92.8	0.4	7.04		1985	0.3	
4/14/96 9:30	7886.5		1000	87.3	330	361	31	248	97.3	0.5	5.34		1870	0.5	shut down for sampling after marants.
4/22/96 8:00	8086.0		1000	87.3	330	357	27	216	81	0.4	3.38		1973	0.4	balanced system
5/19/96 10:10	8736.2		1000	87.3	330	361	31	248	110	0.5	12.30		1988	1.4	
6/9/96 11:35	9241.6		1000	87.3	330	366	36	288	135	0.6	12.28		1998	0.8	
6/22/96 14:00	9558.0		1000	87.3	330	363	33	264	124	0.6	6.07		2006	0.7	
7/2/96 15:00	9787.0		1000	87.3	330	361	31	248	120	0.6	5.82		2012	0.7	
7/28/96 7:30	10437.5		1000	87.3	330	357	27	216	115	0.5	14.91		2027	0.5	estimated PID based on previous visit
9/2/96 15:00	11285.0	nm	0	0.0	0	0	0	0	0	0.0	0.00		2027	0.0	Falco down, since 8/21/96 (at least)
9/15/96 11:00	11593.0	0.0	1000	87.3	330	358	28	224	0	0.0	0.00		2027	0.5	
9/25/96 13:00	11636.0	100.2	1000	87.3	328	369	80	480	209	1.0	5.01		2032	1.3	Restart after fixing elect.
10/2/96 10:30	12000.5	174.1	1000	87.3	300	338	38	304	254	1.2	7.59		2039	7.5	GW Sampling event, restart, after samp.
10/18/96 10:00	12336.0	565.5	1000	87.3	320	307	47	376	186	0.9	14.82		2054	1.0	
10/23/96 0:00	12494.0	675.8	1000	87.3	318	364	45	360	181	0.8	5.43		2059	1.2	
10/29/96 11:00	12673.0	843.7	1000	87.3	321	367	66	528	327	1.8	6.65		2068	0.4	
11/8/96 12:15	12814.3	1085.9	1000	87.3	325	377	52	416	209	1.0	12.81		2081	1.2	
12/8/96 8:30	13606.5	1431.4	0	0.0	0	0	0	0	0	0.0	0.00		2085	1.2	Falco off, elect. interruption
12/18/96 9:45	13847.8	1432.1	1000	87.3	324	434	110	860	368	1.7	8.78		2104	1.2	restart after elect. repairs

* PID = Photovac MicroTIP HL-2000 or Photovac 2020 set to respond to benzene.

Estimated Influent** Delta T x B, which equals the concentration of Influent in ppm based on Falmouth Products' research

$$\text{ppm} \times 1E-6 (\text{cfm} \times 1440 \text{ m}^3/\text{day} \times 86 \text{ lbs gasoline/mole})$$

$$\text{Recovery Rate (gal/day)} = \frac{\text{ppm} \times 1E-6 (\text{cfm} \times 1440 \text{ m}^3/\text{day} \times 86 \text{ lbs gasoline/mole})}{(6 \text{ lbs gasoline/gallon} \times 379 \text{ cf/mole air})}$$

FLOW MEASUREMENTS

- Readings taken between 5/9/97 and 5/29/97 are suspect (wrong magnetic gauge)
- Readings estimated between 5/29/97 and 6/9/97 based on blower manufacturer info. and vacuum pressures
- Readings after 6/16/97 taken with new magnetic gauge

SOIL VAPOR EXTRACTION SYSTEM DATA

STOWE AUTO SERVICE, STOWE, VERMONT, SMS SITE #96-1957

1570 Gallons Recovered By Baker Furnace between 4/15/96 and 5/1/97

FALCO Start Up on 5/9/97

5/20/97

Date & Time	Total Hours Operated	New Hour Meter (hrs)	Pilot Tube (fl/min)	Est. Flow Rate (cfm)	FALCO DATA				PID MEASUREMENTS*				Comments	
					T1 (°C)	T2 (°C)	Delta T (T2-T1)	Estimated Influent** (ppm)	Measured Influent (ppm)	Recovery Rate (gal/day)	Est. Incremental Recovery (gal)	Total Recovery (gal)		Effluent Conc. (ppm)
1/5/99 14:30	14294.5		nm	87.0	321	391	70	560	262	1.2	27.21	2131	1.7	
1/14/99 14:55	14510.9		nm	87.0	319	387	68	544	nm	1.0	10.11	2141	nm	
1/19/99 13:05	14629.1	2152.9	nm	60.0	295	321	26	208	309	1.0	4.95	2146	8.2	Falco off upon arrival
1/26/99 9:15	14793.2	2260.6	nm	60.0	288	328	42	336	303	1.0	6.84	2153	5.4	Falco off upon arrival
2/11/99 15:35	15183.8		nm	60.0	315	374	59	472	216	0.7	13.79	2167	2.3	
2/23/99 9:00	15465.0	2680.5	nm	60.0	314	353	39	312	273	0.9	9.37	2176	1.8	Falco off upon arrival
3/5/99 8:30	15704.5	2920.1	nm	60.0	324	401	77	616	270	0.9	8.85	2185	0.2	
3/17/99 8:45	15992.8	3208.8	nm	60.0	325	393	68	544	235	0.8	9.91	2195	nm	
3/26/99 8:30	16208.5	3423.6	nm	60.0	325	382	57	456	214	0.7	6.59	2202	nm	
4/19/99 15:30	16791.5	4006.3	nm	60.0	325	359	34	272	136	0.4	13.69	2215	0.3	one blower is off-line
5/3/99 16:30	17128.5	4342.9	nm	60.0	325	357	32	256	117	0.4	5.60	2221	0.0	as above
5/5/99 15:30	17175.5	4389.9	nm	109.0	320	347	27	216	181	1.1	1.43	2223	1.5	replaced blower, working ok.
5/13/99 9:20	17381.3	4574.9	nm	109.0	325	358	33	264	160	0.9	7.84	2231	1.9	reduced T1 setpoint to 320
5/28/99 9:30	17721.5	4935.2	nm	109.0	320	352	32	256	129	0.8	12.87	2243	2.8	
6/10/99 12:00	18036.0	5249.9	1250	109.1	320	357	37	296	151	0.9	10.90	2254	2.3	

* PID = Photovac MicroTIP HL-2000 or Photovac 20/20 set to respond to benzene.

Estimated Influent** Delta T x 8, which equals the concentration of influent in ppm based on Falmouth Products' research

$$\text{(ppm)}(1E-6)(\text{scfm})(1440 \text{ min/day})(86 \text{ lbs gasoline/mole})$$

$$\text{Recovery Rate (gal/day)} = \frac{\text{Estimated Influent (ppm)} \times \text{Flow Rate (scfm)} \times 1440 \times 86}{(6 \text{ lbs gasoline/gallon})(379 \text{ cf/mole air})}$$

FLOW MEASUREMENTS

- Readings taken between 5/9/97 and 5/29/97 are suspect (wrong magnehelic gauge)
- Readings estimated between 5/29/97 and 6/9/97 based on blower manufacturer info. and vacuum pressures
- Readings after 6/16/97 taken with new magnehelic gauge