



SEP 04 2001

August 30, 2001

Mr. John Schmeltzer  
Sites Management Section  
VTDEC WMD  
103 South Main St./ West Bldg.  
Waterbury, VT 05671-0404

RE: Summary Report of the Investigation of Subsurface Petroleum Contamination at the  
Mac's Autocare, Morrisville, Vermont (VTDEC Site #97-2218)

Dear Mr. Schmeltzer:

Enclosed please find the August 2001 report titled Summary Report of the Investigation of  
Subsurface Petroleum Contamination at the Mac's Autocare facility in Morrisville, Vermont.  
Mr. Daniel Dukeshire of Sherman V. Allen, Inc., requested that a copy be forwarded to you for  
review.

Please do not hesitate to call, if you have any questions or comments.

Sincerely,



Rob Danckert  
Geologist

Enc.

cc: Mr. Daniel Dukeshire, Sherman V. Allen, Inc.  
GI #391410

SEP 04 2001

**SUMMARY REPORT OF THE  
INVESTIGATION OF SUBSURFACE  
PETROLEUM CONTAMINATION AT  
THE MAC'S AUTOCARE FACILITY,  
MORRISVILLE, VERMONT**

**August 23, 2001**

**Site Location:**

**ROUTE 15  
MORRISVILLE, VERMONT**

**GI Project # 391410  
VTDEC SITE #97-2218**

**Prepared For:**

**Mr. Daniel Dukeshire  
Sherman V. Allen, Inc.  
P. O. Box 865  
Rutland, Vermont 05661**

**Prepared By:**



***www.griffin-intl.com***

**P.O. Box 943 / 171 Commerce Street Williston, VT 05495 (802) 865-4288**

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## I. INTRODUCTION

This report summarizes the results of the continued investigation of subsurface petroleum contamination at the Mac's Autocare facility (Site) located on Route 15, Morrisville, Vermont. (Site Location Map, Appendix A). Investigative efforts at the site were initially conducted due to the reported observation of petroleum sheens present on surface water at the Foster Residence located north of the Site on February 26, 1991. It was later concluded that sheens reportedly present were due to spillage from petroleum dispensers at the Site; which had washed onto the Foster property via surface runoff from the Site. For more information on the initial subsurface investigation the reader is referred to the Griffin International, Inc. (Griffin) report titled, May 23, 1991, *Subsurface Investigation at Mac's Autocare*,

On March 22, 1991 seven groundwater monitoring wells were installed to define the extent of a potential subsurface release of petroleum from the various underground storage tanks (USTs) located on-site. Monitoring well MW-5 was the only monitoring well that had exhibited signs of contamination as measured with the photoionization detector (PID) on the date of drilling. It was later determined that elevated measurement of volatile organic compounds (VOCs) was due to surface spills at the gasoline dispensers that had likely migrated into the subsurface via cracks in the pavement.

On September 2-3, 1997 the following USTs were abandoned: one 10,000 gallon diesel UST located on the east side of the Mac's Autocare facility, one 10,000 and one 8,000 gallon gasoline UST located on the north side of the facility within a single tank pit. Both tank excavations exhibited varying degrees of petroleum contamination (Refer to Griffin's *September 4, 1997 UST Closure Report*).

On April 4, 2001, Griffin received a call from John Schmeltzer of the Vermont Department of Environmental Conservation (VTDEC) requesting sampling of the two water supply wells at the Foster Residence. One supply well was located approximately 200 feet from the Site. This supply well (Garage Supply Well) currently services the Foster garage and is not used for human consumption. The second Foster supply well (Foster Supply Well), services the Foster home and the trailer on the property (See Site Map, Appendix A). On April 9 and May 1, 2001 Griffin sampled the two supply wells for volatile organic compounds (VOCs) via EPA Method 524.2. MTBE was detected at the garage supply well above laboratory detection limits on both sampling events.

Scheduled work for this portion of the investigation included the installation of three groundwater monitoring wells and three soil borings, water table elevation measurements, and the collection and laboratory analysis of groundwater samples from the four previously existing monitoring wells and the three newly installed monitoring wells. Also conducted was the preparation of a summary report (this document) based on the findings.

This work and the investigative procedures were conducted generally in accordance with Griffin's *May 2001, Work Plan and Cost Estimate for Additional Site Characterization of*

*Subsurface Contamination at Mac's Autocare.* This work plan was approved by S. V. Allen and later by Mr. John Schmeltzer of the Vermont Department of Environmental Conservation (VTDEC) in a May 14, 2001 letter to Mr. Dan Dukeshire of S. V. Allen, Inc.

## **II. INVESTIGATIVE PROCEDURES**

### ***A. Drilling Methods and Soil Boring and Monitoring Well Installation***

On June 12, 2001 six (6) soil borings were advanced by T&K Drilling of East Swanzee, New Hampshire. Monitoring wells MW-9, MW-10, and MW-11 were constructed in three of the six soil borings using a truck-mounted, 4.25" inside diameter (ID), hollow-stem auger drill rig. Two of the monitoring wells (MW-9 and MW-10) were installed at the northern edge of the Site and the third monitoring well (MW-11) was installed in the vicinity of the Garage supply well. The three monitoring wells were installed in locations believed to be downgradient of the Site. Three of the six soil borings, not completed as monitoring wells, were advanced through shallow soils using only split spoon samplers in order to determine the extent of potential run-off impact to shallow soils in the vicinity of the garage supply well and northern edge of the Site.

The monitoring wells were installed to help determine whether or not the Mac's Autocare facility has impacted the Foster garage supply well and to further characterize the petroleum impact to shallow groundwater originally detected during the closure of three USTs at the Site. (See Site Map, Appendix A).

Soil samples were collected at 5-foot intervals in each boring to be completed as a monitoring well using a two-foot long, 2" ID stainless steel split-spoon sampler. The split-spoon sampler was decontaminated in the field with a solution of Alconox (detergent) and water to prevent potential cross-contamination. Soil samples were screened for VOCs using an Hnu™ Model IIW-101 Photoionization Detector (PID) equipped with a 10.2 eV bulb. Soils were screened using the Griffin Jar/Polyethylene Bag Headspace Screening Protocol, which conforms to state and industry standards. In addition, soil characteristics were recorded in boring logs by the Griffin drilling supervisor (See Boring Logs and Monitoring Well Construction Diagrams, Appendix B).

All of the monitoring wells are constructed of newly threaded, flush-joint, schedule 40, 2" ID polyvinyl chloride (PVC) riser attached to a 0.010-slot, 2" ID PVC screen. The screen is attached to the riser by a watertight, threaded, flush joint coupling. A sealed watertight roadway box was installed at grade to protect the well. The top of the riser is capped with a lockable expansion plug.

A silica sand pack was placed around the screened portion of each well in order to prevent fine sediments within the groundwater from entering the well. A bentonite seal was placed in the annulus immediately above the sand pack to prevent infiltration into the borehole. An additional seal was placed closer to the ground surface to prevent surface water from entering the borehole.

### **MW-9**

Subsurface conditions encountered from zero to approximately 2.0 feet and 5.0 to 7.0 feet below surface grade (bsg) in the boring for monitoring well MW-9, consisted of poorly-graded, dark brown-red, loose sand. A two-inch clay layer was observed within the 5.0 to 7.0 spoon. Soils encountered at 10.0 to 12.0 feet bsg consisted of well-graded, dark grey sand with gravel. Soils encountered at 15.0 to 17.0 feet bsg consisted of wet, well-graded, dark brown, loose sand with gravel. Soils encountered from 20.0 to 22.0 feet bsg consisted of wet, well-graded, dark brown-grey, stratified sand. Driller refusal was not encountered throughout drilling of the soil boring for MW-9. VOCs were recorded at 5.0 parts per million with the PID from the zero to 2.0 feet bsg. No other significant VOCs were detected throughout the drilling of this soil boring. Groundwater was encountered at approximately 14.9 feet bsg.

### **MW-10**

Subsurface conditions encountered from zero to approximately 2.0 feet bsg in the boring for monitoring well MW-10 consisted of moist, dark brown, well-graded sand with silt. Soils encountered from 5.0 to 7.0 and 10.0 to 12.0 feet bsg consisted of dry, dark grey-brown, well-graded sand with gravel. Soils encountered from 15.0 to 17.0 and 20.0 to 22.0 feet bsg consisted of wet, dark grey-brown, poorly graded sand. A four inch layer of clay was observed at the base of exploration. Driller refusal was not encountered throughout drilling of the soil boring for MW-10. VOCs were recorded at 5.3 parts per million with the PID from the zero to 2.0 feet bsg. No other significant VOCs were detected throughout the drilling of this soil boring. Groundwater was encountered at approximately 15 feet bsg.

### **MW-11**

Subsurface conditions encountered from zero to approximately 2.0 feet bsg in the boring for monitoring well MW-11 consisted of dry, dark brown, well-graded sand with gravel. Soils encountered from 5.0 to 7.0 and 10.0 to 12.0 feet bsg consisted of dry, dark grey-brown and dark brown-red, well-graded sand. Soils encountered from 15.0 to 17.0 feet bsg consisted of wet, dark brown, well-graded sand with gravel. Soils encountered from 20.0 to 22.0 feet bsg consisted of wet, laminated, dark grey-brown, well-graded sand. Driller refusal was encountered at 22.0 feet bsg. No significant VOCs were detected throughout the drilling of this soil boring. Groundwater was encountered at approximately 15 feet bsg.

### **SB-1**

Subsurface conditions encountered from zero to approximately 2.0 feet bsg in soil boring SB-1 consisted of dry, dark brown-grey, poorly-graded sand with silt. Soils encountered from 2.0 to 6.0 feet bsg consisted of moist, dense, dark brown, well-graded sand with silt. Driller refusal was

not encountered throughout drilling of soil boring SB-1. VOCs were recorded at 5.6 parts per million with the PID from zero to 2.0 feet bsg. No other significant VOCs were detected throughout the drilling of this soil boring.

### ***SB-2***

Subsurface conditions encountered from zero to approximately 4.0 feet bsg in soil boring SB-2 consisted of dry, brown-grey, well-graded sand. Soils encountered from 4.0 to 6.0 feet bsg consisted of dry, brown-grey, silty sand. Driller refusal was not encountered throughout drilling of soil boring SB-2. VOCs were not detected with the PID throughout the drilling of this soil boring.

### ***SB-3***

Subsurface conditions encountered from zero to approximately 2.0 feet bsg in soil boring SB-3 consisted of dry, brown-red, poorly-graded sand. Soils encountered from 2.0 to 6.0 feet bsg consisted of dry, light brown-grey, well-graded sand. Driller refusal was not encountered throughout drilling of soil boring SB-3. VOCs were not detected with the PID throughout the drilling of this soil boring.

## ***B. Determination of Groundwater Elevations, Flow Direction, and Gradient***

On June 25, 2001, depth to water measurements were taken with the use of a Keck™ interface probe in the three monitoring wells (MW-9 through MW-11) drilled on June 12, 2001 and the four previously existing monitoring wells (MW-1, MW-5, and MW-7). Monitoring well MW-3 was dry on the date of sampling (See Liquid Level Measurement Data, Appendix C). The relative water table elevation was determined, based on an arbitrary benchmark of 100 feet (top of casing for MW-1).

The groundwater flow direction for the June 25, 2001 sampling round was estimated to be in a north-northwest direction at a gradient of approximately 1.5% (See Appendix B, Groundwater Contour Map). No free phase petroleum product was observed in the gauged monitoring wells on June 25, 2001. Groundwater level data are recorded in Appendix C.

## ***C. Groundwater Sample Collection and Analysis***

On June 25, 2001 groundwater samples were collected from the six monitoring wells and the Mac's Autocare (Store) supply well. The samples were stored on ice and submitted to Endyne, Inc. of Williston, Vermont, under proper chain-of-custody procedures. The samples were collected according to Griffin's groundwater sampling protocol, which complies with industry and state standards. Groundwater samples were analyzed for VOCs by EPA Method 8021B and

the Store supply well sample was also analyzed for VOCs by EPA Method 524.2. In accordance with VTDEC protocols and for quality assurance/quality control (QA/QC) purposes, a duplicate (MW-7) and trip blank sample were also collected and analyzed for VOCs by EPA Method 8021B.

No VOCs were reported as detected above laboratory detection limits in groundwater samples collected from monitoring wells MW-1, MW-9, MW-10, MW-11, and the Store supply well. (See Groundwater Quality Summary Data, Appendix D).

Laboratory analysis of the groundwater sample collected from monitoring well MW-5 detected concentrations of benzene and ethylbenzene above laboratory detection limits and below applicable Vermont Groundwater Enforcement Standards (VGESs). Total VOC concentrations have significantly decreased since the July 1, 1998 sampling event.

Laboratory analysis of the groundwater sample collected from monitoring well MW-7 detected concentrations of naphthalene above laboratory detection limits and the applicable VGES. The concentration of naphthalene has steadily decreased since the July 1, 1998 sampling event.

Results from the analyses of the duplicate sample indicate that adequate QA/QC measures were maintained during sample collection and analysis.

#### **D. Supply Well Construction**

A review of the well completion report for the Garage supply well indicates that Manosh drilled the well in March 1988 (See Appendix E, Garage Supply Completion Report). The supply well was drilled to a total depth of 273 feet. Sixty-one feet of casing was installed. Bedrock was observed at 17 feet bsg.

### **III. CONCLUSIONS**

Based on the site investigation at the Macs Autocare site, the following conclusions are offered:

1. On September 2-3, 1997 the following USTs were abandoned: one 10,000 gallon diesel UST located on the east side of the Mac's Autocare facility, one 10,000 and one 8,000 gallon gasoline UST located on the north side of the facility within a single tank pit. Both tank excavations exhibited varying degrees of petroleum contamination.
2. On June 12, 2001 three monitoring wells (MW-9 – MW-11) and three soil borings were installed at the north end of the Mac's Autocare facility and the Foster property. Soil screening results measured during soil boring advancement indicates that VOC concentrations were present in soils, particularly in the vicinity of monitoring wells MW-9 and MW-10 and soil boring SB-1 ranging from 0-2 feet bsg. Concentrations decreased

significantly with depth. These near-surface readings are likely the result of surface runoff from the area of the dispensers to the north towards the Foster property.

3. An earthen berm was reportedly placed at the north end of the Mac's Autocare facility in order to redirect surface runoff directly into a catch basin present at the north end of the Site. The grass and gravel areas separating the Foster property from the Site was also reportedly reseeded (Telephone Communications with Dan Dukeshire, 8/18/01). Both of these actions should reduce the surface run-off reportedly occurring from the Site onto the Foster property.
4. Results of the groundwater sampling event conducted on June 25, 2001 indicate that contaminant concentrations previously reported in monitoring wells MW-5 and MW-7 are still present, however, total contaminant concentrations have decreased significantly since detections were first reported in July 1998. The absence of VOCs reported from the laboratory analyses of downgradient monitoring wells MW-9, MW-10, and MW-11 further support the conclusion that the contaminants reported in groundwater samples collected from monitoring wells MW-5 and MW-7 have not migrated off site via surficial material. However, it should be noted that MTBE laboratory detection limits for the groundwater samples collected from the site monitoring wells were above the most-recent MTBE concentration reported from the garage supply well (6.3 ppb).
5. Supply well samples collected from the Mac's Autocare facility and the Garage and Foster House report that concentrations of MTBE are present in the Garage supply well at levels above laboratory detection limits but far below the applicable VGES (40.0 ppb). Laboratory analyses of the Store and Foster supply well samples indicate that none of the compounds analyzed for were detected above laboratory detection limits. The Garage supply well is not currently used for human consumption.
6. Based on the Garage supply well completion report and given the significant depth of casing (61'), the shallow depth to bedrock, and the absence of reported contamination in the up-gradient monitoring wells (relative to the Garage supply well), it is not likely that surface runoff is the cause of the Garage supply well contamination. This is assuming there are no leaks and the casing was set properly. Contaminant migration into the Garage supply well may be from bedrock fractures between the former USTs at the Mac's Autocare facility and the Garage supply well. The 1,000 gallon aboveground storage tank (AST) located directly east of the Garage supply well may be a potential source of contamination within the supply well.
7. Based on field observations from past investigations residual petroleum impacts are present to a limited extent in soil in the vicinity of the former UST source areas located adjacent to the north and east sides of the Mac's Autocare facility.
8. With the apparent sources removed (i.e., the former USTs), it is expected that, over time, the natural processes of dilution, dispersion, and biodegradation will reduce any remaining dissolved contaminant concentrations potentially present in groundwater and soils in the former source areas at the Site.

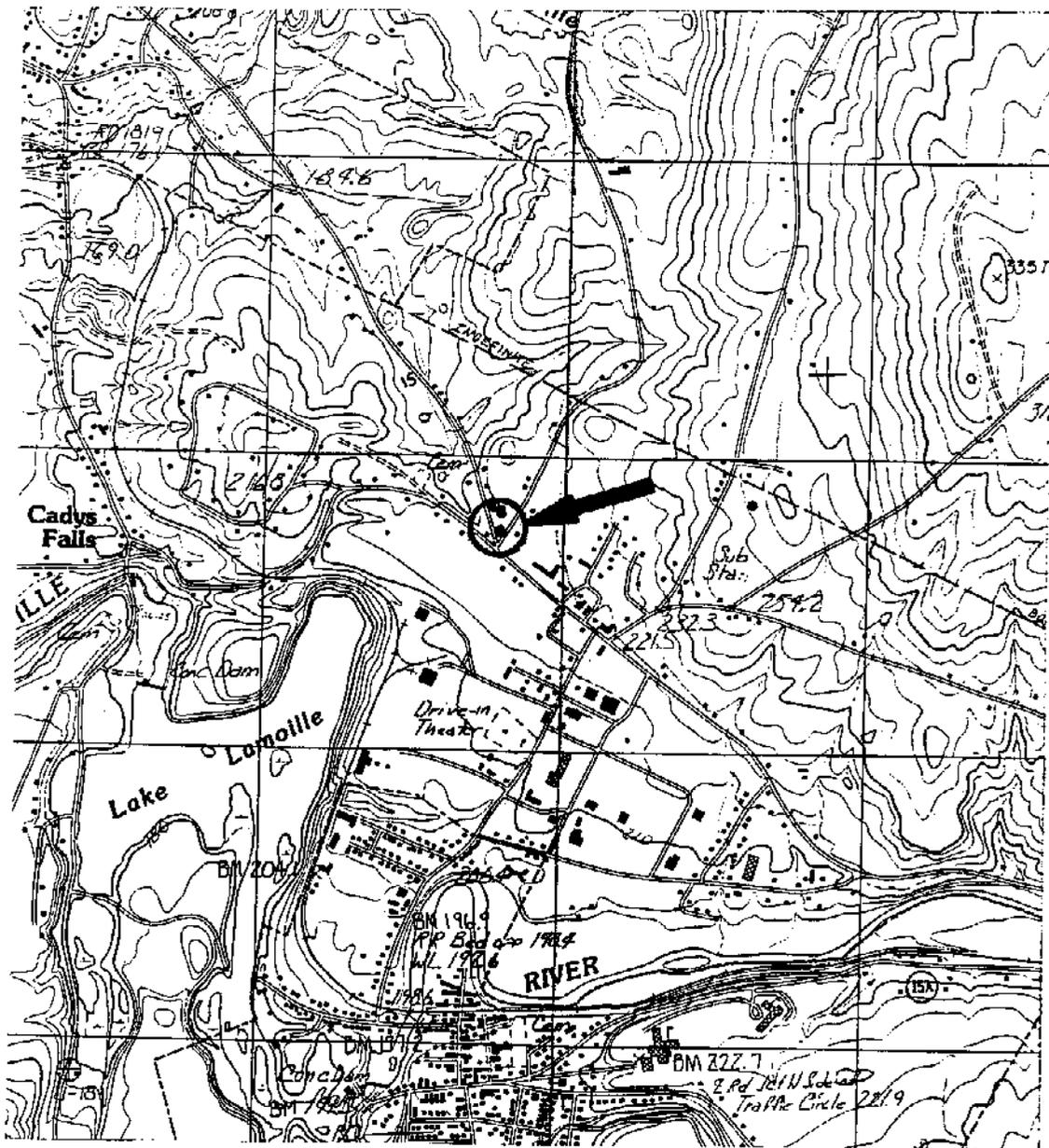
#### IV. RECOMMENDATIONS

Based on the results of this site investigation, Griffin recommends that the Mac's Autocare facility be sampled in June 2002. The seven site monitoring wells (MW-1, MW-3, MW-5, MW-7, MW-9, MW-10, and MW-11) should be sampled for VOCs via EPA Method 8021 B. The three supply wells (Store, Foster, and Garage supply wells) should also be sampled for VOCs an additional time via EPA Method 524.2. Assuming analytical results report a stabilization decrease of contaminant levels and no evidence of contamination migration, Griffin will recommend the Mac's Autocare facility be considered for Sites Management Activity Completed (SMAC) status and be removed from the VTDEC Active Hazardous Waste Sites List.

## **APPENDIX A**

### **MAPS**

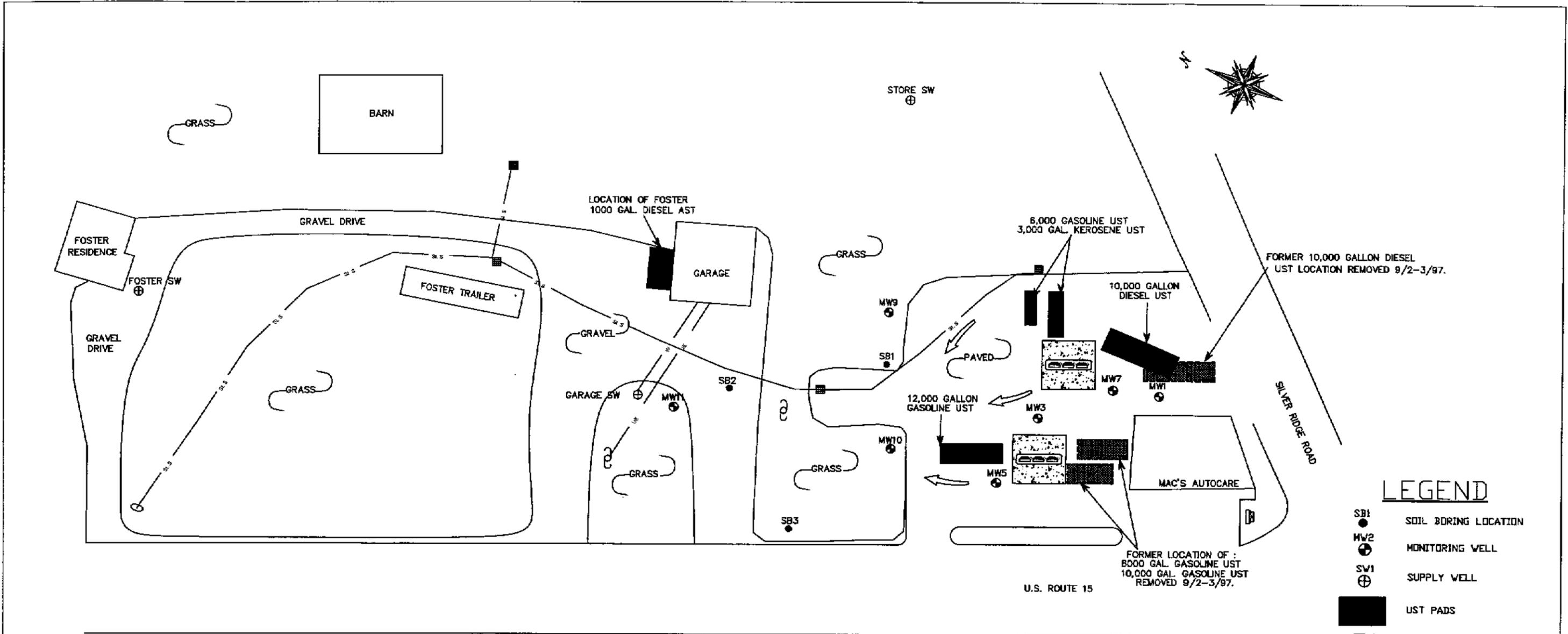
- 1) SITE LOCATION MAP**
- 2) SITE MAP**
- 3) GROUNDWATER CONTOUR MAP**
- 4) CONTAMINANT CONCENTRATION MAP**



DB #: 391410  
 SOURCE: USGS- MORRISVILLE, VERMONT QUADRANGLE



<b>MAC'S AUTOCARE</b>			
ROUTE 15, MORRISVILLE, VERMONT			
<b>SITE LOCATION MAP</b>			
DATE: 8/24/98	DWG.#:1	SCALE: 1:24000	DRN.:SB APP.:RA



**LEGEND**

- SB1 ● SOIL BORING LOCATION
- MW2 ⊕ MONITORING WELL
- SW1 ⊕ SUPPLY WELL
- UST PADS
- ⊕ UTILITY POLE
- ⊕ GASOLINE PUMP
- ⊕ BUSINESS SIGN
- ⊕ CATCH BASIN
- W— APPROX. WATER LINE LOCATION
- UE— APPROX. UNDERGROUND ELECTRIC LOCATION
- S.S.— APPROX. STORM SEWER LOCATION
- ➔ APPROX. DIRECTION OF STORMWATER RUNOFF

NOTE: FOSTER'S TRAILER AND TRUCKING GARAGE LOCATIONS ARE APPROXIMATE.

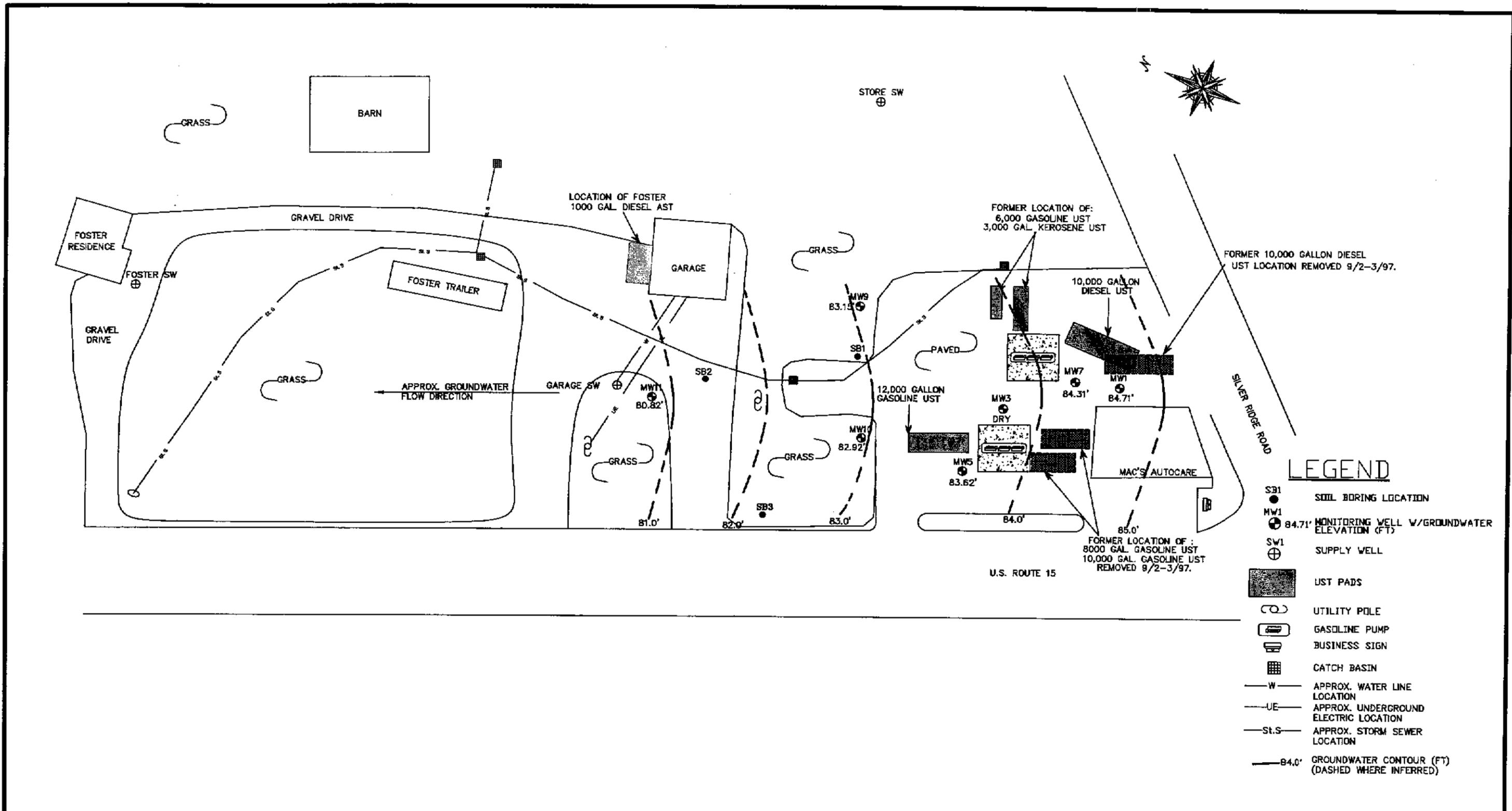
VT DEC # 97-2218  
JOB # 391410

**GRIFFIN INTERNATIONAL**

**MAC'S AUTOCARE**  
ROUTE 15, MORRISVILLE, VERMONT

**SITE MAP**

DATE: 8/23/01	DWG.#: 2	SCALE: 1"=50'	DRN: RW	APP: RD
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NOTE: FOSTER'S TRAILER AND TRUCKING GARAGE LOCATIONS ARE APPROXIMATE.

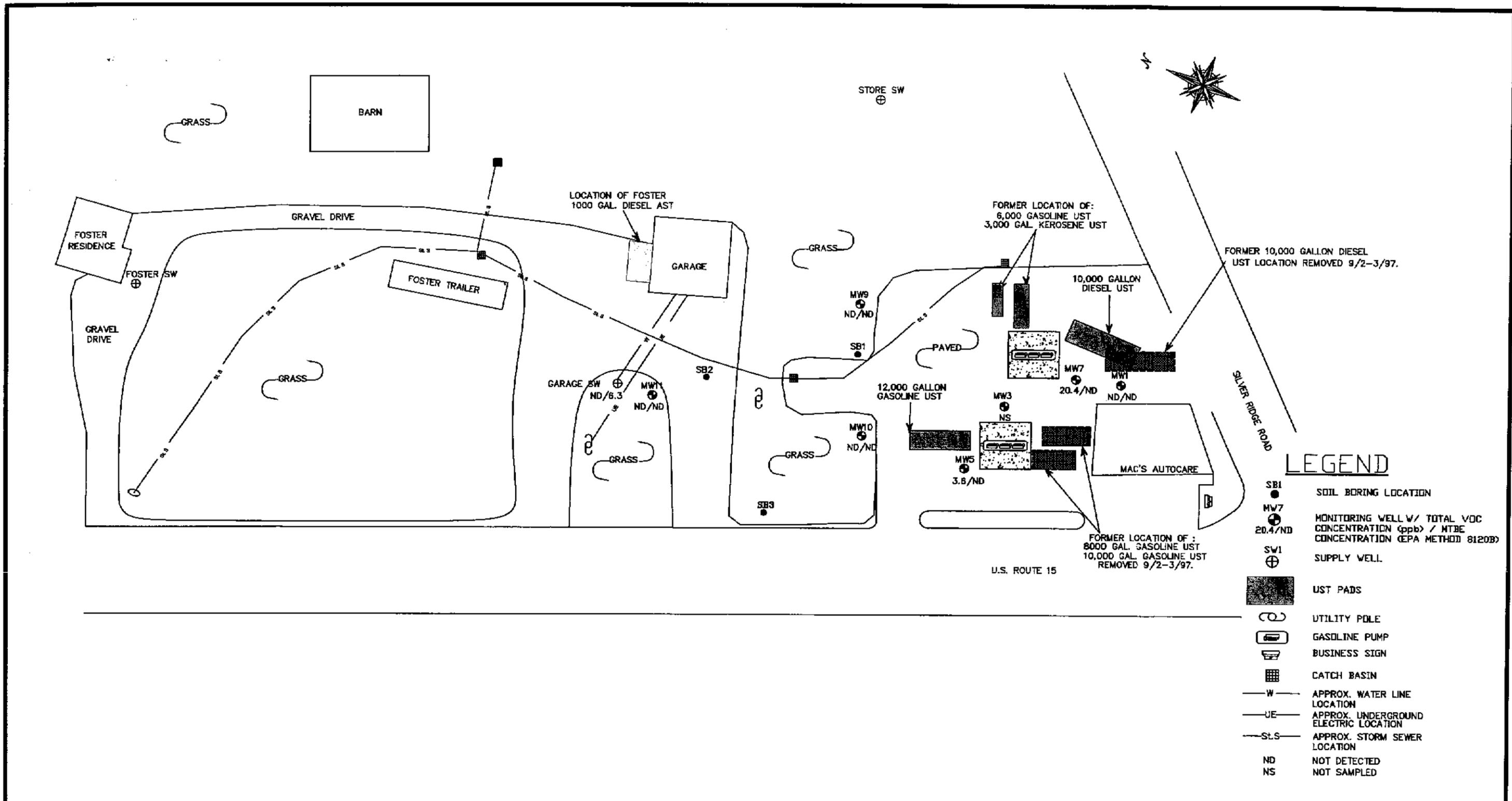


VTDEC # 97-2218  
JOB # 391410

**MAC'S AUTOCARE**  
ROUTE 15, MORRISVILLE, VERMONT

**GROUNDWATER CONTOUR MAP**  
MEASURED: 6/25/01

DATE: 8/14/01	DWG.#: 3	SCALE: 1"=50'	DRN: DM	APP: RD
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NOTE: FOSTER'S TRAILER AND TRUCKING GARAGE LOCATIONS ARE APPROXIMATE.



NOTE: MW11 SAMPLE COLLECTED ON 5/1/01 (EPA METHOD 524.2)

VDEC # 97-2218  
JOB # 391410

<b>MAC'S AUTOCARE</b>				
ROUTE 15, MORRISVILLE, VERMONT				
CONTAMINANT CONCENTRATION MAP				
SAMPLED: 6/25/01				
DATE: 8/14/01	DWG.#: 2	SCALE: 1"=50'	DRN: DM	APP: RD

*Mac's Autocare  
Morrisville, Vermont*

*Griffin Project# 391410  
VTDEC# 97-2218*

## **APPENDIX B**

### **BORING LOGS AND MONITORING WELL CONSTRUCTION DIAGRAMS**

# BORING LOG AND WELL CONSTRUCTION DIAGRAM

Well No: MW-9



**MACS AUTOCARE**  
MORRISVILLE, VERMONT

Griffin Project #: 391410	Date Installed: 6/12/01	Letter Symbol Graphic Symbol
Drilled by: Griffin International	Drilling Method: HOLLOW-STEM AUGER	
Driller: T&K DRILLING	Boring Diameter: 4.25"	
Supervised by: RD	Development Method: Disposable Bailer	
Log Prepared by: RD	T.O.C. Elevation: 98.16'	
Logged by: RD	Screened Length: 10 Ft.	

Grade	Well Construction	Pen/Rec (")	Interval (')	Soil Characteristics	Letter Symbol	Graphic Symbol	
=0		Blow Count	PID (ppm)	Gravel Surface			
1.0		NA	0-2'	POORLY-GRADED SAND (SP)-Auger flight	SP		
2.0		NA	5.0	Dry, dark-brown, loose sand.			
3.0							
4.0							
5.0							
6.0			24/18	5-7'	POORLY-GRADED SAND (SP)		SP
7.0			7-5-7-9	0.1	Moist, brown-red, loose sand, with 2" clay layer.		
8.0							
9.0							
10.0							
11.0			24/5	10-12'	WELL-GRADED SAND WITH GRAVEL (SW)		SW
12.0			4-7-7-6	0.9	Dry, dark-grey, loose sand.		
13.0							
14.0							
15.0			24/7	15-17'	WELL-GRADED SAND WITH GRAVEL (SW)		SW
16.0		4-5-5-6	0.2	Wet, homogenous, dark-brown, loose sand.			
17.0							
18.0							
19.0							
20.0							
21.0		24/18	20-22'	WELL-GRADED SAND (SW)	SW		
22.0		1-1-3-5	0.4	Wet, stratified, dark brown-grey, dense sand and gravels.			
23.0							
24.0							
25.0				Base of exploration.			
26.0							
27.0							
27.5							
28.0							
28.5							
29.0							
29.5							
30.0							
30.5							
31.0							
31.5							
32.0							
32.5							
33.0							

Legend

- Road Box with Bolt Down Cover, Set in Cement.
- Existing Surface.
- Bentonite Seal Placed in Annulus.
- Grade #1 Silica Sand Pack Placed in Annulus.
- Drill Cuttings Placed in Annulus.
- NA-Not Applicable
- ND-Non-detect w/ PID
- Approximate Water Level During Drilling (Fl.)
- Static Water Level (Fl.) on Date of Sampling

# BORING LOG AND WELL CONSTRUCTION DIAGRAM

## Well No: MW-10



**MACS AUTOCARE**  
**MORRISVILLE, VERMONT**

Griffin Project #: 391410	Date Installed: 8/12/01	
Drilled by: Griffin International	Drilling Method: HOLLOW-STEM AUGER	
Driller: T&K DRILLING	Boring Diameter: 4.25"	
Supervised by: RD	Development Method: Disposable Bailer	
Log Prepared by: RD	T.O.C. Elevation: 98.02'	
Logged by: RD	Screened Length: 10 Ft.	

Grade	Well Construction	Pen/Rec ("")	Interval ("")	Soil Characteristics	Letter Symbol	Graphic Symbol	
=0				Gravel Surface			
1.0		NA	0-2'	WELL-GRADED SAND WITH SILT (SW/SM)-Auger flight	SW		
2.0		NA	5.3	Moist, dark-brown, loose sand.	SM		
3.0							
4.0							
5.0							
6.0			24/10	5-7'	WELL-GRADED SAND WITH GRAVEL (SW)		SW
7.0			4-5-5-12	0.9	Dry, homogenous, dark grey/brown, loose sand.		
8.0							
9.0							
10.0							
11.0			24/10	10-12'	WELL-GRADED SAND WITH GRAVEL (SW)		SW
12.0			3-3-2-4	2.1	Dry, homogenous, dark grey/brown, loose sand.		
13.0							
14.0							
15.0							
16.0			24/17	15-17'	POORLY-GRADED SAND (SP)		SP
17.0			2-2-2-3	0.2	Wet, homogenous, dark grey/brown, loose sand.		
18.0							
19.0							
20.0							
21.0			24/16	20-22'	POORLY-GRADED SAND (SP)		SP
22.0			2-3-8-28	ND	Wet, homogenous, dark grey/brown, loose sand.		
23.0					4" layer of clay observed at base of spoon.		
24.0							
25.0					Base of exploration.		
26.0							
27.0							
27.5							
28.0							
28.5							
29.0							
29.5							
30.0							
30.5							
31.0							
31.5							
32.0							
32.5							
33.0							

### Legend

<ul style="list-style-type: none"> <li> Road Box with Bolt Down Cover, Set in Cement.</li> <li> Existing Surface.</li> <li> Bentonite Seal Placed in Annulus.</li> <li> Grade #1 Silica Sand Pack Placed in Annulus.</li> <li> Drill Cuttings Placed in Annulus.</li> <li>NA-Not Applicable</li> <li>ND-Non-detect w/ PID</li> </ul>	<ul style="list-style-type: none"> <li> Locking Plug</li> <li> 2.0" ID, Schedule 40 PVC Riser.</li> <li> 2.0" ID, Schedule 40 PVC, 0.010"-Stotted Well Screen</li> <li> Plug Point</li> <li> Approximate Water Level During Drilling (Fl.)</li> <li> Static Water Level (Fl.) on Date of Sampling</li> </ul>
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# BORING LOG AND WELL CONSTRUCTION DIAGRAM

## Well No: MW-11



**MACS AUTOCARE**  
**MORRISVILLE, VERMONT**

Griffin Project #: 391410	Date Installed: 6/12/01
Drilled by: Griffin International	Drilling Method: HOLLOW-STEM AUGER
Driller: T&K DRILLING	Boring Diameter: 4.25"
Supervised by: RD	Development Method: Disposable Bailer
Log Prepared by: RD	T.O.C. Elevation: 92.56'
Logged by: RD	Screened Length: 10 Ft.

Grade	Well Construction	Pen/Rec (")	Interval (')	Soil Characteristics	Letter Symbol	Graphic Symbol	
=0							
1.0		NA	0-2'	WELL-GRADED SAND WITH GRAVEL (SW)-Auger flight	SW		
2.0		NA	0.7	Dry, dark-brown, loose sand.			
3.0							
4.0							
5.0							
6.0			24/13	5-7'	WELL-GRADED SAND (SW)		SW
7.0			6-6-8-8	ND	Dry, homogenous, dark brown/red, loose sand.		
8.0							
9.0							
10.0							
11.0			24/14	10-12'	WELL-GRADED SAND (SW)		SW
12.0		11.74' ▽ 6/25/01	6-8-5-7	ND	Dry, homogenous, dark grey/brown, loose sand.		
13.0					Clean sands encountered at 11.5' bsg.		
14.0							
15.0		15' ▽ 6/12/01	24/11	15-17'	WELL-GRADED SAND WITH GRAVEL (SW)		SW
16.0			3-3-5-6	ND	Wet, homogenous, dark-brown, loose sand.		
17.0							
18.0							
19.0							
20.0			24/9	20-22'	WELL-GRADED SAND (SW)		SW
21.0			9-7-1-	ND	Wet, laminated, dark grey/brown, dense sand.		
22.0			REFUSAL		Base of exploration.		
23.0							
24.0							
25.0							
26.0							
27.0							
27.5							
28.0							
28.5							
29.0							

### Legend

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li> Road Box with Bolt Down Cover, Set in Cement.</li> <li> Existing Surface.</li> <li> Bentonite Seal Placed in Annulus.</li> <li> Grade #1 Silica Sand Pack Placed in Annulus.</li> <li> Drill Cuttings Placed in Annulus.</li> <li>NA-Not Applicable</li> <li>ND-Non-detect w/ PID</li> </ul> | <ul style="list-style-type: none"> <li> Locking Plug.</li> <li> 2.0" ID, Schedule 40 PVC Riser.</li> <li> 2.0" ID, Schedule 40 PVC, 0.010" Slotted Well Screen</li> <li> Plug Point</li> <li> ▽ Approximate Water Level During Drilling (Ft.)</li> <li> ▽ Static Water Level (Fl.) on Date of Sampling</li> </ul> |
|--|---|

# BORING LOG AND WELL CONSTRUCTION DIAGRAM

## Well No: SB-1



**MACS AUTOCARE**  
**MORRISVILLE, VERMONT**

Griffin Project #: 391410	Date Installed: 6/12/01	Letter Symbol Graphic Symbol
Drilled by: Griffin International	Drilling Method: Continuous Split Spoon	
Driller: T&K DRILLING	Boring Diameter: 2.0" ID	
Supervised by: RD	Development Method: NA	
Log Prepared by: RD	T.O.C. Elevation: NA	
Logged by: RD	Screened Length: NA	

Grade	Soil Boring	Pen/Rec (")	Interval (')	Soil Characteristics	Letter Symbol	Graphic Symbol
=0		<b>Blow Count</b>	<b>PID (ppm)</b>	Gravel Surface		
1.0		24/16	0-2'	POORLY-GRADED SAND WITH SILT (SP-SM)- -Auger flight. Dry, dark brown-grey, dense sand.	SP/ SM	
1.5		8-13-35-20	5.8			
2.0		24/20	2-4'	WELL-GRADED SAND WITH SILT (SW/SM)	SW/ SM	
2.5		5-3-2-3	0.7	Moist, stratified, dark brown, dense sand.		
3.0						
3.5						
4.0		24/20	4-6'	WELL-GRADED SAND WITH SILT (SW/SM)	SW/ SM	
4.5		5-8-9-10	0.1	Moist, stratified, dark brown, dense sand.		
5.0						
5.5						
6.0				Base of exploration.		
6.5						
7.0						
7.5						

### Legend

- Road Box with Bolt Down Cover, Set in Cement.
- Existing Surface.
- Bentonite Seal Placed in Annulus.
- Grade #1 Silica Sand Pack Placed in Annulus.
- Drill Cuttings Placed in Annulus.
- NA-Not Applicable
- ND-Non-detect w/ PID
- Approximate Water Level During Drilling (Fl.)
- Static Water Level (Fl.) on Date of Sampling

# BORING LOG AND WELL CONSTRUCTION DIAGRAM

## Well No: SB-2



**MACS AUTOCARE**  
**MORRISVILLE, VERMONT**

Griffin Project #: 391410	Date Installed: 6/12/01	Letter Symbol Graphic Symbol
Drilled by : Griffin International	Drilling Method: Continuous Split Spoon	
Driller: T&K DRILLING	Boring Diameter: 2.0" ID	
Supervised by: RD	Development Method: NA	
Log Prepared by: RD	T.O.C. Elevation: NA	
Logged by: RD	Screened Length: NA	

Grade	Soil Boring	Pen/Rac (")	Interval (')	Soil Characteristics	Letter Symbol	Graphic Symbol
=0		<b>Blow Count</b>	<b>PID (ppm)</b>	Gravel Surface		
1.0		24/12	0-2'	WELL-GRADED SAND (SW)	SW	
1.5		16-26-14-10	ND	Dry, homogenous, brown-red, loose sand.		
2.0		24/12	2-4'	WELL-GRADED SAND (SW)	SW	
2.5	5-12-21-12	ND	Dry, homogenous, light brown-grey, loose sand.			
3.0						
3.5						
4.0	24/20	4-6'	SILTY SAND (SM)	SM		
4.5	10-16-22-16	ND	Dry, homogenous, light brown-grey, loose sand.			
5.0						
5.5						
6.0				Base of exploration.		
6.5						
7.0						
7.5						

### Legend

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li> Road Box with Bolt Down Cover, Set in Cement.</li> <li> Existing Surface.</li> <li> Bentonite Seal Placed in Annulus.</li> <li> Grade #1 Silica Sand Pack Placed in Annulus.</li> <li> Drill Cuttings Placed in Annulus.</li> </ul> | <ul style="list-style-type: none"> <li> Approximate Water Level During Drilling (FL)</li> <li> Static Water Level (Ft) on Date of Sampling</li> </ul> <p>NA-Not Applicable<br/> ND-Non-detect w/ PID</p> |
|---|--|

# BORING LOG AND WELL CONSTRUCTION DIAGRAM

Well No: SB-3



**MACS AUTOCARE**  
MORRISVILLE, VERMONT

Griffin Project #: 391410	Date Installed: 6/12/01	Letter Symbol Graphic Symbol
Drilled by: Griffin International	Drilling Method: Continuous Split Spoon	
Driller: T&K DRILLING	Boring Diameter: 2.0"	
Supervised by: RD	Development Method: NA	
Log Prepared by: RD	T.O.C. Elevation: NA	
Logged by: RD	Screened Length: NA	

Grade	Soil Boring	Pen/Rec (")	Interval (')	Soil Characteristics	Letter Symbol	Graphic Symbol
=0		<b>Blow Count</b>	<b>PID (ppm)</b>	Gravel Surface		
1.0	Ft < Grade ▼	24/16	0-2'	POORLY-GRADED SAND (SP)	SP	[SP Graphic]
1.5		2-3-3-3	ND	Dry, homogenous, brown-red, loose sand.		
2.0						
2.5		24/17	2-4'	WELL-GRADED SAND (SW)	SW	[SW Graphic]
3.0		3-8-12-9	ND	Dry, homogenous, light brown-grey, loose sand.		
3.5						
4.0		24/8	4-6'	WELL-GRADED SAND (SW)	SW	[SW Graphic]
4.5		9-12-8-5	ND	Dry, homogenous, light brown, loose sand.		
5.0						
6.0				Base of exploration.		
6.5						
7.0						
7.5						

**Legend**

- Road Box with Bolt Down Cover, Set in Cement.
  - Existing Surface.
  - Bentonite Seal Placed in Annulus.
  - Grade #1 Silica Sand Pack Placed in Annulus.
  - Drill Cuttings Placed in Annulus.
  - NA-Not Applicable
  - ND-Non-Detect w/ PID
- Approximate Water Level During Drilling (Ft.)  
 Static Water Level (Ft.) on Date of Sampling

*Mac's Autocare  
Morrisville, Vermont*

*Griffin Project# 391410  
VTDEC# 97-2218*

**APPENDIX C**  
**LIQUID LEVEL MEASUREMENT DATA**

**Liquid Level Monitoring Data  
Mac's Autocare**

Monitoring Date: 6/25/01

<i>Well I.D.</i>	<i>Top of Casing Elevation</i>	<i>Depth To Product</i>	<i>Depth To Water</i>	<i>Product Thickness</i>	<i>Specific Gravity Of Product</i>	<i>Hydro Equivalent</i>	<i>Corrected Depth To Water</i>	<i>Corrected Water Table Elevation</i>
MW-1	100.00	-	15.29	-	-	-	15.29	84.71
MW-3	97.69	-	DRY	-	-	-	DRY	DRY
MW-5	97.64	-	14.02	-	-	-	14.02	83.62
MW-7	99.13	-	14.82	-	-	-	14.82	84.31
MW-9	96.16	-	13.01	-	-	-	13.01	83.15
MW-10	96.02	-	13.10	-	-	-	13.1	82.92
MW-11	92.56	-	11.74	-	-	-	11.74	80.82

*All measurements in feet.*

*Monitoring well top of casing elevations surveyed by Griffin International 6/12/01.*

*Arbitrary elevation of 100 feet set at MW-1.*

*Mac's Autocare  
Morrisville, Vermont*

*Griffin Project# 391410  
VTDEC# 97-2218*

## **APPENDIX D**

### **GROUNDWATER QUALITY SUMMARY DATA**

Groundwater Quality Summary  
Mac's Autocare  
Morrisville, VT

PARAMETER	MW-1				VGES
	1/6/98	7/1/98	7/15/99	6/25/01	
Benzene	<1	<1	ND<1.0	ND<1.0	5
Toluene	TBO<1	<1	ND<1.0	ND<1.0	1,000
Ethylbenzene	<1	<1	ND<1.0	ND<1.0	700
Xylenes	<1	<1	ND<1.0	ND<1.0	10,000
MTBE	<10	<10	ND<10.0	ND<10.0	40
Total BTEX + MTBE	ND	ND	ND	ND	
1,3,5 Trimethylbenzene	NA	<1	ND<1.0	ND<1.0	4
1,2,4 Trimethylbenzene	NA	<1	ND<1.0	ND<1.0	5
Naphthalene	NA	<1	ND<1.0	ND<1.0	20
Total Targeted VOCs	ND	ND	ND	ND	
TPH	ND	ND	ND<0.40	NA	

PARAMETER	MW-5				VGES
	1/6/98	7/1/98	7/15/99	6/25/01	
Benzene	<1	<1	ND<1.0	2.5	5
Toluene	<1	<1	ND<1.0	ND<1.0	1,000
Ethylbenzene	<1	1.4	ND<1.0	1.1	700
Xylenes	TBO<1	2.7	ND<1.0	ND<1.0	10,000
MTBE	<10	<10	ND<10.0	ND<10.0	40
Total BTEX + MTBE	ND	4.1	ND	2.6	
1,3,5 Trimethylbenzene	NA	3.1	ND<1.0	ND<1.0	4
1,2,4 Trimethylbenzene	NA	2.8	ND<1.0	ND<1.0	5
Naphthalene	NA	8.6	ND<1.0	ND<1.0	20
Total Targeted VOCs	ND	16.9	ND	3.6	
TPH	TBO	1.25	ND<0.40	NA	

PARAMETER	MW-7				VGES
	1/6/98	7/1/98	7/15/99	6/25/01	
Benzene	<1	<5	ND<5	ND<20.0	5
Toluene	<1	<5	ND<5	ND<20.0	1,000
Ethylbenzene	<1	<5	ND<5	ND<20.0	700
Xylenes	TBO<1	<5	ND<5	ND<20.0	10,000
MTBE	<10	<50	ND<50	ND<200	40
Total BTEX + MTBE	ND	ND	ND	ND	
1,3,5 Trimethylbenzene	NA	<5	ND<5	ND<20.0	4
1,2,4 Trimethylbenzene	NA	<5	ND<5	ND<20.0	5
Naphthalene	NA	15.8	15.8	20	20
Total Targeted VOCs	ND	17.3	15.3	20.4	
TPH	61.9	28.2	8.90	NA	

PARAMETER	MW-9				VGES
	6/25/01				
Benzene	ND<1.0				5
Toluene	ND<1.0				1,000
Ethylbenzene	ND<1.0				700
Xylenes	ND<1.0				10,000
MTBE	ND<10.0				40
Total BTEX + MTBE	ND				
1,3,5 Trimethylbenzene	ND<1.0				4
1,2,4 Trimethylbenzene	ND<1.0				5
Naphthalene	ND<1.0				20
Total Targeted VOCs	ND				
TPH	NA				

All 8021 B Values Reported in ug/L (ppb)- TPH values reported in mg/L (ppm).

NA - not analyzed

ND<1 - not detected less than detection limit

TBO - to be quantified

VGES - Vermont Groundwater Enforcement Standard

January 1998 analysis by EPA Method 802. Post 1/98 analyses by EPA Method 8021B.

TPH-Total Petroleum Hydrocarbons - Post 6/99 analyses by EPA Method 8015 Diesel Range Organics-

Pre 6/99 TPH analyses by EPA Method 8100.

Bold indicates a detection.

**15.8** indicates a detection above applicable VGES

Groundwater Quality Summary  
Mac's Autocare  
Morrisville, VT

PARAMETER	MW-10			VGES
	8/25/01			
Benzene	ND < 1.0			5
Toluene	ND < 1.0			1,000
Ethylbenzene	ND < 1.0			700
Xylenes	ND < 1.0			10,000
MTBE	ND < 10.0			40
<del>Toluene, Ethylbenzene, Xylenes, MTBE</del>	ND			
1,3,5 Trimethylbenzene	ND < 1.0			4
1,2,4 Trimethylbenzene	ND < 1.0			5
Naphthalene	ND < 1.0			20
<del>Total Organics (VOCs)</del>	ND			
TPH	NA			

PARAMETER	MW-11			VGES
	6/25/01			
Benzene	ND < 1.0			5
Toluene	ND < 1.0			1,000
Ethylbenzene	ND < 1.0			700
Xylenes	ND < 1.0			10,000
MTBE	ND < 10.0			40
<del>Toluene, Ethylbenzene, Xylenes, MTBE</del>	ND			
1,3,5 Trimethylbenzene	ND < 1.0			4
1,2,4 Trimethylbenzene	ND < 1.0			5
Naphthalene	ND < 1.0			20
<del>Total Organics (VOCs)</del>	ND			
TPH	NA			

All 8021 B Values Reported in ug/L (ppb)- TPH values reported in mg/L (ppm).

NA - not analyzed

ND < 1 - not detected less than detection limit

TBC - to be quantified

VGES - Vermont Groundwater Enforcement Standard

January 1998 analysis by EPA Method 802. Post 1/98 analyses by EPA Method 8021B.

TPH Total Petroleum Hydrocarbons - Post 6/99 analyses by EPA Method 8015 Diesel Range Organics-

Pre-6/99 TPH analyses by EPA Method 8100.

**Bold indicates a detection.**

**ND** indicates a detection above applicable VGES

**Supply Well Quality Summary  
Mac's Autocare  
Morrisville, VT**

PARAMETER	Garage Supply Well			Enforcement Standard
	7/1/98	4/9/01	5/1/01	
Benzene	ND < 1.0	ND < 0.5	ND < 0.5	5
Napthalene	ND < 1.0	ND < 1.0	ND < 1.0	20
1,3,5, trimethyl benzene	ND < 1.0	ND < 0.5	ND < 0.5	4
1,2,4, trimethyl benzene	ND < 1.0	ND < 0.5	ND < 0.5	5
Ethylbenzene	ND < 1.0	ND < 0.5	ND < 0.5	700
Toluene	ND < 1.0	ND < 0.5	ND < 0.5	1,000
Xylenes	ND < 1.0	ND < 1.0	ND < 1.0	10,000
Total BTEX	ND	ND	ND	-
MTBE	ND < 10.0	6.0	6.3	40
BTEX + MTBE	ND	ND	ND	-

PARAMETER	Store Supply Well			Enforcement Standard
	7/1/98	6/25/01		
Benzene	ND < 1.0	ND < 0.5		5
Napthalene	ND < 1.0	ND < 1.0		20
1,3,5, trimethyl benzene	ND < 1.0	ND < 0.5		4
1,2,4, trimethyl benzene	ND < 1.0	ND < 0.5		5
Ethylbenzene	ND < 1.0	ND < 0.5		700
Toluene	ND < 1.0	ND < 0.5		1,000
Xylenes	ND < 1.0	ND < 1.0		10,000
Total BTEX	ND	ND		-
MTBE	ND < 10.0	ND < 1.0		40
BTEX + MTBE	ND	ND		-

PARAMETER	Foster Supply Well			Enforcement Standard
	4/9/01	5/1/01		
Benzene	ND < 0.5	ND < 0.5		5
Napthalene	ND < 1.0	ND < 1.0		20
1,3,5, trimethyl benzene	ND < 0.5	ND < 0.5		4
1,2,4, trimethyl benzene	ND < 0.5	ND < 0.5		5
Ethylbenzene	ND < 0.5	ND < 0.5		700
Toluene	ND < 0.5	ND < 0.5		1,000
Xylenes	ND < 1.0	ND < 1.0		10,000
Total BTEX	ND	ND		-
MTBE	ND < 1.0	ND < 1.0		40
BTEX + MTBE	ND	ND		-

All Values Reported in ug/L (ppb)

NA - not analyzed

ND < 1 - not detected less than detection limit

TBQ - to be quantified

Bold indicates a detection above laboratory detection limit.

Bold & shade - indicates reported concentration above VGES (Vermont Groundwater Enforcement Standard).

Post 7/98 analyses by EPA Method 8021B.

4/01, 5/01, and 6/01 analyses by EPA Method 524.2 - however, only 8021 B specific compounds are listed.

*Mac's Autocare  
Morrisville, Vermont*

*Griffin Project# 391410  
VTDEC# 97-2218*

## **APPENDIX E**

### **GARAGE SUPPLY WELL COMPLETION REPORT**

Water Supply Division Well Report

Printed: 8/17/2001

Town: Morristown		Well Lithology		Well Report Number:	369
Starting Depth	Ending Depth	GPM	Lithology	Driller's Description	
0.00	17.00		GRAVEL	Gravel	
17.00	273.00		GREY SHALE-WATER	Rock, bedrock, ledge, etc.	

Items in *ITALICS* are recent additions to the computer databases. Information for these fields MAY exist in the paper files that is not entered here

Water Supply Division Well Report  
Well Statistics

Printed: 8/17/2001

Well Tag Number: 0811031488      Date Report Received: 11/30/88      Well Report Number: 369      Map Cell: 32D2

Owner's Name: BETTY FOSTER

Unique Location Name For GIS: MP369

Purchaser's Name:

E-911 Address:

Town Name: Morristown

Sub Division:

Lot Number:

Date Well Was Completed: 3/14/88

Purposed Use of Well: Domestic

Reason for Drilling Well: New Supply

Well Type:

Drilling Equipment: Rotary (AP)

Well Has Screen      Total Depth of Well (in feet): 273.00

Casing Finish: Above ground, finished

Total Casing Length (in feet): 61.00      Casing Length below Land Surface (in feet): 0.00      Casing Length Exposed: 0.00

Casing Diameter (in inches): 6.00      Casing Material:      Casing Weight (in lbs/foot): 0.00

Length of Liner Used (in feet): 0.00      Liner Diameter (in inches): 0.00      Liner Material:

Liner Weight (in lbs/foot): 0.00      Depth To Liner Top: 0.00

Method of Sealing Casing: Drive shoe only

Not Steel Casing

Grout Type:

Diameter Drilled in Bedrock (in inches): 0.00

Depth Drilled in Bedrock: 0.00

Screen Make and Type:

Screen Material:

Screen Length (in feet): 0.00

Screen Diameter (in inches): 0.00

Screen Slot Size (in inches): 0.000

Depth to top of screen below land surface (in feet): 0.00

Gravel Size or Type:

Yield Test Method: Compressed air

Yield Tested At (Gallons per Minute): 3.00

Hydro Fracture: Resulting Flow if HydroFractured: 0.00

Static Water Level (in feet): 0.00

Well is OverFlowing

Has Water been Analyzed

Comments:

Reason for Well Development:

Well Driller: Howard Manosh

Tax Map:

Depth To Bedrock (in feet): 17

Items in *ITALLICS* are recent additions to the computer databases. Information for these fields MAY exist in the paper files that is not entered here.

*Mac's Autocare  
Morrisville, Vermont*

*Griffin Project# 391410  
VTDEC# 97-2218*

**APPENDIX F**  
**GROUNDWATER LABORATORY ANALYTICAL REPORTS**



**E. J. DYNE, INC.**

**Laboratory Services**

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

**LABORATORY REPORT**

Griffin International  
PO Box 943  
Williston, VT 05495  
Attn: Rob Higgins

PROJECT: Mac's Autocare/#391410  
ORDER ID: 11890  
RECEIVE DATE: April 10, 2001  
REPORT DATE: April 17, 2001

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. Different groups of analyses may be reported under separate cover.

All samples were prepared and analyzed by requirements outlined in the referenced methods and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced methods.

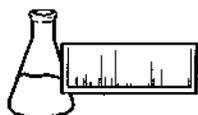
Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which include matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits, unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D.  
Laboratory Director

enclosures



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

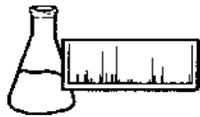
### LABORATORY REPORT

EPA 524.2

CLIENT: Griffin International  
PROJECT: Mac's Autocare/#391410  
SITE: Old Supply Well  
DATE RECEIVED: April 10, 2001  
REPORT DATE: April 17, 2001  
ANALYSIS DATE: April 15, 2001

ORDER ID: 11890  
REFERENCE NUMBER: 171363  
DATE SAMPLED: April 9, 2001  
TIME SAMPLED: 10:05 AM  
SAMPLER: RD  
ANALYST: 917

<u>Parameter</u>	<u>Result</u> <u>ug/L</u>	<u>Parameter</u>	<u>Result</u> <u>ug/L</u>
Benzene	< 0.5	Hexachlorobutadiene	< 0.5
Bromobenzene	< 0.5	Isopropylbenzene	< 0.5
Bromochloromethane	< 0.5	4-Isopropyltoluene	< 0.5
Bromomethane	< 0.5	MTBE	6.0
n-Butylbenzene	< 0.5	Naphthalene	< 1.0
sec-Butylbenzene	< 0.5	n-Propylbenzene	< 0.5
tert-Butylbenzene	< 0.5	Styrene	< 0.5
Carbon tetrachloride	< 0.5	1,1,1,2-Tetrachloroethane	< 0.5
Chlorobenzene	< 0.5	1,1,2,2-Tetrachloroethane	< 1.0
Chloroethane	< 0.5	Tetrachloroethene	< 0.5
Chloromethane	< 0.5	Toluene	< 0.5
2-Chlorotoluene	< 1.0	1,2,3-Trichlorobenzene	< 0.5
4-Chlorotoluene	< 1.0	1,2,4-Trichlorobenzene	< 0.5
Dibromomethane	< 1.0	1,1,1-Trichloroethane	< 0.5
1,2-Dichlorobenzene	< 0.5	1,1,2-Trichloroethane	< 0.5
1,3-Dichlorobenzene	< 0.5	Trichloroethene	< 0.5
1,4-Dichlorobenzene	< 0.5	Trichlorofluoromethane	< 1.0
Dichlorodifluoromethane	< 0.5	1,2,3-Trichloropropane	< 0.5
1,1-Dichloroethane	< 0.5	1,2,4-Trimethylbenzene	< 0.5
1,2-Dichloroethane	< 0.5	1,3,5-Trimethylbenzene	< 0.5
1,1-Dichloroethene	< 0.5	Vinyl Chloride	< 0.5
cis-1,2-Dichloroethene	< 0.5	Xylenes, Total	< 1.0
trans-1,2-Dichloroethene	< 0.5	Bromodichloromethane	< 0.5
Dichloromethane	< 1.0	Bromoform	< 0.5
1,2-Dichloropropane	< 0.5	Chloroform	< 0.5
1,3-Dichloropropane	< 0.5	Dibromochloromethane	< 0.5
2,2-Dichloropropane	< 0.5	Total Trihalomethanes	< 0.5
1,1-Dichloropropene	< 0.5	Surrogate 1	90.0%
cis-1,3-Dichloropropene	< 0.5	Surrogate 2	87.0%
trans-1,3-Dichloropropene	< 0.5	UIP's	0.
Ethylbenzene	< 0.5		



LABORATORY REPORT

EPA 524.2

CLIENT: Griffin International  
PROJECT: Mac's Autocare/#391410  
SITE: New Supply Well  
DATE RECEIVED: April 10, 2001  
REPORT DATE: April 17, 2001  
ANALYSIS DATE: April 15, 2001

ORDER ID: 11890  
REFERENCE NUMBER: 171364  
DATE SAMPLED: April 9, 2001  
TIME SAMPLED: 10:20 AM  
SAMPLER: RD  
ANALYST: 917

Parameter	Result ug/L	Parameter	Result ug/L
Benzene	< 0.5	Hexachlorobutadiene	< 0.5
Bromobenzene	< 0.5	Isopropylbenzene	< 0.5
Bromochloromethane	< 0.5	4-Isopropyltoluene	< 0.5
Bromomethane	< 0.5	MTBE	< 1.0
n-Butylbenzene	< 0.5	Naphthalene	< 1.0
sec-Butylbenzene	< 0.5	n-Propylbenzene	< 0.5
tert-Butylbenzene	< 0.5	Styrene	< 0.5
Carbon tetrachloride	< 0.5	1,1,1,2-Tetrachloroethane	< 0.5
Chlorobenzene	< 0.5	1,1,2,2-Tetrachloroethane	< 1.0
Chloroethane	< 0.5	Tetrachloroethene	< 0.5
Chloromethane	< 0.5	Toluene	< 0.5
4-Chlorotoluene	< 1.0	1,2,3-Trichlorobenzene	< 0.5
2-Chlorotoluene	< 1.0	1,2,4-Trichlorobenzene	< 0.5
Dibromomethane	< 1.0	1,1,1-Trichloroethane	< 0.5
1,2-Dichlorobenzene	< 0.5	1,1,2-Trichloroethane	< 0.5
1,3-Dichlorobenzene	< 0.5	Trichloroethene	< 0.5
1,4-Dichlorobenzene	< 0.5	Trichlorofluoromethane	< 1.0
Dichlorodifluoromethane	< 0.5	1,2,3-Trichloropropane	< 0.5
1,1-Dichloroethane	< 0.5	1,2,4-Trimethylbenzene	< 0.5
1,2-Dichloroethane	< 0.5	1,3,5-Trimethylbenzene	< 0.5
1,1-Dichloroethene	< 0.5	Vinyl Chloride	< 0.5
cis-1,2-Dichloroethene	< 0.5	Xylenes, Total	< 1.0
trans-1,2-Dichloroethene	< 0.5	Bromodichloromethane	< 0.5
Dichloromethane	< 1.0	Bromoform	< 0.5
1,2-Dichloropropane	< 0.5	Chloroform	< 0.5
1,3-Dichloropropane	< 0.5	Dibromochloromethane	< 0.5
2,2-Dichloropropane	< 0.5	Total Trihalomethanes	< 0.5
1,1-Dichloropropene	< 0.5	Surrogate 1	92.0%
cis-1,3-Dichloropropene	< 0.5	Surrogate 2	93.0%
trans-1,3-Dichloropropene	< 0.5	UIP's	0.
Ethylbenzene	< 0.5		

Project Name: <b>MACE'S AUTO CARE #391410</b>		Reporting Address: <b>GRIFFIN</b>		Billing Address: <b>GRIFFIN</b>	
Endyne Order ID: (Lab Use Only) <b>11890</b>		Company: <b>GRIFFIN</b>		Sampler Name: <b>RP</b>	
		Contact Name/Phone #: <b>RH</b>		Phone #:	

Ref # (Lab Use Only)	Sample Identification	Matrix	GRAB	COMP	Date/Time 4/7/01	Sample Containers		Field Results/Remarks	Analysis Required	Sample Preservation	Rush
						No.	Type/Size				
171363	OLD SUPPLY WELL	H <sub>2</sub> O	X		1005	2	40ml		54.2	KL1	
171364	NEW SUPPLY WELL				1020	0	40ml		h	+	

Relinquished by: 	Date/Time 4/9/01	Received by: <i>Melissa Salmon</i>	Date/Time 4/10/01 9:35 AM	Received by: <i>Affonucci</i>	Date/Time 4-10-01 9:55
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New York State Project: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>										Requested Analyses										LAB USE ONLY	
1	pH	6	TKN	11	Total Solids	16	Sulfate	21	1664 TPH/FOG	26	8270 PAH	Delivery:	<i>Client</i>								
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	8015 GRO	27	PP13 Metals	Temp:	<i>cool</i>								
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	8015 DRO	28	RCRA8 Metals	Comment:									
4	Nitrite N	9	BOD	14	Turbidity	19	8021B	24	8260/8260B	29											
5	Nitrate N	10	Alkalinity	15	Conductivity	20	8010/8020	25	8270 B/N or Acid	30											
31	Metals (As Is, Total, Diss.) Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, Hg, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Ti, V, Zn																				
32	TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										33										
34	Other																				

Special Reporting Instructions: PLEASE HAVE RESULTS BY 4/6/01

Project Name: <u>River Run Lake # 391410</u>		Reporting Address: <u>GRIFFIN</u>		Billing Address: <u>GRIFFIN</u>	
Endyne Order ID: (Lab Use Only)	-O	Company: <u>GRIFFIN</u>		Sampler Name: <u>LD</u>	
	-I	Contact Name/Phone #: <u>LH</u>		Phone #:	
	-S				

Ref # (Lab Use Only)	Sample Identification	Matrix	P	S	Date/Time	Sample Containers		Field Results/Remarks	Analysis Required	Sample Preservation	Rush
						No.	Type/Size				
	<u>OLD SUPPLY WELL</u>	<u>H<sub>2</sub>O</u>	<u>X</u>		<u>1005</u>	<u>2</u>	<u>40ml</u>		<u>24.2</u>	<u>10</u>	
	<u>NEW SUPPLY WELL</u>				<u>1030</u>	<u>5</u>	<u>40ml</u>		<u>+</u>	<u>+</u>	

Relinquished by: <u>[Signature]</u>	Date/Time: <u>4/19/01</u>	Received by: <u>[Signature]</u>	Date/Time: <u>4/19/01 7:35AM</u>	Received by:	Date/Time:
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New York State Project: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>										Requested Analyses		LAB USE ONLY	
1	pH	6	TKN	11	Total Solids	16	Sulfate	21	1664 TPH/FOG	25	8270 PAH	Delivery:	
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	8015 GRO	27	PP13 Metals	Temp:	
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	8015 DRO	28	RCRA8 Metals	Comment:	
4	Nitrite N	9	BOD	14	Turbidity	19	8021B	24	8260/8260B	29			
5	Nitrate N	10	Alkalinity	15	Conductivity	20	8010/8020	25	8270 B/N or Acid	30			
31	Metals (As, Is, Total, Diss.) Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, Hg, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Tl, V, Zn												
32	TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										33		
34	Other												



ENDYNE, INC.

Laboratory Services

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

LABORATORY REPORT

Griffin International  
PO Box 943  
Williston, VT 05495  
Attn: Rob Danckert

PROJECT: Mac's Autocarc/#391410  
ORDER ID: 12249  
RECEIVE DATE: May 2, 2001  
REPORT DATE: May 7, 2001

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. Different groups of analyses may be reported under separate cover.

All samples were prepared and analyzed by requirements outlined in the referenced methods and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced methods.

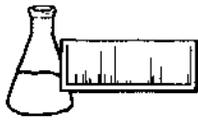
Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which include matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits, unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D.  
Laboratory Director

enclosures



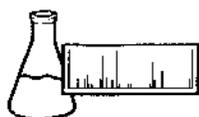
**LABORATORY REPORT**

**EPA 524.2**

CLIENT: Griffin International  
PROJECT: Mac's Autocare/#391410  
SITE: New Supply Well  
DATE RECEIVED: May 2, 2001  
REPORT DATE: May 7, 2001  
ANALYSIS DATE: May 2, 2001

ORDER ID: 12249  
REFERENCE NUMBER: 172944  
DATE SAMPLED: May 1, 2001  
TIME SAMPLED: 10:10 AM  
SAMPLER: RD  
ANALYST: 725

<u>Parameter</u>	<u>Result</u> ug/L	<u>Parameter</u>	<u>Result</u> ug/L
Benzene	< 0.5	Hexachlorobutadiene	< 0.5
Bromobenzene	< 0.5	Isopropylbenzene	< 0.5
Bromochloromethane	< 0.5	4-Isopropyltoluene	< 0.5
Bromomethane	< 0.5	MTBE	< 1.0
n-Butylbenzene	< 0.5	Naphthalene	< 1.0
sec-Butylbenzene	< 0.5	n-Propylbenzene	< 0.5
tert-Butylbenzene	< 0.5	Styrene	< 0.5
Carbon tetrachloride	< 0.5	1,1,1,2-Tetrachloroethane	< 0.5
Chlorobenzene	< 0.5	1,1,2,2-Tetrachloroethane	< 1.0
Chloroethane	< 0.5	Tetrachloroethene	< 0.5
Chloromethane	< 0.5	Toluene	< 0.5
2-Chlorotoluene	< 1.0	1,2,3-Trichlorobenzene	< 0.5
4-Chlorotoluene	< 1.0	1,2,4-Trichlorobenzene	< 0.5
Dibromomethane	< 1.0	1,1,1-Trichloroethane	< 0.5
1,2-Dichlorobenzene	< 0.5	1,1,2-Trichloroethane	< 0.5
1,3-Dichlorobenzene	< 0.5	Trichloroethene	< 0.5
1,4-Dichlorobenzene	< 0.5	Trichlorofluoromethane	< 1.0
Dichlorodifluoromethane	< 0.5	1,2,3-Trichloropropane	< 0.5
1,1-Dichloroethane	< 0.5	1,2,4-Trimethylbenzene	< 0.5
1,2-Dichloroethane	< 0.5	1,3,5-Trimethylbenzene	< 0.5
1,1-Dichloroethene	< 0.5	Vinyl Chloride	< 0.5
cis-1,2-Dichloroethene	< 0.5	Xylenes, Total	< 1.0
trans-1,2-Dichloroethene	< 0.5	Bromodichloromethane	< 0.5
Dichloromethane	< 1.0	Bromoform	< 0.5
1,2-Dichloropropane	< 0.5	Chloroform	< 0.5
1,3-Dichloropropane	< 0.5	Dibromochloromethane	< 0.5
2,2-Dichloropropane	< 0.5	Total Trihalomethanes	< 0.5
1,1-Dichloropropene	< 0.5	Surrogate 1	103.0%
cis-1,3-Dichloropropene	< 0.5	Surrogate 2	98.0%
trans-1,3-Dichloropropene	< 0.5	UIP's	0.0%
Ethylbenzene	< 0.5		



### LABORATORY REPORT

EPA 524.2

CLIENT: Griffin International  
PROJECT: Mac's Autocare/#391410  
SITE: Old Supply Well  
DATE RECEIVED: May 2, 2001  
REPORT DATE: May 7, 2001  
ANALYSIS DATE: May 3, 2001

ORDER ID: 12249  
REFERENCE NUMBER: 172945  
DATE SAMPLED: May 1, 2001  
TIME SAMPLED: 10:35 AM  
SAMPLER: RD  
ANALYST: 725

<u>Parameter</u>	<u>Result</u> <u>ug/L</u>	<u>Parameter</u>	<u>Result</u> <u>ug/L</u>
Benzene	< 0.5	Hexachlorobutadiene	< 0.5
Bromobenzene	< 0.5	Isopropylbenzene	< 0.5
Bromochloromethane	< 0.5	4-Isopropyltoluene	< 0.5
Bromomethane	< 0.5	MTBE	6.3
n-Butylbenzene	< 0.5	Naphthalene	< 1.0
sec-Butylbenzene	< 0.5	n-Propylbenzene	< 0.5
tert-Butylbenzene	< 0.5	Styrene	< 0.5
Carbon tetrachloride	< 0.5	1,1,1,2-Tetrachloroethane	< 0.5
Chlorobenzene	< 0.5	1,1,2,2-Tetrachloroethane	< 1.0
Chloroethane	< 0.5	Tetrachloroethene	< 0.5
Chloromethane	< 0.5	Toluene	< 0.5
2-Chlorotoluene	< 1.0	1,2,3-Trichlorobenzene	< 0.5
4-Chlorotoluene	< 1.0	1,2,4-Trichlorobenzene	< 0.5
Dibromomethane	< 1.0	1,1,1-Trichloroethane	< 0.5
1,2-Dichlorobenzene	< 0.5	1,1,2-Trichloroethane	< 0.5
1,3-Dichlorobenzene	< 0.5	Trichloroethene	< 0.5
1,4-Dichlorobenzene	< 0.5	Trichlorofluoromethane	< 1.0
Dichlorodifluoromethane	< 0.5	1,2,3-Trichloropropane	< 0.5
1,1-Dichloroethane	< 0.5	1,2,4-Trimethylbenzene	< 0.5
1,2-Dichloroethane	< 0.5	1,3,5-Trimethylbenzene	< 0.5
1,1-Dichloroethene	< 0.5	Vinyl Chloride	< 0.5
cis-1,2-Dichloroethene	< 0.5	Xylenes, Total	< 1.0
trans-1,2-Dichloroethene	< 0.5	Bromodichloromethane	< 0.5
Dichloromethane	< 1.0	Bromoform	< 0.5
1,2-Dichloropropane	< 0.5	Chloroform	< 0.5
1,3-Dichloropropane	< 0.5	Dibromochloromethane	< 0.5
2,2-Dichloropropane	< 0.5	Total Trihalomethanes	< 0.5
1,1-Dichloropropene	< 0.5	Surrogate 1	98.0%
cis-1,3-Dichloropropene	< 0.5	Surrogate 2	98.0%
trans-1,3-Dichloropropene	< 0.5	UIP's	0
Ethylbenzene	< 0.5		







**ENDYNE, INC.**

**Laboratory Services**

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

**LABORATORY REPORT**

Griffin International  
PO Box 943  
Williston, VT 05495  
Attn: Rob D

PROJECT: Mac's Autocare/#391410  
ORDER ID: 13123  
RECEIVE DATE: June 26, 2001  
REPORT DATE: July 6, 2001

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. Different groups of analyses may be reported under separate cover.

All samples were prepared and analyzed by requirements outlined in the referenced methods and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced methods.

Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which include matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits, unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D.  
Laboratory Director

enclosures



### LABORATORY REPORT

EPA 524.2

CLIENT: Griffin International  
PROJECT: Mac's Autocare/#391410  
SITE: Store Supply  
DATE RECEIVED: June 26, 2001  
REPORT DATE: July 6, 2001  
ANALYSIS DATE: July 2, 2001

ORDER ID: 13123  
REFERENCE NUMBER: 176533  
DATE SAMPLED: June 25, 2001  
TIME SAMPLED: 11:30 AM  
SAMPLER: DM  
ANALYST: 725

<u>Parameter</u>	<u>Result</u> <u>ug/L</u>	<u>Parameter</u>	<u>Result</u> <u>ug/L</u>
Benzene	< 0.5	Hexachlorobutadiene	< 0.5
Bromobenzene	< 0.5	Isopropylbenzene	< 0.5
Bromochloromethane	< 0.5	4-Isopropyltoluene	< 0.5
Bromomethane	< 0.5	MTBE	< 1.0
n-Butylbenzene	< 0.5	Naphthalene	< 1.0
sec-Butylbenzene	< 0.5	n-Propylbenzene	< 0.5
tert-Butylbenzene	< 0.5	Styrene	< 0.5
Carbon tetrachloride	< 0.5	1,1,1,2-Tetrachloroethane	< 0.5
Chlorobenzene	< 0.5	1,1,2,2-Tetrachloroethane	< 1.0
Chloroethane	< 0.5	Tetrachloroethene	< 0.5
Chloromethane	< 0.5	Toluene	< 0.5
4-Chlorotoluene	< 1.0	1,2,3-Trichlorobenzene	< 0.5
2-Chlorotoluene	< 1.0	1,2,4-Trichlorobenzene	< 0.5
Dibromomethane	< 1.0	1,1,1-Trichloroethane	< 0.5
1,2-Dichlorobenzene	< 0.5	1,1,2-Trichloroethane	< 0.5
1,3-Dichlorobenzene	< 0.5	Trichloroethene	< 0.5
1,4-Dichlorobenzene	< 0.5	Trichlorofluoromethane	< 1.0
Dichlorodifluoromethane	< 1.0	1,2,3-Trichloropropane	< 0.5
1,1-Dichloroethane	< 0.5	1,2,4-Trimethylbenzene	< 0.5
1,2-Dichloroethane	< 0.5	1,3,5-Trimethylbenzene	< 0.5
1,1-Dichloroethene	< 0.5	Vinyl Chloride	< 0.5
cis-1,2-Dichloroethene	< 0.5	Xylenes, Total	< 1.0
trans-1,2-Dichloroethene	< 0.5	Bromodichloromethane	< 0.5
Dichloromethane	< 1.0	Bromoform	< 0.5
1,2-Dichloropropane	< 0.5	Chloroform	< 0.5
1,3-Dichloropropane	< 0.5	Dibromochloromethane	< 0.5
2,2-Dichloropropane	< 0.5	Total Trihalomethanes	< 0.5
1,1-Dichloropropene	< 0.5	Surrogate 1	103.0%
cis-1,3-Dichloropropene	< 0.5	Surrogate 2	104.0%
trans-1,3-Dichloropropene	< 0.5	UIP's	0.
Ethylbenzene	< 0.5		

Project Name: <b>Mac's Auto Care</b>		Reporting Address: <b>GI</b>		Billing Address: <b>GI</b>	
Endyne Order ID: (Lab Use Only) <b>13123</b>	<b>2-0</b>	Company:		Sampler Name:	
	<b>-1</b>	Contact Name/Phone #:		Phone #:	
	<b>-S</b>	<b>Rob D.</b>		<b>DAGAN M.</b>	

Ref # (Lab Use Only)	Sample Identification	Matrix	GRAB	COMP	Date/Time	Sample Containers		Field Results/Remarks	Analysis Required	Sample Preservation	Rush
						No.	Type/Size				
<del>17625</del>	Trip Blank	H <sub>2</sub> O	X		6/25/01 7:37	2	40ml		8021B	1H	
526	MW-7	↓	↓		9:49	↓	↓		↓	↓	
527	Duplicate	↓	↓		9:49	↓	↓		↓	↓	
528	MW-1	↓	↓		9:58	↓	↓		↓	↓	
529	MW-5	↓	↓		10:25	↓	↓		↓	↓	
530	MW-9	↓	↓		11:36	↓	↓		↓	↓	
531	MW-10	↓	↓		11:42	↓	↓		↓	↓	
532	MW-11	↓	↓		11:47	↓	↓		↓	↓	
533	Store Supply	↓	↓		11:30	↓	↓		521.2	↓	

Relinquished by: <i>[Signature]</i>	Date/Time 6/25/01 13:28	Received by: <i>[Signature]</i>	Date/Time 6/24/01 10:12	Received by: <i>[Signature]</i>	Date/Time 6-26-01 11:00
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New York State Project: Yes _____ No <u>X</u>										Requested Analyses		LAB USE ONLY	
1	pH	6	TKN	11	Total Solids	16	Sulfate	21	1664 TPH/FOG	26	8270 PAH	Delivery:	
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	8015 GRO	27	PP13 Metals	Temp:	
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	8015 DRO	28	RCRA8 Metals	Comment:	
4	Nitrite N	9	BOD	14	Turbidity	19	8021B	24	8260/8260B	29			
5	Nitrate N	10	Alkalinity	15	Conductivity	20	8010/8020	25	8270 B/N or Acid	30			
31	Metals (As Is, Total, Diss.) Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, Hg, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Tl, V, Zn												
32	TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)								33				
34	Other												

Special Reporting Instructions:

Project Name: <b>Mac's Auto Care</b>		Reporting Address: <b>GI</b>		Billing Address: <b>EI</b>	
Endyne Order ID:	-O	Company:		Sampler Name: <b>DAVID M.</b>	
(Lab Use Only)	-I	Contact Name/Phone #: <b>Rob D.</b>		Phone #:	
	-S				

Ref# (Lab Use Only)	Sample Identification	Matrix	K	Q	Collection Time	Sample Container		Field Results/Remarks	Analysis Required	Sample Preservation	Rush
						No.	Type/Size				
	Trip Blank	H <sub>2</sub> O	A		7:37	2	40ml		2011	1K1	
	MW-7				9:49						
	Duplicate				9:49						
	MW-1				9:58						
	MW-5				10:25						
	MW-9				11:30						
	MW-10				11:42						
	MW-11				11:47						
	Store supply				11:50				501.3		

Relinquished by: <i>[Signature]</i>	Date/Time: 6/21/01 13:28	Received by: <i>[Signature]</i>	Date/Time: 6/21/01 13:28	Received by:	Date/Time:
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New York State Project: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>										Requested Analyses		LAB USE ONLY	
1	pH	6	TKN	11	Total Solids	16	Sulfate	21	1664 TPH/FOG	26	8270 PAH	Delivery:	
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	8015 GRO	27	PP13 Metals	Temp:	
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	8015 DRO	28	RCRA8 Metals	Comment:	
4	Nitrite N	9	BOD	14	Turbidity	19	8021B	24	8260/8260B	29			
5	Nitrate N	10	Alkalinity	15	Conductivity	20	8010/8020	25	8270 B/N or Acid	30			
31	Metals (As Is, Total, Diss.) Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, Hg, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Ti, V, Zn												
32	TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)							33					
34	Other												



**ENDYNE, INC.**

**Laboratory Services**

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

**LABORATORY REPORT**

Griffin International  
PO Box 943  
Williston, VT 05495  
Attn: Rob D

PROJECT: Mac's Autocare/#391410  
ORDER ID: 13123  
RECEIVE DATE: June 26, 2001  
REPORT DATE: July 6, 2001

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. Different groups of analyses may be reported under separate cover.

All samples were prepared and analyzed by requirements outlined in the referenced methods and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced methods.

Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which include matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits, unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D.  
Laboratory Director

enclosures



### LABORATORY REPORT

CLIENT: Griffin International  
PROJECT: Mac's Autocare/#391410  
DATE RECEIVED: June 26, 2001  
REPORT DATE: July 6, 2001

ORDER ID: 13123  
ANAL. METHOD: SW 8021B  
SAMPLER: DM  
ANALYST: 917

<b>Site:</b> Trip Blank <b>Ref. Number:</b> 176525 <b>Date Sampled:</b> 6/25/01 <b>Time Sampled:</b> 7:37 AM <b>Analysis Date:</b> 6/28/01		<b>Site:</b> MW-1 <b>Ref. Number:</b> 176528 <b>Date Sampled:</b> 6/25/01 <b>Time Sampled:</b> 9:58 AM <b>Analysis Date:</b> 6/29/01		<b>Site:</b> MW-10 <b>Ref. Number:</b> 176531 <b>Date Sampled:</b> 6/25/01 <b>Time Sampled:</b> 11:42 AM <b>Analysis Date:</b> 7/3/01	
<b>Parameter</b>	<b>Results ug/L</b>	<b>Parameter</b>	<b>Results ug/L</b>	<b>Parameter</b>	<b>Results ug/L</b>
MTBE	< 10.0	MTBE	< 10.0	MTBE	< 10.0
Benzene	< 1.0	Benzene	< 1.0	Benzene	< 1.0
Toluene	< 1.0	Toluene	< 1.0	Toluene	< 1.0
Ethylbenzene	< 1.0	Ethylbenzene	< 1.0	Ethylbenzene	< 1.0
Xylenes, Total	< 1.0	Xylenes, Total	< 1.0	Xylenes, Total	< 1.0
1,3,5 Trimethyl Benzene	< 1.0	1,3,5 Trimethyl Benzene	< 1.0	1,3,5 Trimethyl Benzene	< 1.0
1,2,4 Trimethyl Benzene	< 1.0	1,2,4 Trimethyl Benzene	< 1.0	1,2,4 Trimethyl Benzene	< 1.0
Naphthalene	< 1.0	Naphthalene	< 1.0	Naphthalene	< 1.0
UIP's	0.	UIP's	0.	UIP's	0.
Surrogate 1	93.0%	Surrogate 1	87.0%	Surrogate 1	90.0%
<b>Site:</b> MW-7 <b>Ref. Number:</b> 176526 <b>Date Sampled:</b> 6/25/01 <b>Time Sampled:</b> 9:49 AM <b>Analysis Date:</b> 6/29/01		<b>Site:</b> MW-5 <b>Ref. Number:</b> 176529 <b>Date Sampled:</b> 6/25/01 <b>Time Sampled:</b> 10:25 AM <b>Analysis Date:</b> 6/29/01		<b>Site:</b> MW-11 <b>Ref. Number:</b> 176532 <b>Date Sampled:</b> 6/25/01 <b>Time Sampled:</b> 11:47 AM <b>Analysis Date:</b> 6/29/01	
<b>Parameter</b>	<b>Results ug/L</b>	<b>Parameter</b>	<b>Results ug/L</b>	<b>Parameter</b>	<b>Results ug/L</b>
MTBE	< 200.	MTBE	< 10.0	MTBE	< 10.0
Benzene	< 20.0	Benzene	2.5	Benzene	< 1.0
Toluene	< 20.0	Toluene	< 1.0	Toluene	< 1.0
Ethylbenzene	< 20.0	Ethylbenzene	1.1	Ethylbenzene	< 1.0
Xylenes, Total	< 20.0	Xylenes, Total	< 1.0	Xylenes, Total	< 1.0
1,3,5 Trimethyl Benzene	< 20.0	1,3,5 Trimethyl Benzene	< 1.0	1,3,5 Trimethyl Benzene	< 1.0
1,2,4 Trimethyl Benzene	< 20.0	1,2,4 Trimethyl Benzene	< 1.0	1,2,4 Trimethyl Benzene	< 1.0
Naphthalene	20.4	Naphthalene	< 1.0	Naphthalene	< 1.0
UIP's	> 10.	UIP's	> 10.	UIP's	0.
Surrogate 1	95.0%	Surrogate 1	94.0%	Surrogate 1	89.0%
<b>Site:</b> Duplicate <b>Ref. Number:</b> 176527 <b>Date Sampled:</b> 6/25/01 <b>Time Sampled:</b> 9:49 AM <b>Analysis Date:</b> 6/29/01		<b>Site:</b> MW-9 <b>Ref. Number:</b> 176530 <b>Date Sampled:</b> 6/25/01 <b>Time Sampled:</b> 11:36 AM <b>Analysis Date:</b> 6/29/01			
<b>Parameter</b>	<b>Results ug/L</b>	<b>Parameter</b>	<b>Results ug/L</b>		
MTBE	< 200.	MTBE	< 10.0		
Benzene	< 20.0	Benzene	< 1.0		
Toluene	< 20.0	Toluene	< 1.0		
Ethylbenzene	< 20.0	Ethylbenzene	< 1.0		
Xylenes, Total	< 20.0	Xylenes, Total	< 1.0		
1,3,5 Trimethyl Benzene	< 20.0	1,3,5 Trimethyl Benzene	< 1.0		
1,2,4 Trimethyl Benzene	< 20.0	1,2,4 Trimethyl Benzene	< 1.0		
Naphthalene	22.2	Naphthalene	< 1.0		
UIP's	> 10.	UIP's	0.		
Surrogate 1	91.0%	Surrogate 1	90.0%		

Special Reporting Instructions:

Project Name: <b>Mac's Auto Care</b>		Reporting Address: <b>GI</b>		Billing Address: <b>GI</b>	
Endyne Order ID: (Lab Use Only) <b>13123</b>	<b>2-0</b>	Company: Contact Name/Phone #: <b>Rob D.</b>		Sampler Name: Phone #: <b>DAGAN M.</b>	
	<b>-1</b>				
	<b>-S</b>				

Ref# (Lab Use Only)	Sample Identification	Matrix	G R A B	C O M P	Date/Time <i>6/25/01</i>	Sample Containers		Field Results/Remarks	Analysis Required	Sample Preservation	Rush
						No.	Type/Size				
<del>176525</del>	Trip Blank	H <sub>2</sub> O	X		7:37	2	40ml		8021B	HeI	
526	MW-7	↓	↓		9:49	↓	↓		↓	↓	
527	Duplicate	↓	↓		9:49	↓	↓		↓	↓	
528	MW-1	↓	↓		9:58	↓	↓		↓	↓	
529	MW-5	↓	↓		10:25	↓	↓		↓	↓	
530	MW-9	↓	↓		11:36	↓	↓		↓	↓	
531	MW-10	↓	↓		11:42	↓	↓		↓	↓	
532	MW-11	↓	↓		11:47	↓	↓		↓	↓	
533	Store Supply	↓	↓		11:30	↓	↓		524.2	↓	

Relinquished by: <i>[Signature]</i>	Date/Time <b>6/25/01 13:28</b>	Received by: <i>[Signature]</i>	Date/Time <b>6/26/01 10:12</b>	Received by: <i>[Signature]</i>	Date/Time <b>6-26-01 11:00</b>
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New York State Project: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>										Requested Analyses		LAB USE ONLY	
1	pH	6	TKN	11	Total Solids	16	Sulfate	21	1664 TPH/FOG	26	8270 PAH	Delivery:	
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	8015 GRO	27	PP13 Metals	Temp:	
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	8015 DRO	28	RCRAS Metals	Comment:	
4	Nitrite N	9	BOD	14	Turbidity	19	8021B	24	8260/8260B	29			
5	Nitrate N	10	Alkalinity	15	Conductivity	20	8010/8020	25	8270 B/N or Acid	30			
31	Metals (As Is, Total, Diss.) Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, Hg, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Tl, V, Zn												
32	TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										33		
34	Other												