

OCT 15 1993



205 Main Street  
Brattleboro, VT 05301

(802) 254-3677 (24 hrs.)  
(802) 254-7630 (FAX)

October 13, 1993

First Vermont Bank  
Attn: Andrew Cay  
Western Avenue  
W. Brattleboro, VT 05301

RE: First Quarterly Monitoring Report of Former Holson Automotive LTD  
South Main Street, Rutland, VT

Dear Mr. Cay:

Enclosed please find the above-referenced report for your review. Also enclosed you will find 2 forms requiring your signature upon approval of this report. Please sign one form and return it to us in the self addressed, stamped envelope provided for your convenience. The second copy is for your records.

As soon as we receive this form, a copy of the above-referenced report will be mailed to the recipients listed.

Should you have any questions please call me at 254-3677.

Sincerely,  
TRI-S, Inc. Environmental Consulting

Bruce Tease, Ph.D.  
Senior Environmental Scientist

Enclosures

cc: Matt Germon

BET/dan

Branch Office:  
25 Pinney Street, Ellington, CT 06029 (203) 875-2110 (24 hrs.)  
Fax: (203) 875-8587 (24 hrs.)

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**First Quarterly Monitoring Report**

*of*

Former Holson Automotive LTD  
South Main Street  
Rutland, Vermont

*for*

First Vermont Bank  
Western Avenue  
West Brattleboro, Vermont 05301

*by*

TRI-S, Inc. Environmental Consulting  
205 Main Street  
Brattleboro, VT 05301

November 5, 1993

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**APPENDICES**

- Appendix A Monitoring Well Gauging and Sampling Log
- Appendix B Laboratory Data
- Appendix C Groundwater Potentiometric Map

## I. Introduction

To fulfill the requirements set forth in the July 8, 1993 letter from the Sites Management Section (SMS) of the Vermont Department of Environmental Conservation (VT DEC), TRI-S, Inc. Environmental Consulting (TEC) of Brattleboro, VT was contracted by First Vermont Bank, to perform quarterly sampling and gauging, and potentiometric map generation of the groundwater monitoring wells located at the former Holson Automotive Dealership, LTD, Rutland, VT. The following specific tasks were requested by the DEC:

*Collect groundwater samples from the four monitoring wells for laboratory analysis by EPA Method 8020 plus MTBE on a quarterly basis for a period of one year.*

*Gauge the groundwater levels in the monitoring wells during each sampling round and prepare a potentiometric map showing well locations, site structures, and groundwater contours for the site.*

*Prepare and submit to the VT DEC a summary report including laboratory data, potentiometric map, conclusions and recommendations.*

## II. DEC Required Tasks

### 2.1 Monitoring Well Sampling and Analysis

Sampling of the four (4) existing monitoring wells was conducted at the site on September 16, 1993. The monitoring wells were purged by hand bailing of three well volumes (where possible) using disposable plastic (Voss Technologies, Inc.) bailers. The samples, including a trip blank, were stored on ice and delivered to Matrix Analytical Laboratories located in Hopkinton, Massachusetts on September 17, 1993 for analysis of Aromatic Volatile Organic Compounds plus MTBE via EPA Method 8020.

Depth to groundwater was measured using a water level meter accurate to 0.01 feet. A Monitoring Well Gauging and Sampling Log is presented in Appendix A. The wells in each case were evacuated to dryness before bailing the full three well volumes. Recharge of groundwater was very slow in MW-1 and MW-4. Complete evacuation of the well was achieved following the removal of less than 2 bailers. Each bailer is equivalent to approximately 1 liter. Groundwater recharge was only sufficient to collect 2 VOAs (<100ml) for laboratory analysis in each of these wells.

Laboratory results indicated the presence of MTBE in three of the four wells sampled; no MTBE was detected in MW-4. Total BTEX was detected in MW-1 at 1,161 ug/l (ppb). Benzene accounted for 1,100 ug/l of the Total BTEX detected. No other compounds were detected. Toluene at a level of 1 ug/l was detected in the trip blank. This constituent may have been introduced during trip blank preparation or from laboratory sources and is not considered to be significant. The laboratory results are summarized in the following table:

*Analytical Results of Testing Performed on Groundwater Samples Collected on March 25, 1993, May 13, 1993, and September 16, 1993*

Sample Date & Well #	Compounds				
	Benzene	Toluene	Ethyl benzene	Xylene	MTBE
3/25/93					
1	NT	NT	NT	NT	NT
2	ND	6.0	ND	ND	ND
3	ND	10.0	ND	ND	9.0
4	5.0	10.0	ND	ND	270.0
5/13/93					
1	ND	ND	ND	ND	870.0
2	ND	ND	ND	ND	ND
3	ND	ND	ND	ND	ND
4	ND	ND	ND	ND	ND
9/16/93					
1	1,100.0	47.0	3.0	11.0	880.0
2	ND	ND	ND	ND	5.0
3	ND	ND	ND	ND	10.0
4	ND	ND	ND	ND	ND
VT Health Advisory	5.0	2,420.0	680.0	400.0	40.0
Results measured in micrograms per liter (ppb) MTBE = Methyl-tert-butyl ether ND = not detected NT = not tested					

As indicated above, Benzene and MTBE were above the state health advisory levels (published 11/23/92). Full laboratory reports and Chain-of-Custody record for the September 16, 1993 samples are included in Appendix B.

## 2.2 Monitoring Well Gauging and Groundwater Flow Direction

The results of gauging of the four groundwater monitoring wells, performed on September 16, 1993 are presented below. This information was used to generate a groundwater potentiometric map, included in Appendix C. Groundwater flow was calculated to be in a westerly direction.

## 2.3 Disposal of Containerized Soils

On October 6, 1993, the two (2) Tri-Packs once stored inside the service bay area of the site building was transported to the Northland temporary storage facility located in Providence Rhode Island by TRI-S, Inc. Environmental Services of Ellington, Connecticut.

### III. Conclusions

TEC makes the following conclusions:

- 1) .Based on the analytical testing results presented in this report, the presence of BTEX constituents was detected for the first time in groundwater collected from MW-1. This well was located in the immediate vicinity of the former pit of an underground gasoline storage tank (UST) that was removed in June of 1988. While the actual levels of contamination may have been influenced by the limited bailing performed prior to sample collection (resulting in higher levels than actually present in the groundwater), the presence of all four BTEX components indicates that a release of petroleum related product (most likely gasoline) has occurred in this area of the site.
- 2) Head space screening for volatile organic compounds (VOCs) of split spoon soil samples collected during the emplacement of MW-1 (March 17, 1993) did not detect the presence of VOCs. On May 13, 1993, 870.0 ug/l of MTBE was detected in a groundwater sample collected from MW-1. The presence of BTEX constituents detected during the recent sampling round suggests that petroleum related contamination may be migrating from an area upgradient of MW-1.
- 3) A magnetometer survey, performed by East Mountain Property Management Group on May 5, 1993, did not detect the presence of any subsurface anomalies in the area of MW-1. It is possible that a former UST pit may be located upgradient of MW-1 exhibiting residual petroleum related soil contamination. The low levels of MTBE detected in the groundwater samples from MW-2 and MW-3 can not be explained at this time.

**IV. Recommendations**

TEC makes the following recommendations:

- 1) A series of test pits should be advanced and soils screened to determine if extensive contamination exists. Additionally, a pit should be completed in the area of the former tank.
- 2) Quarterly sampling should continue as previously recommended.

*Appendix A*

*Monitoring Well Gauging and Sampling Log*



*Appendix B*

*Laboratory Data*



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ANALYTICAL DATA  
SUMMARY

Report Date: 09/27/93

Account: TRI-S Environmental Consulting  
Address: P.O. Box 1760  
Brattleboro, VT 05302  
802-254-3677

Project Manager: Tease  
Project Name: Holson (304) (9-17-93)  
Project No.: 304

Sample Information:

Laboratory ID	Client ID	Laboratory ID	Client ID
32605008-001	HA-01-91693-304	32605008-004	HA-3-91693-304
32605008-002	HA-1-91693-304	32605008-005	HA-4-91693-304
32605008-003	HA-2-91693-304	32605008-006	QC Report - Water

Reviewed by

Stephen DiMatter  
Quality Assurance Officer

Lab Certifications

EPA ID: No. MA059  
Massachusetts: No. 313  
Maine: Reciprocity  
New York: ELAP No. 11116

Connecticut: No. PH 0515  
Florida: QA Plan No. 900437G  
New Hampshire: No. 24190-A,B  
Rhode Island: Reciprocity



Matrix Analytical, Inc.  
 106 South Street  
 Hopkinton, MA 01748  
 1 800 3-MATRIX

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F I N A L R E P O R T

Client Information

Account: TRI-S Environmental Consulting  
 Address: P.O. Box 1760  
 Brattleboro, VT 05302

Project Name: Hulson (304) (9-17-93)  
 Project Number: 304  
 Project Manager: Tease  
 Sampler Name: TRI-S Environmental Consult.

Sample Information

Lab ID: 32605008-002  
 Client ID: HA-1-91693-304  
 Matrix: Water

Date Sampled: 09/16/93 11:31  
 Date Received: 09/17/93 :0  
 Date Reported: 09/27/93

Analytical Parameter	Result	Unit	Detection Limit	Method No.	Analyst	Date Analyzed
<b><u>VOLATILE ORGANICS</u></b>						
Benzene	1,100	ug/l	1	8020	kp	09/23/93
Chlorobenzene	ND	ug/l	1	8020	kp	09/23/93
1,2-Dichlorobenzene	ND	ug/l	1	8020	kp	09/23/93
1,3-Dichlorobenzene	ND	ug/l	1	8020	kp	09/23/93
1,4-Dichlorobenzene	ND	ug/l	1	8020	kp	09/23/93
Ethylbenzene	3	ug/l	1	8020	kp	09/23/93
MTBE	880	ug/l	5	8020	kp	09/23/93
Toluene	47	ug/l	1	8020	kp	09/23/93
Xylene	11	ug/l	1	8020	kp	09/23/93
<b><u>Surrogate Studies - Volatiles</u></b>						
Bromofluorobenzene	93	Percent			kp	09/23/93



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**F I N A L R E P O R T**

Client Information

Account: TRI-S Environmental Consulting  
Address: P.O. Box 1760  
Brattleboro, VT 05302

Project Name: Hulson (304) (9-17-93)  
Project Number: 304  
Project Manager: Tease  
Sampler Name: TRI-S Environmental Consult.

Sample Information

Lab ID: 32605008-003  
Client ID: HA-2-91693-304  
Matrix: Water

Date Sampled: 09/16/93 11:14  
Date Received: 09/17/93 :0  
Date Reported: 09/27/93

Analytical Parameter	Result	Unit	Detection Limit	Method No.	Analyst	Date Analyzed
----------------------	--------	------	-----------------	------------	---------	---------------

VOLATILE ORGANICS

Benzene	ND	ug/l	1	8020	kp	09/23/93
Chlorobenzene	ND	ug/l	1	8020	kp	09/23/93
1,2-Dichlorobenzene	ND	ug/l	1	8020	kp	09/23/93
1,3-Dichlorobenzene	ND	ug/l	1	8020	kp	09/23/93
1,4-Dichlorobenzene	ND	ug/l	1	8020	kp	09/23/93
Ethylbenzene	ND	ug/l	1	8020	kp	09/23/93
MTBE	5	ug/l	5	8020	kp	09/23/93
Toluene	ND	ug/l	1	8020	kp	09/23/93
Xylene	ND	ug/l	1	8020	kp	09/23/93

Surrogate Studies - Volatiles

Bromofluorobenzene	92	Percent			kp	09/23/93
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 106 South Street  
 Hopkinton, MA 01748  
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FINAL REPORT

Client Information

Account: TRI-S Environmental Consulting  
 Address: P.O. Box 1760  
 Brattleboro, VT 05302

Project Name: Hulson (304) (9-17-93)  
 Project Number: 304  
 Project Manager: Tease  
 Sampler Name: TRI-S Environmental Consult.

Sample Information

Lab ID: 32605008-004  
 Client ID: HA-3-91693-304  
 Matrix: Water

Date Sampled: 09/16/93 11:22  
 Date Received: 09/17/93 : 0  
 Date Reported: 09/27/93

Analytical Parameter	Result	Unit	Detection Limit	Method No.	Analyst	Date Analyzed
----------------------	--------	------	-----------------	------------	---------	---------------

VOLATILE ORGANICS

Benzene	ND	ug/l	1	8020	kp	09/23/93
Chlorobenzene	ND	ug/l	1	8020	kp	09/23/93
1,2-Dichlorobenzene	ND	ug/l	1	8020	kp	09/23/93
1,3-Dichlorobenzene	ND	ug/l	1	8020	kp	09/23/93
1,4-Dichlorobenzene	ND	ug/l	1	8020	kp	09/23/93
Ethylbenzene	ND	ug/l	1	8020	kp	09/23/93
MTBE	10	ug/l	5	8020	kp	09/23/93
Toluene	ND	ug/l	1	8020	kp	09/23/93
Xylene	ND	ug/l	1	8020	kp	09/23/93

Surrogate Studies - Volatiles

Bromofluorobenzene	89	Percent			kp	09/23/93
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FINAL REPORT

Client Information

Account: TRI-S Environmental Consulting  
 Address: P.O. Box 1760  
 Brattleboro, VT 05302

Project Name: Hulson (304) (9-17-93)  
 Project Number: 304  
 Project Manager: Tease  
 Sampler Name: TRI-S Environmental Consult.

Sample Information

Lab ID: 32605008-005  
 Client ID: HA-4-91693-304  
 Matrix: Water

Date Sampled: 09/16/93 11:41  
 Date Received: 09/17/93 :0  
 Date Reported: 09/27/93

Analytical Parameter	Result	Unit	Detection Limit	Method No.	Analyst	Date Analyzed
<b><u>VOLATILE ORGANICS</u></b>						
Benzene	ND	ug/l	1	8020	kp	09/23/93
Chlorobenzene	ND	ug/l	1	8020	kp	09/23/93
1,2-Dichlorobenzene	ND	ug/l	1	8020	kp	09/23/93
1,3-Dichlorobenzene	ND	ug/l	1	8020	kp	09/23/93
1,4-Dichlorobenzene	ND	ug/l	1	8020	kp	09/23/93
Ethylbenzene	ND	ug/l	1	8020	kp	09/23/93
MTBE	ND	ug/l	5	8020	kp	09/23/93
Toluene	ND	ug/l	1	8020	kp	09/23/93
Xylene	ND	ug/l	1	8020	kp	09/23/93
<b><u>Surrogate Studies - Volatiles</u></b>						
Bromofluorobenzene	87	Percent			kp	09/23/93



Matrix Analytical, Inc.  
 106 South Street  
 Hopkinton, MA 01748  
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FINAL REPORT

Client Information

Account: TRJ-S Environmental Consulting  
 Address: P.O. Box 1760  
 Brattleboro, VT 05302

Project Name: Hulson (304) (9-17-93)  
 Project Number: 304  
 Project Manager: Tease  
 Sampler Name:

Sample Information

Lab ID: 32605008-006  
 Client ID: QC Report -Water  
 Matrix: Water

Date Sampled: 09/16/93 :  
 Date Received: 09/17/93 :0  
 Date Reported: 09/27/93

Analytical Parameter	Result	Unit	Detection Limit	Method No.	Analyst	Date Analyzed
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METHOD BLANK - VOLATILES

Method Blank	ND	ug/l		8020/602		
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METHOD SUMMARIES

Volatile organic analysis is performed using H/P 5995 or 5970 GC/MS, Tekmar purge and trap, and ALS autosampler. Chromatography incorporates packed and megabore columns. Data reduction is performed on RTE 1000 and ChemStation systems. Tuning is based on BFB standards. Procedural guidelines follow EPA 624 or SW846 for all analyses. Aromatic volatiles listed in VOA 8020 are analyzed using GC/MS systems.

METHOD REFERENCES

1. Test Methods For Evaluating Solid Waste: Physical Chemical Methods. EPA SW 846. November 1986.
2. Methods For Chemical Analysis of Water and Wastes. EPA 600/4-79-200. Revised March 1983.
3. Standard Methods For Examination of Water and Wastewater. APHA-AWWA-WACF., 16th Edition. 1985.



Matrix Analytical, Inc.  
 106 South Street  
 Hopkinton, MA 01748  
 1 800 3-MATRIX

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F I N A L R E P O R T

Client Information

Account: TRI-S Environmental Consulting  
 Address: P.O. Box 1760  
 Brattleboro, VT 05302

Project Name: Hulson (304) (9-17-93)  
 Project Number: 304  
 Project Manager: Tease  
 Sampler Name: TRI-S Environmental Consult.

Sample Information

Lab ID: 32605008-001  
 Client ID: HA-01-91693-304  
 Matrix: Water

*TRIP BLANK*

Date Sampled: 09/16/93 08:05  
 Date Received: 09/17/93 :0  
 Date Reported: 09/27/93

Analytical Parameter	Result	Unit	Detection Limit	Method No.	Analyst	Date Analyzed
<b>VOLATILE ORGANICS</b>						
Benzene	ND	ug/l	1	8020	kp	09/24/93
Chlorobenzene	ND	ug/l	1	8020	kp	09/24/93
1,2-Dichlorobenzene	ND	ug/l	1	8020	kp	09/24/93
1,3-Dichlorobenzene	ND	ug/l	1	8020	kp	09/24/93
1,4-Dichlorobenzene	ND	ug/l	1	8020	kp	09/24/93
Ethylbenzene	ND	ug/l	1	8020	kp	09/24/93
MTBE	ND	ug/l	5	8020	kp	09/24/93
Toluene	1	ug/l	1	8020	kp	09/24/93
Xylene	ND	ug/l	1	8020	kp	09/24/93
<b>Surrogate Studies - Volatiles</b>						
Bromofluorobenzene	96	Percent			kp	09/24/93

COMPANY NAME: TRI-S Inc. Environmental Consulting  
 ADDRESS: PO Box 1760 (205 Main St)  
 Rutledge VT 05302  
 PROJECT NAME: HULSON NO.: 304  
 PROJECT MANAGER: TENSE PHONE:  
 SAMPLE(S) NAME: P&C DCB

ANALYSES REQUESTED

LAB ID (LAB USE ONLY)	CLIENT SAMPLE ID	TYPE*	COLLECTION DATE / TIME		8020										COMMENTS OR NOTES	Total # of BOTTLES
	HA-01-91693-304	DW	9/16/93	8:05	2											2
	HA-1-91693-304	GW		11:31	2											2
	HA-2-91693-304	GW		11:14	2											2
	HA-3-91693-304	GW		11:22	2											2
	HA-4-91693-304	GW	↓	11:41	2									2ND VOA SAMPLE AT 5:04		2
TOTAL															810	

\*TYPE: W = water; GW = groundwater; DW = drinking water; SW = surface water; S = soil; SED = sediment; SL = sludge; DS = drum sample; D = oil; WI = wipe; X = other (please describe)

SPECIAL INSTRUCTIONS / NOTES:  
 PO # 1813

MATRIX ANALYTICAL, UNIT ONLY  
 NOTES:

RELINQUISHED BY	RECEIVED BY	DATE	TIME	COMMENTS
<i>Daniel J. [Signature]</i>	<i>[Signature]</i>	9/17/93	11:55	
<i>[Signature]</i>	<i>[Signature]</i>	9/17/93		
PROJECT PRICE QUOTE NO.:	MATRIX ANALYTICAL, INC. 100 South Street Hopkinton, MA 01748 1 (800) 382-8749			

32603008-001

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*Appendix C*

*Groundwater Potentiometric Map*

GROUNDWATER POTENTIOMETRIC  
MAP FOR 09/16/93

FORMER HOLSON AUTO DEALERSHIP, LTD.  
ROUTE 7  
RUTLAND, VERMONT

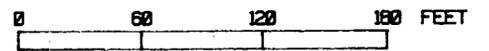
LEGEND

- ⊕ HA-1 MONITORING WELL HA-1
- 91 GROUNDWATER CONTOUR AT 91 FEET  
(CONTOUR INTERVAL OF 1 FOOT)

MONITORING WELL GROUNDWATER ELEVATIONS ( IN FEET )	
HA-1	86.88
HA-2	93.79
HA-3	92.87
HA-4	86.82

ALL MEASUREMENTS TAKEN RELATIVE TO AN ARBITRARY DATUM

SCALE  
1 = 720



PREPARED BY:  
TRI-S INC. ENVIRONMENTAL CONSULTING  
P.O. BOX 1760, 205 MAIN STREET  
BRATTLEBORO, VT 05302

