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3 December 2003
File No. VT96-0093

Mr. Gary Thurston
Rice Oil Company
P.O. Box 1497
34 Montague City Road
Greenfield, Massachusetts 01301

RE: Site Progress Report (September 2003 Monitoring)
Londonderry Citgo (VT DEC Site No. 96-2015)

Dear Mr. Thurston:

This report prepared by ECSMarin summarizes monitoring results for the Londonderry Citgo site located in Londonderry Center, Vermont on September 25 2003 (Figure 1 & 2, Attachment A). Activities during this report period included a monitoring well road box repair, semi-annual monitoring well sampling, and a quarterly supply well treatment system sampling. All activities described above and the air sparge / soil vapor extraction (AS/SVE) system restart was approved by Mr. Tim Cropley of the of the Vermont Department of Environmental Conservation (VTDEC) Sites Management Section (SMS) via e-mail dated 7 October 2003.

FINDINGS

- Results indicate that residual gasoline-related volatile organic compound (VOC) contamination is still present within the surficial and bedrock aquifer.
- Previously, the current configuration of the AS/SVE system at the site no longer appeared to be cost effective at reducing petroleum hydrocarbon contamination at the site. Mass removal rates of (VOCs) decreased to asymptotic levels. As such, the remediation system was shut down October 2000. Since AS/SVE system shutdown groundwater data shows a rebound of VOCs, primarily MTBE, generally limited to the former underground storage tank (UST) source area, and an area immediately west of the pump island. These wells, which include MW-8, SP-3, and MW-3, appear to be within the radius of influence of the AS/SVE system. AS/SVE system will be restarted the first week of December 2003.
- The Vermont Groundwater Enforcement Standard (VGES) for at least one petroleum hydrocarbon continue to be exceeded in site monitoring wells MW-3, MW-8, SP-1, SP-2, and SP-3. The gasoline additive methyl tert butyl ether (MTBE) continues to be detected in monitoring wells MW-3, MW-8, MW-7, MW-S2, MW-S3, SP-1, SP-2, and SP-3.
- No groundwater samples were collected from SP-4 because it was dry during the September 2003 sampling event. MW-5 was also, not sampled because it was taken off the sampling plan.

- Monitoring wells MW-3, MW-4, MW-6, MW-7, SP-1, and SP-3 were raised/repaired during the September 25, 2003 site visit. The purpose of the raising and repairing of the road boxes was to rule out the possibility of surface water contamination infiltrating the monitoring wells, especially in the area of the pump islands. MW-4 was historically noted as being destroyed. During the September 2003 site visit it was found covered with sediment and missing a expansion plug and road box lid. A new road box was installed.

- An evaluation of the presumably destroyed monitoring wells MW-1 and MW-2 was made during the last site visit. MW-2, if intact, is covered by several inches of concrete pad surrounding the pump islands and is unrecoverable. MW-1 may be retrievable but was not investigated during the September 25, 2003 site visit because of lack of time.

- Benzene was detected in the shopping center's main drinking-water supply well influent sample at a concentration exceeding the Vermont Action Level of 1 µg/L for public water systems. Benzene was not detected in the mid-carbon and effluent samples indicating that the system was effectively removing the compound of concern on the sampling date.

- MTBE continues to be detected in samples collected from the shopping center's main drinking-water supply well's influent, mid-carbon and effluent at concentrations below the Vermont Health Advisory (VHA) of 40 µg/L. Water Works, who services the treatment system, was notified of the treatment system break-through.

- MTBE was detected in the Thorne-Thomsen residential supply well influent samples at concentrations below the VGES and Vermont Health Advisory guidelines of 40 µg/L. There were no other VOC's detected in the treatment system's first and second carbon effluent samples indicating that the system is effectively removing the compounds of concern. Mr. Roger Thorne-Thomsen will be notified of the results.

On the basis of these findings, ECSMarin makes the following recommendations:

- Ground-water samples should continue to be collected on a semi-annual basis from on-site monitoring wells, MW-6, MW-7, MW-3, MW-S3, MW-S2, MW-8, and SP-1 through SP-4. MW-4 and MW- 5 should be added to the sampling plan to further evaluate the downgradient extent of contamination.

- Supply wells for the Shopping Center and Thorne-Thomsen residence should continue to be sampled on a quarterly basis with two of the quarterly monitoring events coinciding with semi-annual site groundwater monitoring events.

- The AS/SVE system should be put on a monthly operation and maintenance schedule following system restart.

- A summary letter documenting the findings of the quarterly sampling and remedial system progress should be submitted to the VT DEC.

- Following semi annual groundwater sampling, a report should be prepared which includes a site plan, ground water elevation map, contaminant distribution map, and identifies an appropriate course of action for the site

- The annual sampling of supply wells in the vicinity of the site and reporting of the results should be performed as currently scheduled.

GROUNDWATER ELEVATION AND FLOW DIRECTION

Based on 25 September 2003 hydrogeologic data, groundwater in the shallow unconfined surficial aquifer at the site appears to flow southerly direction toward the West River with an average horizontal hydraulic gradient of averaged about 3 percent. Water-level measurements and elevation calculations for 25 September 2003 are presented in Table 1, below.

Fluid levels were measured in the on-site monitoring wells on 25 September 2003. Static water-table elevations were computed for each monitoring well by subtracting the measured depth-to-water readings from the surveyed top-of-casing elevations, which are relative to an arbitrary site datum of 100.00 feet. The groundwater contour map (Figure 3, Attachment A) was prepared using these data.

TABLE 1. GROUNDWATER ELEVATION CALCULATION

Monitoring Date: 25 September 2003

Well I. D.	Top of Casing Elevation *	Depth to Water (feet, TOC)	Ground Water Elevation
MW-1	**DESTROYED or PAVED OVER**		
MW-2	**DESTROYED or PAVED OVER**		
MW-3	98.69	6.65	92.04
MW-4	**Restored 9/25/03 will sample next event.**		
MW-5	98.48	NS	NS
MW-6	95.13	9.03	86.10
MW-7	98.40	9.50	88.90
MW-8	99.66	7.19	92.47
MW-S1	**DESTROYED or PAVED OVER**		
MW-S2	94.89	9.61	85.28
MW-S3	94.41	9.12	85.29
SP-1**	99.07	6.45	92.62
SP-2**	99.23	6.80	92.43
SP-3**	99.50	6.92	92.58
SP-4**	99.64	NS	NS

*Top of casing (TOC) and ground water elevations are relative to an arbitrary site datum of 100.00 feet.
**Sparge points (SP) screened below water-table.
MW-1 and MW-2 were destroyed during installation of the new UST sy
MW-S1 and were destroyed during snow removal.
MW-5 was not sampled due to change in scope of work.
MW-6 was not located.
NS = Well Not Sampled.

SAMPLING AND ANALYSIS

Total BTEX and MTBE concentrations have decreased in all monitoring wells when compared to the baseline samples collected before system installation and start up.

The VGESs[1] for one or more gasoline-related VOCs were exceeded in groundwater samples collected from monitoring wells MW-S2, MW-3, MW-S3, MW-8, SP-1, SP-2, and SP-3.

The highest total BTEX concentration was detected in source area monitoring well MW-8 at 3,362 µg/L. This concentration has increased approximately 60 times the sample results in the previous sampling event conducted in March 2003. The greatest decrease in total BTEX concentrations was in SP-1, which exhibited a 73 percent decrease from the September 2003 sampling event. Large variations in contaminant concentrations are most likely due to groundwater level fluctuations between the spring and fall seasons.

The gasoline additive MTBE was detected in all monitoring wells sampled with the exception of MW-6. No other gasoline-related VOCs were detected in the downgradient monitoring well MW-6.

Groundwater analytical results are summarized in Table 2, below. A contaminant distribution map is presented on Figure 4. Time-series graphs illustrating trends in contaminant concentrations at the monitoring wells are presented in Figures 5 – 14. Laboratory report forms are included in Attachment B.

Groundwater samples were collected from the monitoring wells on 25 September 2003. A blind duplicate was collected at MW-8. Monitoring wells were purged and then sampled using disposable bailers and dropline. Purge water was discharged directly to the ground in the vicinity of each well. Samples were collected in laboratory supplied 40 milliliter glass vials preserved with HCL. One trip blank and one duplicate sample were collected to ensure that adequate quality assurance/quality control (QA/QC) standards were maintained. All field procedures were conducted in accordance with ECSMarin standard protocols.

The groundwater samples were transported under chain of custody in an ice-filled cooler to Spectrum Analytical, Inc. of Agawam, Massachusetts. The samples were analyzed for the possible presence of gasoline-related VOCs by EPA Method SW846 8260B. No petroleum compounds were detected in the trip blank. The duplicate sample was within 22 percent of the original results, which are within the EPA recommended limits for field duplicate QA/QC data.

The Vermont DEC has established Groundwater Enforcement Standards (VGESs) for the following petroleum related VOCs, as follows: benzene - 5 µg/L; toluene - 1,000 µg/L; ethylbenzene - 700 µg/L; and xylenes - 10,000 µg/L; and MTBE, a gasoline additive, - 40 µg/L; 1,3,5-trimethyl benzene - 4 µg/L; 1,2,4-trimethyl benzene – 5 µg/L; and naphthalene – 20 µg/L.

TABLE 2. SUMMARY OF ANALYTICAL RESULTS
Monitoring Date: 25 September 2003

Sample Location	Total BTEX	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes	1,3,5 Trimethyl Benzene	1,2,4 Trimethyl Benzene	Naphthalene
Volatile Petroleum Hydrocarbons by EPA Method 8021B									
MW-S2	ND	**17.0**	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0
MW-3	ND	**80.2**	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0
MW-S3	ND	**16.8**	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0
MW-5	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-6	ND	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0
MW-7	ND	**1.72**	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0
MW-8	**3,362**	**556**	ND<25.0	**116**	**824**	**2,422**	**581**	**1,690**	**376**
SP-1	**6.4**	**392**	ND<5.0	ND<5.0	**6.4**	ND<10.0	ND<5.0	ND<5.0	**7.4**
SP-2	**141.0**	**149**	ND<2.5	**3.45**	**92.2**	**45.3**	**23.2**	**137**	**20.4**
SP-3	**51.5**	**2,750**	ND<25.0	ND<25.0	ND<25.0	**51.5**	**45.0**	**136**	ND<25.0
SP-4	NS	NS	NS	NS	NS	NS	NS	NS	NS
VGES	***---***	***40***	***5.0***	***1,000***	***700***	***10,000***	***4.0***	***5.0***	***20***
Quality Assurance/Quality Control Samples by EPA Method 8021B									
Duplicate (Dup.)	**3,351**	**548**	ND<25.0	**110**	**822**	**2,419**	**567**	**1640**	**308**
MW-8	**3,362**	**556**	ND<25.0	**116**	**824**	**2,422**	**581**	**1,690**	**376**
% Difference	***0.33***	***1***	***--***	***5***	***0***	***0.12***	***2***	***3***	***22***
trip blank	ND	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0

Notes:
All Samples collected by ECSMarin and analyzed by Endyne, Inc. for volatile petroleum hydrocarbons by EPA Method 8021B.
Results given in micrograms per liter (µg/L).
ND - None detected at indicated detection limit.
TBQ - Trace below indicated quantitation limit.
VGES - Vermont Groundwater Enforcement Standards.
Shaded concentrations exceed VGES.
MW-5 was not sampled due to a change in the scope of work.
SP-4 was not sampled because well was dry on 9/25/03.

Water Supply Treatment System Sampling and Analysis

Analytical results of the influent samples collected from bedrock supply well treatment systems in the vicinity of the site indicate that the bedrock aquifer beneath the site continues to be contaminated with gasoline compounds. During the 25 September 2003 monitoring, analyses of the influent samples collected from the treatment system at the Shopping Center's main supply well identified the presence of benzene at a concentrations of 4.1 µg/L which is above the 1 µg/L Vermont Action Level (VAL) for chemicals of concern in public water supply. Analytical

results of the influent samples for the supply well of the Thorne-Thomsen residence did not detect benzene above the analytical detection limits during this monitoring period.

The groundwater samples were transported under chain of custody in an ice-filled cooler to Spectrum Analytical, Inc. of Agawam, Massachusetts. The samples were analyzed for the possible presence of gasoline-related VOCs by EPA Method SW846 8260B. No petroleum compounds were detected in the trip blank. The duplicate sample obtained from the Thorne-Thomsen was within 1.6 percent of the original results, which are within the EPA recommended limits for field duplicate QA/QC data. The analytical results for the treatment system influent samples are summarized in Table 3. Laboratory report forms are included in Appendix A.

TABLE 3. SUMMARY OF SUPPLY WELL ANALYTICAL RESULTS
Monitoring Date: 25 September 2003

Supply Well	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes	Total BTEX	1,3,5 -TMB	1,3,5 -TMB	Naphthalene
Main Supply Well Londonderry Shopping Center									
- System Influent	**15.4**	**4.11**	ND <1	ND <1	ND <2	**4.1**	ND <1	ND <1	ND <1
- C-1 Eff	**8.19**	ND <1	ND <1	ND <1	ND <2	**ND**	ND <1	ND <1	ND <1
- C-2 Eff	**5.77**	ND <1	ND <1	ND <1	ND <2	**ND**	ND <1	ND <1	ND <1
Thorne-Thomsen Supply Well									
- System Influent	**5.51**	ND <1	ND <1	ND <1	ND <2	**ND**	ND <1	ND <1	ND <1
- C-1 Eff	ND <1	ND <1	ND <1	ND <1	ND <2	**ND**	ND <1	ND <1	ND <1
- C-2 Eff	ND <1	ND <1	ND <1	ND <1	ND <2	**ND**	ND <1	ND <1	ND <1
Quality Assurance/Quality Control Samples by EPA Method 8021B									
Dup. (Thorne-Thomsen System Infl.)	**5.42**	ND <1	ND <1	ND <1	ND <2	**ND**	ND <1	ND <1	ND <1
- System Influent	**5.51**	ND <1	ND <1	ND <1	ND <2	**ND**	ND <1	ND <1	ND <1
% Difference	***1.63***	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
trip blank	ND	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0
MCL	---	5	1,000	700	10,000	---	---	---	---
VHA	40	---	---	---	---	---	5	4	20
VAL	---	1	---	---	---	---	---	---	---

Notes:
Results given in parts per billion (ppb).
ND - None detected at indicated detection limit.
TBQ - Trace below quantitation limit indicated.
All samples collected by ECSMarin and analyzed by Endyne, Inc.
MCL - Enforceable U.S. EPA Maximum Contaminant Levels for chemicals of concern in drinking water.
VHA - Vermont Health Advisories - guidelines for concentrations of chemicals in drinking water that do not have MCLs.
VAL - Vermont Action Levels for eight chemicals of specific health concern in public water systems, established by the Vermont Dept. of Health.

Thorne-Thomsen Residential Well: The treatment system at this location is a point-of-entry system designed primarily for VOC removal by adsorption to granular activated carbon. This system was installed and is maintained by Vermont Water Treatment Systems of Bristol, Vermont.

During the report period, this system continued to remove all detectable concentrations of gasoline-related compounds from the drinking water. No petroleum hydrocarbons were detected in the treatment mid-carbon or effluent system samples. MTBE was detected in the 25 September 2003 system influent samples at 5.51 µg/L. All MTBE concentrations were below the Vermont Health Advisory VHA of 40 µg/L for this monitoring period.

Shopping Center Main Supply Well: The treatment system at this location is a granular activated carbon based system, designed for VOC removal. This system was installed and is maintained by Vermont Water Works of Manchester, Vermont.

During the report period, this system failed to remove all detectable concentrations of MTBE from the drinking water. MTBE was detected in the treatment system effluent samples.

The VAL for benzene (1.0 µg/L) was exceeded during this monitoring period in the influent samples collected on 25 September 2003. MTBE was detected in the supply well influent and mid-carbon samples during this monitoring period at concentrations of 8.19 µg/L and 15.4 µg/L, but below the VHA of 40 µg/L. No other VOCs were detected in the samples.

MTBE was detected in the shopping center's main supply well treatment system effluent samples collected on 25 September 2005 at a concentration of 5.77 µg/L. Although there was MTBE contamination breakthrough of the treatment system, concentrations were below the VHA of 40 µg/L. Vermont Water Works, who maintains the treatment system, was notified of the MTBE breakthrough.

AS/SVE System

Previously, the current configuration of the AS/SVE system at the site no longer appeared to be cost effective at reducing petroleum hydrocarbon contamination at the site. Mass removal rates of VOCs decreased to asymptotic levels. As such, the remediation system was shut down. Since system shutdown data shows a rebound of VOCs in wells primarily limited to the former UST source area, and an area immediately west of the pump island. These wells appear to be within the radius of influence of the AS/SVE system. AS/SVE system will be restarted this month November 2003. The AS/SVE system should be put on a monthly operation and maintenance schedule following system restart AS/SVE system progress will be reported in a quarterly summary letter also including quarterly supply well treatment sampling.

If you have any questions regarding this data or need additional information, please do not hesitate to contact me at (800) 520-6065. Once we receive your approval, we will forward a copy of this report to Mr. Tim Cropley of the VT DEC.

Sincerely,
Environmental Compliance Services, Inc.

Jaymi Cleland
Environmental Geologist

JMC/960093r02.doc

cc: Tim Cropley, VT DEC (following approval)
Bob Waite, Londonderry Ventures

Attachment A – Figures
Attachment B – Laboratory Report

ATTACHMENT A

FIGURES

MARIN ENVIRONMENTAL

TITLE: FIGURE 1. SITE LOCATION MAP

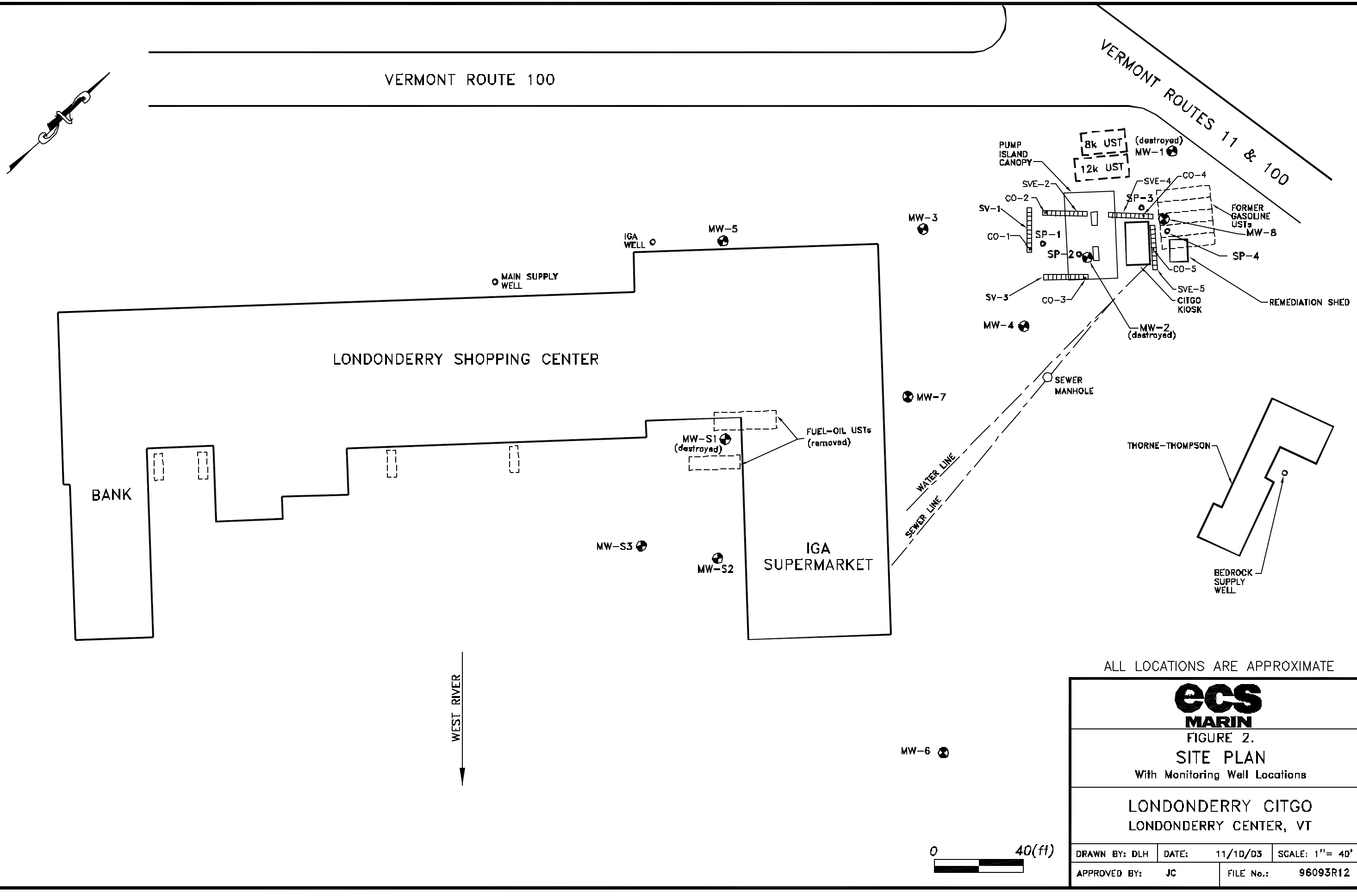
Source: USGS Topographic Map
Londonderry Quadrangle (last revised: 1986)

SITE: Londonderry Citgo
Londonderry, Vermont
Site Lat/Lon NAD83: 43.229, -72.8141

QUADRANGLE LOCATION

N

DRAWN BY: MJB	DATE: 11/11/99	SCALE: 1in = 2000ft
APPROVED BY: JB	FILE: 960093SLOC.PLT	



ALL LOCATIONS ARE APPROXIMATE

ecs MARIN

FIGURE 2.

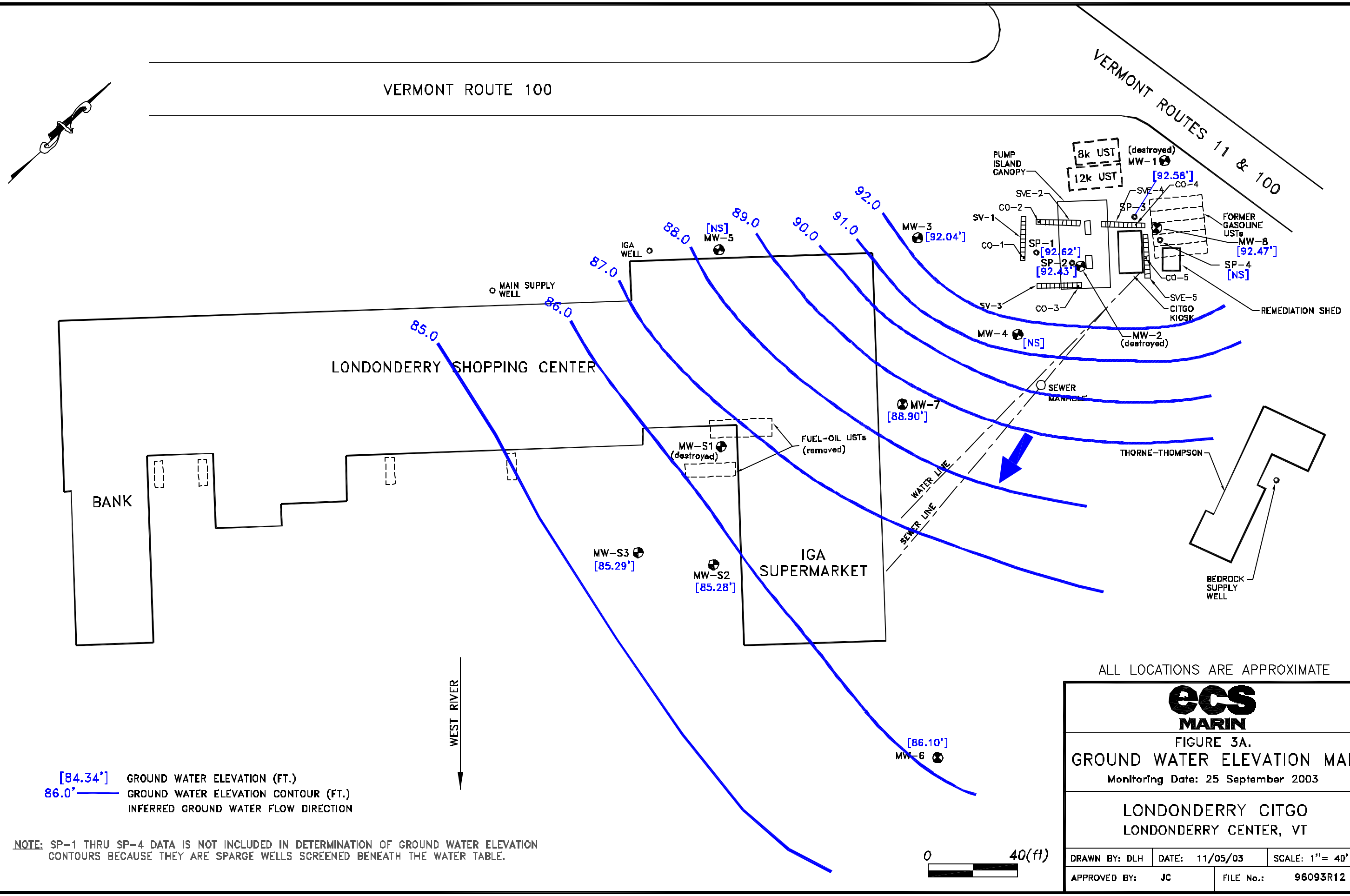
SITE PLAN

With Monitoring Well Locations

LONDONDERRY CITGO

LONDONDERRY CENTER, VT

DRAWN BY: DLH	DATE: 11/10/03	SCALE: 1"= 40'
APPROVED BY: JC	FILE No.: 96093R12	



ALL LOCATIONS ARE APPROXIMATE

NOTE: SP-1 THRU SP-4 DATA IS NOT INCLUDED IN DETERMINATION OF GROUND WATER ELEVATION CONTOURS BECAUSE THEY ARE SPARGE WELLS SCREENED BENEATH THE WATER TABLE.

ecs MARIN

FIGURE 3A.

GROUND WATER ELEVATION MAP

Monitoring Date: 25 September 2003

LONDONDERRY CITGO

LONDONDERRY CENTER, VT

DRAWN BY: DLH	DATE: 11/05/03	SCALE: 1"= 40'
APPROVED BY: JC		FILE No.: 96093R12

VERMONT ROUTE 100

VERMONT ROUTES 11 & 100

BTEX= 51.5
MTBE= 2,750

PUMP ISLAND CANOPY

8k UST

12k UST

(destroyed) MW-1

SVE-2

SVE-4

CO-4

CO-2

SP-3

BTEX= ND
MTBE= 80.2
MW-3

SV-1

FORMER GASOLINE USTs

MW-8 BTEX= 3,362 MTBE= 556

CO-1

SP-1

BTEX= 6.4
MTBE= 392

SP-2

SP-4
NS

BTEX= 141
MTBE= 149

CO-5

SV-3

CO-3

SVE-5

CITGO KIOSK

REMEDIATION SHED

MW-4

MW-2 (destroyed)

IGA WELL

MW-5 NS

MAIN SUPPLY WELL

LONDONDERRY SHOPPING CENTER

SEWER MANHOLE

MW-7
BTEX= ND
MTBE= 1.7

FUEL-OIL USTs (removed)

MW-S1 (destroyed)

WATER LINE

SEWER LINE

THORNE-THOMPSON

BANK

MW-S3
BTEX= ND
MTBE= 16.8

MW-S2
BTEX= ND
MTBE= 17.0

IGA SUPERMARKET

BEDROCK SUPPLY WELL

WEST RIVER

MW-6
BTEX= ND
MTBE= ND

ALL LOCATIONS ARE APPROXIMATE

0 40(ft)

LEGEND

MW-2	MONITORING WELL
SP-1	SPARGE POINT
BTEX= 515.4	BENZENE, TOLUENE, ETHYL BENZENE AND XYLENES
MTBE= 294	METHYL TERTIARY BUTYL ETHER
ND	NONE DETECTED AT INDICATED DETECTION LIMIT
NS	NOT SAMPLED

NOTES: RESULTS GIVEN IN MICROGRAMS PER LITER (ug/L)
SP-4 IS A SPARGE WELL SCREENED BENEATH THE WATER TABLE.

ECS MARINE

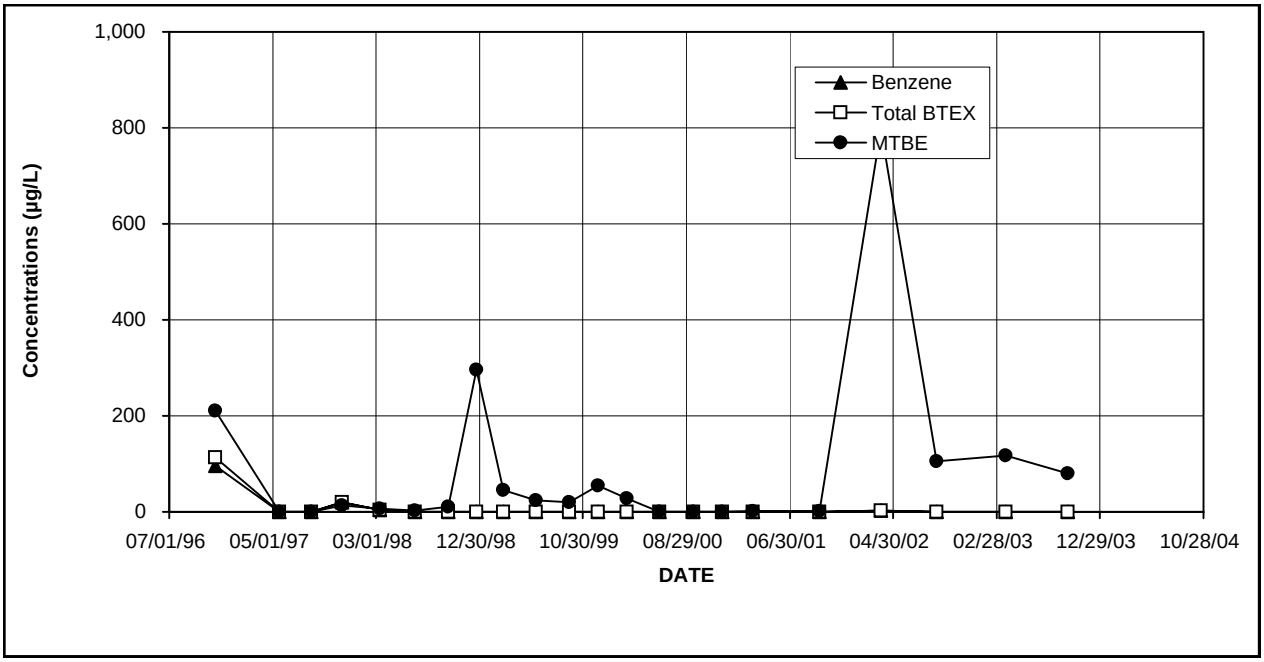
FIGURE 4A.
CONTAMINANT DISTRIBUTION MAP
Monitoring Date: 25 September 2003

LONDONDERRY CITGO
LONDONDERRY CENTER, VT

DRAWN BY: DLH	DATE: 11/05/03	SCALE: 1"= 40'
APPROVED BY: JC	FILE No.: 96093R12	

FIGURE 5. MW-3
VOC Concentrations

Londonderry Citgo
Londonderry, VT

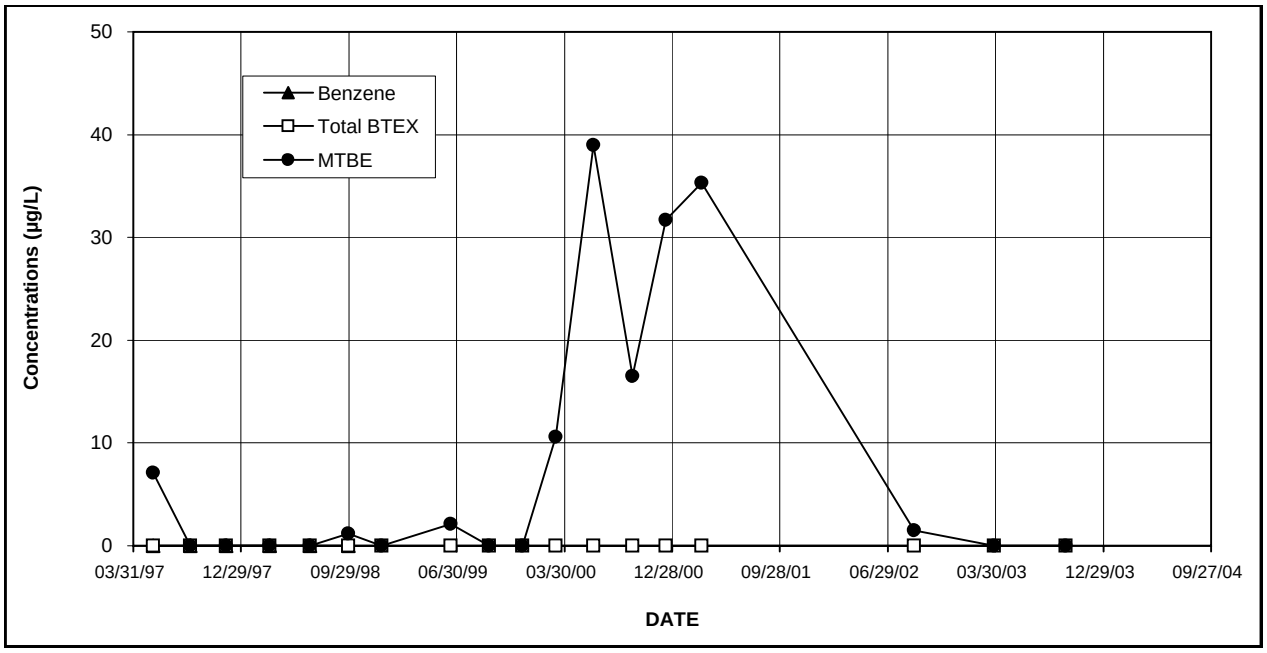


Date	Total BTEX	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes	1,3,5 TMB	1,2,4 TMB	Naph-thalene
03/08/00	ND	**27.9**	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
06/12/00	ND	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
09/19/00	ND	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
12/13/00	ND	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
03/13/01	ND	**1.7**	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
09/25/01	ND	**1.83**	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
03/26/02	**3.2**	**798**	**3.2**	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
09/05/02	ND	**106**	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0
03/27/03	ND	**118**	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0
09/25/03	ND	**80.2**	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0
VGES	**---**	**40**	**5**	**1,000**	**700**	**10,000**	**4**	**5**	**20**

Notes: Results given in micrograms per liter (µg/L)
ND - None detected at indicated detection limit
TBQ- Trace below quantitation limit indicated.
All samples collected by Marin and analyzed by Endyne, Inc.
VGES - Vermont Groundwater Enforcement Standards
BTEX - Benzene, toluene, ethyl benzene, & xylenes
MTBE - Methyl tertiary butyl ether
TMB - Trimethyl Benzene
Shaded concentrations exceed VGES.

FIGURE 6. MW-6
VOC Concentrations

Londonderry Citgo
Londonderry, VT

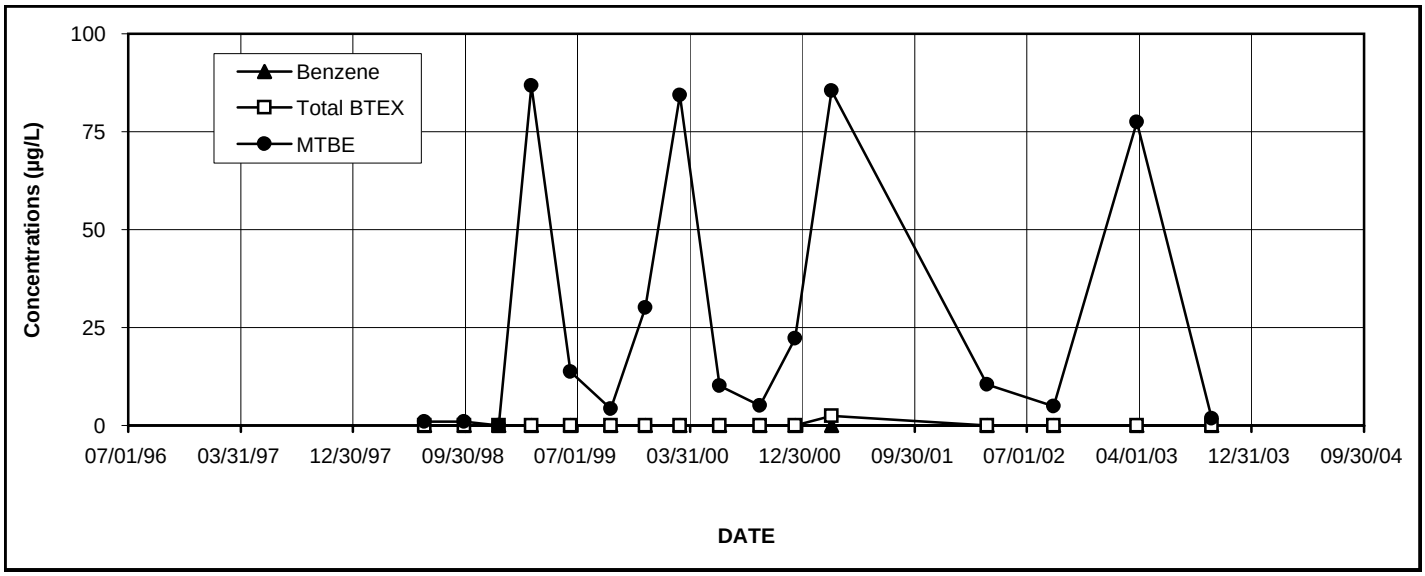


Date	Total BTEX	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes	1,3,5 TMB	1,2,4 TMB	Naph-thalene
03/08/00	ND	**10.6**	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
06/12/00	ND	**39.0**	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
09/19/00	ND	**16.5**	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
12/13/00	ND	**31.7**	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
03/13/01	ND	**35.3**	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
09/05/02	ND	**1.5**	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
03/27/03	NS	NS	NS	NS	NS	NS	NS	NS	NS
09/25/03	ND	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<2.0	ND<1.0	ND<1.0	ND<1.0
VGES	**---**	**40**	**5**	**1,000**	**700**	**10,000**	**4**	**5**	**20**

Notes: Results given in micrograms per liter (µg/L)
ND - None detected at indicated detection limit.
TBQ - Trace below quantitation limit indicated.
All samples collected by Marin and analyzed by Endyne, Inc.
VGES - Vermont Groundwater Enforcement Standards
BTEX - Benzene, toluene, ethyl benzene, & xylenes
MTBE - Methyl tertiary butyl ether
TMB - Trimethyl Benzene
* Well installed 14 May 1997
** MW-6 not located.
NS- Unable to locate the well due to excessive snow stock piled from plowing, therefore not sampled

FIGURE 7. MW-7
VOC Concentrations

Londonderry Citgo
Londonderry, VT

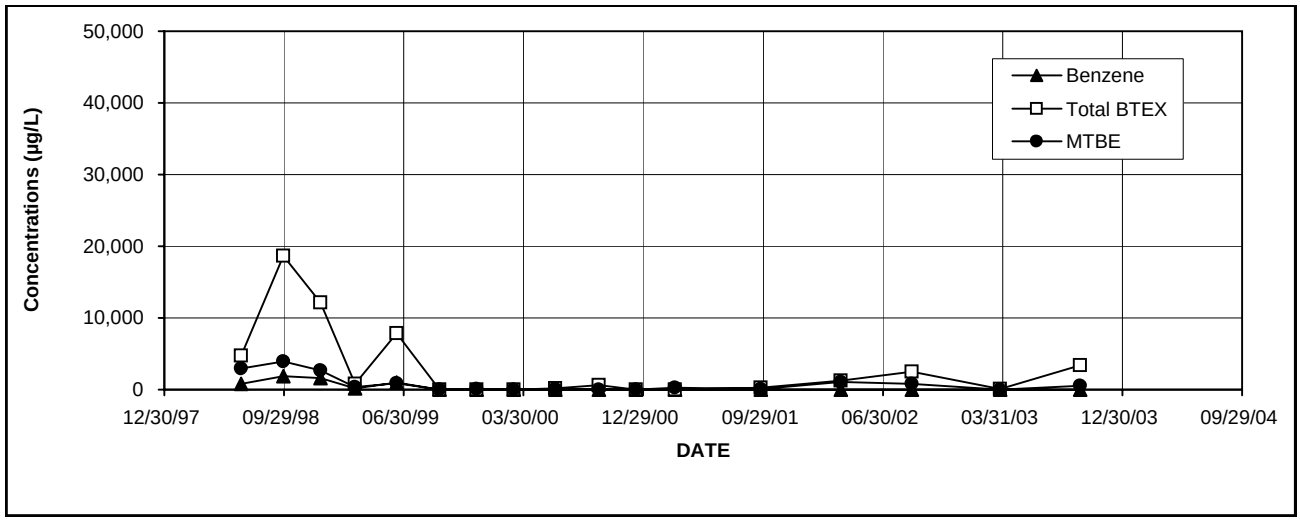


Date	Total BTEX	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes	1,3,5 TMB	1,2,4 TMB	Naph-thalene
03/08/00	ND	**84.3**	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND<1.0
06/12/00	ND	**10.2**	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND<1.0
09/19/00	ND	**5.1**	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND<1.0
12/13/00	ND	**22.3**	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND<1.0
03/13/01	**2.4**	**85.5**	ND<1.0	ND<1.0	ND<1.0	**2.4**	ND<1.0	ND<1.0	ND<1.0
03/26/02	ND	**10.4**	ND<1.0	ND<1.0	ND<1.0	ND <1.0	ND<1.0	ND<1.0	ND<1.0
09/05/02	ND	**4.9**	ND<1.0	ND<1.0	ND<1.0	ND <2.0	ND<1.0	ND<1.0	ND<1.0
03/27/03	ND	**77.5**	ND<1.0	ND<1.0	ND<1.0	ND <2.0	ND<1.0	ND<1.0	ND<1.0
09/25/03	ND	**1.72**	ND<1.0	ND<1.0	ND<1.0	ND <2.0	ND<1.0	ND<1.0	ND<1.0
VGES	**---**	**40**	**5**	**1,000**	**700**	**10,000**	**4**	**5**	**20**

Notes: Results given in micrograms per liter (µg/L)
ND - None detected at indicated detection limit.
TBQ - Trace below quantitation limit indicated.
All samples collected by Marin and analyzed by Endyne, Inc.
VGES - Vermont Groundwater Enforcement Standards
BTEX - Benzene, toluene, ethyl benzene, & xylenes
MTBE - Methyl tertiary butyl ether
TMB - Trimethyl Benzene
* Well installed 23 April 1998
**MW-7 not sampled because it was damaged.

FIGURE 8. MW-8
VOC Concentrations

Londonderry Citgo
Londonderry, VT

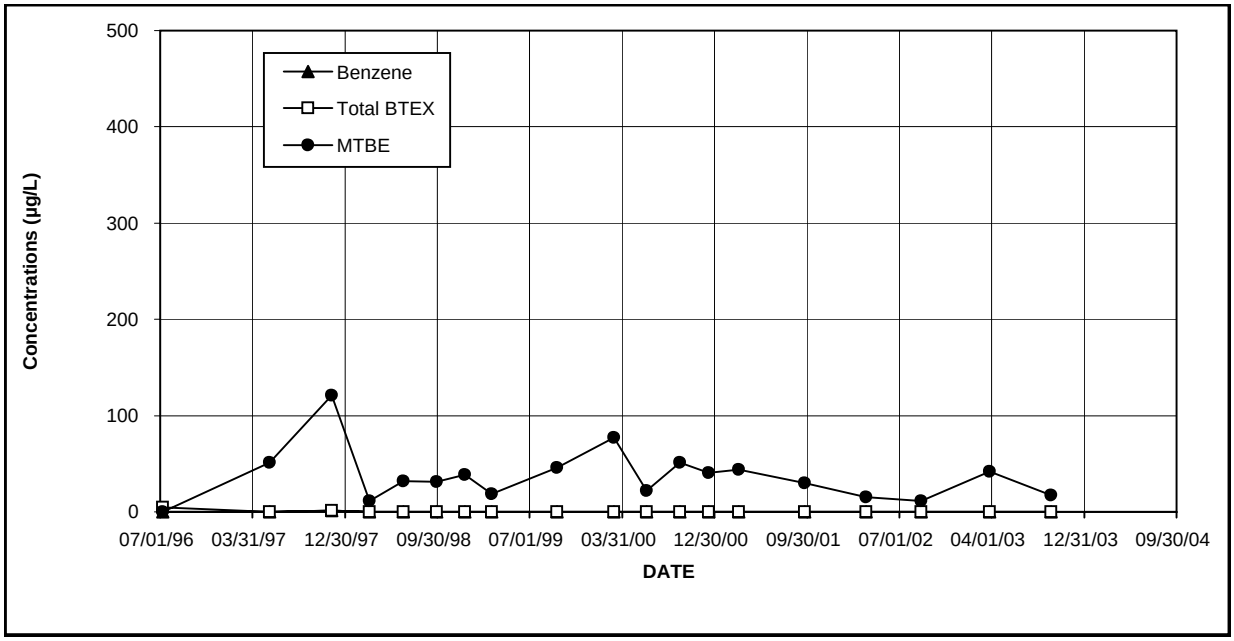


Date	Total BTEX	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes	1,3,5 TMB	1,2,4 TMB	Naph-thalene
03/08/00	ND	**1.2**	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
06/12/00	**188.2**	**53.1**	**10.2**	**7.9**	**31.1**	**139**	**37.9**	**46.8**	**10.9**
09/19/00	**625.8**	**24.4**	**10.8**	**117**	**129**	**369**	**31.5**	**103**	**19.0**
12/13/00	ND	**24.7**	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0
03/13/01	**44.5**	**264**	**5.9**	ND<2.0	**18.6**	**20.0**	**10.6**	**12.3**	**4.2**
09/25/01	**295.4**	**68.1**	**4.3**	**15.1**	**116**	**160**	**32.5**	**92.1**	**18.8**
03/26/02	**1,294.3**	**1,080**	**11.2**	**35.1**	**178**	**1,070**	**180**	**422**	**146**
09/05/02	**2,514.2**	**814**	**20.2**	**206.0**	**588**	**1,700**	**222**	**696**	**153**
03/27/03	**55.2**	**38.4**	**1.0**	**1.7**	**5.9**	**46.6**	**8.0**	**16.2**	**4.1**
09/25/03	**3,362.0**	**556**	ND<25.0	**116**	**824**	**2,422**	**581**	**1,690**	**376**
VGES	**---**	**40**	**5**	**1,000**	**700**	**10,000**	**4**	**5**	**20**

Notes: Results given in micrograms per liter (µg/L)
ND- None detected at indicated detection limit.
TBQ - Trace below quantitation limit indicated.
All samples collected by Marin and analyzed by Endyne, Inc.
VGES - Vermont Groundwater Enforcement Standards
* Well installed 23 April 1998
BTEX - Benzene, toluene, ethyl benzene, & xylenes
MTBE - Methyl tertiary butyl ether
TMB - Trimethyl Benzene
Shaded concentrations exceed VGES.

FIGURE 9. MW-S2
VOC Concentrations

Londonderry Citgo
Londonderry, VT

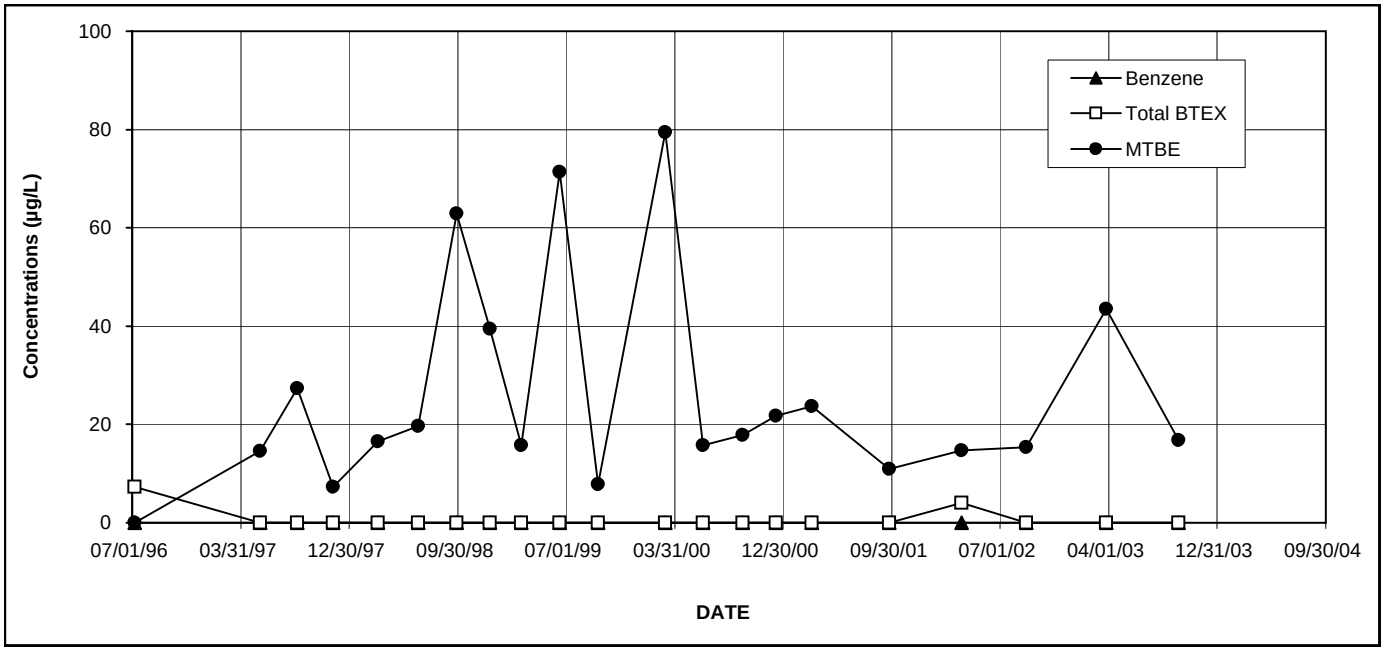


Date	Total BTEX	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes	1,3,5 TMB	1,2,4 TMB	Naph-thalene
03/08/00	ND	**76.8**	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0
06/12/00	ND	**22.0**	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0
09/19/00	ND	**51.3**	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0
12/13/00	ND	**40.7**	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0
03/13/01	ND	**43.9**	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0
09/25/01	ND	**29.6**	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0
03/26/02	ND	**15.6**	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0
09/05/02	ND	**11.6**	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0
03/27/03	ND	**41.6**	ND <1.0	ND <1.0	ND <1.0	ND <2.0	ND <1.0	ND <1.0	ND <1.0
09/25/03	ND	**17.0**	ND <1.0	ND <1.0	ND <1.0	ND <2.0	ND <1.0	ND <1.0	ND <1.0
VGES	**---**	**40**	**5**	**1,000**	**700**	**10,000**	**4**	**5**	**20**

Notes: Results given in micrograms per liter (µg/L)
ND- None detected at indicated detection limit.
TBQ - Trace below quantitaion limit indicated
All samples collected by Marin and analyzed by Endyne, Inc.
VGES - Vermont Groundwater Enforcement Standards
BTEX - Benzene, toluene, ethyl benzene, & xylenes
MTBE - Methyl tertiary butyl ether
TMB - Trimethyl Benzene
Shaded concentrations exceed VGES.
Unable to be located during Dec '99 site visit

FIGURE 10. MW-S3
VOC Concentrations

Londonderry Citgo
Londonderry, VT

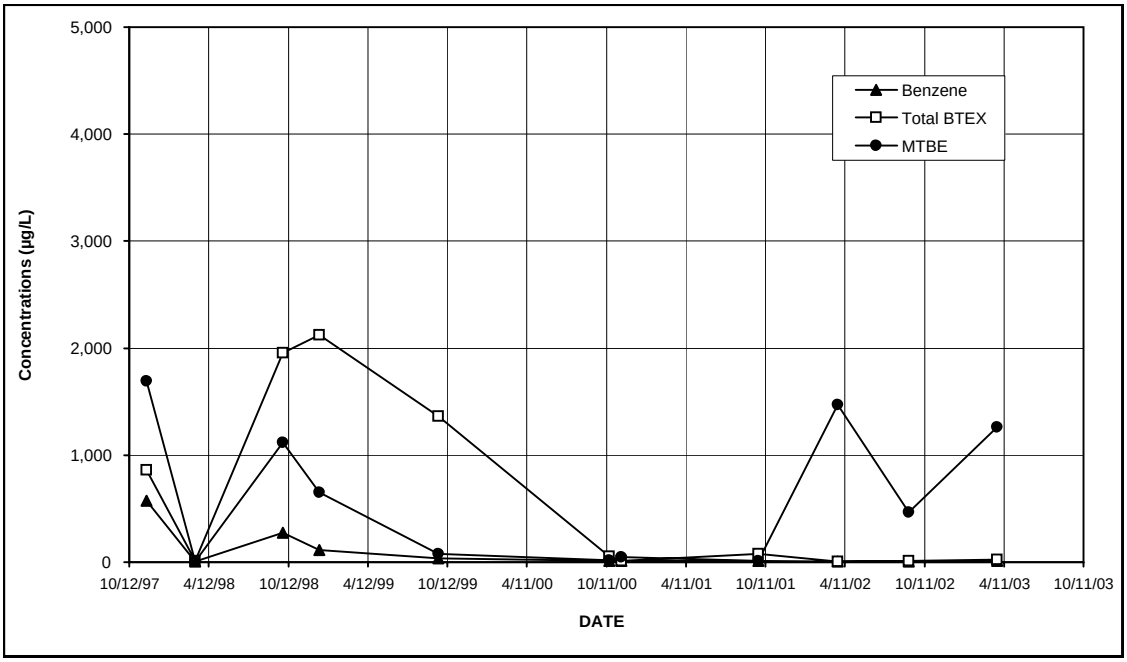


Date	Total BTEX	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes	1,3,5 TMB	1,2,4 TMB	Naphthalene
03/08/00	ND	**79.4**	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0
06/12/00	ND	**15.7**	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0
09/19/00	ND	**17.9**	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0
12/13/00	ND	**21.8**	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0	ND <1.0
03/13/01	ND	**23.7**	ND <1.0	ND <1.0	ND <1.0	ND<1.0	ND<1.0	ND<1.0	ND <1.0
09/25/01	ND	**10.9**	ND <1.0	ND <1.0	ND <1.0	ND<1.0	ND<1.0	ND<1.0	ND <1.0
03/26/02	**4.1**	**14.7**	ND <1.0	ND <1.0	**1.3**	**2.8**	ND<1.0	ND<1.0	ND <1.0
09/05/02	ND	**15.4**	ND <1.0	ND <1.0	ND <1.0	ND<2.0	ND<1.0	ND<1.0	ND <1.0
03/27/03	ND	**43.5**	ND <1.0	ND <1.0	ND <1.0	ND<2.0	ND<1.0	ND<1.0	ND <1.0
09/25/03	ND	**16.8**	ND <1.0	ND <1.0	ND <1.0	ND<2.0	ND<1.0	ND<1.0	ND <1.0
VGES	**---**	**40**	**5**	**1,000**	**700**	**10,000**	**4**	**5**	**20**

Notes: Results given in micrograms per liter (µg/L)
ND- None detected at indicated detection limit.
TBQ - Trace below quantitaion limit indicated
All samples collected by Marin and analyzed by Endyne, Inc.
VGES - Vermont Groundwater Enforcement Standards
BTEX - Benzene, toluene, ethyl benzene, & xylenes
MTBE - Methyl tertiary butyl ether
TMB - Trimethyl Benzene
Shaded concentrations exceed VGES.
Unable to be located during Dec '99 site visit

FIGURE 11. SP-1
VOC Concentrations

Londonderry Citgo
Londonderry, VT

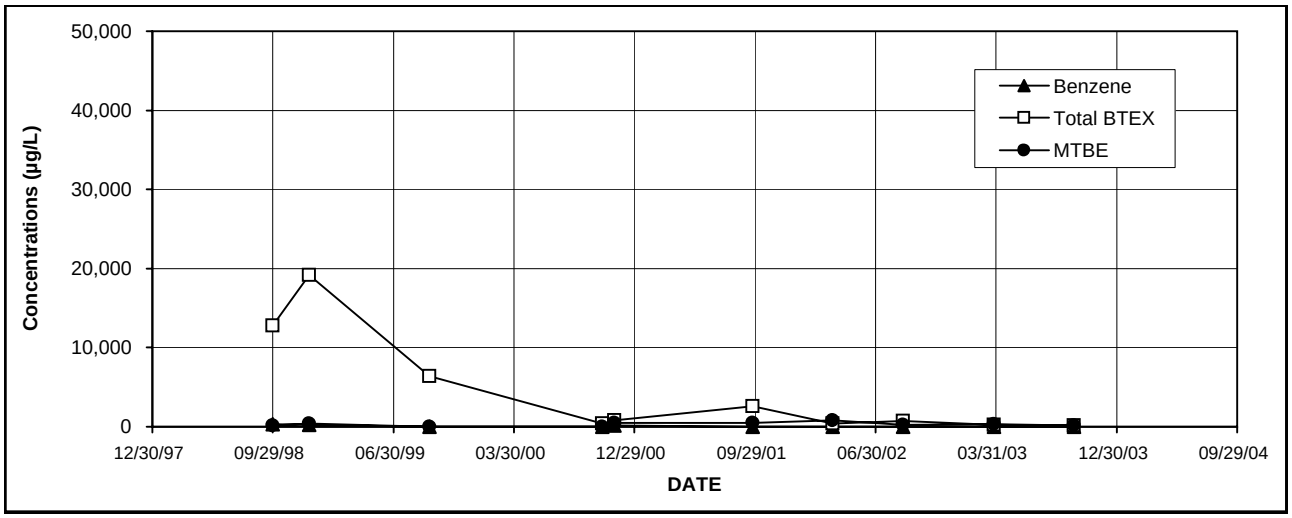


Date	Total BTEX	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes	1,3,5 TMB	1,2,4 TMB	Naph-thalene
11/21/97	**863.9**	**1,690**	**575**	**121**	**93.5**	**74.4**	---	---	---
03/13/98	**11.9**	**4.7**	**6.9**	**1.6**	**3.4**	**TBQ<1**	---	---	---
09/29/98	**1,954**	**1,120**	**278**	**129**	**1,000**	**547**	**227**	**384**	**247**
12/22/98	**2,121**	**651**	**111**	**163**	**966**	**881**	**400**	**1,020**	**155**
09/21/99	**1,361**	**77**	**35.3**	**60.8**	**474**	**791**	**323**	**620**	**58**
10/17/00	**53.8**	**18**	**10.0**	**1.5**	**31.3**	**11.0**	**25.7**	**90.7**	**9.5**
11/14/00	**11.9**	**47.9**	**9.3**	ND<1.0	**2.6**	ND<1.0	**1.3**	**3.7**	**4.5**
09/25/01	**77.8**	**11.8**	**9.6**	**3.1**	**37.1**	**28.0**	**24.3**	**72.2**	**5.2**
03/26/02	**6.2**	**1,470**	**6.2**	ND <2.0	ND <2.0	ND <2.0	ND <2.0	ND <2.0	ND <2.0
09/05/02	**10.3**	**467**	**5.1**	ND <4.0	**5.2**	ND <8.0	ND <4.0	ND <4.0	ND <4.0
03/27/03	**24.0**	**1,260**	**14.0**	**5.2**	**4.8**	ND<8.0	**5.8**	**13.1**	ND<4.0
09/25/03	**6.4**	**392**	ND<5.0	ND<5.0	**6.4**	ND<10.0	ND<5.0	ND<5.0	**7.4**
VGES	**---**	**40**	**5**	**1,000**	**700**	**10,000**	**4**	**5**	**20**

Notes: Results given in micrograms per liter (µg/L).
ND- None detected at indicated detection limit.
TBQ - Trace below quantitation limit indicated.
All samples collected by Marin and analyzed by Endyne, Inc.
VGES - Vermont Groundwater Enforcement Standards
6/23/98 and 3/9/00 - Not Sampled
BTEX - Benzene, toluene, ethyl benzene, & xylenes
MTBE - methyl tertiary butyl ether
TMB - Trimethyl Benzene
All samples collected by Marin and analyzed by Endyne, Inc.
Shaded concentrations denote VGES exceedences

FIGURE 12. SP-2
VOC Concentrations

Londonderry Citgo
Londonderry, VT

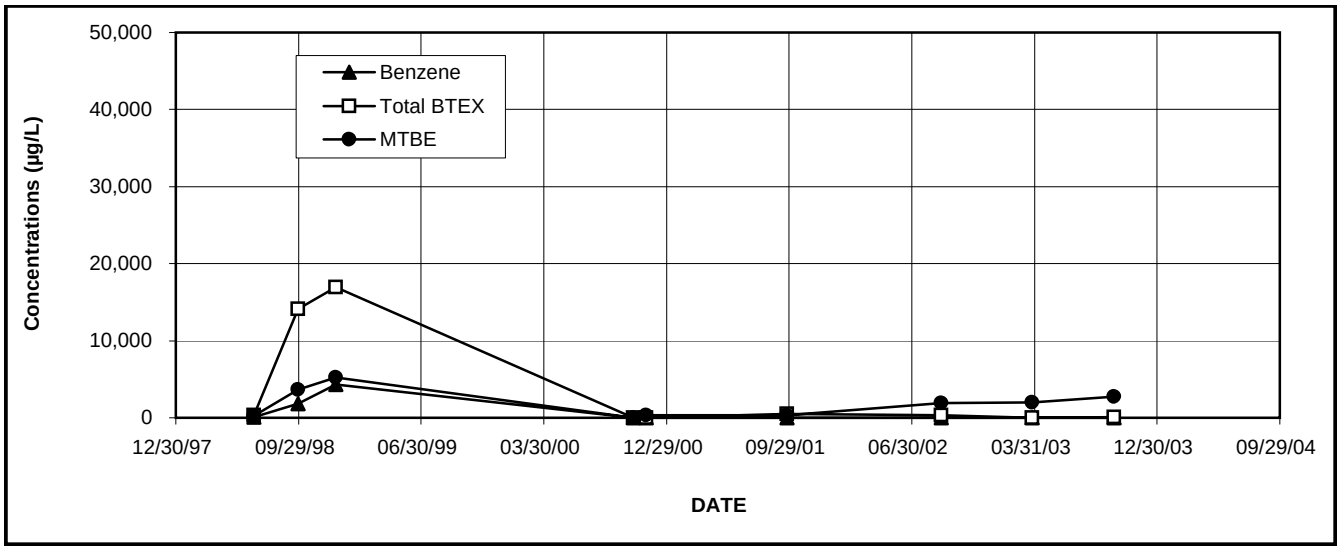


Date	Total BTEX	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes	1,3,5 TMB	1,2,4 TMB	Naph-thalene
09/29/98	**12,751**	**195**	**291**	**1,430**	**4,040**	**6,990**	**958**	**2,840**	**835**
12/22/98	**19,211**	**429**	**271**	**2,430**	**5,810**	**10,700**	**1,120**	**3,520**	**638**
09/21/99	**6,407**	ND<50	ND<50	**367**	**1,980**	**4,060**	**618**	**1,730**	**261**
10/17/00	**409**	**6.7**	**5.0**	**15.7**	**167**	**221**	**85.6**	**244**	**27.8**
11/14/00	**816.3**	**513**	**200**	**54.3**	**402**	**160**	**129**	**555**	**161**
09/25/01	**2580**	**452**	ND<20.0	**130**	**1,050**	**1,400**	**365**	**1,060**	**126**
03/26/02	**399.4**	**789**	**12.3**	**17.1**	**238**	**132**	**96.4**	**174**	**48.2**
09/01/02	**725**	**225**	**13.8**	**41.2**	**347**	**323**	**103**	**387**	**72.7**
03/27/03	**260.8**	**305**	**16.2**	**66.2**	**50.4**	**128**	**23.6**	**68.8**	**12.6**
09/25/03	**140.95**	**149**	ND<2.5	**3.45**	**92.2**	**45.3**	**23.2**	**137**	**20.4**
VGES	**---**	**40**	**5**	**1,000**	**700**	**10,000**	**4**	**5**	**20**

Notes: Results given in micrograms per liter(µg/L)
ND- None detected at indicated detection limit.
TBQ - Trace below quantitation limit indicated.
All samples collected by Marin and analyzed by Endyne, Inc.
VGES - Vermont Groundwater Enforcement Standards
* Well installed 23 April 1998
TMB - Trimethyl Benzene
BTEX - Benzene, toluene, ethyl benzene, & xylenes
MTBE - Methyl tertiary butyl ether
Shaded concentrations exceed VGES.
All samples collected by Marin and analyzed by Endyne, Inc.
03/13/01 - not sampled

FIGURE 13. SP-3
VOC Concentrations

Londonderry Citgo
Londonderry, VT

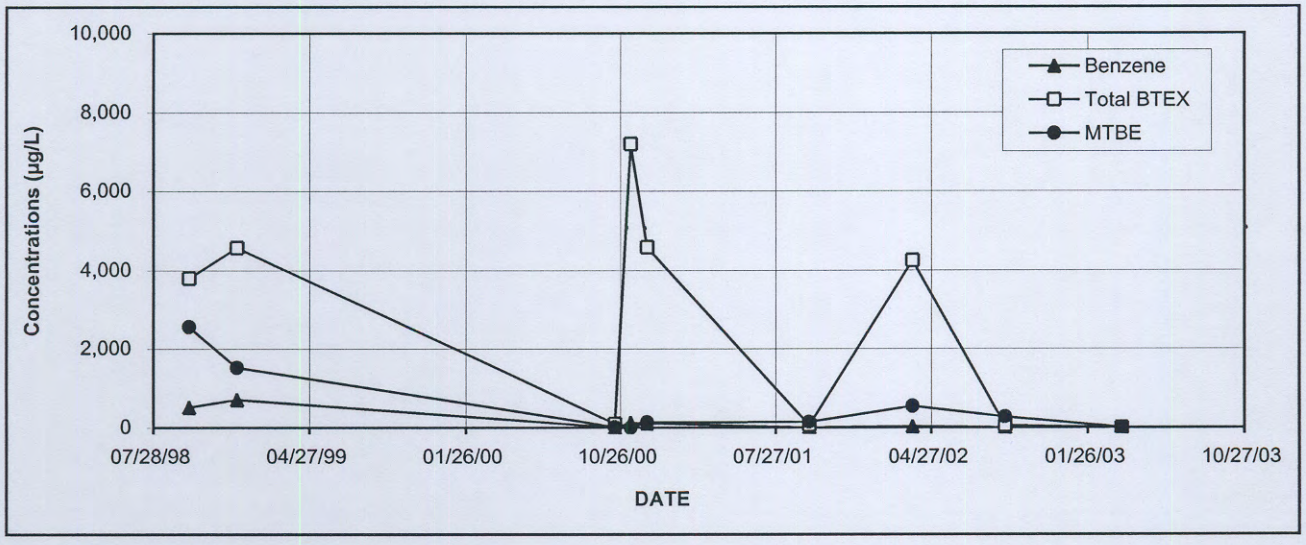


Date	Total BTEX	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes	1,3,5 TMB	1,2,4 TMB	Naph-thalene
06/23/98	**291.7**	**256**	**80.9**	**13.0**	**80.8**	**117**	**---**	**---**	**---**
09/29/98	**14,150**	**3,690**	**1,840**	**4,980**	**1,430**	**5,900**	**634**	**1,620**	**345**
12/22/98	**16,920**	**5,200**	**4,360**	**4,980**	**1,620**	**5,960**	**634**	**1,750**	**343**
10/17/00	**29.5**	**6**	**<1.0**	**<1.0**	**10.2**	**19.3**	**7.5**	**25.5**	**3.9**
11/14/00	ND	**338**	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	**13.7**	ND<5.0
09/25/01	**515.4**	**294**	**8.0**	**37.4**	**177**	**293**	**121**	**112**	**75.1**
09/05/02	**355.4**	**1,920**	**27.3**	**10.1**	**119**	**199**	**165**	**142**	**36**
03/27/03	**19.4**	**1,970**	**19.4**	ND<10.0	ND<10.0	ND<20.0	ND<10.0	ND<10.0	ND<10.0
09/25/03	**51.5**	**2,750**	ND<25.0	ND<25.0	ND<25.0	**51.5**	**45**	**136**	ND<25.0
VGES	**---**	**40**	**5**	**1,000**	**700**	**10,000**	**4**	**5**	**20**

Notes: Results given in micrograms per liter (µg/L).
ND- None detected at indicated detection limit.
TBQ - Trace below quantitation limit indicated.
All samples collected by Marin and analyzed by Endyne, Inc.
VGES - Vermont Groundwater Enforcement Standards
* Well installed 23 April 1998
TMB - Trimethyl Benzene
BTEX - Benzene, toluene, ethyl benzene, & xylenes
MTBE - Methyl tertiary butyl ether
Shaded concentrations exceed VGES.
All samples collected by Marin and analyzed by Endyne, Inc.
3/9/00 and 3/13/01 - Not sampled

FIGURE 14. SP-4
VOC Concentrations

Londonderry Citgo
Londonderry, VT



Date	Total BTEX	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes	1,3,5 TMB	1,2,4 TMB	Naph-thalene
09/29/98	**3,800**	**2,560**	**515**	**TBQ <50**	**945**	**2,340**	**1,180**	**2,940**	**734**
12/22/98	**4,570**	**1,520**	**706**	**774.0**	**1,130**	**1,960**	**966**	**2,040**	**357**
10/17/00	**95**	**13.7**	**2.3**	**7.4**	**32.9**	**52.4**	**18.3**	**38.1**	**13.7**
11/14/00	**7,193**	ND<40.0	**127**	**386**	**1,480**	**5,200**	**823**	**2,550**	**490**
12/13/00	**4,583**	**137**	**109**	**394**	**1,220**	**2,860**	**551**	**1,470**	**366**
09/25/01	**66.3**	**143**	**4.0**	ND<2.0	**49.4**	**12.9**	**31.3**	**9.2**	**39.8**
03/26/02	**4,244.8**	**544**	**29.8**	**290**	**845**	**3,080**	**524**	**1,330**	**348**
09/05/02	**53.7**	**275**	**3.7**	ND<2.0	**40.0**	**10.0**	**18.1**	**22.2**	**18.0**
03/27/03	**3.6**	**12.0**	ND<1.0	ND<1.0	**3.6**	ND<2.0	**1.4**	**1.5**	**1.9**
09/25/03	NS	NS	NS	NS	NS	NS	NS	NS	NS
VGES	**---**	**40**	**5**	**1,000**	**700**	**10,000**	**4**	**5**	**20**

Notes:
Results given in micrograms per liter (µg/L).
ND- None detected at indicated detection limit.
TBQ - Trace below quantitation limit indicated.
All samples collected by Marin and analyzed by Endyne, Inc.
VGES - Vermont Groundwater Enforcement Standards
BTEX - Benzene, toluene, ethyl benzene, & xylenes
MTBE - Methyl tertiary butyl ether
TMB - Trimethyl Benzene
Shaded concentrations exceed VGES.
3/09/00 and 3/13/01 - Not Sampled
9/25/03 - Not samped, well was dry.

ATTACHMENT B

LABORATORY REPORT

Report Date:
15-Oct-03 16:38

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

ECS/Marin
65 Millet Street; Suite 301
Richmond, VT 05477
Attn: Jaymi Cleland

Project:Citgo-Londonderry, VT
Project #:VT96-0093

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SA03120-01	MW-6	Ground Water	25-Sep-03 12:25	30-Sep-03 14:30
SA03120-02	MW-7	Ground Water	25-Sep-03 12:22	30-Sep-03 14:30
SA03120-03	MW-3	Ground Water	25-Sep-03 12:20	30-Sep-03 14:30
SA03120-04	MW-S3	Ground Water	25-Sep-03 12:32	30-Sep-03 14:30
SA03120-05	MW-S2	Ground Water	25-Sep-03 12:30	30-Sep-03 14:30
SA03120-06	MW-8	Ground Water	25-Sep-03 12:17	30-Sep-03 14:30
SA03120-07	SP-1	Ground Water	25-Sep-03 12:02	30-Sep-03 14:30
SA03120-08	SP-2	Ground Water	25-Sep-03 12:00	30-Sep-03 14:30
SA03120-09	SP-3	Ground Water	25-Sep-03 12:04	30-Sep-03 14:30
SA03120-10	Dup	Ground Water	25-Sep-03 12:18	30-Sep-03 14:30
SA03120-11	Trip	Deionized Water	25-Sep-03 06:30	30-Sep-03 14:30
SA03120-12	Influent-Main	Drinking Water	25-Sep-03 15:39	30-Sep-03 14:30
SA03120-13	Mid-Main	Drinking Water	25-Sep-03 15:41	30-Sep-03 14:30
SA03120-14	Effluent-Main	Drinking Water	25-Sep-03 15:43	30-Sep-03 14:30
SA03120-15	Influent-Thorne	Drinking Water	25-Sep-03 16:10	30-Sep-03 14:30
SA03120-16	Mid-Thorne	Drinking Water	25-Sep-03 16:13	30-Sep-03 14:30
SA03120-17	Effluent-Thorne	Drinking Water	25-Sep-03 16:16	30-Sep-03 14:30
SA03120-18	Dup-Main Iff	Drinking Water	25-Sep-03 16:11	30-Sep-03 14:30

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method and meet the requirements of NELAC.

Massachusetts Certification # M-MA138
Connecticut # PH-0777
Florida # E87600
Maine # MA138
New Hampshire # 2538
New York # 11393
Rhode Island # 98
USDA # S-51435

ACCREDITED IN ACCORDANCE WITH nelac

Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

RECEIVED
OCT 21 2003

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-6	VT96-0093	Ground Water	25-Sep-03 12:25	30-Sep-03
SA03120-01				

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by GCMS		Prepared by method Volatiles							
Benzene	BRL	1.00 ug/l	1	SW846 8260B	06-Oct-03	07-Oct-03	3100334	tim	
Ethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
Methyl tert-butyl ether	BRL	1.00 ug/l	1	"	"	"	"	"	
Naphthalene	BRL	1.00 ug/l	1	"	"	"	"	"	
Toluene	BRL	1.00 ug/l	1	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
m,p-Xylene	BRL	2.00 ug/l	1	"	"	"	"	"	
o-Xylene	BRL	1.00 ug/l	1	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*92.2*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*99.6*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*101*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*104*	*70-130 %*		"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-7	VT96-0093	Ground Water	25-Sep-03 12:22	30-Sep-03
SA03120-02				

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by GCMS		Prepared by method Volatiles							
Benzene	BRL	1.00 ug/l	1	SW846 8260B	06-Oct-03	07-Oct-03	3100334	tim	
Ethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
Methyl tert-butyl ether	1.72	1.00 ug/l	1	"	"	"	"	"	
Naphthalene	BRL	1.00 ug/l	1	"	"	"	"	"	
Toluene	BRL	1.00 ug/l	1	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
m,p-Xylene	BRL	2.00 ug/l	1	"	"	"	"	"	
o-Xylene	BRL	1.00 ug/l	1	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*92.8*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*99.4*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*101*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*101*	*70-130 %*		"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-3	VT96-0093	Ground Water	25-Sep-03 12:20	30-Sep-03
SA03120-03				

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by GCMS		Prepared by method Volatiles							
Benzene	BRL	1.00 ug/l	1	SW846 8260B	06-Oct-03	07-Oct-03	3100334	tim	
Ethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
Methyl tert-butyl ether	80.2	1.00 ug/l	1	"	"	"	"	"	
Naphthalene	BRL	1.00 ug/l	1	"	"	"	"	"	
Toluene	BRL	1.00 ug/l	1	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
m,p-Xylene	BRL	2.00 ug/l	1	"	"	"	"	"	
o-Xylene	BRL	1.00 ug/l	1	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*92.8*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*99.4*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*103*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*106*	*70-130 %*		"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-S3	VT96-0093	Ground Water	25-Sep-03 12:32	30-Sep-03
SA03120-04				

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by GCMS		Prepared by method Volatiles							
Benzene	BRL	1.00 ug/l	1	SW846 8260B	06-Oct-03	08-Oct-03	3100334	tim	
Ethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
Methyl tert-butyl ether	16.8	1.00 ug/l	1	"	"	"	"	"	
Naphthalene	BRL	1.00 ug/l	1	"	"	"	"	"	
Toluene	BRL	1.00 ug/l	1	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
m,p-Xylene	BRL	2.00 ug/l	1	"	"	"	"	"	
o-Xylene	BRL	1.00 ug/l	1	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*91.8*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*98.8*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*100*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*103*	*70-130 %*		"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-S2	VT96-0093	Ground Water	25-Sep-03 12:30	30-Sep-03
SA03120-05				

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by GCMS		Prepared by method Volatiles							
Benzene	BRL	1.00 ug/l	1	SW846 8260B	06-Oct-03	08-Oct-03	3100334	tim	
Ethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
Methyl tert-butyl ether	17.0	1.00 ug/l	1	"	"	"	"	"	
Naphthalene	BRL	1.00 ug/l	1	"	"	"	"	"	
Toluene	BRL	1.00 ug/l	1	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
m,p-Xylene	BRL	2.00 ug/l	1	"	"	"	"	"	
o-Xylene	BRL	1.00 ug/l	1	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*93.2*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*100*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*101*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*98.4*	*70-130 %*		"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-8	VT96-0093	Ground Water	25-Sep-03 12:17	30-Sep-03
SA03120-06				

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by GCMS		Prepared by method Volatiles							
Benzene	BRL	25.0 ug/l	50	SW846 8260B	06-Oct-03	08-Oct-03	3100334	tim	
Ethylbenzene	824	25.0 ug/l	50	"	"	"	"	"	
Methyl tert-butyl ether	556	25.0 ug/l	50	"	"	"	"	"	
Naphthalene	376	25.0 ug/l	50	"	"	"	"	"	
Toluene	116	25.0 ug/l	50	"	"	"	"	"	
1,2,4-Trimethylbenzene	1,690	25.0 ug/l	50	"	"	"	"	"	
1,3,5-Trimethylbenzene	581	25.0 ug/l	50	"	"	"	"	"	
m,p-Xylene	1,960	50.0 ug/l	50	"	"	"	"	"	
o-Xylene	462	25.0 ug/l	50	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*96.0*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*101*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*107*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*110*	*70-130 %*		"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
SP-1	VT96-0093	Ground Water	25-Sep-03 12:02	30-Sep-03
SA03120-07				

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by GCMS		Prepared by method Volatiles							
Benzene	BRL	5.00 ug/l	10	SW846 8260B	06-Oct-03	08-Oct-03	3100334	tim	
Ethylbenzene	6.40	5.00 ug/l	10	"	"	"	"	"	
Methyl tert-butyl ether	392	5.00 ug/l	10	"	"	"	"	"	
Naphthalene	7.40	5.00 ug/l	10	"	"	"	"	"	
Toluene	BRL	5.00 ug/l	10	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	5.00 ug/l	10	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	5.00 ug/l	10	"	"	"	"	"	
m,p-Xylene	BRL	10.0 ug/l	10	"	"	"	"	"	
o-Xylene	BRL	5.00 ug/l	10	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*93.6*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*99.4*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*98.8*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*103*	*70-130 %*		"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
SP-2	VT96-0093	Ground Water	25-Sep-03 12:00	30-Sep-03
SA03120-08				

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by GCMS		Prepared by method Volatiles							
Benzene	BRL	2.50 ug/l	5	SW846 8260B	06-Oct-03	08-Oct-03	3100334	tim	
Ethylbenzene	92.2	2.50 ug/l	5	"	"	"	"	"	
Methyl tert-butyl ether	149	2.50 ug/l	5	"	"	"	"	"	
Naphthalene	20.4	2.50 ug/l	5	"	"	"	"	"	
Toluene	3.45	2.50 ug/l	5	"	"	"	"	"	
1,2,4-Trimethylbenzene	137	2.50 ug/l	5	"	"	"	"	"	
1,3,5-Trimethylbenzene	23.2	2.50 ug/l	5	"	"	"	"	"	
m,p-Xylene	34.7	5.00 ug/l	5	"	"	"	"	"	
o-Xylene	10.6	2.50 ug/l	5	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*95.2*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*102*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*110*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*108*	*70-130 %*		"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
SP-3	VT96-0093	Ground Water	25-Sep-03 12:04	30-Sep-03
SA03120-09				

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by GCMS		Prepared by method Volatiles							
Benzene	BRL	25.0 ug/l	50	SW846 8260B	06-Oct-03	08-Oct-03	3100334	tim	
Ethylbenzene	BRL	25.0 ug/l	50	"	"	"	"	"	
Methyl tert-butyl ether	2,750	25.0 ug/l	50	"	"	"	"	"	
Naphthalene	BRL	25.0 ug/l	50	"	"	"	"	"	
Toluene	BRL	25.0 ug/l	50	"	"	"	"	"	
1,2,4-Trimethylbenzene	136	25.0 ug/l	50	"	"	"	"	"	
1,3,5-Trimethylbenzene	45.0	25.0 ug/l	50	"	"	"	"	"	
m,p-Xylene	51.5	50.0 ug/l	50	"	"	"	"	"	
o-Xylene	BRL	25.0 ug/l	50	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*95.0*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*102*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*119*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*115*	*70-130 %*		"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Dup	VT96-0093	Ground Water	25-Sep-03 12:18	30-Sep-03
SA03120-10				

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by GCMS		Prepared by method Volatiles							
Benzene	BRL	25.0 ug/l	50	SW846 8260B	06-Oct-03	08-Oct-03	3100334	tim	
Ethylbenzene	822	25.0 ug/l	50	"	"	"	"	"	
Methyl tert-butyl ether	548	25.0 ug/l	50	"	"	"	"	"	
Naphthalene	308	25.0 ug/l	50	"	"	"	"	"	
Toluene	110	25.0 ug/l	50	"	"	"	"	"	
1,2,4-Trimethylbenzene	1,640	25.0 ug/l	50	"	"	"	"	"	
1,3,5-Trimethylbenzene	567	25.0 ug/l	50	"	"	"	"	"	
m,p-Xylene	1,960	50.0 ug/l	50	"	"	"	"	"	
o-Xylene	459	25.0 ug/l	50	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*96.2*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*101*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*104*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*107*	*70-130 %*		"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Trip	VT96-0093	Deionized Water	25-Sep-03 06:30	30-Sep-03
SA03120-11				

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by GCMS		Prepared by method Volatiles							
Benzene	BRL	1.00 ug/l	1	SW846 8260B	06-Oct-03	08-Oct-03	3100334	tim	
Ethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
Methyl tert-butyl ether	BRL	1.00 ug/l	1	"	"	"	"	"	
Naphthalene	BRL	1.00 ug/l	1	"	"	"	"	"	
Toluene	BRL	1.00 ug/l	1	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
m,p-Xylene	BRL	2.00 ug/l	1	"	"	"	"	"	
o-Xylene	BRL	1.00 ug/l	1	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*94.6*	*70-130 %*		"	"	08-Oct-03	"	"	
Surrogate: Toluene-d8	*102*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*111*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*112*	*70-130 %*		"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Influent-Main	VT96-0093	Drinking Water	25-Sep-03 15:39	30-Sep-03
SA03120-12				

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by GCMS		Prepared by method Volatiles							
Benzene	4.11	1.00 ug/l	1	SW846 8260B	07-Oct-03	09-Oct-03	3100407	tim	
Ethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
Methyl tert-butyl ether	15.4	1.00 ug/l	1	"	"	"	"	"	
Naphthalene	BRL	1.00 ug/l	1	"	"	"	"	"	
Toluene	BRL	1.00 ug/l	1	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
m,p-Xylene	BRL	2.00 ug/l	1	"	"	"	"	"	
o-Xylene	BRL	1.00 ug/l	1	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*95.6*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*100*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*98.6*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*107*	*70-130 %*		"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Mid-Main	VT96-0093	Drinking Water	25-Sep-03 15:41	30-Sep-03
SA03120-13				

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by GCMS		Prepared by method Volatiles							
Benzene	BRL	1.00 ug/l	1	SW846 8260B	07-Oct-03	09-Oct-03	3100407	tim	
Ethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
Methyl tert-butyl ether	8.19	1.00 ug/l	1	"	"	"	"	"	
Naphthalene	BRL	1.00 ug/l	1	"	"	"	"	"	
Toluene	BRL	1.00 ug/l	1	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
m,p-Xylene	BRL	2.00 ug/l	1	"	"	"	"	"	
o-Xylene	BRL	1.00 ug/l	1	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*97.8*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*99.6*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*100*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*107*	*70-130 %*		"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Effluent-Main	VT96-0093	Drinking Water	25-Sep-03 15:43	30-Sep-03
SA03120-14				

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by GCMS		Prepared by method Volatiles							
Benzene	BRL	1.00 ug/l	1	SW846 8260B	07-Oct-03	09-Oct-03	3100407	tim	
Ethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
Methyl tert-butyl ether	5.77	1.00 ug/l	1	"	"	"	"	"	
Naphthalene	BRL	1.00 ug/l	1	"	"	"	"	"	
Toluene	BRL	1.00 ug/l	1	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
m,p-Xylene	BRL	2.00 ug/l	1	"	"	"	"	"	
o-Xylene	BRL	1.00 ug/l	1	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*97.2*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*100*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*101*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*107*	*70-130 %*		"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Influent-Thorne	VT96-0093	Drinking Water	25-Sep-03 16:10	30-Sep-03
SA03120-15				

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by GCMS		Prepared by method Volatiles							
Benzene	BRL	1.00 ug/l	1	SW846 8260B	07-Oct-03	09-Oct-03	3100407	tim	
Ethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
Methyl tert-butyl ether	5.51	1.00 ug/l	1	"	"	"	"	"	
Naphthalene	BRL	1.00 ug/l	1	"	"	"	"	"	
Toluene	BRL	1.00 ug/l	1	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
m,p-Xylene	BRL	2.00 ug/l	1	"	"	"	"	"	
o-Xylene	BRL	1.00 ug/l	1	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*96.4*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*99.2*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*101*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*106*	*70-130 %*		"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Mid-Thorne	VT96-0093	Drinking Water	25-Sep-03 16:13	30-Sep-03
SA03120-16				

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by GCMS		Prepared by method Volatiles							
Benzene	BRL	1.00 ug/l	1	SW846 8260B	07-Oct-03	09-Oct-03	3100407	tim	
Ethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
Methyl tert-butyl ether	BRL	1.00 ug/l	1	"	"	"	"	"	
Naphthalene	BRL	1.00 ug/l	1	"	"	"	"	"	
Toluene	BRL	1.00 ug/l	1	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
m,p-Xylene	BRL	2.00 ug/l	1	"	"	"	"	"	
o-Xylene	BRL	1.00 ug/l	1	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*96.6*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*100*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*99.6*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*106*	*70-130 %*		"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Effluent-Thorne	VT96-0093	Drinking Water	25-Sep-03 16:16	30-Sep-03
SA03120-17				

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by GCMS		Prepared by method Volatiles							
Benzene	BRL	1.00 ug/l	1	SW846 8260B	07-Oct-03	09-Oct-03	3100407	tim	
Ethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
Methyl tert-butyl ether	BRL	1.00 ug/l	1	"	"	"	"	"	
Naphthalene	BRL	1.00 ug/l	1	"	"	"	"	"	
Toluene	BRL	1.00 ug/l	1	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
m,p-Xylene	BRL	2.00 ug/l	1	"	"	"	"	"	
o-Xylene	BRL	1.00 ug/l	1	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*96.6*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*101*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*99.6*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*107*	*70-130 %*		"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Dup-Main Iff	VT96-0093	Drinking Water	25-Sep-03 16:11	30-Sep-03
SA03120-18				

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by GCMS		Prepared by method Volatiles							
Benzene	BRL	1.00 ug/l	1	SW846 8260B	07-Oct-03	09-Oct-03	3100407	tim	
Ethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
Methyl tert-butyl ether	5.42	1.00 ug/l	1	"	"	"	"	"	
Naphthalene	BRL	1.00 ug/l	1	"	"	"	"	"	
Toluene	BRL	1.00 ug/l	1	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	1.00 ug/l	1	"	"	"	"	"	
m,p-Xylene	BRL	2.00 ug/l	1	"	"	"	"	"	
o-Xylene	BRL	1.00 ug/l	1	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*98.0*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*100*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*100*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*106*	*70-130 %*		"	"	"	"	"	

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 3100334 - Volatiles										
Blank (3100334-BLK1)				Prepared: 06-Oct-03 Analyzed: 07-Oct-03						
Benzene	BRL	1.00	ug/l							
Ethylbenzene	BRL	1.00	ug/l							
Methyl tert-butyl ether	BRL	1.00	ug/l							
Naphthalene	BRL	1.00	ug/l							
Toluene	BRL	1.00	ug/l							
1,2,4-Trimethylbenzene	BRL	1.00	ug/l							
1,3,5-Trimethylbenzene	BRL	1.00	ug/l							
m,p-Xylene	BRL	2.00	ug/l							
o-Xylene	BRL	1.00	ug/l							
Surrogate: 4-Bromofluorobenzene	*46.1*		ug/l	*50.0*		*92.2*	*70-130*			
Surrogate: Toluene-d8	*50.0*		ug/l	*50.0*		*100*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*50.5*		ug/l	*50.0*		*101*	*70-130*			
Surrogate: Dibromofluoromethane	*52.3*		ug/l	*50.0*		*105*	*70-130*			
Matrix Spike (3100334-MS1)	**Source: SA02979-03**			Prepared: 06-Oct-03 Analyzed: 07-Oct-03						
Benzene	22.0		ug/l	20.0	BRL	110	70-130			
Chlorobenzene	20.8		ug/l	20.0	BRL	104	70-130			
1,1-Dichloroethene	24.3		ug/l	20.0	BRL	122	70-130			
Toluene	22.0		ug/l	20.0	BRL	110	70-130			
Trichloroethene	23.1		ug/l	20.0	BRL	116	70-130			
Surrogate: 4-Bromofluorobenzene	*43.9*		ug/l	*50.0*		*87.8*	*70-130*			
Surrogate: Toluene-d8	*49.5*		ug/l	*50.0*		*99.0*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*49.0*		ug/l	*50.0*		*98.0*	*70-130*			
Surrogate: Dibromofluoromethane	*51.1*		ug/l	*50.0*		*102*	*70-130*			
Batch 3100407 - Volatiles										
Blank (3100407-BLK1)				Prepared: 07-Oct-03 Analyzed: 08-Oct-03						
Benzene	BRL	1.00	ug/l							
Ethylbenzene	BRL	1.00	ug/l							
Methyl tert-butyl ether	BRL	1.00	ug/l							
Naphthalene	BRL	1.00	ug/l							
Toluene	BRL	1.00	ug/l							
1,2,4-Trimethylbenzene	BRL	1.00	ug/l							
1,3,5-Trimethylbenzene	BRL	1.00	ug/l							
m,p-Xylene	BRL	2.00	ug/l							
o-Xylene	BRL	1.00	ug/l							
Surrogate: 4-Bromofluorobenzene	*48.2*		ug/l	*50.0*		*96.4*	*70-130*			
Surrogate: Toluene-d8	*49.4*		ug/l	*50.0*		*98.8*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*51.3*		ug/l	*50.0*		*103*	*70-130*			
Surrogate: Dibromofluoromethane	*54.0*		ug/l	*50.0*		*108*	*70-130*			
Matrix Spike (3100407-MS1)	**Source: SA03120-12**			Prepared: 07-Oct-03 Analyzed: 09-Oct-03						
Benzene	18.6		ug/l	20.0	4.11	72.4	70-130			
Chlorobenzene	17.0		ug/l	20.0	BRL	85.0	70-130			
1,1-Dichloroethene	18.3		ug/l	20.0	BRL	91.5	70-130			
Toluene	17.2		ug/l	20.0	BRL	86.0	70-130			
Trichloroethene	17.9		ug/l	20.0	BRL	89.5	70-130			
Surrogate: 4-Bromofluorobenzene	*48.8*		ug/l	*50.0*		*97.6*	*70-130*			
Surrogate: Toluene-d8	*49.7*		ug/l	*50.0*		*99.4*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*50.3*		ug/l	*50.0*		*101*	*70-130*			
Surrogate: Dibromofluoromethane	*53.1*		ug/l	*50.0*		*106*	*70-130*			
Matrix Spike Dup (3100407-MSD1)	**Source: SA03120-12**			Prepared: 07-Oct-03 Analyzed: 09-Oct-03						
Benzene	18.5		ug/l	20.0	4.11	72.0	70-130	0.554	30	
Chlorobenzene	17.2		ug/l	20.0	BRL	86.0	70-130	1.17	30	
1,1-Dichloroethene	18.2		ug/l	20.0	BRL	91.0	70-130	0.548	30	

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 3100407 - Volatiles										
Matrix Spike Dup (3100407-MSD1)	**Source: SA03120-12**			Prepared: 07-Oct-03 Analyzed: 09-Oct-03						
Toluene	17.4		ug/l	20.0	BRL	87.0	70-130	1.16	30	
Trichloroethene	18.1		ug/l	20.0	BRL	90.5	70-130	1.11	30	
Surrogate: 4-Bromofluorobenzene	*48.2*		ug/l	*50.0*		*96.4*	*70-130*			
Surrogate: Toluene-d8	*49.8*		ug/l	*50.0*		*99.6*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*50.4*		ug/l	*50.0*		*101*	*70-130*			
Surrogate: Dibromofluoromethane	*53.4*		ug/l	*50.0*		*107*	*70-130*			

Notes and Definitions

BRL Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. The RDL is generally 5 to 10 times the MDL. However, it may be nominally chosen within these guidelines to simplify data reporting. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

SA 03120

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HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 2

Special Handling:
- ☒ Standard TAT - 7 to 10 business days
- ☐ Rush TAT - Date Needed: _____
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: ECSMARIN - RICHMOND

Invoice To: ECS-AGAWAM
23100250

Project No.: VT 96-0093
Site Name: CITGO LONDONDERRY
Location: ~~CORNER OF~~ RT. 100 State: VT
Sampler(s): R.KEMP + D.JOHNSON

Project Mgr.: J. Cleland

P.O. No.: _____ RQN: _____

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8= $NaHSO_4$ 9= 4°c 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses: 8021B VT VOCScan	Notes:
AD 03120-01	MW-6	9/25/03	12:25	G	GW	2,9	2				X	
AD -02	MW-7		12:22								X	
AD -03	MW-3		12:20								X	
AD -04	MW-S3		12:32								X	
AD -05	MW-S2		12:30								X	
AD -06	MW-8		12:17								X	
AD -07	SP-1		12:02								X	
AD -08	SP-2		12:00								X	
AD -09	SP-3		12:04								X	
AD -10	DUP		12:18								X	

Relinquished by:	Received by:	Date:	Time:
Randy Kemp	Randy Kemp	9/30/03	11:20
	Mike	9/30/03	1439

☒ Fax results when available to (802) 434-6076

☐ E-mail results when available to _____

Condition upon Receipt: ☐ Iced ☐ Ambient ☐ 5 °C

11 Almgren Drive • Agawam, Massachusetts 01001 • 413-789-9018 • Fax 413-789-4076 • www.spectrum-analytical.com

Rel'd 5. 5°C

03120

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 2 of 2

Special Handling:

- ☒ Standard TAT - 7 to 10 business days
- ☐ Rush TAT - Date Needed: ______
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: ECSMARIN - RICHMOND

Project Mgr.: J. CLELAND

Invoice To: ECSMARIN - AGAWAM

P.O. No.: ______ RQN: ______

Project No.: VT 96-0093

Site Name: CITGO LONDONDERRY

Location: RT. 100 State: VT

Sampler(s): R. KEMP + D. JOHNSON

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8= $NaHSO_4$ 9= 4°C 10=______

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= DiH2O X2=______ X3=______

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	8021 B VT VOC Scan							Notes:
AD 03120-11	TRIP	9/25/03	6:30	G	X1	2,9	1				X							
AD -12	Influent-Main	↓	3:39	↓	DW	↓	2				X							
AD -13	Mid-Main	↓	3:41	↓	↓	↓	↓				X							
AD -14	Effluent-Main	↓	3:43	↓	↓	↓	↓				X							
AD -15	Influent-Thorne	↓	4:10	↓	↓	↓	↓				X							
AD -16	Mid-Thorne	↓	4:13	↓	↓	↓	↓				X							
AD -17	Effluent-Thorne	↓	4:16	↓	↓	↓	↓				X							
AD -18	DUP-Main Iff.	↓	4:11	↓	↓	↓	↓				X							
AD																		
AD																		

Containers: / Analyses:

Relinquished by:	Received by:	Date:	Time:
Randy Woodard (RAO = 1 for)	Randy Woodard	9/30/03	11:20
	[signature]	9/30/03	1420

☒ Fax results when available to (802) 434-6076

☐ E-mail results when available to ______

Condition upon Receipt: ☐ Iced ☐ Ambient ☐ 5 °C

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Rcvd. 5°C