

BIENNIAL GROUNDWATER MONITORING REPORT, 2011

FORMER WAIT FARM MOTOR INN 4805 MAIN STREET WAITSFIELD, VERMONT VT DEC SITE NUMBER 2002-2982

Prepared for:

Gumbo Group, LLC 4805 Main Street Waitsfield, Vermont 05673 Contact: Mr. Branwell Lepp, (802) 583-5525

Prepared by:

Wilcox & Barton, Inc.
57 Hoit Road
Concord, New Hampshire 03301
Contact: Mr. Russell W. Barton, (603) 369-4190 x502

September 2, 2011

Wilcox & Barton, Inc. Project No.: GUMB0001

WWW.WILCOXANDBARTON.COM 1 (888) 777-5805

BIENNIAL GROUNDWATER MONITORING REPORT, 2011

FORMER WAIT FARM MOTOR INN 4805 MAIN STREET WAITSFIELD, VERMONT VT DEC SITE #2002-2982

Prepared for:

Gumbo Group, LLC 4805 Main Street Waitsfield, Vermont 05673 Contact: Mr. Branwell Lepp, (802) 583-5525

Prepared by:

Wilcox & Barton, Inc. 57 Hoit Road Concord, New Hampshire 03301 Contact: Mr. Russell W. Barton, (603) 369-4190 x502

Wilcox & Barton, Project No: GUMB0001

September 2, 2011



CERTIFICATION

The following personnel have prepared and/or reviewed this report for accuracy, content, and quality of presentation.

i

Document Title: Biennial Groundwater Monitoring Report, 2011

Former Wait Farm Motor Inn

4805 Main Street, Waitsfield, Vermont

VT DEC Site #2002-2982

Date/Version: September 2, 2011

James Donaldson Project Scientist

Robert W. Rooks, PE Principal Engineer

TABLE OF CONTENTS

1.0 I	NTRODUCTION1										
2.0 S	SITE DESCRIPTION										
3.0 R	RESPONSE ACTIONS1										
3	.1 Groundwater Gauging2										
3	.2 Groundwater Sample Collection and Analysis										
4.0 P	OTENTIAL SENSITIVE RECEPTORS AND EXPOSURE PATHWAYS3										
5.0	CONCLUSIONS AND RECOMMENDATIONS4										
Tables											
Table 1	Well Gauging and Piezometric Head Elevation Data										
Table 2	Groundwater Samples – Summary of Analytical Results										
Figures											
Figure 1	Site Location Map										
Figure 2	Site Plan										
Appendi	i <u>ces</u>										
Appendi	X A VT DEC Correspondence										
Appendi	x B Site Background Information										
Appendi											
Appendi	•										
Appendi	x E Laboratory Report										



1.0 INTRODUCTION

This report presents the results of a biennial groundwater sampling event performed at the former Wait Farm Motor Inn, 4805 Main Street in Waitsfield, Vermont (the site). The groundwater monitoring activities are a continuation of response actions implemented following the discovery of a release of an unknown quantity of #2 fuel oil from an underground storage tank (UST) supply line. The leak was discovered following UST system removal in March 2002. The Vermont Department of Environmental Conservation (VT DEC) assigned Site Number 2002-2982 to the release.

The property was sold in March 2010 and Wilcox & Barton, Inc. was retained by Mr. Branwell Lepp of Gumbo Group, LLC, in May 2011 to provide environmental consulting services. The current biennial groundwater monitoring event was performed in accordance with the VT DEC letter dated October 9, 2009, and a scope of work and budget approved by VT DEC in a letter dated June 3, 2011. A copy of the October 9, 2009, VT DEC correspondence is included in Appendix A.

The location of the site is presented on Figure $1 - Site \ Location \ Map$, and pertinent site features are depicted on Figure $2 - Site \ Plan$. A brief history of response actions at the site to date is provided in Appendix B.

2.0 SITE DESCRIPTION

The site is located in a rural area of Waitsfield, Vermont, consisting primarily of commercial properties situated along Main Street (Vermont Route 100). The site is operated as a retail showroom and office space for a residential and commercial heating, ventilation, and air conditioning supply company. The site is occupied by a two-story, wood-frame structure containing apartments, a showroom, and office space in the full basement. Unimproved portions of the property consist of unpaved parking areas, lawn, and landscaping. A pond is located on the eastern portion of the property.

The topography of the western portion of the property between the building and Main Street is predominantly level. The site slopes steeply downward east of the building toward the pond. The site is serviced by an on-site septic system and private drinking water well. The leach field for the septic system is located between the building and Main Street, and is shared with the adjacent residential property. According to prior site investigations, the drinking water well is 300 feet deep, is installed in bedrock, and is located approximately 250 feet northeast of the release area. The water supply well is also shared with the adjacent residential property.

3.0 RESPONSE ACTIONS

Response actions conducted during this reporting period consist of a groundwater monitoring event performed on June 16, 2011. A summary of monitoring activities is presented in this section.



3.1 Groundwater Gauging

On June 16, 2011, monitoring wells MW-1, MW-2, and MW-4 were gauged for depth to water using an oil/water interface probe capable of measuring depth to water and non-aqueous phase liquid (NAPL) to the nearest 0.01 foot. Monitoring well MW-3 could not be located on the densely vegetated slope, which showed signs of disruption from the conversion of the building from an Inn to office space. The well is presumed to have been destroyed.

The presence of NAPL was investigated by inserting a clean, clear bailer into each well until half the volume of the bailer was filled, removing the bailer, and visually inspecting the contents. Gauging did not reveal a measurable thickness of NAPL in any well. Well gauging data and product thickness measurements are summarized in Table 1.

A petroleum sheen was observed on the purge water from well MW-2, and a petroleum odor was noted in purge water from wells MW-2 and MW-4 prior to sampling. The well riser for MW-2 was damaged and would not accept a probe or bailer, so the riser was cut back to facilitate well gauging and sampling.

3.2 Groundwater Sample Collection and Analysis

On June 16, 2011, groundwater samples were collected from monitoring wells MW-1, MW-2, and MW-4. Sampling for volatile organic compounds (VOCs) was performed in accordance with Wilcox & Barton, Inc. Field Sampling Protocol, a copy of which is included in Appendix C. The samples were submitted under Chain of Custody to Con-Test Analytical Laboratory of East Longmeadow, Massachusetts, for analysis of VOCs by U.S. Environmental Protection Agency (EPA) Method 8021B.

One or more target constituents were detected in monitoring wells MW-1, MW-2, and MW-4. The samples from MW-1, MW-2, and MW-4 were found to contain several VOCs indicative of fuel oil, although none were present at concentrations above Vermont Primary Groundwater Enforcement Standards (VGES). Detected concentrations of fuel oil-related constituents generally show a decreasing concentration trend from previous monitoring results.

Four constituents were detected for the first time in any site well during this monitoring event: acetone, tert-butylbenzene, chloromethane, and trichlorofluoromethane. All detected concentrations of acetone and trichlorofluoromethane were below the corresponding VGES; no VGES is available for tert-butylbenzene. The detected concentrations of chloromethane exceeded the VGES of 30 micrograms per liter (μ g/L) in all three wells, at concentrations ranging from 37 μ g/L in MW-4 to 110 μ g/L in MW-2. The source of the chloromethane is currently unknown.

Graphs of concentration trends for Total VOCs and naphthalene are presented in Appendix D. Stable to downward trends are evident over the two year period from 2009 to 2011. Only MW-2 shows a slight upwards trend in Total VOCs; however, the concentrations are well below those found during the historical high period in 2002 and 2003 and are largely attributable to the presence of chloromethane. The concentration of naphthalene in MW-2 remains stable.



Dissolved phase constituent concentrations across the remainder of site have shown a decrease from historic highs, and NAPL has not been detected since 2008.

A summary of the groundwater data is presented in Table 2 and a copy of the laboratory report is included in Appendix E.

4.0 POTENTIAL SENSITIVE RECEPTORS AND EXPOSURE PATHWAYS

In general, potential human receptors may include residents, workers, visitors, or trespassers in the vicinity of the site. Environmental receptors may include flora and fauna within the affected area. Potential exposure pathways and points may include wellhead protection areas, potable water wells, surface waters, wetlands, migration of vapors into building through basements, direct contact (e.g., playgrounds), and utility corridors. Exposure routes through which contamination may reach human receptors include ingestion, inhalation, and dermal contact.

Based on a review of response actions undertaken by Griffin and a limited inspection of the property, Wilcox & Barton, Inc. has identified the following potentially complete exposure pathways for human receptors at the site:

<u>Ingestion of Drinking Water</u> - The site and surrounding properties are serviced by private drinking water wells. No municipal water service is provided within the Town of Waitsfield. As groundwater contamination has been documented at the site, drinking water from wells located within the area of contamination may serve as a potential exposure point. The potable well located on the subject property is reportedly located approximately 250 feet northeast of (cross-gradient from) the source area and is installed in bedrock at a depth of 300 feet. The potable well was sampled and analyzed for VOCs by EPA Method 524.2 on June 20, 2002. The analysis did not detect fuel oil constituents.

According to the Griffin International "Initial Report on the Investigation of Subsurface Petroleum Contamination and Product Recovery Efforts" report of August 28, 2002, no known private or public water supply wells, other than the well on the property, are located within 500 feet downgradient of the site.

Inhalation of Vapors – The former Wait Farm Motor Inn building is constructed over a basement, which is now occupied by employees during working hours. The release of fuel oil occurred beneath the building. NAPL has been detected within shallow groundwater (3 to 4 feet below the basement floor), most recently during the 2008 sampling event. In addition, in an inspection of the basement during the UST closure in March 2002, screening of the indoor air with a photoionization detector (PID) identified a peak VOC concentration of 2.8 parts per million by volume (ppmv). Constituent concentrations in soil and groundwater and VOC screening measurements within the basement suggest that impacts to indoor air may exist, although the influence of two 275-gallon above-ground storage tanks and an oil-fired boiler in the basement cannot be ruled out.

<u>Dermal Contact with Soil, Groundwater, Surface Water</u> – Based on historic site characterization data, contamination is present in soil and groundwater beneath the basement floor and in soil and



groundwater within the vicinity of the water table extending to the on-site pond. The pond was historically impacted with product, however, no sheen was visible on the pond surface during the 2011 monitoring event. Contact with surface water may result in dermal exposures. Under current conditions, dermal contact with soil and groundwater are not likely unless excavations are performed.

<u>Impact to Surface Water</u> - The pond on the subject property has historically been impacted with petroleum product. Product recovery efforts were instituted on the pond using absorbent pads and containment booms. Due to the concentration of constituents remaining within groundwater and the location of the pond relative to the source area, dissolved-phase constituents may be impacting the pond. No surface water samples have been collected to document the potential impacts.

5.0 CONCLUSIONS AND RECOMMENDATIONS

During this reporting period, a biennial groundwater monitoring event was performed on July 16, 2011. Gauging and purging of monitoring wells did not identify the presence of NAPL, but a petroleum sheen was identified on purge water from well MW-2. VOCs consistent with fuel oil were measured in wells MW-1, MW-2, and MW-4, but no fuel oil-related constituents were detected at concentrations exceeding VGES. Chloromethane was detected in samples from wells MW-1, MW-2, and MW-4 for the first time since groundwater monitoring began at the site, and all detected concentrations exceeded the VGES for chloromethane. The source of chloromethane is currently unknown.

Although the current monitoring data did not indicate the presence of NAPL in the subsurface, historic data suggest that it is still present in some quantity. NAPL represents a continuing source of both dissolved and vapor phase contamination. Such conditions pose a threat of impact to drinking water, surface water, and indoor air at the site. Drinking water quality data have not been collected since 2002.

Wilcox & Barton, Inc. recommends the continuation of groundwater and NAPL gauging, groundwater monitoring for VOCs, and reporting on a biennial basis. Due to the historical presence of contaminant concentrations exceeding VGES in monitoring well MW-3, Wilcox & Barton, Inc. recommends that the monitoring well be replaced prior to the scheduled 2013 monitoring event. The well riser for MW-2 should also be repaired.





TABLE 1 Well Gauging and Piezometric Head Elevation Data

Wait Farm Motor Inn 4805 Main Street, Waitsfield, Vermont

Well ID	Gauging Date	Depth to Water (ft)	Depth to NAPL (ft)	NAPL Thickness (ft)	Well Elevation (Ft)	Piezometric Head Elevation (ft)
MW-1	11/21/02	3.28	3.16	0.125*	NM	NM
	02/10/03	3.45			NM	NM
	05/21/03	3.50			NM	NM
	09/25/03	3.41			NM	NM
	03/29/04	3.38			NM	NM
	05/27/05	3.28	3.26	0.02	NM	NM
	03/29/06	4.50	4.48	0.02	NM	NM
	07/21/06	3.02	3.00	0.02	NM	NM
	10/21/06	2.93	2.92	0.01	NM	NM
	01/24/07	3.09			NM	NM
	05/02/07	7.55			NM	NM
	05/06/08	3.61			NM	NM
	05/18/09	3.15			NM	NM
	06/16/11	3.53			NM	NM
MW-2	11/21/02	1.48			NM	NM
	02/10/03	2.36			NM	NM
	05/21/03	2.55			NM	NM
	09/25/03	2.21			NM	NM
	03/29/04	1.88			NM	NM
	05/27/05	2.31			NM	NM
	03/29/06	2.10			NM	NM
	07/21/06	2.18			NM	NM
	10/21/06	2.88			NM	NM
	01/24/07	1.90			NM	NM
	05/02/07	1.83			NM	NM
	05/06/08	2.20			NM	NM
	05/18/09	1.77			NM	NM
	06/16/11	0.99			NM	NM
MW-3	11/21/02	3.76	3.64	0.125*	NM	NM
	02/10/03	4.98			NM	NM
	05/21/03	4.28			NM	NM
	09/25/03	4.55			NM	NM
	03/29/04	2.30			NM	NM
	05/27/05	4.52			NM	NM
	03/29/06	4.69			NM	NM
	07/21/06	3.96			NM	NM
	10/21/06	3.81			NM	NM
	01/24/07	4.50			NM	NM
	05/02/07	3.98	3.97	0.01	NM	NM
	05/06/08	4.68			NM	NM
	05/18/09	3.32			NM	NM
	06/16/11			Well not found	d	
MW-4	11/21/02	6.55			NM	NM
•	02/10/03	6.97			NM	NM
	05/21/03	6.67			NM	NM
	09/25/03	6.55			NM	NM
	03/29/04	6.54			NM	NM
	05/27/05	6.50			NM	NM
	03/29/06	6.75			NM	NM
	07/21/06	6.38			NM	NM
	10/21/06	6.20			NM	NM
	01/24/07	6.54			NM	NM
	05/02/07	4.55			NM	NM
	05/02/07					
		6.64			NM	NM
	05/18/09	6.21			NM	NM

Notes:

Data prior to 5/27/05 collected by Griffin International, Inc.

* 1/8 inch of NAPL measured using a bailer by Griffin International, Inc.

NAPL Non-aqueous phase liquid.

NM Not Measured.



Groundwater Samples - Summary of Analytical Results

Wait Farm Motor Inn 4805 Main Street, Waitsfield, Vermont

Sample Identification	Vermont Groundwater													
Sample Date	Enforcement Standard †	07/03/02	11/21/02	02/10/03	05/21/03	09/25/03	03/29/04	05/27/05	03/29/06	05/02/07	05/07/08	05/18/09	06/16/11	
Volatile Organic Compounds (VOCs) by EPA														
Method 8021B/8260B														
Acetone	700	/	/	/	/	/	/	NS*	NS*	< 500	NS*	< 50	50 UB	
tertiary-Amyl methyl ether (TAME)	NE		NS*					NS*	NS*	< 5.0	NS*	< 0.50	0.50 U	
Benzene	5.0	5.9	NS*	ND	ND	ND	ND	NS*	NS*	<10.0	NS*	<1.0	1.0 U	
n-Butylbenzene	NE		NS*					NS*	NS*	16.4	NS*	<1.0	1.0 U	
sec-Butylbenzene	NE		NS*					NS*	NS*	11.8	NS*	<1.0	0.14 J	
tert-Butylbenzene	NE	/	/	/	/	/	/	NS*	NS*	< 10.0	NS*	< 1.0	1.0 U	
Chloromethane	30.0	/	/	/	/	/	/	NS*	NS*	< 20.0	NS*	< 2.0	38	
Ethylbenzene	700.0	41.3	NS*	ND	ND	ND	ND	NS*	NS*	113	NS*	<1.0	1.0 U	
Isopropylbenzene	NE		NS*			-		NS*	NS*	29.4	NS*	<1.0	1.0 U	
p-Isopropyltoluene	NE		NS*			-		NS*	NS*	<10.0	NS*	<1.0	1.0 U	
Methyl tert-butyl ether (MTBE)	40.0	31.8	NS*	ND	ND	ND	ND	NS*	NS*	12.5	NS*	<1.0	0.29 J	
Naphthalene	20.0	127	NS*	121	63.6	54.1	96.8	NS*	NS*	30.5	NS*	<2.0 J	2.0 UJ	
n-Propylbenzene	NE		NS*					NS*	NS*	48.8	NS*	<1.0	1.0 U	
1,1,2,2-Tetrachloroethane	NE		NS*			-		NS*	NS*	< 5.0	NS*	< 0.50	0.50 U	
Toluene	1,000.0	42.8	NS*	ND	ND	ND	ND	NS*	NS*	<10.0	NS*	<1.0	1.0 U	
Trichlorofluoromethane	2,100.0	/	/	/	/	/	/	NS*	NS*	< 20.0	NS*	< 2.0	1.3 J	
1,2,4-Trimethylbenzene	NE	235	NS*	49.8	20.2	39.8	81.3	NS*	NS*	176	NS*	<1.0	1.0 U	
1,3,5-Trimethylbenzene	NE	70.6	NS*	25.7	ND	12.7	25.5	NS*	NS*	83.1	NS*	<1.0	1.0 U	
Total Trimethylbenzenes	350	249	NS*	121.0	63.6	54.1	96.8	NS*	NS*	262.4	NS*	<2.0	2.0 U	
Xylenes (total)	10,000	298	NS*	19.9	ND	ND	14.8	NS*	NS*	169.3	NS*	<3.0	3.0 U	
Total Petroleum Hydrocarbons (TPH) by EPA														
Method 8015														
TPH	NE		NS*	12,300	16,100	25,500	147,000	NS*	NS*		NS*			

All results are in micrograms per liter (ug/L).

Only detected and selected other analytes shown; all others not detected.

bold shaded Exceeds Vermont Groundwater Enforcement Standard (VGES)

bold italics Reporting limit for non-detection exceeds VGES.

Not analyzed.

ND Not detected; reporting limit not shown. <X; U Not detected; reporting limit shown. NS* Not sampled, free product present. NE No standard established.

Estimated concentration below reporting limit or due to quality J

control limitations.

Amount in sample >5x (>10x for acetone) amount in method blank;

UB Amount in sample <5x (<10x for acetone) amount in method blank;

changed to non-detection.

"/" Analytical result not available.

Groundwater Protection Rule and Strategy, 02/05, and



Groundwater Samples - Summary of Analytical Results

Wait Farm Motor Inn 4805 Main Street, Waitsfield, Vermont

Sample Identification	Vermont Groundwater						M	W-2					
Sample Date	Enforcement Standard †	07/03/02	11/21/02	02/10/03	05/21/03	09/25/03	03/29/04	05/27/05	03/29/06	05/02/07	05/07/08	05/18/09	06/16/11
Volatile Organic Compounds (VOCs) by EPA													
Method 8021B/8260B													
Acetone	700	/	/	/		/	/	< 10.0	< 50.0	< 50.0	< 50	< 50	50 UB
tertiary-Amyl methyl ether (TAME)	NE							1.0	0.5 J	< 0.5	< 0.5	< 0.50	0.50 U
Benzene	5.0	20.3	ND	ND		ND	11.9	7.2	5.8	3.6	1.4	1.5	1.2
n-Butylbenzene	NE							2.6	<1.0	1.2	1.3	<1.0	2.1
sec-Butylbenzene	NE		-		-			< 0.6	<1.0	1.9	1.8	1.2	4.5
tert-Butylbenzene	NE	/	/	/	-	/	/	< 0.8	< 1.0	< 1.0	< 1.0	< 1.0	1.0 U
Chloromethane	30.0	/	/	/	-	/	/	< 1.2	< 2.0	< 2.0	< 2.0	< 2.0	110
Ethylbenzene	700.0	11.2	16.3	ND		ND	ND	12.3	28.1	30.9	21.4	7.3	7.0
Isopropylbenzene	NE							2.5	5.4	8.3	8.3	5.0	9.9
p-Isopropyltoluene	NE							0.9	<1.0	<1.0	<1.0	<1.0	0.41 J
Methyl tert-butyl ether (MTBE)	40.0	353	111	61.0		30.7	33.6	16.7	8.9	3.9	1.8	2.1	1.3
Naphthalene	20.0	48.7	131	20.5	-	49.2	ND	3.6	6.8 J	10.5	8.7	4.7	5.0 JB
n-Propylbenzene	NE							1.6	5.1	8.7	8.5	3.9	8.9
1,1,2,2-Tetrachloroethane	NE							< 0.5	< 0.5	0.8	< 0.5	< 0.50	0.50 U
Toluene	1,000.0	4.2	ND	ND		ND	ND	< 0.7	<1.0	<1.0	<1.0	<1.0	0.34 J
Trichlorofluoromethane	2,100.0	/	/	/	-	/	/	< 0.7	< 2.0	< 2.0	< 2.0	< 2.0	2.0 U
1,2,4-Trimethylbenzene	NE	54.9	114	44.2		11.1	ND	0.8	3.1	12.4	11.6	2.4	6.1
1,3,5-Trimethylbenzene	NE	29.4	84.7	114	-	144	11.3	2.6	1.9	3.4	5.8	<1.0	1.0 U
Total Trimethylbenzenes	350	437.4	258	81.5	-	79.9	45.5	48.4	53.3	69.8	53.2	2.4	6.1
Xylenes (total)	10,000	136	65.6	26.8		22.0	ND	1.9	8.8	3.1	4.0	<3.0	0.82 J
Total Petroleum Hydrocarbons (TPH) by EPA													
Method 8015													
ТРН	NE		47,600	1,690,000		741,000	275,000						

All results are in micrograms per liter (ug/L).

Only detected and selected other analytes shown; all others not detected.

bold shaded Exceeds Vermont Groundwater Enforcement Standard (VGES)

bold italics Reporting limit for non-detection exceeds VGES.

"--" Not analyzed.

ND Not detected; reporting limit not shown.

<X; U Not detected; reporting limit shown.

NS* Not sampled, free product present.

NE No standard established.

J Estimated concentration below reporting limit or due to quality

control limitations.

B Amount in sample >5x (>10x for acetone) amount in method blank;

result valid.

UB Amount in sample <5x (<10x for acetone) amount in method blank;

changed to non-detection.

"/" Analytical result not available.

† Groundwater Protection Rule and Strategy, 02/05, and



Groundwater Samples - Summary of Analytical Results

Wait Farm Motor Inn 4805 Main Street, Waitsfield, Vermont

Sample Identification	Vermont Groundwater												
Sample Date	Enforcement Standard†	07/03/02	11/21/02	02/10/03	05/21/03	09/25/03	03/29/04	05/27/05	03/29/06	05/02/07	05/07/08	05/18/09	
Volatile Organic Compounds (VOCs) by EPA													
Method 8021B/8260B													
Acetone	700	/	/	/	/	/	/	< 10.0	< 50.0	NS*	< 500	< 50	
tertiary-Amyl methyl ether (TAME)	NE	NS*	NS*				-	< 2.5	<0.5 J	NS*	< 5.0	< 0.50	
Benzene	5.0	NS*	NS*	43.6	28.0	33.2	11.3	3.2	<1.0	NS*	<10.0	<1.0	
n-Butylbenzene	NE	NS*	NS*					18.9	12.4	NS*	43.6	3.0	
sec-Butylbenzene	NE	NS*	NS*				-	9.2	6.0	NS*	20.1	1.7	
tert-Butylbenzene	NE	/	/	/	/	/	/	< 0.8	< 1.0	NS*	< 10	< 1.0	
Chloromethane	30.0	/	/	/	/	/	/	< 1.2	< 2.0	NS*	< 20.0	< 2.0	
Ethylbenzene	700.0	NS*	NS*	137	69.9	107	80.9	47.8	29.1	NS*	30.9	6.1	
Isopropylbenzene	NE	NS*	NS*					15.6	11.8	NS*	22.9	5.5	
p-Isopropyltoluene	NE	NS*	NS*					6.6	4.5	NS*	12.6	1.4	
Methyl tert-butyl ether (MTBE)	40.0	NS*	NS*	190	46.4	42.9	32.3	19.9	5.6	NS*	<10.0	<1.0	
Naphthalene	20.0	NS*	NS*	494	220	304	226	202	87.8 J	NS*	52.2	31	
n-Propylbenzene	NE	NS*	NS*					24.6	20.0	NS*	40.7	6.9	
1,1,2,2-Tetrachloroethane	NE	NS*	NS*					< 2.5	< 0.5	NS*	< 5.0	< 0.50	
Toluene	1,000.0	NS*	NS*	28.5	16.5	19.6	ND	< 3.5	<1.0	NS*	<10.0	<1.0	
Trichlorofluoromethane	2,100.0	/	/	/	/	/	/	< 0.7	< 2.0	NS*	< 20.0	< 2.0	
1,2,4-Trimethylbenzene	NE	NS*	NS*	881	261	323	253	76.3	64.2	NS*	105	25	
1,3,5-Trimethylbenzene	NE	NS*	NS*	887	96.0	135	112	54.8	37.3	NS*	70.6	15	
Total Trimethylbenzenes	350	NS*	NS*	893	381	507	351	347.8	89.4	NS*	223	40	
Xylenes (total)	10,000	NS*	NS*	940	456	452	388	80.4	43.1	NS*	<30.0	4.5	
Total Petroleum Hydrocarbons (TPH) by EPA Method 8015													
TPH	NE	NS*	NS*	2,830,000	16,200	184,000	59,400			NS*			

All results are in micrograms per liter (ug/L).

Only detected and selected other analytes shown; all others not detected.

bold shaded Exceeds Vermont Groundwater Enforcement Standard (VGES)

bold italics Reporting limit for non-detection exceeds VGES.

"--" Not analyzed.

ND Not detected; reporting limit not shown.

<X; U Not detected; reporting limit shown.

NS* Not sampled, free product present.

NE No standard established.

J Estimated concentration below reporting limit or due to quality

 $control\ limitations.$

B Amount in sample >5x (>10x for acetone) amount in method blank;

result valid.

UB Amount in sample <5x (<10x for acetone) amount in method blank;

changed to non-detection.

"/" Analytical result not available.

† Groundwater Protection Rule and Strategy, 02/05, and



Groundwater Samples - Summary of Analytical Results

Wait Farm Motor Inn 4805 Main Street, Waitsfield, Vermont

Sample Identification	Vermont Groundwater												
Sample Date	Enforcement Standard †	11/21/02	02/10/03	05/21/03	09/25/03	03/29/04	05/27/05	03/29/06	05/02/07	05/06/08	05/18/09	06/16/11	
Volatile Organic Compounds (VOCs) by EPA													
Method 8021B/8260B													
Acetone	700	/	/	/	/	/	< 200	< 50.0	< 50.0	< 50.0	< 50	14 B	
tertiary-Amyl methyl ether (TAME)	NE					-	< 10.0	0.9 J	< 0.5	< 0.5	< 0.50	2.5 U	
Benzene	5.0	43.7	62.2	58.1	52.8	32.2	15.0	7.1	<1.0	3.6	2.0	0.85 J	
n-Butylbenzene	NE						28.8	15.4	<1.0	17.1	13	14	
sec-Butylbenzene	NE					-	< 12.0	9.7	1.1	12.0	8.6	9.2	
tert-Butylbenzene	NE	/	/	/	/	/	< 16.0	< 1.0	< 1.0	< 1.0	< 1.0	0.55 J	
Chloromethane	30.0	/	/	/	/	/	< 24.0	< 2.0	< 2.0	< 2.0	< 2.0	37	
Ethylbenzene	700.0	80.8	59.0	65.9	91.4	57.8	32.6	63.2	<1.0	94.8	87	75	
Isopropylbenzene	NE						35.6	22.4	<1.0	28.7	23	21	
p-Isopropyltoluene	NE						19.8	4.8	<1.0	6.2	4.7	4.8 J	
Methyl tert-butyl ether (MTBE)	40.0	403	273	235	103	86.6	41.2	23.3	<1.0	6.3	3.2	2.3 J	
Naphthalene	20.0	487	173	204	246	99.9	201	104. J	< 2.0	15.8	21	5.9 JB	
n-Propylbenzene	NE						18.8	36.7	<1.0	44.4	36	33	
1,1,2,2-Tetrachloroethane	NE						< 10.0	< 0.5	< 0.5	< 0.5	< 0.50	2.5 U	
Toluene	1,000.0	ND	24.5	15.6	19.9	ND	< 14.0	4.5	<1.0	<1.0	1.7	0.70 J	
Trichlorofluoromethane	2,100.0	/	/	/	/	/	< 14.0	< 2.0	< 2.0	< 2.0	< 2.0	10 U	
1,2,4-Trimethylbenzene	NE	425	180	217	322	99.3	30.4	107	<1.0	112	120	120	
1,3,5-Trimethylbenzene	NE	132	82.1	81.9	124	75.0	27.8	55.8	<1.0	74.7	65	55	
Total Trimethylbenzenes	350	1015	592	579	513	276.5	392.8	187	< 2.0	229	185	175	
Xylenes (total)	10,000	269	357	423	536	210	16.2	121.8	<3.0	55.8	118	70	
Total Petroleum Hydrocarbons (TPH) by EPA													
Method 8015													
TPH	NE	530,000	108,000	486,000	1,495,000	21,500							

All results are in micrograms per liter (ug/L).

Only detected and selected other analytes shown; all others not detected.

bold shaded Exceeds Vermont Groundwater Enforcement Standard (VGES)

bold italics Reporting limit for non-detection exceeds VGES.

"--" Not analyzed.

ND Not detected; reporting limit not shown.

<X; U Not detected; reporting limit shown.

NS* Not sampled, free product present.

NE No standard established.

J Estimated concentration below reporting limit or due to quality

control limitations.

B Amount in sample >5x (>10x for acetone) amount in method blank;

result valid.

UB Amount in sample <5x (<10x for acetone) amount in method blank;

changed to non-detection.

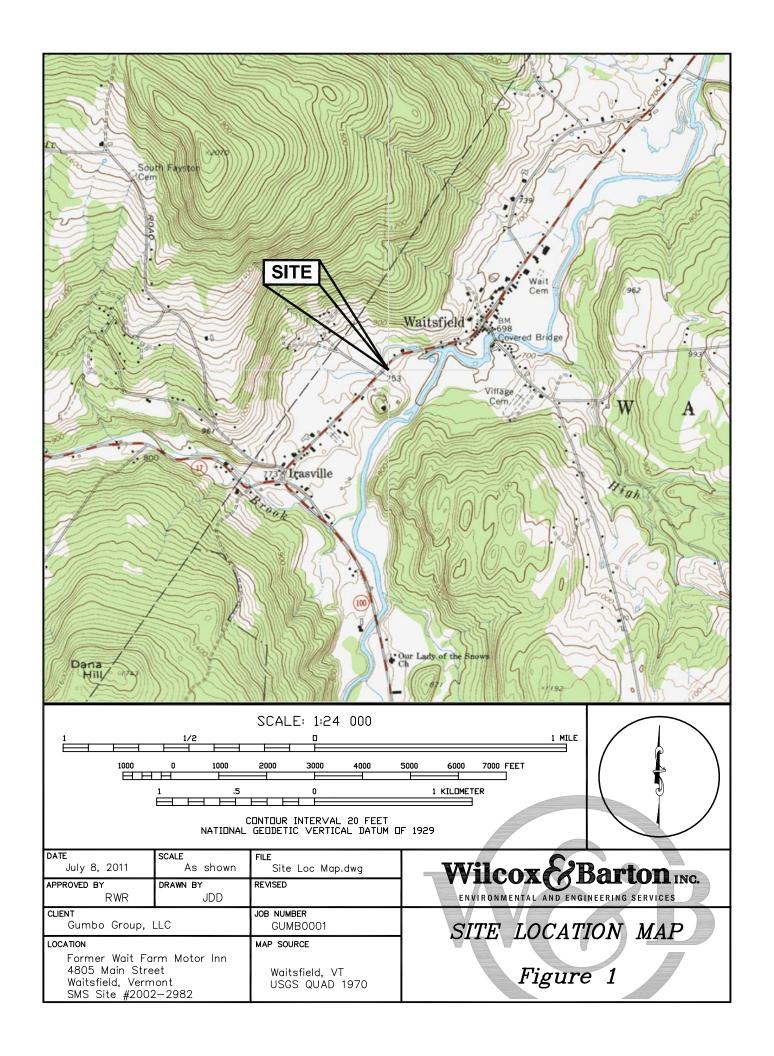
"/" Analytical result not available.

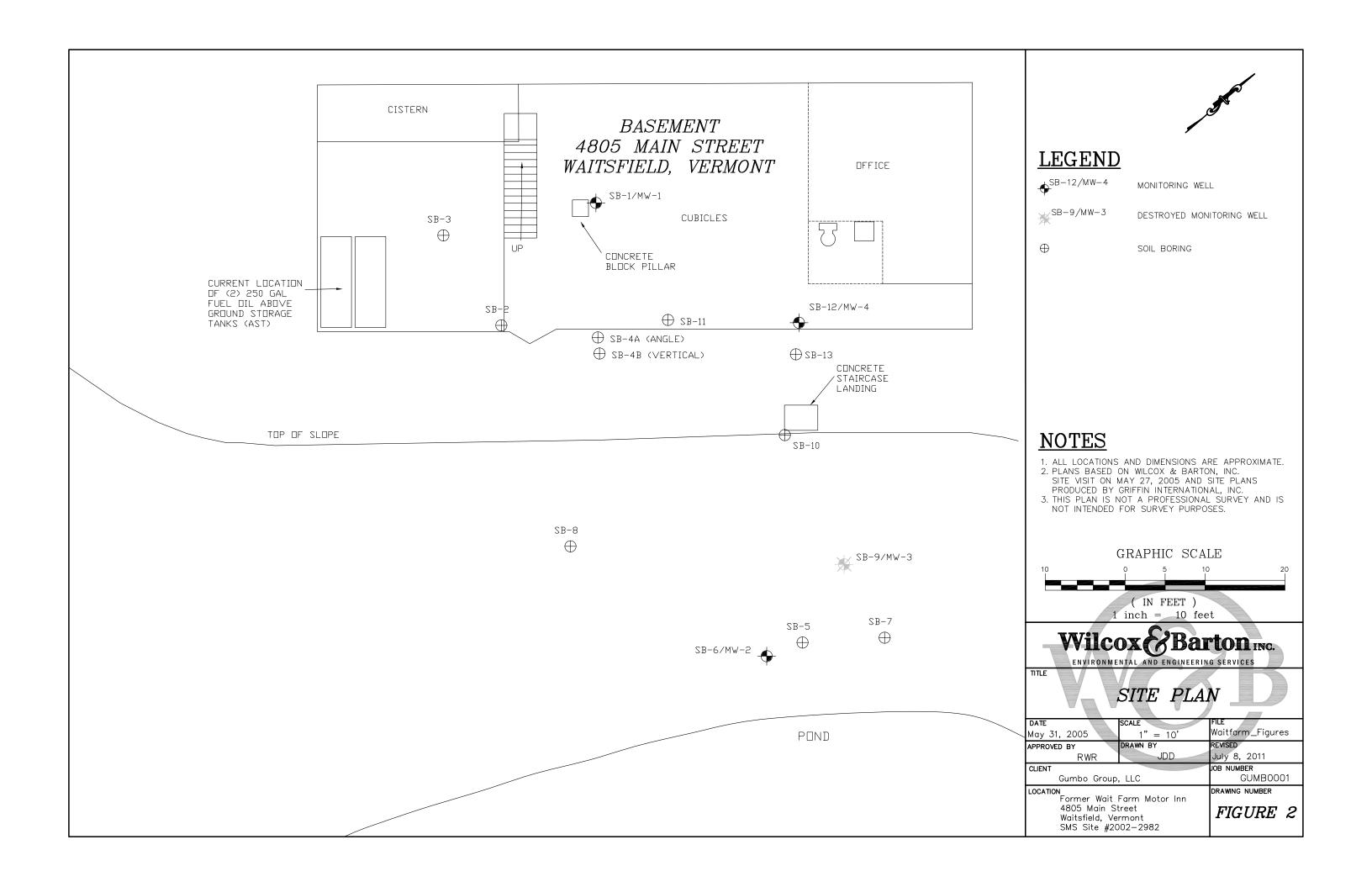
Groundwater Protection Rule and Strategy, 02/05, and



FIGURES







APPENDIX A

VT DEC Correspondence





AGENCY OF NATURAL RESOURCES

State of Vermont
Department of Environmental Conservation
Waste Management Division
103 South Main Street/West Building
Waterbury, VT 05671-0404
(802) 241-3877
FAX (802) 241-3296
gerold.noyes@state.vt.us

October 9, 2009

PAUL LAVOIE
WAIT FARM MOTOR INN
4805 MAIN STREET
WAITSFIELD, VERMONT 05673

Re: Groundwater monitoring, Wait Farm Motor Inn, SMS Site #2002-2982

Waitsfield, Vermont

Dear Mr. Lavoie:

The Sites Management Section (SMS) has reviewed the October 7, 2009 report prepared by Wilcox & Barton for annual groundwater monitoring conducted on May 18. Naphthalene (31 and 21 μ g/L) was found above the Vermont Groundwater Enforcement Standards (VGES) in monitor wells MW-3 and -4 respectively. MW-2, -3, and -4 contained other petroleum compounds below the VGES. No contamination was noted in MW-1. Petroleum sheens and odors were noted in the purge water from the monitor wells, although no measurable free product was reported.

Based on these results, the SMS is not requesting additional site investigation or remediation and asks that **biennial** groundwater monitoring be implemented.

We look forward to reviewing the next sample results by **August 15, 2011** and recommendations for future site activity. Please feel free to contact me if I can be of assistance.

Sincerely,

Gerold Noyes, P.E. Environmental Engineer Sites Management Section

CC: William Wilcox, Wilcox & Barton (via electronic mail)



APPENDIX B

Site Background Information



SITE BACKGROUND INFORMATION

Wait Farm Motor Inn

4805 Main Street Waitsfield, Vermont VT DEC Site #2002-2982

On March 19, 2002, Mr. Paul Lavoie of the Wait Farm Motor Inn retained Griffin International, Inc. (Griffin) to remove a 2,000-gallon fuel oil underground storage tank (UST) from the property. The tank removal was prompted by a leak from a supply line extending to the basement and the presence of petroleum on a pond located near the building.

UST Closure Site Assessment, March 25, 2002, Griffin International, Inc.

On March 25, 2002, Griffin removed the UST and performed a UST closure site assessment. The results of the closure assessment are contained in a letter report to the Vermont Department of Environmental Conservation (VT DEC) dated March 28, 2002. According to the report, the UST and piping exposed during the removal were found to be in good condition with no indication of petroleum leakage or staining on or near the UST. Six confirmatory soil samples from the tank grave were screened for organic vapors with a photoionization detector (PID), revealing a maximum concentration of 13.8 parts per million by volume (ppmv). The cause of the release was attributed to a leaking supply line under the basement. Remedial measures included the recovery of free phase petroleum from the nearby pond.

<u>Initial Report on the Investigation of Subsurface Petroleum Contamination and Product</u> Recovery Efforts, August 28, 2002, Griffin International, Inc.

On August 28, 2002, Griffin produced a report entitled "*Initial Report on the Investigation of Subsurface Petroleum Contamination and Product Recovery Efforts.*" The report summarized site investigative activities implemented for the release, including the installation of 13 soil borings (SB-1 through SB-13) and four one-inch diameter monitoring wells (MW-1 through MW-4) with a hand auger. Soil encountered at the site consisted primarily of silty sand underlain by clay. Soil samples were screened with a PID and selected samples were submitted for laboratory analysis for volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (EPA) Method 8021B. PID measurements revealed petroleum contamination in soil beneath the concrete slab floor of the basement. Soil samples from three borings (SB-2 through SB-4) exhibiting high PID readings were analyzed for VOCs by EPA Method 8021B. The soil analysis revealed petroleum compounds at concentrations above the VT DEC Guidelines for Contaminated Soil and Debris.

Groundwater samples from wells MW-1 and MW-2 were analyzed for VOCs by EPA Method 8021B and found to contain petroleum constituents above the VT DEC Groundwater Enforcement Standards (VGES). A groundwater sample was not collected from monitoring well MW-3 because non-aqueous phase liquid (NAPL) was detected in the well. MW-4 had not yet been installed at the time of the sampling event. Analysis of the on-site potable well for VOCs by EPA Method 524.2 revealed no detection of petroleum constituents.



Griffin recovered product from the pond using sorbent pads and containment booms and from MW-3 using a bailer. It was estimated that approximately 100 gallons of product were recovered. NAPL was measured in MW-3 at a thickness of up to 13.25 inches in July and August of 2002.

Griffin performed a sensitive receptor survey during UST closure and site investigation activities. The pond on the property was noted to overflow to a drainage swale, which ultimately discharges to the Mad River at a location approximately 500 feet to the northeast of the site. Indoor air in the building basement was screened with a PID. The screening revealed a maximum concentration of 2.8 ppmv. The 2.8 ppmv reading was not explained, but it was noted that the basement contained two 275-gallon above-ground storage tanks (ASTs) and an oil-fired boiler.

Griffin recommended groundwater analysis in the fall of 2002 and bi-weekly inspections of the containment area along the pond.

Report on the Quarterly Groundwater Monitoring of Subsurface Petroleum Contamination, January 2003, Griffin International, Inc.

Griffin produced a quarterly monitoring report entitled "Report on the Quarterly Groundwater Monitoring of Subsurface Petroleum Contamination" dated January 2003. The report presented groundwater sampling data from November 21, 2002. Wells MW-1 and MW-3 were found to contain 1/8 inch of NAPL and were, therefore, not sampled. Groundwater samples from MW-2 and MW-4 were analyzed for VOCs by EPA Method 8021B and total petroleum hydrocarbons (TPH) by EPA Method 8015 and found to contain petroleum constituents above VGES. Product was recovered from the monitoring wells that contained NAPL and the absorbents on the pond were monitored and changed as needed.

Report on the Quarterly Groundwater Monitoring of Subsurface Petroleum Contamination, March 2003, Griffin International, Inc.

Griffin produced a second quarterly monitoring report entitled "Report on the Quarterly Groundwater Monitoring of Subsurface Petroleum Contamination" dated March 2003. The report presented groundwater sampling data from February 10, 2003. Groundwater was analyzed for VOCs by EPA Method 8021B and TPH by EPA Method 8015. Petroleum constituents were detected in each well at concentrations above VGES. Product recovery was also performed from monitoring wells containing NAPL and the absorbents on the pond were monitored and changed as needed.



<u>Report on the Quarterly Groundwater Monitoring of Subsurface Petroleum Contamination, July 2003, Griffin International, Inc.</u>

Griffin produced a third quarterly monitoring report entitled "Report on the Quarterly Groundwater Monitoring of Subsurface Petroleum Contamination" dated July 2003. The report presented groundwater sampling data from May 21, 2003. No NAPL was detected during the sampling event and MW-2 was not sampled because insufficient water was present. Groundwater was analyzed for VOCs by EPA Method 8021B and TPH by EPA Method 8015. Petroleum constituents were detected in each well at concentrations above VGES. Absorbents on the pond and NAPL in the monitoring wells were monitored on a bi-weekly basis during the period. NAPL was detected and recovered from MW-1 and MW-3 on several site visits performed in March and April of 2003. Absorbent booms on the pond were changed as needed. Griffin recommended semi-annual sampling in the spring and fall, monthly NAPL gauging and recovery, and removal of the absorbent materials from the pond. The recommendations were conditionally approved by VT DEC in a letter dated August 1, 2003.

Semi-Annual Groundwater Monitoring Report, October 2003, Griffin International, Inc.

Griffin produced a "Semi-Annual Groundwater Monitoring Report" dated October 2003. The report presented groundwater sampling data from September 25, 2003. No NAPL was detected during the sampling event. Groundwater was analyzed for VOCs by EPA Method 8021B and TPH by EPA Method 8015. Petroleum constituents were detected in each well at concentrations above VGES. The monitoring wells were not found to contain NAPL during gauging events in July and September of 2003. The absorbent materials in the pond were removed on September 30, 2003 and removed from the site for disposal. Griffin recommended continuation of the groundwater analysis program on a semi-annual basis, discontinuing TPH analysis, and discontinuing the NAPL gauging and recovery events. VT DEC approved of the Griffin recommendations in a letter dated November 6, 2003.

Semi-Annual Groundwater Monitoring Report, May 2004, Griffin International, Inc.

Griffin produced a second "Semi-Annual Groundwater Monitoring Report" dated May 2004. The report presented groundwater sampling data from March 29, 2004. No NAPL was detected during the sampling event. Groundwater was analyzed for VOCs by EPA Method 8021B and TPH by EPA Method 8015. Groundwater was found to contain petroleum constituents in each well at concentrations above VGES. Griffin recommended continuation of the groundwater analysis program on a semi-annual basis, with groundwater analysis for VOCs only.

VT DEC Correspondence, May 21, 2004.

VT DEC produced a letter dated May 21, 2004 providing comments on the Griffin Semi-Annual Groundwater Monitoring Report of May 2004. VT DEC indicated that annual groundwater sampling in the spring was a sufficient scope of work for the project, and requested that TPH sampling be discontinued.



In March 2005, Wilcox & Barton, Inc. was retained to provide environmental consulting services for the site.

Annual Groundwater Monitoring Report, 2005, July 18, 2005, Wilcox & Barton, Inc.

On July 18, 2005, Wilcox & Barton, Inc. produced a report entitled "Annual Groundwater Monitoring Report, 2005." According to the report, an annual groundwater monitoring event was performed on May 27, 2005. Groundwater and product level gauging revealed the presence of 0.02 foot of NAPL in monitoring well MW-1. Prior to this event, NAPL had not been observed on the site since April 2003. Laboratory analysis of groundwater samples from monitoring wells MW-2, MW-3, and MW-4 for VOCs revealed the presence of petroleum constituents in groundwater at concentrations above VGES. Aside from the recurrence of NAPL in MW-1, dissolved contaminant concentrations within each well showed a decreasing trend when compared with historic monitoring data.

The presence of NAPL at the site, as indicated by the 2005 monitoring data, was considered to represent a continuing source of dissolved and vapor phase soil gas contamination. Such conditions were considered to pose a significant threat of impact to surface water and indoor air at the site.

Wilcox & Barton, Inc. recommended increasing the frequency of groundwater monitoring to assess the presence of NAPL in the formation. Groundwater gauging on a quarterly basis during the four seasons of one year was recommended, along with removal of NAPL from the well(s) to ensure the well would continue to accurately reflect dynamic aquifer conditions. Groundwater monitoring for dissolved VOC constituents and reporting was recommended to continue on an annual basis.

Due to the presence of NAPL and potential threats to sensitive receptors, Wilcox & Barton, Inc. recommended that a Corrective Action Feasibility Investigation be performed. It was noted that additional site characterization information may be required to support the completion of the investigation. The required characterization was noted to potentially include the following elements, among others:

- installation of additional monitoring wells to determine the extent of contamination;
- collection and analysis of groundwater samples to determine contaminant distribution and geochemical and groundwater chemistry characteristics indicative of natural attenuation;
- collection of soil vapor samples to assess the potential for migration to indoor air;
- collection and analysis of surface water and/or pond sediment samples;
- surveying of monitoring wells to aid in assessment of contaminant migration rates; and,
- collection and analysis of indoor air samples.

VT DEC Correspondence, February 7, 2006.

On February 7, 2005, VT DEC issued a letter regarding the July 18, 2005, "Annual Groundwater Monitoring Report, 2005" prepared by Wilcox & Barton, Inc. VT DEC concurred with the recommendations of the report to increase sampling frequency and product removal, with further



work to be determined based on observed conditions. VT DEC asked that the quarterly monitoring not be initiated until the results of the spring 2006 event were received and reviewed.

Annual Groundwater Monitoring Report, 2006, May 12, 2006, Wilcox & Barton, Inc.

On May 12, 2006, Wilcox & Barton, Inc. produced a report entitled "Annual Groundwater Monitoring Report, 2006." According to the report, an annual groundwater monitoring event was performed on March 29, 2006. Groundwater and product level gauging revealed the presence of 0.02 foot of NAPL in monitoring well MW-1. Laboratory analysis of groundwater samples from monitoring wells MW-2, MW-3, and MW-4 for VOCs revealed the presence of petroleum constituents in groundwater at concentrations above VGES. Aside from the recurrence of NAPL in MW-1, dissolved contaminant concentrations within each well showed a decreasing trend when compared with historic monitoring data.

Wilcox & Barton, Inc. recommended increasing the frequency of groundwater monitoring to assess the presence of NAPL in the formation. Groundwater gauging on a quarterly basis during the four seasons of one year was recommended, along with removal of NAPL from the well(s) to ensure the well would continue to accurately reflect dynamic aquifer conditions. Groundwater monitoring for dissolved VOC constituents and reporting was recommended to continue on an annual basis.

• Due to the presence of NAPL and potential threats to sensitive receptors, Wilcox & Barton, Inc. recommended that a Corrective Action Feasibility Investigation be performed. It was noted that additional site characterization information may be required to support the completion of the investigation.

VT DEC Correspondence, June 1, 2006.

On June 1, 2006, VT DEC issued a letter regarding the May 12, 2006 "Annual Groundwater Monitoring Report, 2006" prepared by Wilcox & Barton, Inc. VT DEC did not find the need for a Corrective Action Feasibility Investigation, but did concur with the recommendations to continue annual sampling and quarterly free product removal, with further work to be determined based on observed conditions.

Annual Groundwater Monitoring Report, 2007, June 12, 2007, Wilcox & Barton, Inc.

On June 12, 2007, Wilcox & Barton, Inc. produced a report entitled "Annual Groundwater Monitoring Report, 2007." According to the report, quarterly groundwater and NAPL gauging events were performed on July 21, 2006, October 21, 2006, January 24, 2007, and in conjunction with an annual groundwater monitoring event on May 2, 2007.

The gauging identified the presence of NAPL in monitoring wells MW-1 and MW-3 during the past year of quarterly gauging. The groundwater monitoring event identified the presence of VOCs consistent with fuel oil at concentrations above VGES in samples from wells MW-1 and MW-2.



Wilcox & Barton, Inc. concluded that the current monitoring data indicated that a significant quantity of free-phase fuel oil is present in the subsurface at the site, and represents a continuing source of dissolved and vapor phase soil gas contamination. Such conditions pose a significant threat of impact to surface water and indoor air at the site.

Wilcox & Barton, Inc. recommended the continuation of the quarterly gauging and NAPL recovery for an additional one-year period. Due to the presence of NAPL and potential threats to sensitive receptors, Wilcox & Barton, Inc. continued to recommend that a Corrective Action Feasibility Investigation be performed. Additional site characterization information may be required to support the completion of the investigation and may include the following elements:

- installation of additional monitoring wells to determine the extent of contamination;
- collection and analysis of groundwater samples to determine contaminant distribution and geochemical and groundwater chemistry characteristics indicative of natural attenuation;
- collection of soil vapor samples to assess the potential for migration to indoor air;
- collection and analysis of surface water and/or pond sediment samples;
- surveying of monitoring wells to aid in assessment of contaminant migration rates; and, collection and analysis of indoor air samples.

VT DEC Correspondence, August 1, 2007.

On August 1, 2007, VT DEC issued a letter regarding the 2007 Annual Groundwater Monitoring Report. The letter referenced the reported free-product recovery results and recommended the discontinuation of free-product recovery.

Annual Groundwater Monitoring Report, 2008, July 14, 2008, Wilcox & Barton, Inc.

On July 14, 2008, Wilcox & Barton submitted a report entitled "Annual Groundwater Monitoring Report, 2008" detailing the monitoring activities and sampling results from 2008. It also included a recommendation for completion of a Corrective Action Feasibility Study and collection of site characterization and exposure pathway data to support that effort. To date, these recommendations have not been accepted by VT DEC.

Annual Groundwater Monitoring Report, 2009, October 7, 2009, Wilcox & Barton, Inc.

On October 7, 2009, Wilcox & Barton submitted a report entitled "Annual Groundwater Monitoring Report, 2009" detailing the monitoring activities and sampling results from 2009. The report again included a recommendation for completion of a Corrective Action Feasibility Study and collection of site characterization and exposure pathway data to support that effort. The VTDEC correspondence dated October 9, 2009, stated further site investigation or remediation would not be required, and biennial sampling and reporting should be implemented.



APPENDIX C

Wilcox & Barton, Inc. Field Sampling Protocol



WILCOX & BARTON, INC.

Protocol for Sampling Groundwater for Volatile Organic Compounds (VOCs) Volatile Petroleum Hydrocarbons (VPH) and Extractable Petroleum Hydrocarbons (EPH)

Groundwater samples may be collected using conventional (standard) techniques or via low-flow techniques depending upon project objectives and data needs. Users are responsible for selecting the appropriate technique and adhering to the protocols outlined below.

STANDARD PURGING AND SAMPLE COLLECTION:

- 1. Measure depth to static water level and depth to bottom of well.
- 2. Calculate standing water volume in the well.
- 3. Using a new or decontaminated bailer, purge either: (1) five well volumes of water from the well, (2) until the well is dry, or (3) until pH, specific conductance and temperature readings stabilize.
- 4. Transfer the sample directly from the bailer into the appropriate sample container(s).
 - a) VPH and VOC samples <u>three</u> pre-cleaned, pre-preserved 40-milliliter VOA vials with Teflon septa caps.
 - b) EPH samples <u>two</u> pre-cleaned 1-liter amber bottles equipped with Teflon-lined screw caps.
- 5. Pre-preserved sample containers provided by the laboratory are to be used whenever possible. Care must be taken to ensure that the preservative (hydrochloric acid) is not spilled during filling of containers. Sample pH of <2 must be maintained, and can be accomplished by adding 3 to 4 drops of HCl to a 40-ml VOA vial when needed.
- 6. After filling vials for VOC or VPH samples, invert each vial and tap to liberate potential air bubbles. Inspect to ensure no air bubbles are in the vial.
- 7. Place samples on ice immediately. Keep refrigerated until delivery to laboratory under chain-of-custody. Samples must be maintained at a temperature of less than 6°C but not frozen.

LOW FLOW PURGING AND SAMPLE COLLECTION (Less than 25 ft to water):

- 1. Measure depth to static water level and depth to bottom of well.
- 2. Determine desired sample intake depth based on well construction log and carefully install decontaminated or new/unused sampling tubing and foot valve assembly, minimizing disturbance of the water column:
 - a) Set the intake near the top of the well screen for surficial groundwater monitoring wells; or
 - b) Set the intake at the center of the screened interval for vertical delineation

Rev. 07/02/10 1



groundwater monitoring wells.

- 3. Attach the sampling tubing to clean, unused peristaltic pump tubing using appropriately sized vacuum fittings (male-male hose barb connection or similar fitting).
- 4. Attach the discharge of the pump to a calibrated flow-through meter capable of measuring, at a minimum, pH, temperature, and specific conductance, and at least one additional parameter such as oxidation-reduction potential, dissolved oxygen, and/or turbidity.
- 5. Initiate pumping at the lowest possible flow rate and monitor water level drawdown in the well while gradually increasing flow rate. Set the flow rate at the point just before water level drawdown occurs (generally less than 0.5 liter per minute or 0.12 gallons per minute).
- 6. Observe and record field parameters and water level drawdown initially at 5 to 15 minute intervals. Once stabilization appears to be approaching, increase the observation frequency to every 3 to 5 minutes. Purging is complete when three successive measurements meet the following minimum criteria:
 - $pH \pm 0.1$
 - Specific Conductivity ± 0.3%
 - Dissolved Oxygen ± 10%

If additional parameters are considered, recommended stabilized tolerances are:

- Reduction-Oxidation Potential ± 10 mV
- Turbidity ± 10%
- 7. Disconnect the flow-through field parameter meter and collect the sample from the pump discharge tubing.
- **8.** Fill the sample containers directly from the pump discharge tubing, following the same procedures outline in steps 4 through 7 of Standard Purging and Sample Collection above.

DECONTAMINATION:

Use of disposable sampling equipment is preferred. However, if any item of equipment will be introduced into more than one well in a sampling round, the wells should be gauged and/or sampled in order of increasing contamination (*i.e.*, wells anticipated to be less contaminated will be sampled first). After use in each well, the equipment will be decontaminated using, at a minimum, the following sequence:

- 1. Three rinses with clean water
- 2. Wash with Alconox (laboratory detergent) and clean water solution
- 3. Three rinses with clean water
- 4. Two rinses with distilled water

Similar decontamination procedures should be followed for all equipment introduced into the well, including water level meters, interface probes, and intake tubing. Bailers exposed to free product will not be re-used to sample for dissolved volatile constituents.

Rev. 07/02/10 2

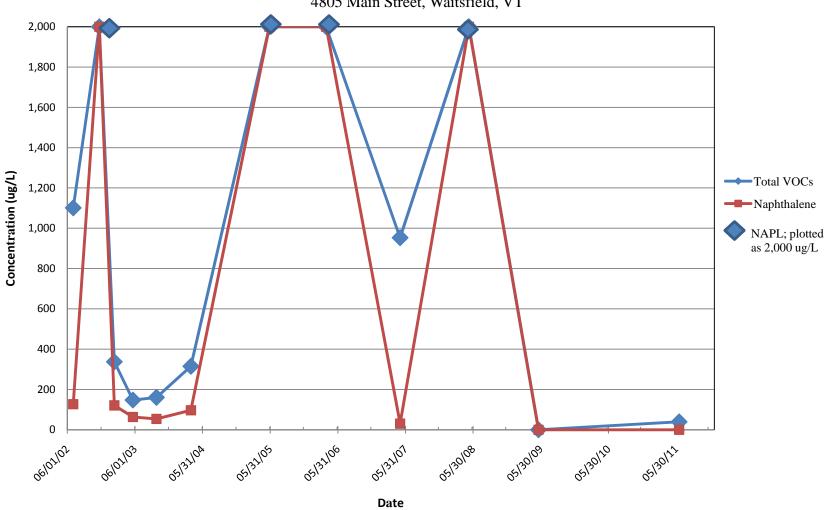


APPENDIX D

Contaminant Trend Graphs

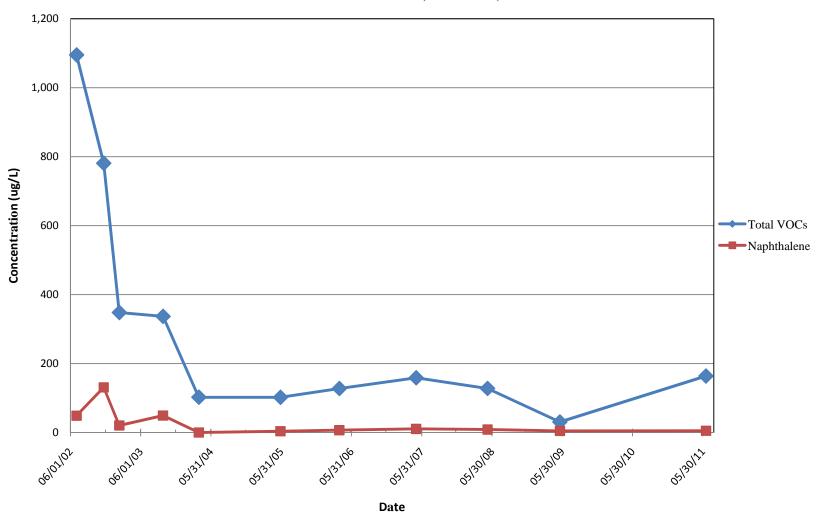


Concentration Trends in MW-1



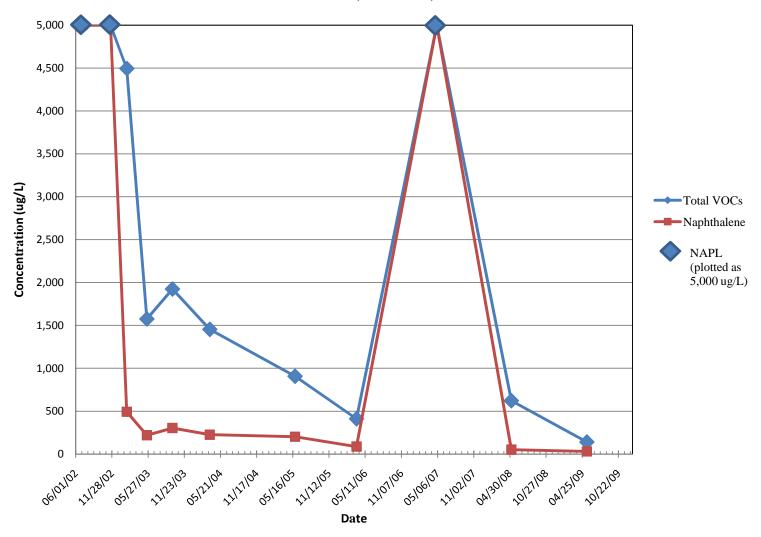


Concentration Trends in MW-2



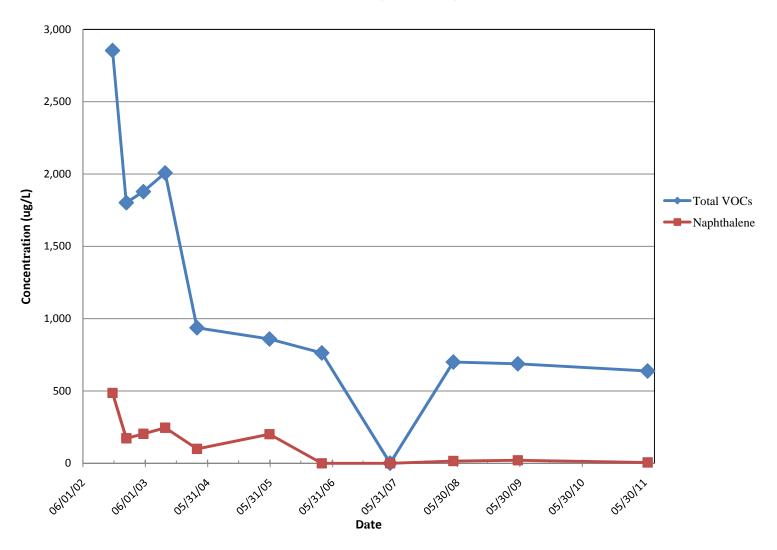


Concentration Trends in MW-3





Concentration Trends in MW-4





APPENDIX E

Laboratory Report





June 28, 2011

James Donaldson Wilcox & Barton 1115 Route 100B, Suite 200 Moretown, VT 05660

Project Location: 4805 Main St., Waitsfield, VT

Client Job Number: Project Number: [none]

Laboratory Work Order Number: 11F0756

Enclosed are results of analyses for samples received by the laboratory on June 21, 2011. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

James M. Georgantas Project Manager



Wilcox & Barton REPORT DATE: 6/28/2011

1115 Route 100B, Suite 200 Moretown, VT 05660 ATTN: James Donaldson

PURCHASE ORDER NUMBER:

PROJECT NUMBER: [none]

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 11F0756

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 4805 Main St., Waitsfield, VT

FIELD SAMPLE#	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-1	11F0756-01	Ground Water		SW-846 8260C	
MW-2	11F0756-02	Ground Water		SW-846 8260C	
MW-4	11F0756-03	Ground Water		SW-846 8260C	



CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8260C

Qualifications:

Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.

Analyte & Samples(s) Qualified:

1.4-Dioxane

B032567-BS1, B032567-BSD1

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

Dichlorodifluoromethane (Freon 12), Isopropylbenzene (Cumene)

B032642-BSD1, B032567-BSD1

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 2,2-Dichloropropane, Naphthalene

11F0756-01[MW-1], 11F0756-02[MW-2], 11F0756-03[MW-4], B032567-BLK1, B032567-BS1, B032567-BSD1, B032642-BLK1, B032642-BSD1, B03

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy are associated with reported result.

Analyte & Samples(s) Qualified:

1,4-Dioxane, tert-Butyl Alcohol (TBA)

11F0756-01[MW-1], 11F0756-02[MW-2], 11F0756-03[MW-4], B032567-BLK1, B032567-BS1, B032567-BSD1, B032642-BLK1, B032642-BSD1, B0326

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

1,4-Dioxane

B032567-BS1, B032567-BSD1, B032642-BS1, B032642-BSD1



The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Daren J. Damboragian Laboratory Manager



Project Location: 4805 Main St., Waitsfield, VT Sample Description: Work Order: 11F0756

Date Received: 6/21/2011

Field Sample #: MW-1

Sampled: 6/16/2011 10:00

Sample ID: 11F0756-01
Sample Matrix: Ground Water

								Date	Date/Time	
Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Prepared	Analyzed	Analyst
Acetone	2.8	50	0.54	μg/L	1	J	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Acrylonitrile	ND	5.0	0.51	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.11	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Benzene	ND	1.0	0.050	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Bromobenzene	ND	1.0	0.10	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Bromochloromethane	ND	1.0	0.10	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Bromodichloromethane	ND	0.50	0.080	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Bromoform	ND	1.0	0.25	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Bromomethane	ND	2.0	0.38	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
2-Butanone (MEK)	ND	20	0.41	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
tert-Butyl Alcohol (TBA)	ND	20	3.5	μg/L	1	V-16, U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
n-Butylbenzene	ND	1.0	0.050	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
sec-Butylbenzene	0.14	1.0	0.050	μg/L	1	J	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
tert-Butylbenzene	ND	1.0	0.050	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.070	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Carbon Disulfide	ND	2.0	0.050	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Carbon Tetrachloride	ND	5.0	0.090	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Chlorobenzene	ND	1.0	0.050	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Chlorodibromomethane	ND	1.0	0.12	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Chloroethane	ND	2.0	0.33	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Chloroform	ND	2.0	0.040	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Chloromethane	38	2.0	0.13	μg/L	1		SW-846 8260C	6/23/11	6/23/11 18:32	MFF
2-Chlorotoluene	ND	1.0	0.050	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
4-Chlorotoluene	ND	1.0	0.050	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.48	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
1,2-Dibromoethane (EDB)	ND	0.50	0.14	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Dibromomethane	ND	1.0	0.080	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
1,2-Dichlorobenzene	ND	1.0	0.060	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
1,3-Dichlorobenzene	ND	1.0	0.060	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
1,4-Dichlorobenzene	ND	1.0	0.11	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
trans-1,4-Dichloro-2-butene	ND	2.0	0.77	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.040	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
1,1-Dichloroethane	ND	1.0	0.090	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
1,2-Dichloroethane	ND	1.0	0.090	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
1,1-Dichloroethylene	ND	1.0	0.10	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
cis-1,2-Dichloroethylene	ND	1.0	0.050	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
trans-1,2-Dichloroethylene	ND	1.0	0.070	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
1,2-Dichloropropane	ND	1.0	0.20	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
1,3-Dichloropropane	ND	0.50	0.080	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
2,2-Dichloropropane	ND	1.0	0.13	μg/L	1	V-05, U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
1,1-Dichloropropene	ND	2.0	0.10	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
cis-1,3-Dichloropropene	ND	0.50	0.070	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
trans-1,3-Dichloropropene	ND	0.50	0.12	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF



Project Location: 4805 Main St., Waitsfield, VT Sample Description: Work Order: 11F0756

Date Received: 6/21/2011 Field Sample #: MW-1

Sampled: 6/16/2011 10:00

Sample ID: 11F0756-01 Sample Matrix: Ground Water

Volotilo	Organia	Compounds	by CC/MS
voiatile	Organic	Compounds	DV CrC./IVIS

			Vola	tile Organic Com	pounds by G	C/MS				
Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diethyl Ether	ND	2.0	0.10	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Diisopropyl Ether (DIPE)	ND	0.50	0.030	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
1,4-Dioxane	ND	50	3.5	μg/L	1	V-16, U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Ethylbenzene	ND	1.0	0.050	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Hexachlorobutadiene	ND	1.0	0.26	$\mu g/L$	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
2-Hexanone (MBK)	ND	10	0.66	$\mu g/L$	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Isopropylbenzene (Cumene)	ND	1.0	0.060	$\mu g/L$	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.060	$\mu g/L$	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Methyl tert-Butyl Ether (MTBE)	0.29	1.0	0.050	$\mu g/L$	1	J	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Methylene Chloride	ND	5.0	2.3	$\mu g/L$	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
4-Methyl-2-pentanone (MIBK)	ND	10	0.22	$\mu g/L$	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Naphthalene	ND	2.0	0.21	$\mu g/L$	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
n-Propylbenzene	ND	1.0	0.040	$\mu g/L$	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Styrene	ND	1.0	0.060	$\mu g/L$	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
1,1,1,2-Tetrachloroethane	ND	1.0	0.080	$\mu g/L$	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
1,1,2,2-Tetrachloroethane	ND	0.50	0.18	$\mu g/L$	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Tetrachloroethylene	ND	1.0	0.14	$\mu g/L$	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Tetrahydrofuran	ND	10	1.0	$\mu g/L$	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Toluene	ND	1.0	0.040	$\mu g/L$	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
1,2,3-Trichlorobenzene	ND	5.0	0.22	$\mu g/L$	1	V-05, U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
1,2,4-Trichlorobenzene	ND	1.0	0.11	$\mu g/L$	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
1,3,5-Trichlorobenzene	ND	1.0	0.40	$\mu g/L$	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
1,1,1-Trichloroethane	ND	1.0	0.050	$\mu g/L$	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
1,1,2-Trichloroethane	ND	1.0	0.080	$\mu g/L$	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Trichloroethylene	ND	1.0	0.12	$\mu g/L$	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Trichlorofluoromethane (Freon 11)	1.3	2.0	0.070	$\mu g/L$	1	J	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
1,2,3-Trichloropropane	ND	2.0	0.21	$\mu g/L$	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.11	μg/L	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
1,2,4-Trimethylbenzene	ND	1.0	0.060	$\mu g/L$	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
1,3,5-Trimethylbenzene	ND	1.0	0.060	$\mu g/L$	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Vinyl Chloride	ND	2.0	0.16	$\mu g/L$	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
m+p Xylene	ND	2.0	0.070	$\mu g/L$	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
o-Xylene	ND	1.0	0.050	$\mu g/L$	1	U	SW-846 8260C	6/23/11	6/23/11 18:32	MFF
Surrogates		% Reco	overy	Recovery Limits		Flag				
1,2-Dichloroethane-d4		96.2		70-130					6/23/11 18:32	
Toluene-d8		100		70-130					6/23/11 18:32	

Surrogates	% Recovery	Recovery Limits	Flag	
1,2-Dichloroethane-d4	96.2	70-130		6/23/11 18:32
Toluene-d8	100	70-130		6/23/11 18:32
4-Bromofluorobenzene	100	70-130		6/23/11 18:32



Project Location: 4805 Main St., Waitsfield, VT Sample Description: Work Order: 11F0756

Date Received: 6/21/2011 Field Sample #: MW-2

Sampled: 6/16/2011 11:15

Sample ID: 11F0756-02

Sample Matrix: Ground Water

								Date	Date/Time	
Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Prepared	Analyzed	Analyst
Acetone	5.7	50	0.54	μg/L	1	J	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Acrylonitrile	ND	5.0	0.51	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.11	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Benzene	1.2	1.0	0.050	μg/L	1		SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Bromobenzene	ND	1.0	0.10	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Bromochloromethane	ND	1.0	0.10	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Bromodichloromethane	ND	0.50	0.080	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Bromoform	ND	1.0	0.25	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Bromomethane	ND	2.0	0.38	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
2-Butanone (MEK)	ND	20	0.41	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
tert-Butyl Alcohol (TBA)	ND	20	3.5	μg/L	1	V-16, U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
n-Butylbenzene	2.1	1.0	0.050	μg/L	1		SW-846 8260C	6/24/11	6/24/11 15:00	LBD
sec-Butylbenzene	4.5	1.0	0.050	μg/L	1		SW-846 8260C	6/24/11	6/24/11 15:00	LBD
tert-Butylbenzene	ND	1.0	0.050	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.070	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Carbon Disulfide	ND	2.0	0.050	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Carbon Tetrachloride	ND	5.0	0.090	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Chlorobenzene	ND	1.0	0.050	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Chlorodibromomethane	ND	1.0	0.12	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Chloroethane	ND	2.0	0.33	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Chloroform	ND	2.0	0.040	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Chloromethane	110	2.0	0.13	μg/L	1		SW-846 8260C	6/24/11	6/24/11 15:00	LBD
2-Chlorotoluene	ND	1.0	0.050	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
4-Chlorotoluene	ND	1.0	0.050	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.48	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
1,2-Dibromoethane (EDB)	ND	0.50	0.14	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Dibromomethane	ND	1.0	0.080	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
1,2-Dichlorobenzene	ND	1.0	0.060	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
1,3-Dichlorobenzene	ND	1.0	0.060	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
1,4-Dichlorobenzene	ND	1.0	0.11	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
trans-1,4-Dichloro-2-butene	ND	2.0	0.77	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.040	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
1,1-Dichloroethane	ND	1.0	0.090	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
1,2-Dichloroethane	ND	1.0	0.090	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
1,1-Dichloroethylene	ND	1.0	0.10	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
cis-1,2-Dichloroethylene	ND	1.0	0.050	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
trans-1,2-Dichloroethylene	ND	1.0	0.070	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
1,2-Dichloropropane	ND	1.0	0.20	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
1,3-Dichloropropane	ND	0.50	0.080	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
2,2-Dichloropropane	ND	1.0	0.13	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
1,1-Dichloropropene	ND	2.0	0.10	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
cis-1,3-Dichloropropene	ND	0.50	0.070	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
trans-1,3-Dichloropropene	ND	0.50	0.12	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD



Project Location: 4805 Main St., Waitsfield, VT Sample Description: Work Order: 11F0756

Date Received: 6/21/2011 Field Sample #: MW-2

Sampled: 6/16/2011 11:15

Sample ID: 11F0756-02 Sample Matrix: Ground Water

Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analys
Diethyl Ether	ND	2.0	0.10	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Diisopropyl Ether (DIPE)	ND	0.50	0.030	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
1,4-Dioxane	ND	50	3.5	μg/L	1	V-16, U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Ethylbenzene	7.0	1.0	0.050	μg/L	1	, .	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Hexachlorobutadiene	ND	1.0	0.26	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
2-Hexanone (MBK)	ND	10	0.66	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Isopropylbenzene (Cumene)	9.9	1.0	0.060	μg/L	1	C	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
p-Isopropyltoluene (p-Cymene)	0.41	1.0	0.060	μg/L μg/L	1	J	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Methyl tert-Butyl Ether (MTBE)	1.3	1.0	0.050	μg/L μg/L	1	J	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Methylene Chloride	ND	5.0	2.3	μg/L μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
4-Methyl-2-pentanone (MIBK)	ND	10	0.22		1	U	SW-846 8260C	6/24/11		LBD
Naphthalene				μg/L					6/24/11 15:00	
•	5.0	2.0	0.21	μg/L	1	V-05	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
n-Propylbenzene	8.9	1.0	0.040	μg/L	1		SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Styrene	ND	1.0	0.060	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
1,1,1,2-Tetrachloroethane	ND	1.0	0.080	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
1,1,2,2-Tetrachloroethane	ND	0.50	0.18	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Tetrachloroethylene	ND	1.0	0.14	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Tetrahydrofuran	ND	10	1.0	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Toluene	0.34	1.0	0.040	μg/L	1	J	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
1,2,3-Trichlorobenzene	ND	5.0	0.22	$\mu g/L$	1	V-05, U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
1,2,4-Trichlorobenzene	ND	1.0	0.11	$\mu g/L$	1	V-05, U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
1,3,5-Trichlorobenzene	ND	1.0	0.40	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
1,1,1-Trichloroethane	ND	1.0	0.050	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
1,1,2-Trichloroethane	ND	1.0	0.080	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Trichloroethylene	ND	1.0	0.12	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Trichlorofluoromethane (Freon 11)	ND	2.0	0.070	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
1,2,3-Trichloropropane	ND	2.0	0.21	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.11	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
1,2,4-Trimethylbenzene	6.1	1.0	0.060	μg/L	1		SW-846 8260C	6/24/11	6/24/11 15:00	LBD
1,3,5-Trimethylbenzene	ND	1.0	0.060	$\mu g/L$	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Vinyl Chloride	ND	2.0	0.16	μg/L	1	U	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
m+p Xylene	0.52	2.0	0.070	μg/L	1	J	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
o-Xylene	0.30	1.0	0.050	μg/L	1	J	SW-846 8260C	6/24/11	6/24/11 15:00	LBD
Surrogates		% Reco	very	Recovery Limits	s	Flag				
1,2-Dichloroethane-d4		95.6		70-130					6/24/11 15:00	
Toluene-d8		97.2		70-130					6/24/11 15:00	



Project Location: 4805 Main St., Waitsfield, VT Sample Description: Work Order: 11F0756

Date Received: 6/21/2011 Field Sample #: MW-4

Sampled: 6/16/2011 10:55

Sample ID: 11F0756-03
Sample Matrix: Ground Water

								Date	Date/Time	
Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Prepared	Analyzed	Analyst
Acetone	14	250	2.7	μg/L	5	J	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Acrylonitrile	ND	25	2.6	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
tert-Amyl Methyl Ether (TAME)	ND	2.5	0.55	$\mu g/L$	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Benzene	0.85	5.0	0.25	μg/L	5	J	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Bromobenzene	ND	5.0	0.50	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Bromochloromethane	ND	5.0	0.50	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Bromodichloromethane	ND	2.5	0.40	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Bromoform	ND	5.0	1.2	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Bromomethane	ND	10	1.9	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
2-Butanone (MEK)	ND	100	2.0	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
tert-Butyl Alcohol (TBA)	ND	100	18	μg/L	5	V-16, U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
n-Butylbenzene	14	5.0	0.25	μg/L	5		SW-846 8260C	6/24/11	6/24/11 13:56	LBD
sec-Butylbenzene	9.2	5.0	0.25	μg/L	5		SW-846 8260C	6/24/11	6/24/11 13:56	LBD
tert-Butylbenzene	0.55	5.0	0.25	μg/L	5	J	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
tert-Butyl Ethyl Ether (TBEE)	ND	2.5	0.35	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Carbon Disulfide	ND	10	0.25	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Carbon Tetrachloride	ND	25	0.45	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Chlorobenzene	ND	5.0	0.25	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Chlorodibromomethane	ND	5.0	0.60	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Chloroethane	ND	10	1.6	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Chloroform	ND	10	0.20	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Chloromethane	37	10	0.65	μg/L	5		SW-846 8260C	6/24/11	6/24/11 13:56	LBD
2-Chlorotoluene	ND	5.0	0.25	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
4-Chlorotoluene	ND	5.0	0.25	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
1,2-Dibromo-3-chloropropane (DBCP)	ND	25	2.4	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
1,2-Dibromoethane (EDB)	ND	2.5	0.70	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Dibromomethane	ND	5.0	0.40	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
1,2-Dichlorobenzene	ND	5.0	0.30	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
1,3-Dichlorobenzene	ND	5.0	0.30	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
1,4-Dichlorobenzene	ND	5.0	0.55	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
trans-1,4-Dichloro-2-butene	ND	10	3.8	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Dichlorodifluoromethane (Freon 12)	ND	10	0.20	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
1,1-Dichloroethane	ND	5.0	0.45	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
1,2-Dichloroethane	ND	5.0	0.45	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
1,1-Dichloroethylene	ND	5.0	0.50	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
cis-1,2-Dichloroethylene	ND	5.0	0.25	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
trans-1,2-Dichloroethylene	ND	5.0	0.35	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
1,2-Dichloropropane	ND	5.0	1.0	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
1,3-Dichloropropane	ND	2.5	0.40	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
2,2-Dichloropropane	ND	5.0	0.65	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
1,1-Dichloropropene	ND	10	0.50	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
cis-1,3-Dichloropropene	ND	2.5	0.35	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
trans-1,3-Dichloropropene	ND	2.5	0.60	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD



Project Location: 4805 Main St., Waitsfield, VT Sample Description: Work Order: 11F0756

Date Received: 6/21/2011

Field Sample #: MW-4

Sampled: 6/16/2011 10:55

Sample ID: 11F0756-03
Sample Matrix: Ground Water

								Date	Date/Time	
Analyte	Results	RL	DL	Units	Dilution	Flag	Method	Prepared	Analyzed	Analyst
Diethyl Ether	ND	10	0.50	$\mu g/L$	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Diisopropyl Ether (DIPE)	ND	2.5	0.15	$\mu g/L$	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
1,4-Dioxane	ND	250	18	$\mu g/L$	5	V-16, U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Ethylbenzene	75	5.0	0.25	$\mu g/L$	5		SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Hexachlorobutadiene	ND	5.0	1.3	$\mu g/L$	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
2-Hexanone (MBK)	ND	50	3.3	$\mu g/L$	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Isopropylbenzene (Cumene)	21	5.0	0.30	$\mu g/L$	5		SW-846 8260C	6/24/11	6/24/11 13:56	LBD
p-Isopropyltoluene (p-Cymene)	4.8	5.0	0.30	$\mu g/L$	5	J	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Methyl tert-Butyl Ether (MTBE)	2.3	5.0	0.25	$\mu g/L$	5	J	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Methylene Chloride	ND	25	11	$\mu g/L$	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
4-Methyl-2-pentanone (MIBK)	ND	50	1.1	$\mu g/L$	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Naphthalene	5.9	10	1.0	$\mu g/L$	5	V-05, J	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
n-Propylbenzene	33	5.0	0.20	$\mu g/L$	5		SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Styrene	ND	5.0	0.30	$\mu g/L$	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
1,1,1,2-Tetrachloroethane	ND	5.0	0.40	$\mu g/L$	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
1,1,2,2-Tetrachloroethane	ND	2.5	0.90	$\mu g/L$	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Tetrachloroethylene	ND	5.0	0.70	$\mu g/L$	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Tetrahydrofuran	ND	50	5.0	$\mu g/L$	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Toluene	0.70	5.0	0.20	$\mu g/L$	5	J	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
1,2,3-Trichlorobenzene	ND	25	1.1	$\mu g/L$	5	V-05, U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
1,2,4-Trichlorobenzene	ND	5.0	0.55	μg/L	5	V-05, U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
1,3,5-Trichlorobenzene	ND	5.0	2.0	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
1,1,1-Trichloroethane	ND	5.0	0.25	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
1,1,2-Trichloroethane	ND	5.0	0.40	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Trichloroethylene	ND	5.0	0.60	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Trichlorofluoromethane (Freon 11)	ND	10	0.35	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
1,2,3-Trichloropropane	ND	10	1.0	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.0	0.55	μg/L	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
(Freon 113)										
1,2,4-Trimethylbenzene	120	5.0	0.30	μg/L	5		SW-846 8260C	6/24/11	6/24/11 13:56	LBD
1,3,5-Trimethylbenzene	55	5.0	0.30	$\mu g/L$	5		SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Vinyl Chloride	ND	10	0.80	$\mu g/L$	5	U	SW-846 8260C	6/24/11	6/24/11 13:56	LBD
m+p Xylene	41	10	0.35	$\mu g/L$	5		SW-846 8260C	6/24/11	6/24/11 13:56	LBD
o-Xylene	29	5.0	0.25	$\mu g/L$	5		SW-846 8260C	6/24/11	6/24/11 13:56	LBD
Surrogates		% Reco	verv	Recovery Limits		Flag				

Surrogates	% Recovery	Recovery Limits	Flag	
1,2-Dichloroethane-d4	96.5	70-130		6/24/11 13:56
Toluene-d8	97.9	70-130		6/24/11 13:56
4-Bromofluorobenzene	99.1	70-130		6/24/11 13:56



Sample Extraction Data

Prep Method: SW-846 5030B-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
11F0756-01 [MW-1]	B032567	5	5.00	06/23/11

Prep Method: SW-846 5030B-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
11F0756-02 [MW-2]	B032642	5	5.00	06/24/11
11F0756-03 [MW-4]	B032642	1	5.00	06/24/11



QUALITY CONTROL

Spike

Source

Volatile Organic Compounds by GC/MS - Quality Control

Reporting

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch B032567 - SW-846 5030B				Drong J O	Amalus- 1. 00	:/22/11				
Blank (B032567-BLK1) Acetone	0.02	50	ua/I	riepared &	Analyzed: 06	1/23/11				т
Acetone Acrylonitrile	0.82	5.0	μg/L μg/L							J U
	ND									
ert-Amyl Methyl Ether (TAME)	ND	0.50	μg/L							U
Benzene	ND	1.0	μg/L							U
Bromobenzene	ND	1.0	μg/L							U
Bromochloromethane	ND	1.0	μg/L							U
Bromodichloromethane	ND	0.50	μg/L							U
Bromoform	ND	1.0	μg/L							U
Bromomethane	ND	2.0	μg/L							U
2-Butanone (MEK)	ND	20	μg/L							U
ert-Butyl Alcohol (TBA)	ND	20	μg/L							V-16, U
n-Butylbenzene	ND	1.0	μg/L							U
ec-Butylbenzene	ND	1.0	μg/L							U
ert-Butylbenzene	ND	1.0	$\mu g/L$							U
ert-Butyl Ethyl Ether (TBEE)	ND	0.50	$\mu g \! / \! L$							U
Carbon Disulfide	ND	2.0	$\mu g \! / \! L$							U
Carbon Tetrachloride	ND	5.0	$\mu \text{g/L}$							U
Chlorobenzene	ND	1.0	μg/L							U
Chlorodibromomethane	ND	0.50	$\mu g/L$							U
Chloroethane	ND	2.0	μg/L							U
Chloroform	ND	2.0	μg/L							U
Chloromethane	ND	2.0	μg/L							U
-Chlorotoluene	ND	1.0	μg/L							U
I-Chlorotoluene	ND	1.0	μg/L							U
,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	μg/L							U
,2-Dibromoethane (EDB)	ND	0.50	μg/L							U
Dibromomethane	ND	1.0	μg/L							U
,2-Dichlorobenzene	ND	1.0	μg/L							U
,3-Dichlorobenzene	ND	1.0	μg/L							U
,4-Dichlorobenzene	ND	1.0	μg/L							U
rans-1,4-Dichloro-2-butene	ND	2.0	μg/L							U
Dichlorodifluoromethane (Freon 12)	ND	2.0	μg/L							U
,1-Dichloroethane	ND	1.0	μg/L							U
,2-Dichloroethane		1.0	μg/L							U
,1-Dichloroethylene	ND	1.0	μg/L μg/L							U
ris-1,2-Dichloroethylene	ND		_							
rans-1,2-Dichloroethylene	ND	1.0 1.0	μg/L μg/L							U U
,2-Dichloropropane	ND	1.0								U
• •	ND		μg/L							
,3-Dichloropropane	ND	0.50	μg/L							U
2,2-Dichloropropane	ND	1.0	μg/L							V-05, U
,1-Dichloropropene	ND	2.0	μg/L							U
ris-1,3-Dichloropropene	ND	0.50	μg/L							U
rans-1,3-Dichloropropene	ND	0.50	μg/L							U
Diethyl Ether	ND	2.0	μg/L							U
Diisopropyl Ether (DIPE)	ND	0.50	μg/L							U
,4-Dioxane	ND	50	μg/L							V-16, U
Ethylbenzene	ND	1.0	$\mu g/L$							U
Iexachlorobutadiene	ND	0.50	$\mu g \! / \! L$							U
-Hexanone (MBK)	ND	10	$\mu \text{g/L}$							U
sopropylbenzene (Cumene)	ND	1.0	$\mu g/L$							U
p-Isopropyltoluene (p-Cymene)	ND	1.0	μg/L							U
Methyl tert-Butyl Ether (MTBE)	ND	1.0	μg/L							U

RPD

%REC



QUALITY CONTROL

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B032567 - SW-846 5030B										
Blank (B032567-BLK1)				Prepared &	Analyzed: 06	/23/11				
Methylene Chloride	ND	5.0	$\mu g/L$							U
-Methyl-2-pentanone (MIBK)	ND	10	$\mu g/L$							U
Japhthalene	0.28	2.0	$\mu g/L$							J
-Propylbenzene	ND	1.0	$\mu g/L$							U
tyrene	ND	1.0	$\mu g/L$							U
,1,1,2-Tetrachloroethane	ND	1.0	$\mu g/L$							U
,1,2,2-Tetrachloroethane	ND	0.50	$\mu g/L$							U
etrachloroethylene	ND	1.0	$\mu g/L$							U
etrahydrofuran	ND	10	$\mu g/L$							U
oluene	ND	1.0	$\mu g/L$							U
2,3-Trichlorobenzene	0.61	5.0	$\mu g/L$							V-05, J
2,4-Trichlorobenzene	0.20	1.0	$\mu g/L$							J
,3,5-Trichlorobenzene	ND	1.0	$\mu g \! / \! L$							U
,1,1-Trichloroethane	ND	1.0	$\mu \text{g/L}$							U
,1,2-Trichloroethane	ND	1.0	$\mu g \! / \! L$							U
richloroethylene	ND	1.0	$\mu g \! / \! L$							U
richlorofluoromethane (Freon 11)	ND	2.0	$\mu \text{g/L}$							U
,2,3-Trichloropropane	ND	2.0	$\mu g \! / \! L$							U
,1,2-Trichloro-1,2,2-trifluoroethane (Freon	ND	1.0	$\mu g \! / \! L$							U
13)		1.0	7							
,2,4-Trimethylbenzene	ND	1.0	μg/L							U
3,5-Trimethylbenzene	ND	1.0	μg/L							U
Vinyl Chloride	ND	2.0	μg/L							U
n+p Xylene -Xylene	ND	2.0 1.0	μg/L μα/Ι							U
	ND	1.0	μg/L	25.0		06.0	70.120			U
durrogate: 1,2-Dichloroethane-d4 durrogate: Toluene-d8	24.2 24.3		μg/L	25.0 25.0		96.8 97.1	70-130 70-130			
urrogate: 4-Bromofluorobenzene	24.4		μg/L μg/L	25.0		97.1	70-130			
_	27.7		μg/L				70-130			
.CS (B032567-BS1)			/T		Analyzed: 06		70.160		25	
cetone	119	50	μg/L	100		119	70-160		25	
acrylonitrile	10.0	5.0	μg/L	10.0		100	70-130		25	
ert-Amyl Methyl Ether (TAME)	10.5	0.50	μg/L	10.0		105	70-130		25	
Benzene	10.5	1.0	μg/L	10.0		105	70-130		25	
Bromoblerzene	10.9	1.0	μg/L	10.0		109	70-130		25	
Bromochloromethane	11.2	1.0	μg/L	10.0		112	70-130		25	
Bromodichloromethane	10.8	0.50	μg/L	10.0		108	70-130		25	
Bromoform	9.04	1.0	μg/L μα/Ι	10.0		90.4	70-130		25	
Fromomethane -Butanone (MEK)	4.79	2.0	μg/L	10.0		47.9	40-160		25	
· /	113	20	μg/L ug/I	100		113	40-160		25	37.16
ert-Butyl Alcohol (TBA)	110	20	μg/L	100		110	40-160		25	V-16
-Butylbenzene	9.52	1.0	μg/L	10.0		95.2	70-130		25	
ec-Butylbenzene	10.3	1.0	μg/L	10.0		103	70-130		25	
ert-Butylbenzene	10.5	1.0	μg/L	10.0		105	70-130		25	
ert-Butyl Ethyl Ether (TBEE)	9.24	0.50	μg/L	10.0		92.4	70-130		25	
arbon Disulfide	8.79	2.0	μg/L	10.0		87.9	70-130		25	
arbon Tetrachloride	8.85	5.0	μg/L	10.0		88.5	70-130		25	
Chlorobenzene	11.1	1.0	μg/L	10.0		111	70-130		25	
Chlorodibromomethane	10.7	0.50	μg/L	10.0		107	70-130		25	
Chloroethane	8.77	2.0	μg/L	10.0		87.7	70-130		25	
Chloroform	10.3	2.0	μg/L	10.0		103	70-130		25	
	6.43	2.0	μg/L	10.0		64.3	40-160		25	
Chloromethane -Chlorotoluene	11.0	1.0	μg/L	10.0		110	70-130		25	



QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B032567 - SW-846 5030B											
LCS (B032567-BS1)				Prepared &	Analyzed: 06/	23/11					
I-Chlorotoluene	11.4	1.0	μg/L	10.0		114	70-130		25		
,2-Dibromo-3-chloropropane (DBCP)	9.24	5.0	$\mu g/L$	10.0		92.4	70-130		25		
,2-Dibromoethane (EDB)	11.3	0.50	$\mu g/L$	10.0		113	70-130		25		
Dibromomethane	11.4	1.0	$\mu g/L$	10.0		114	70-130		25		
,2-Dichlorobenzene	10.4	1.0	$\mu g/L$	10.0		104	70-130		25		
,3-Dichlorobenzene	10.6	1.0	μg/L	10.0		106	70-130		25		
,4-Dichlorobenzene	10.2	1.0	μg/L	10.0		102	70-130		25		
rans-1,4-Dichloro-2-butene	8.06	2.0	μg/L	10.0		80.6	70-130		25		
Dichlorodifluoromethane (Freon 12)	4.90	2.0	μg/L	10.0		49.0	40-160		25		
,1-Dichloroethane	10.2	1.0	μg/L	10.0		102	70-130		25		
,2-Dichloroethane	11.1	1.0	μg/L	10.0		111	70-130		25		
,1-Dichloroethylene	9.50	1.0	μg/L	10.0		95.0	70-130		25		
cis-1,2-Dichloroethylene	9.85	1.0	μg/L	10.0		98.5	70-130		25		
rans-1,2-Dichloroethylene	10.9	1.0	μg/L	10.0		109	70-130		25		
,2-Dichloropropane	10.8	1.0	μg/L	10.0		108	70-130		25		
,3-Dichloropropane	11.0	0.50	μg/L	10.0		110	70-130		25		
,2-Dichloropropane	6.77	1.0	μg/L	10.0		67.7	40-130		25	V-05	
,1-Dichloropropene	10.2	2.0	μg/L	10.0		102	70-130		25		
is-1,3-Dichloropropene	8.57	0.50	μg/L	10.0		85.7	70-130		25		
rans-1,3-Dichloropropene	9.15	0.50	μg/L	10.0		91.5	70-130		25		
Diethyl Ether	10.6	2.0	μg/L	10.0		106	70-130		25		
Diisopropyl Ether (DIPE)	9.93	0.50	μg/L	10.0		99.3	70-130		25		
,4-Dioxane	155	50	μg/L	100		155 *	40-130		50	L-02, V-16, V-	-20
Ethylbenzene	11.0	1.0	μg/L	10.0		110	70-130		25		
Hexachlorobutadiene	9.74	0.50	μg/L ug/I	10.0		97.4	70-130		25		
-Hexanone (MBK)	117	10	μg/L	100		117	70-160		25		
sopropylbenzene (Cumene)	13.0	1.0	μg/L ug/I	10.0		130	70-130		25		
-Isopropyltoluene (p-Cymene) Methyl tert-Butyl Ether (MTBE)	9.92	1.0 1.0	μg/L μg/I	10.0		99.2	70-130		25 25		
Methylene Chloride	10.5	5.0	μg/L μg/I	10.0		105	70-130		25 25		
-Methyl-2-pentanone (MIBK)	10.5	10	μg/L μg/L	10.0 100		105 116	70-130 70-160		25 25		
Vaphthalene	116	2.0									
-Propylbenzene	8.95	1.0	μg/L μg/L	10.0 10.0		89.5 105	40-130 70-130		25 25		
tyrene	10.5	1.0	μg/L μg/L	10.0		116	70-130		25 25		
,1,1,2-Tetrachloroethane	11.6	1.0	_								
.1,2,2-Tetrachloroethane	10.7	0.50	μg/L μg/L	10.0 10.0		107 101	70-130 70-130		25 25		
Setrachloroethylene	10.1 10.5	1.0	μg/L μg/L	10.0		101	70-130		25		
etrahydrofuran	9.35	1.0	μg/L μg/L	10.0		93.5	70-130		25	J	
oluene	9.33	1.0	μg/L μg/L	10.0		109	70-130		25	J	
,2,3-Trichlorobenzene	8.11	5.0	μg/L μg/L	10.0		81.1	70-130		25	V-05	
,2,4-Trichlorobenzene	8.39	1.0	μg/L μg/L	10.0		83.9	70-130		25	¥ 203	
3,5-Trichlorobenzene	8.91	1.0	μg/L μg/L	10.0		89.1	70-130		25		
1,1-Trichloroethane	10.3	1.0	μg/L μg/L	10.0		103	70-130		25		
1,2-Trichloroethane	10.3	1.0	μg/L μg/L	10.0		111	70-130		25		
richloroethylene	11.1	1.0	μg/L	10.0		112	70-130		25		
richlorofluoromethane (Freon 11)	7.87	2.0	μg/L	10.0		78.7	70-130		25		
,2,3-Trichloropropane	9.69	2.0	μg/L	10.0		96.9	70-130		25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon	8.74	1.0	μg/L	10.0		87.4	70-130		25		
,2,4-Trimethylbenzene	10.7	1.0	$\mu g/L$	10.0		107	70-130		25		
,3,5-Trimethylbenzene	10.8	1.0	$\mu g/L$	10.0		108	70-130		25		
/inyl Chloride	7.60	2.0	μg/L	10.0		76.0	40-160		25		



QUALITY CONTROL

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B032567 - SW-846 5030B											
LCS (B032567-BS1)				Prepared &	Analyzed: 06	/23/11					
m+p Xylene	23.0	2.0	μg/L	20.0		115	70-130		25		
o-Xylene	11.8	1.0	$\mu g/L$	10.0		118	70-130		25		
Surrogate: 1,2-Dichloroethane-d4	23.8		μg/L	25.0		95.2	70-130				
Surrogate: Toluene-d8	24.2		μg/L	25.0		97.0	70-130				
Surrogate: 4-Bromofluorobenzene	25.3		μg/L	25.0		101	70-130				
LCS Dup (B032567-BSD1)				Prepared &	Analyzed: 06	/23/11					
Acetone	146	50	μg/L	100	-	146	70-160	20.1	25		 †
Acrylonitrile	10.4	5.0	μg/L	10.0		104	70-130	2.94	25		
tert-Amyl Methyl Ether (TAME)	10.7	0.50	μg/L	10.0		107	70-130	1.51	25		
Benzene	10.7	1.0	μg/L	10.0		107	70-130	1.42	25		
Bromobenzene	11.0	1.0	μg/L	10.0		110	70-130	0.641	25		
Bromochloromethane	11.4	1.0	μg/L	10.0		114	70-130	1.95	25		
Bromodichloromethane	10.9	0.50	μg/L	10.0		109	70-130	0.831	25		
Bromoform	9.06	1.0	μg/L	10.0		90.6	70-130	0.221	25		
Bromomethane	5.10	2.0	μg/L	10.0		51.0	40-160	6.27	25		†
2-Butanone (MEK)	121	20	μg/L	100		121	40-160	6.30	25		†
tert-Butyl Alcohol (TBA)	107	20	μg/L μg/L	100		107	40-160	3.13	25	V-16	†
n-Butylbenzene	9.94	1.0	μg/L μg/L	10.0		99.4	70-130	4.32	25	V-10	1
sec-Butylbenzene		1.0	μg/L μg/L	10.0		106	70-130	3.15	25		
tert-Butylbenzene	10.6	1.0					70-130				
	11.0		μg/L	10.0		110		5.11	25		
tert-Butyl Ethyl Ether (TBEE)	9.26	0.50	μg/L	10.0		92.6	70-130	0.216	25		
Carbon Disulfide	8.38	2.0	μg/L	10.0		83.8	70-130	4.78	25		
Carbon Tetrachloride	9.14	5.0	μg/L	10.0		91.4	70-130	3.22	25		
Chlorobenzene	11.4	1.0	μg/L	10.0		114	70-130	2.85	25		
Chlorodibromomethane	11.0	0.50	μg/L	10.0		110	70-130	2.58	25		
Chloroethane	8.49	2.0	μg/L	10.0		84.9	70-130	3.24	25		
Chloroform	10.6	2.0	μg/L	10.0		106	70-130	3.34	25		
Chloromethane	6.28	2.0	μg/L	10.0		62.8	40-160	2.36	25		Ť
2-Chlorotoluene	11.2	1.0	μg/L	10.0		112	70-130	1.62	25		
4-Chlorotoluene	11.6	1.0	μg/L	10.0		116	70-130	1.83	25		
1,2-Dibromo-3-chloropropane (DBCP)	9.34	5.0	μg/L	10.0		93.4	70-130	1.08	25		
1,2-Dibromoethane (EDB)	11.3	0.50	μg/L	10.0		113	70-130	0.177	25		
Dibromomethane	11.6	1.0	$\mu g/L$	10.0		116	70-130	1.82	25		
1,2-Dichlorobenzene	10.7	1.0	μg/L	10.0		107	70-130	2.74	25		
1,3-Dichlorobenzene	10.7	1.0	μg/L	10.0		107	70-130	0.749	25		
1,4-Dichlorobenzene	10.3	1.0	μg/L	10.0		103	70-130	1.36	25		
trans-1,4-Dichloro-2-butene	8.31	2.0	μg/L	10.0		83.1	70-130	3.05	25		
Dichlorodifluoromethane (Freon 12)	4.79	2.0	$\mu g/L$	10.0		47.9	40-160	2.27	25		†
1,1-Dichloroethane	10.6	1.0	μg/L	10.0		106	70-130	4.24	25		
1,2-Dichloroethane	11.6	1.0	$\mu g \! / \! L$	10.0		116	70-130	4.39	25		
1,1-Dichloroethylene	9.49	1.0	$\mu g \! / \! L$	10.0		94.9	70-130	0.105	25		
cis-1,2-Dichloroethylene	10.2	1.0	$\mu g/L$	10.0		102	70-130	3.00	25		
trans-1,2-Dichloroethylene	11.0	1.0	$\mu g/L$	10.0		110	70-130	0.915	25		
1,2-Dichloropropane	11.1	1.0	$\mu g/L$	10.0		111	70-130	3.01	25		
1,3-Dichloropropane	11.2	0.50	$\mu g/L$	10.0		112	70-130	2.52	25		
2,2-Dichloropropane	7.17	1.0	μg/L	10.0		71.7	40-130	5.74	25	V-05	†
1,1-Dichloropropene	10.4	2.0	μg/L	10.0		104	70-130	1.36	25		
cis-1,3-Dichloropropene	9.05	0.50	μg/L	10.0		90.5	70-130	5.45	25		
trans-1,3-Dichloropropene	9.48	0.50	μg/L	10.0		94.8	70-130	3.54	25		
Diethyl Ether	11.1	2.0	μg/L	10.0		111	70-130	5.08	25		
Diisopropyl Ether (DIPE)	10.0	0.50	μg/L	10.0		100	70-130	0.702	25		



QUALITY CONTROL

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B032567 - SW-846 5030B										
LCS Dup (B032567-BSD1)				Prepared &	Analyzed: 06	5/23/11				
1,4-Dioxane	141	50	μg/L	100		141 *	40-130	9.00	50	L-02, V-16, V-20
Ethylbenzene	11.3	1.0	$\mu \text{g/L}$	10.0		113	70-130	2.06	25	
Hexachlorobutadiene	10.1	0.50	$\mu \text{g/L}$	10.0		101	70-130	3.73	25	
2-Hexanone (MBK)	121	10	$\mu \text{g/L}$	100		121	70-160	2.74	25	
Isopropylbenzene (Cumene)	13.3	1.0	$\mu g/L$	10.0		133 *	70-130	2.05	25	L-07
p-Isopropyltoluene (p-Cymene)	10.4	1.0	$\mu \text{g/L}$	10.0		104	70-130	4.34	25	
Methyl tert-Butyl Ether (MTBE)	10.6	1.0	μg/L	10.0		106	70-130	0.947	25	
Methylene Chloride	10.6	5.0	μg/L	10.0		106	70-130	0.662	25	
4-Methyl-2-pentanone (MIBK)	117	10	$\mu g/L$	100		117	70-160	0.797	25	
Naphthalene	9.10	2.0	$\mu g/L$	10.0		91.0	40-130	1.66	25	
n-Propylbenzene	10.8	1.0	$\mu \text{g/L}$	10.0		108	70-130	2.53	25	
Styrene	11.8	1.0	$\mu \text{g/L}$	10.0		118	70-130	2.05	25	
1,1,1,2-Tetrachloroethane	10.6	1.0	$\mu g/L$	10.0		106	70-130	0.376	25	
1,1,2,2-Tetrachloroethane	10.1	0.50	$\mu g/L$	10.0		101	70-130	0.494	25	
Tetrachloroethylene	11.0	1.0	$\mu g/L$	10.0		110	70-130	4.64	25	
Tetrahydrofuran	8.44	10	$\mu g/L$	10.0		84.4	70-130	10.2	25	J
Toluene	11.1	1.0	$\mu g/L$	10.0		111	70-130	2.09	25	
1,2,3-Trichlorobenzene	8.39	5.0	$\mu g/L$	10.0		83.9	70-130	3.39	25	V-05
1,2,4-Trichlorobenzene	8.45	1.0	$\mu g/L$	10.0		84.5	70-130	0.713	25	
1,3,5-Trichlorobenzene	8.93	1.0	$\mu g/L$	10.0		89.3	70-130	0.224	25	
1,1,1-Trichloroethane	10.4	1.0	$\mu g/L$	10.0		104	70-130	1.54	25	
1,1,2-Trichloroethane	11.2	1.0	$\mu g/L$	10.0		112	70-130	0.897	25	
Trichloroethylene	11.4	1.0	$\mu g/L$	10.0		114	70-130	1.59	25	
Trichlorofluoromethane (Freon 11)	8.08	2.0	$\mu g/L$	10.0		80.8	70-130	2.63	25	
1,2,3-Trichloropropane	9.83	2.0	$\mu g/L$	10.0		98.3	70-130	1.43	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	9.06	1.0	μg/L	10.0		90.6	70-130	3.60	25	
1,2,4-Trimethylbenzene	11.0	1.0	μg/L	10.0		110	70-130	2.21	25	
1,3,5-Trimethylbenzene	11.2	1.0	$\mu g/L$	10.0		112	70-130	3.27	25	
Vinyl Chloride	7.38	2.0	$\mu g/L$	10.0		73.8	40-160	2.94	25	
m+p Xylene	23.4	2.0	$\mu \text{g/L}$	20.0		117	70-130	1.81	25	
o-Xylene	11.9	1.0	μg/L	10.0		119	70-130	1.10	25	
Surrogate: 1,2-Dichloroethane-d4	23.7		μg/L	25.0		94.8	70-130			
Surrogate: Toluene-d8	24.7		$\mu g/L$	25.0		98.7	70-130			
Surrogate: 4-Bromofluorobenzene	25.2		μg/L	25.0		101	70-130			
Batch B032642 - SW-846 5030B										
Blank (B032642-BLK1)				Prepared &	Analyzed: 06	5/24/11				
Acetone	0.80	50	μg/L							J
Acrylonitrile	ND	5.0	μg/L							U
tert-Amyl Methyl Ether (TAME)	ND	0.50	μg/L							U
Benzene	ND	1.0	μg/L							U
Bromobenzene	ND	1.0	μg/L							U
Bromochloromethane	ND	1.0	μg/L							U
Bromodichloromethane	ND	0.50	μg/L							U
Bromoform	ND	1.0	μg/L							U
Bromomethane	ND	2.0	μg/L							U
2-Butanone (MEK)	ND	20	μg/L							U
tert-Butyl Alcohol (TBA)	ND	20	μg/L							V-16, U
n-Butylbenzene	ND	1.0	μg/L							U
sec-Butylbenzene	ND	1.0	μg/L							U
tert-Butylbenzene	ND	1.0	μg/L							U
										Page 16 of 2



Spike

Source

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Reporting

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch B032642 - SW-846 5030B										
Blank (B032642-BLK1)				Prepared &	Analyzed: 06	/24/11				
ert-Butyl Ethyl Ether (TBEE)	ND	0.50	$\mu g\!/\!L$							U
Carbon Disulfide	ND	2.0	μg/L							U
Carbon Tetrachloride	ND	5.0	μg/L							U
Chlorobenzene	ND	1.0	$\mu g/L$							U
Chlorodibromomethane	ND	0.50	$\mu g/L$							U
Chloroethane	ND	2.0	$\mu g/L$							U
Chloroform	ND	2.0	$\mu g/L$							U
Chloromethane	ND	2.0	$\mu g/L$							U
2-Chlorotoluene	ND	1.0	$\mu g/L$							U
I-Chlorotoluene	ND	1.0	$\mu g/L$							U
,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	μg/L							U
,2-Dibromoethane (EDB)	ND	0.50	μg/L							U
Dibromomethane	ND	1.0	μg/L							U
,2-Dichlorobenzene	ND	1.0	μg/L							U
1,3-Dichlorobenzene	ND	1.0	μg/L							U
1,4-Dichlorobenzene	ND	1.0	μg/L							U
rans-1,4-Dichloro-2-butene	ND	2.0	μg/L							U
Dichlorodifluoromethane (Freon 12)	ND	2.0	μg/L							U
1,1-Dichloroethane	ND	1.0	μg/L							U
1,2-Dichloroethane	ND	1.0	μg/L							U
,1-Dichloroethylene	ND	1.0	μg/L							U
sis-1,2-Dichloroethylene	ND	1.0	μg/L							U
rans-1,2-Dichloroethylene	ND	1.0	μg/L							U
,2-Dichloropropane	ND	1.0	μg/L							U
,3-Dichloropropane	ND ND	0.50	μg/L							U
2,2-Dichloropropane		1.0	μg/L μg/L							U
,1-Dichloropropene	ND	2.0	μg/L μg/L							U
sis-1,3-Dichloropropene	ND	0.50	μg/L μg/L							U
rans-1,3-Dichloropropene	ND	0.50	μg/L μg/L							U
Diethyl Ether	ND	2.0								
Disopropyl Ether (DIPE)	ND	0.50	μg/L							U
* **	ND		μg/L							U
I,4-Dioxane	ND	50	μg/L							V-16, U
Ethylbenzene	ND	1.0	μg/L							U
Hexachlorobutadiene	ND	0.50	μg/L							U
2-Hexanone (MBK)	ND	10	μg/L							U
sopropylbenzene (Cumene)	ND	1.0	μg/L							U
p-Isopropyltoluene (p-Cymene)	ND	1.0	μg/L							U
Methyl tert-Butyl Ether (MTBE)	ND	1.0	μg/L							U
Methylene Chloride	ND	5.0	μg/L							U
I-Methyl-2-pentanone (MIBK)	ND	10	μg/L							U
Naphthalene	0.26	2.0	μg/L							V-05, J
n-Propylbenzene	ND	1.0	μg/L							U
Styrene	ND	1.0	μg/L							U
,1,1,2-Tetrachloroethane	ND	1.0	μg/L							U
,1,2,2-Tetrachloroethane	ND	0.50	$\mu \text{g/L}$							U
Tetrachloroethylene	ND	1.0	$\mu \text{g/L}$							U
Γetrahydrofuran	ND	10	$\mu \text{g/L}$							U
Toluene	ND	1.0	$\mu \text{g/L}$							U
,2,3-Trichlorobenzene	0.58	5.0	$\mu \text{g}/L$							V-05, J
1,2,4-Trichlorobenzene	0.22	1.0	$\mu \text{g/L}$							V-05, J
1,3,5-Trichlorobenzene	ND	1.0	$\mu g/L$							U
1,1,1-Trichloroethane	ND	1.0	μg/L							U

RPD

%REC



QUALITY CONTROL

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
atch B032642 - SW-846 5030B										
lank (B032642-BLK1)				Prepared & A	Analyzed: 06	/24/11				
,1,2-Trichloroethane	ND	1.0	$\mu g/L$							U
richloroethylene	ND	1.0	$\mu g/L$							U
richlorofluoromethane (Freon 11)	ND	2.0	$\mu g/L$							U
,2,3-Trichloropropane	ND	2.0	$\mu g/L$							U
,1,2-Trichloro-1,2,2-trifluoroethane (Freon	ND	1.0	μg/L							U
13)										
,2,4-Trimethylbenzene	ND	1.0	$\mu g/L$							U
,3,5-Trimethylbenzene	ND	1.0	$\mu g/L$							U
inyl Chloride	ND	2.0	$\mu g/L$							U
n+p Xylene	ND	2.0	$\mu g/L$							U
-Xylene	ND	1.0	$\mu \text{g/L}$							U
urrogate: 1,2-Dichloroethane-d4	24.6		μg/L	25.0		98.5	70-130			
urrogate: Toluene-d8	24.2		$\mu g/L$	25.0		97.0	70-130			
urrogate: 4-Bromofluorobenzene	24.8		$\mu g/L$	25.0		99.2	70-130			
CS (B032642-BS1)				Prepared & A	Analyzed: 06	/24/11				
acetone	145	50	μg/L	100	0	145	70-160		25	
crylonitrile	9.40	5.0	μg/L	10.0		94.0	70-130		25	
ert-Amyl Methyl Ether (TAME)	10.0	0.50	μg/L μg/L	10.0		100	70-130		25	
denzene		1.0	μg/L μg/L	10.0		100	70-130		25	
romobenzene	10.0	1.0								
	10.2		μg/L	10.0		102	70-130		25	
romochloromethane	10.7	1.0	μg/L	10.0		107	70-130		25	
romodichloromethane	10.5	0.50	μg/L	10.0		105	70-130		25	
romoform	8.74	1.0	μg/L	10.0		87.4	70-130		25	
romomethane	4.29	2.0	μg/L	10.0		42.9	40-160		25	
-Butanone (MEK)	117	20	μg/L	100		117	40-160		25	
ert-Butyl Alcohol (TBA)	104	20	μg/L	100		104	40-160		25	V-16
-Butylbenzene	10.1	1.0	$\mu g\!/\!L$	10.0		101	70-130		25	
ec-Butylbenzene	10.2	1.0	$\mu g \! / \! L$	10.0		102	70-130		25	
ert-Butylbenzene	10.2	1.0	$\mu g/L$	10.0		102	70-130		25	
ert-Butyl Ethyl Ether (TBEE)	8.72	0.50	$\mu g/L$	10.0		87.2	70-130		25	
Carbon Disulfide	8.29	2.0	μg/L	10.0		82.9	70-130		25	
arbon Tetrachloride	9.23	5.0	μg/L	10.0		92.3	70-130		25	
Chlorobenzene	10.5	1.0	μg/L	10.0		105	70-130		25	
Chlorodibromomethane	10.6	0.50	μg/L	10.0		106	70-130		25	
Chloroethane	7.94	2.0	μg/L	10.0		79.4	70-130		25	
Chloroform	10.1	2.0	μg/L μg/L	10.0		101	70-130		25	
Chloromethane	5.67	2.0	μg/L μg/L	10.0		56.7	40-160		25	
-Chlorotoluene		1.0	μg/L μg/L	10.0		106	70-130		25	
-Chlorotoluene	10.6	1.0								
	11.0		μg/L μα/Ι	10.0		110	70-130		25	
,2-Dibromo-3-chloropropane (DBCP) ,2-Dibromoethane (EDB)	9.02	5.0	μg/L	10.0		90.2	70-130		25	
,	10.8	0.50	μg/L	10.0		108	70-130		25	
Dibromomethane	10.9	1.0	μg/L	10.0		109	70-130		25	
2-Dichlorobenzene	10.1	1.0	μg/L	10.0		101	70-130		25	
3-Dichlorobenzene	10.4	1.0	μg/L	10.0		104	70-130		25	
,4-Dichlorobenzene	9.74	1.0	μg/L	10.0		97.4	70-130		25	
ans-1,4-Dichloro-2-butene	8.94	2.0	μg/L	10.0		89.4	70-130		25	
Pichlorodifluoromethane (Freon 12)	4.07	2.0	$\mu g/L$	10.0		40.7	40-160		25	
1-Dichloroethane	9.85	1.0	$\mu g/L$	10.0		98.5	70-130		25	
,2-Dichloroethane	10.4	1.0	$\mu g/L$	10.0		104	70-130		25	
,1-Dichloroethylene	9.19	1.0	$\mu g/L$	10.0		91.9	70-130		25	
is-1,2-Dichloroethylene	9.88	1.0	μg/L	10.0		98.8	70-130		25	
ans-1,2-Dichloroethylene		1.0	μg/L	10.0		105	70-130		25	



QUALITY CONTROL

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B032642 - SW-846 5030B											
LCS (B032642-BS1)				Prepared &	Analyzed: 06	/24/11					
1,2-Dichloropropane	10.1	1.0	μg/L	10.0		101	70-130		25		_
1,3-Dichloropropane	10.5	0.50	$\mu g/L$	10.0		105	70-130		25		
2,2-Dichloropropane	10.9	1.0	μg/L	10.0		109	40-130		25		
1,1-Dichloropropene	10.1	2.0	μg/L	10.0		101	70-130		25		
cis-1,3-Dichloropropene	9.24	0.50	μg/L	10.0		92.4	70-130		25		
trans-1,3-Dichloropropene	9.77	0.50	μg/L	10.0		97.7	70-130		25		
Diethyl Ether	9.87	2.0	μg/L	10.0		98.7	70-130		25		
Diisopropyl Ether (DIPE)	9.27	0.50	μg/L	10.0		92.7	70-130		25		
1,4-Dioxane	117	50	μg/L	100		117	40-130		50	V-16, V-20	
Ethylbenzene	10.7	1.0	$\mu g/L$	10.0		107	70-130		25		
Hexachlorobutadiene	10.4	0.50	$\mu g/L$	10.0		104	70-130		25		
2-Hexanone (MBK)	118	10	μg/L	100		118	70-160		25		
Isopropylbenzene (Cumene)	12.6	1.0	μg/L	10.0		126	70-130		25		
p-Isopropyltoluene (p-Cymene)	10.5	1.0	μg/L	10.0		105	70-130		25		
Methyl tert-Butyl Ether (MTBE)	9.58	1.0	μg/L	10.0		95.8	70-130		25		
Methylene Chloride	9.59	5.0	μg/L	10.0		95.9	70-130		25		
4-Methyl-2-pentanone (MIBK)	110	10	μg/L	100		110	70-160		25		+
Naphthalene	8.56	2.0	μg/L	10.0		85.6	40-130		25	V-05	÷
n-Propylbenzene	10.4	1.0	μg/L	10.0		104	70-130		25		
Styrene	10.9	1.0	μg/L	10.0		109	70-130		25		
1,1,2-Tetrachloroethane	10.2	1.0	μg/L	10.0		102	70-130		25		
1,1,2,2-Tetrachloroethane	10.2	0.50	μg/L	10.0		102	70-130		25		
Tetrachloroethylene	11.0	1.0	μg/L	10.0		110	70-130		25		
Tetrahydrofuran	8.79	10	μg/L	10.0		87.9	70-130		25	J	
Toluene	10.6	1.0	μg/L	10.0		106	70-130		25		
1,2,3-Trichlorobenzene	8.32	5.0	μg/L	10.0		83.2	70-130		25	V-05	
1,2,4-Trichlorobenzene	8.43	1.0	μg/L	10.0		84.3	70-130		25	V-05	
1,3,5-Trichlorobenzene	8.84	1.0	μg/L	10.0		88.4	70-130		25		
1,1,1-Trichloroethane	10.7	1.0	μg/L	10.0		107	70-130		25		
1,1,2-Trichloroethane	10.4	1.0	μg/L	10.0		104	70-130		25		
Trichloroethylene	10.5	1.0	μg/L	10.0		105	70-130		25		
Trichlorofluoromethane (Freon 11)	7.84	2.0	μg/L	10.0		78.4	70-130		25		
1,2,3-Trichloropropane	9.17	2.0	μg/L	10.0		91.7	70-130		25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon	8.93	1.0	μg/L	10.0		89.3	70-130		25		
113)	0.73		. 0	-0.0							
1,2,4-Trimethylbenzene	10.3	1.0	$\mu g/L$	10.0		103	70-130		25		
1,3,5-Trimethylbenzene	10.5	1.0	$\mu g/L$	10.0		105	70-130		25		
Vinyl Chloride	6.71	2.0	$\mu g/L$	10.0		67.1	40-160		25		+
m+p Xylene	22.1	2.0	$\mu g/L$	20.0		110	70-130		25		
o-Xylene	11.0	1.0	$\mu \text{g/L}$	10.0		110	70-130		25		
Surrogate: 1,2-Dichloroethane-d4	23.8		μg/L	25.0		95.0	70-130				
Surrogate: Toluene-d8	24.8		$\mu g/L$	25.0		99.1	70-130				
Surrogate: 4-Bromofluorobenzene	25.1		$\mu g/L$	25.0		101	70-130				



QUALITY CONTROL

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B032642 - SW-846 5030B											
LCS Dup (B032642-BSD1)				Prepared &	Analyzed: 06	5/24/11					
Acetone	136	50	μg/L	100		136	70-160	6.58	25		
Acrylonitrile	9.21	5.0	$\mu g/L$	10.0		92.1	70-130	2.04	25		
ert-Amyl Methyl Ether (TAME)	10.2	0.50	$\mu g/L$	10.0		102	70-130	1.19	25		
Benzene	9.79	1.0	μg/L	10.0		97.9	70-130	2.32	25		
Bromobenzene	10.0	1.0	$\mu g/L$	10.0		100	70-130	2.47	25		
Bromochloromethane	10.5	1.0	μg/L	10.0		105	70-130	2.27	25		
Bromodichloromethane	10.5	0.50	μg/L	10.0		105	70-130	0.476	25		
Bromoform	8.99	1.0	$\mu g/L$	10.0		89.9	70-130	2.82	25		
Bromomethane	4.97	2.0	μg/L	10.0		49.7	40-160	14.7	25		
2-Butanone (MEK)	111	20	$\mu g/L$	100		111	40-160	5.14	25		
ert-Butyl Alcohol (TBA)	98.4	20	$\mu g/L$	100		98.4	40-160	5.38	25	V-16	
n-Butylbenzene	9.96	1.0	$\mu g/L$	10.0		99.6	70-130	1.79	25		
ec-Butylbenzene	10.0	1.0	$\mu g/L$	10.0		100	70-130	1.38	25		
ert-Butylbenzene	10.1	1.0	$\mu g/L$	10.0		101	70-130	1.08	25		
ert-Butyl Ethyl Ether (TBEE)	8.73	0.50	$\mu g/L$	10.0		87.3	70-130	0.115	25		
Carbon Disulfide	7.98	2.0	μg/L	10.0		79.8	70-130	3.81	25		
Carbon Tetrachloride	8.71	5.0	μg/L	10.0		87.1	70-130	5.80	25		
Chlorobenzene	10.5	1.0	μg/L	10.0		105	70-130	0.477	25		
Chlorodibromomethane	10.8	0.50	μg/L	10.0		108	70-130	2.15	25		
Chloroethane	7.68	2.0	μg/L	10.0		76.8	70-130	3.33	25		
Chloroform	9.88	2.0	μg/L	10.0		98.8	70-130	2.50	25		
Chloromethane	5.42	2.0	μg/L	10.0		54.2	40-160	4.51	25		
2-Chlorotoluene	10.4	1.0	μg/L	10.0		104	70-130	2.48	25		
-Chlorotoluene	10.9	1.0	μg/L	10.0		109	70-130	0.365	25		
,2-Dibromo-3-chloropropane (DBCP)	9.01	5.0	μg/L	10.0		90.1	70-130	0.111	25		
,2-Dibromoethane (EDB)	10.7	0.50	μg/L	10.0		107	70-130	0.372	25		
Dibromomethane	10.8	1.0	μg/L	10.0		108	70-130	1.75	25		
.2-Dichlorobenzene	9.99	1.0	μg/L	10.0		99.9	70-130	1.49	25		
,3-Dichlorobenzene	10.2	1.0	μg/L	10.0		102	70-130	1.46	25		
,4-Dichlorobenzene	9.76	1.0	μg/L	10.0		97.6	70-130	0.205	25		
rans-1,4-Dichloro-2-butene	8.39	2.0	μg/L	10.0		83.9	70-130	6.35	25		
Dichlorodifluoromethane (Freon 12)	3.66	2.0	μg/L	10.0		36.6 *	40-160	10.6	25	L-07	
,1-Dichloroethane	9.68	1.0	μg/L	10.0		96.8	70-130	1.74	25		
.2-Dichloroethane	10.6	1.0	μg/L	10.0		106	70-130	2.19	25		
,1-Dichloroethylene	9.12	1.0	μg/L	10.0		91.2	70-130	0.765	25		
ris-1,2-Dichloroethylene	9.57	1.0	μg/L	10.0		95.7	70-130	3.19	25		
rans-1,2-Dichloroethylene	10.2	1.0	μg/L	10.0		102	70-130	2.80	25		
,2-Dichloropropane	10.2	1.0	μg/L	10.0		101	70-130	0.297	25		
,3-Dichloropropane	10.1	0.50	μg/L	10.0		102	70-130	2.22	25		
2,2-Dichloropropane	10.2	1.0	μg/L	10.0		102	40-130	7.20	25		
,1-Dichloropropene	9.73	2.0	μg/L μg/L	10.0		97.3	70-130	3.43	25		
ris-1,3-Dichloropropene	9.73 8.96	0.50	μg/L μg/L	10.0		89.6	70-130	3.08	25		
rans-1,3-Dichloropropene	9.69	0.50	μg/L	10.0		96.9	70-130	0.822	25		
Diethyl Ether	10.2	2.0	μg/L	10.0		102	70-130	3.09	25		
Disopropyl Ether (DIPE)	9.42	0.50	μg/L μg/L	10.0		94.2	70-130	1.61	25		
,4-Dioxane	9.42	50	μg/L μg/L	10.0		114	40-130	2.74	50	V-16, V-20	
Ethylbenzene		1.0	μg/L μg/L	10.0		104	70-130	2.74	25	v-10, v-20	
Hexachlorobutadiene	10.4	0.50									
:-Hexanone (MBK)	10.1	10	μg/L μg/I	10.0		101	70-130	2.92	25 25		
	111		μg/L	100		111	70-160	6.12	25		
sopropylbenzene (Cumene)	12.2	1.0	μg/L	10.0		122	70-130	2.98	25 25		
o-Isopropyltoluene (p-Cymene)	10.0	1.0	μg/L	10.0		100	70-130	4.97	25		
Methyl tert-Butyl Ether (MTBE)	9.98	1.0	μg/L	10.0		99.8	70-130	4.09	25		



QUALITY CONTROL

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B032642 - SW-846 5030B											
LCS Dup (B032642-BSD1)				Prepared &	Analyzed: 06	5/24/11					
Methylene Chloride	9.66	5.0	μg/L	10.0		96.6	70-130	0.727	25		
4-Methyl-2-pentanone (MIBK)	107	10	$\mu g/L$	100		107	70-160	2.55	25		†
Naphthalene	8.31	2.0	$\mu g/L$	10.0		83.1	40-130	2.96	25	V-05	†
n-Propylbenzene	10.4	1.0	$\mu g/L$	10.0		104	70-130	0.482	25		
Styrene	11.0	1.0	$\mu g/L$	10.0		110	70-130	0.911	25		
1,1,1,2-Tetrachloroethane	10.4	1.0	$\mu g/L$	10.0		104	70-130	2.04	25		
1,1,2,2-Tetrachloroethane	10.1	0.50	$\mu g/L$	10.0		101	70-130	0.790	25		
Tetrachloroethylene	10.5	1.0	$\mu g/L$	10.0		105	70-130	4.45	25		
Tetrahydrofuran	9.13	10	$\mu g/L$	10.0		91.3	70-130	3.79	25	J	
Toluene	10.3	1.0	$\mu g/L$	10.0		103	70-130	2.49	25		
1,2,3-Trichlorobenzene	7.93	5.0	$\mu g/L$	10.0		79.3	70-130	4.80	25	V-05	
1,2,4-Trichlorobenzene	8.01	1.0	$\mu g/L$	10.0		80.1	70-130	5.11	25	V-05	
1,3,5-Trichlorobenzene	8.64	1.0	$\mu g/L$	10.0		86.4	70-130	2.29	25		
1,1,1-Trichloroethane	10.3	1.0	$\mu g/L$	10.0		103	70-130	3.53	25		
1,1,2-Trichloroethane	10.4	1.0	$\mu g/L$	10.0		104	70-130	0.289	25		
Trichloroethylene	10.3	1.0	$\mu g/L$	10.0		103	70-130	2.21	25		
Trichlorofluoromethane (Freon 11)	7.52	2.0	$\mu g/L$	10.0		75.2	70-130	4.17	25		
1,2,3-Trichloropropane	9.26	2.0	$\mu g/L$	10.0		92.6	70-130	0.977	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	8.91	1.0	μg/L	10.0		89.1	70-130	0.224	25		
1,2,4-Trimethylbenzene	10.4	1.0	$\mu g/L$	10.0		104	70-130	1.26	25		
1,3,5-Trimethylbenzene	10.4	1.0	$\mu g/L$	10.0		104	70-130	1.15	25		
Vinyl Chloride	6.67	2.0	$\mu g/L$	10.0		66.7	40-160	0.598	25		†
m+p Xylene	21.6	2.0	$\mu g/L$	20.0		108	70-130	2.43	25		
o-Xylene	10.9	1.0	$\mu g/L$	10.0		109	70-130	0.910	25		
Surrogate: 1,2-Dichloroethane-d4	23.8		μg/L	25.0		95.2	70-130				
Surrogate: Toluene-d8	24.4		$\mu g/L$	25.0		97.6	70-130				
Surrogate: 4-Bromofluorobenzene	25.3		μg/L	25.0		101	70-130				



FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-02	Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
U	Analyte included in the analysis, but not detected
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy are associated with reported result.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is no affected since sample result was "not detected" for this compound.



CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications	
SW-846 8260C in Water		
Acetone	CT,NH,NY,NC,ME	
Acrylonitrile	CT,NY,NC,RI,ME	
tert-Amyl Methyl Ether (TAME)	NH,NY,NC,ME	
Benzene	CT,NH,NY,NC,RI,ME	
Bromobenzene	NC	
Bromochloromethane	NH,NY,NC,ME	
Bromodichloromethane	CT,NH,NY,NC,RI,ME	
Bromoform	CT,NH,NY,NC,RI,ME	
Bromomethane	CT,NH,NY,NC,RI,ME	
2-Butanone (MEK)	CT,NH,NY,NC,ME	
tert-Butyl Alcohol (TBA)	NH,NY,NC,ME	
n-Butylbenzene	NY,NC,ME	
sec-Butylbenzene	NY,NC,ME	
tert-Butylbenzene	NY,NC,ME	
tert-Butyl Ethyl Ether (TBEE)	NH,NY,NC,ME	
Carbon Disulfide	CT,NH,NY,NC,ME	
Carbon Tetrachloride	CT,NH,NY,NC,RI,ME	
Chlorobenzene	CT,NH,NY,NC,RI,ME	
Chlorodibromomethane	CT,NH,NY,NC,RI,ME	
Chloroethane	CT,NH,NY,NC,RI,ME	
Chloroform	CT,NH,NY,NC,RI,ME	
Chloromethane	CT,NH,NY,NC,RI,ME	
2-Chlorotoluene	NY,NC,ME	
4-Chlorotoluene	NY,NC,ME	
1,2-Dibromo-3-chloropropane (DBCP)	NC	
1,2-Dibromoethane (EDB)	NC	
Dibromomethane	NH,NY,NC,ME	
1,2-Dichlorobenzene	CT,NY,NC,RI,ME	
1,3-Dichlorobenzene	CT,NH,NY,NC,RI,ME	
1,4-Dichlorobenzene	CT,NH,NY,NC,RI,ME	
trans-1,4-Dichloro-2-butene	NH,NY,NC,ME	
Dichlorodifluoromethane (Freon 12)	NH,NY,NC,RI,ME	
1,1-Dichloroethane	CT,NH,NY,NC,RI,ME	
1,2-Dichloroethane	CT,NH,NY,NC,RI,ME	
1,1-Dichloroethylene	CT,NH,NY,NC,RI,ME	
cis-1,2-Dichloroethylene	NC,ME	
trans-1,2-Dichloroethylene	CT,NH,NY,NC,RI,ME	
1,2-Dichloropropane	CT,NH,NY,NC,RI,ME	
1,3-Dichloropropane	NY,NC,ME	
2,2-Dichloropropane	NH,NY,NC,ME	
1,1-Dichloropropene	NH,NY,NC,ME	
cis-1,3-Dichloropropene	CT,NH,NY,NC,RI,ME	
trans-1,3-Dichloropropene	CT,NH,NY,NC,RI,ME	
Diethyl Ether	NC	
Diisopropyl Ether (DIPE)	NH,NY,NC,ME	
1,4-Dioxane	NC	
Ethylbenzene	CT,NH,NY,NC,RI,ME	



CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260C in Water	
Hexachlorobutadiene	CT,NH,NY,NC,ME
2-Hexanone (MBK)	CT,NH,NY,NC,ME
Isopropylbenzene (Cumene)	NY,NC,ME
p-Isopropyltoluene (p-Cymene)	CT,NH,NY,NC,ME
Methyl tert-Butyl Ether (MTBE)	CT,NH,NY,NC,ME
Methylene Chloride	CT,NH,NY,NC,RI,ME
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,NC,ME
Naphthalene	NH,NY,NC,ME
n-Propylbenzene	CT,NH,NY,NC,ME
Styrene	CT,NH,NY,NC,ME
1,1,1,2-Tetrachloroethane	CT,NH,NY,NC,ME
1,1,2,2-Tetrachloroethane	CT,NH,NY,NC,RI,ME
Tetrachloroethylene	CT,NH,NY,NC,RI,ME
Tetrahydrofuran	NC
Toluene	CT,NH,NY,NC,RI,ME
1,2,3-Trichlorobenzene	NH,NY,NC,ME
1,2,4-Trichlorobenzene	CT,NH,NY,NC,ME
1,3,5-Trichlorobenzene	NC,ME
1,1,1-Trichloroethane	CT,NH,NY,NC,RI,ME
1,1,2-Trichloroethane	CT,NH,NY,NC,RI,ME
Trichloroethylene	CT,NH,NY,NC,RI,ME
Trichlorofluoromethane (Freon 11)	CT,NH,NY,NC,RI,ME
1,2,3-Trichloropropane	NH,NY,NC,ME
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NC
1,2,4-Trimethylbenzene	NY,NC,ME
1,3,5-Trimethylbenzene	NY,NC,ME
Vinyl Chloride	CT,NH,NY,NC,RI,ME
m+p Xylene	CT,NH,NY,NC,RI,ME
o-Xylene	CT,NH,NY,NC,RI,ME

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	American Industrial Hygiene Association	100033	01/1/2012
MA	Massachusetts DEP	M-MA100	06/30/2011
CT	Connecticut Department of Publile Health	PH-0567	09/30/2011
NY	New York State Department of Health	10899 NELAP	04/1/2012
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2012
RI	Rhode Island Department of Health	LAO00112	12/30/2011
NC	North Carolina Div. of Water Quality	652	12/31/2011
NJ	New Jersey DEP	MA007 NELAP	06/30/2012
FL	Florida Department of Health	E871027 NELAP	06/30/2011
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2011
WA	State of Washington Department of Ecology	C2065	02/23/2012
ME	State of Maine	2011028	06/9/2013

Company Name:	1	
lame: LB, Tyc.	ANALYTICAL LABORATORY	con-test

Phone: 413-525-2332 Fax: 413-525-6405

Email: info@contestlabs.com

www.contestlabs.com

CHAIN OF CUSTODY RECORD 2560711

	Ö
AST	9 SPRUCE ST,
¥	Ÿ
	ž
LONGMEADOW, I	ë
ž	ิดิ
ਨ	m
¥	to
€	ĭ
1.0	•
~	2
×	_
\mathbf{z}	U
2	, 2ND FLOOR
MA	┖
≤	Ō
₽	0
0	ᄁ
01028	
9	
22	

s.com IIF	うらものは	7	ZECCZ · · · · · · · · · · · · · · · · · · ·	39 SPRUCE ST, 2ND FLOOR EAST LONGMEADOW, MA 01028) FLOOR W, MA 01028	Page of of 5 of 26
Telephone: (63) 369-4190	369-4	190	T 5			# of contain e
Project # LAWN	1400000)		 			~Cont.Cod
# 1	CANBOOCI			ANALYSIS REQUESTED	UESTED	-Cont. Code:
101	heck one):) j				G=glass
Fax#:	/DEMAIL /DEVERSITE CLIENT		B			P=plastic ST=sterile
Email:			24			¥ ≤a
Format: DEXCEL	EX PDF	☐ GIS KEY				S=summa can
OTHER			. 8			T=tedlar bag
ate S			_	-		0 =Other
Start Stop Date/Time Date/Time	Comp- osite Grab	*Matrix Code	Conc.			
10:00	×	5 4	<u> </u>			Comments:
1:15	メ	6w 11				
10.5%	×	6W 4				
						٠
		Please use be high in c	the following co	Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:	a specific sample	may
		H - High; M	H - High; M - Medium; L - Low;	ow; C - Clean; U - Unknown	n	
Turnaround **	Detection	-	Limit Requirements		**Preservation Codes:	Codes:
☐ 7-Day	Regulations?			GW= groundwater	I = Iced	X = Na hydroxide
10-Day	Data Habbana	D Discool			H = HCL	T = Na thiosulfate
RUSH *	Data Emiancement Project/RCP?	ement Project		A = air	N = Nitric Acid	
□ *24-Hr □ *48-Hr	Special Requirements or DL's:	irements or D) L's:	S = soil/solid	S = Sulfuric Acid	a .
位 *72-Hr				SL = sludge	B = Sodium bisulfate	ulfate

Field ID Sample Description

Lab#

6

ል

1. - WM- Z

8

25-7

Sampled By: J. Vana / Usan

Project Location: 4605 Man St, Waitshi

Proposal Provided? (For Billing purposes)

State Form Required?

☐ yes

proposal date

☐ yes

on no

Start

Attention:

Address:

てらん

72

NH 0330

INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT. ** TURNARGEND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS 0 = other_

Received by:

Date/Time:

1 *72-Hr 1 *4-Day * Require lab approval

Date/Time:

dished by

Relinquished by;/(sjgnature)

Date/Time:

Date/Time:

Laboratory Comments:

AIHA, NELAC & WBE/DBE Certified

O = Other_

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.contestlabs.com





Sample Receipt Checklist

CLIENT NAME: W33 T	NQ.	RECEIVED	BY:	DATE: (9(2)/	1	
1) Was the chain(s) of custody relinquished and signed? Yes No No CoC Included						
2) Does the chain agree with the sample If not, explain:		· ·	\sim	lo		
3) Are all the samples in good condition If not, explain:	n?		Yes 1	No		
4) How were the samples received:						
On Ice Direct from Sampling	a 🗆	Ambient	In Cooler((s) (1/2)		
Were the samples received in Tempera	_		/ \	NO N/A		
Temperature °C by Temp blank Temperature °C by Temp gun						
5) Are there Dissolved samples for the	lab to filter?		Yes (- No)		
Who was notified		Time	(~			
6) Are there any RUSH or SHORT HOLD			/ (10		
Who was notified		-	163	シ		
			Permission to su	bcontract samples? Yes	No	
7) Location where samples are stored:	10			•		
7) Lood and Where Samples are Stored.				only) if not already approv	/ea	
and the second s	The same of the sa	manifesticinaming operations	Client Signature:	and account of the second of t		
Conta	iners rec	eived a	t Con-Tes			
# 0	f containers			# of conta	inore	
1 Liter Amber			8 oz amber/clear		111613	
500 mL Amber			4 oz amber/clear		***	
250 mL Amber (8oz amber)			2 oz amber/clear			
1 Liter Plastic			Air Cassette			
500 mL Plastic			Hg/Hopcalite Tu	be		
250 mL plastic	\sim		Plastic Bag / Zip	loc		
40 mL Vial - type listed below	9		PM 2.5 / PM 1	0		
Colisure / bacteria bottle			PUF Cartridge)		
Dissolved Oxygen bottle			SOC Kit			
Encore Flashpoint bottle			TO-17 Tubes			
Perchlorate Kit			Ion-ConTest Cont	······································		
Other			Other glass ja Other			
Laboratory Comments:		<u>stirounistics.</u>	Other			
40 mL vials: # HCI	# Methanol		:	Time and Date Frozen:		
# Bisulfate	# DI Water					
# Thiosulfate	- Unpreserved	$\overline{}$				
Do all samples have the proper Acid ph	•	N/A)	L	Doc# 277		
Do all samples have the proper Base pl	H: Yes No	N/A)		Rev. 1 May 201	Page 26 of 26	