Phase One (check one)		Type (check one)				
Corrective Action Summary Report		Corrective Action Plan		Work Scope		PCF Reimbursement Request
Corrective Action Feasibility Investigation	\boxtimes	Initial Site Investigation	\boxtimes	Technical Report		General Correspondence
Operations & Monitoring Report						

INITIAL SITE INVESTIGATION FOR CURRIER PROPERTY 82 CARPENTER STREET NORWICH, VERMONT

SMS Site #2005-3389

Property Owned By: John Currier 82 Carpenter Street Norwich, Vermont 05055 Contact: John Currier

Prepared By:



PATHWAYS CONSULTING, LLC

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Contact: A. Dana Arey, Vice President, Director of Environmental Services Pathways Project No. 11210 Date: February 27, 2006

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1.0 INTRODUCTION

1.0 INTRODUCTION

1.1 Project Location

The subject property is owned by John Currier, hereinafter referred to as the site. The site is located at 82 Carpenter Street in Norwich, Vermont. Figure 1 of Appendix A depicts the site in a regional perspective. Figure 2 is a sketch plan developed from a field tape survey. The coordinates of the Site are approximately 43° 42.89' north and 72° 18.25' west. The coordinates were obtained from USGS topographic maps. The site is on a residential street less than ¼-mile east of Main Street in Norwich. The Connecticut River is located approximately ³/₄-mile to the east.

The Currier residence is a single-family, ranch style house with a finished basement in a residential neighborhood. The Currier residence and surrounding residential properties are connected to the municipal water system, and they are serviced by on-site wastewater disposal systems.

1.2 Project Background

In May 2005, the Curriers commenced construction of an addition on the south side of their residence. The soil that was excavated for the foundation addition was transported off-site to another residential property to be used for fill. While completing the excavating for the building addition foundation, petroleum odors were detected in the general area of a 500-gallon #2 fuel oil underground storage tank (UST). The UST was located on the southeast corner of the original structure, as depicted on Figure 2. The UST was a single wall steel tank. The Curriers had the UST closed by removal from the ground on May 21, 2005 by Daly Environmental Contracting (Daly). Daly submitted a closure report, dated June 27, 2005, to the Vermont Agency of Natural Resources, Department of Environmental Conservation (VTANR-DEC). The UST closure report indicated that the tank was in poor condition with multiple perforations throughout the sides and bottom.

Soil screening was conducted with a photoionization detector (PID) during closure of the UST. PID readings of contaminated soils surrounding and underlying the tank ranged from 60 to 260 parts per million (ppm). Free product was observed at the bottom of the tank grave. Groundwater was evident at approximately 6.5 feet below ground surface (bgs) in the UST excavation area. Bedrock was not encountered in the excavation. Approximately 8 cubic yards of petroleum-contaminated soil were excavated from around the UST, and the soil was polyencapsulated on-site.

The construction of the building addition included foundation drains and a sump in the basement area. A sump pump discharges to a drain pipe that flows away from the house. A visible sheen was observed on the surface of the water in the sump; therefore, the Curriers constructed a small holding tank containing spill absorbent pads to capture free-phase floating product.

The excess soil from the building addition foundation that was transported off-site for use as fill was later evaluated, and it was determined that some of the soil was petroleum-contaminated. The off-site petroleum-contaminated soil was polyencapsulated.

The extent of petroleum contamination was not defined during the UST closure. In a letter dated August 26, 2005, the VTANR-DEC, Sites Management Section (SMS) requested additional investigation at the Currier's property. This report presents the findings of the Initial Site Investigation.

1.3 Scope of Work and Procedures

Eleven soil borings were advanced on October 13, 2005. Nine soil borings were advanced with a truck mounted Geoprobe. Eastern Analytical of Concord, New Hampshire provided Geoprobe drilling services. Two hand auger soil borings were completed by Pathways Consulting, LLC (Pathways) at locations inaccessible to the Geoprobe. Pathways provided environmental monitoring during the subsurface investigations. The borings were intended to delineate soil contamination and assess subsurface conditions. Figure 2 depicts the locations of the soil borings.

Geoprobe soil boring samples were recovered continuously using a 4-foot long, 1¹/₂-inch diameter Macro-Core soil sampler. The hand auger soil borings were advanced with 2" and 4" Dutch Augers and a 2" diameter AMS gasoline powered auger. Soil samples were extracted from the core sampler and Dutch Augers, and they were field screened by the headspace method using a Thermo Environmental Instruments Model 580EZ PID. The PID was calibrated using a 100 parts per million isobutylene standard.

Sampling of soil at each boring location extended from the ground surface to a maximum depth of 11 feet bgs. Boring logs were generated by Pathways, and they are presented in Appendix B. Field observations and field screening results were used to select soil samples for laboratory analyses.

Groundwater monitoring wells were installed at three of the boring locations to assess the overall groundwater at the site. The monitoring wells were constructed with 1-inch diameter PVC 0.010-inch slotted screens and 1" diameter solid risers. The wells were set to intersect the estimated groundwater table. The annular spaces around the screened interval of the wells were backfilled with silica sand. A 6-inch to 12-inch thick layer of bentonite clay was installed above each well screen sand pack and the water table to prevent downward migration of surface water into the screened portion of the wells. Removable wing caps and flush mount cast iron road boxes were installed at the ground surface at the monitoring wells identified as MW-1 and MW-2. MW-3 was installed with the riser pipe extending 18 inches above the ground surface. Monitoring well construction details are included in Appendix C.

Groundwater samples were collected for laboratory analyses from the three monitoring wells on November 17, 2005. In addition, a groundwater sample was collected for laboratory analyses from the sump in the basement of the new building addition due to the presence of a sheen on the groundwater, suggesting potential petroleum contamination. The sump groundwater sample was collected on October 18, 2005.

A topographic survey of the monitoring wells was completed, including elevations of the top of the well casing and ground elevations. Static groundwater depths were measured prior to purging the monitoring wells, and the data were used to develop a groundwater contour map, which is included as Figure 3.

Air monitoring using the PID was conducted in the basement of the addition to the Currier residence.

2.0 INVESTIGATIONS AND TESTING RESULTS

2.0 INVESTIGATIONS AND TESTING RESULTS

2.1 Subsurface Geology

Eleven borings were advanced at the locations depicted on Figure 2 in Appendix A. The borings were advanced at locations intended to delineate soil contamination and assess subsurface conditions.

The soil borings indicate that the subsurface geology of the site generally consists of 2 to 4 feet of moist, brown, fine, sandy loam underlain by fine sand and silt from 4 feet to 9.5 feet bgs. Disconnected lenses of coarse sands were observed from 4 to 9.5 feet bgs. A silty clay layer was observed at approximately 9.5 feet bgs at the location of the former tank grave. Groundwater was typically encountered at a depth of approximately 3 feet bgs. No bedrock was present to a depth of 11 feet bgs.

2.2 Soil Boring Program and Sampling Results

The soil samples that were extracted from the Macro-Core or the hand augers were visually characterized.

Portions of the soil samples were transferred to sealable plastic bags for field screening by the headspace method using a Thermo Environmental Instruments Model 580EZ PID. Elevated PID readings were detected at depths ranging from 6 to 9 feet bgs at the soil borings SB-3, located in the tank grave, and SB-4, located immediately downgradient of the tank grave. Elevated PID readings were also detected from 3 to 6 feet bgs at borings SB-6, SB-8, and SB-9, located farther downgradient of the tank grave. PID readings are summarized in Table 1 in Appendix D.

Figure 2 depicts the extent of petroleum-contaminated soil that exceeds the levels established in the VTANR Agency Guidelines for Petroleum-Contaminated Soil and Debris, Soil Guideline Thresholds based on PID readings. The depth of the petroleum-contaminated soils ranges from approximately 3 to 9.5 feet bgs. The deepest contamination was detected within the former tank grave.

Discrete soil samples were selected for laboratory analyses based on field observations, such as soil type and PID readings, to further define the lateral and vertical extent of soil contamination. Selected soil samples were collected in 20 milliliters (ml) Volatile Organic Compounds (VOC) vials containing 5 ml of methanol preservative. Additionally, soil was collected in 4-ounce glass jars with Teflon septum lids. Two soil samples were submitted to Aquarian Analytical, Inc. (Aquarian) for analyses by EPA Methods 8100 and 8021 for total petroleum hydrocarbons (diesel range organics) (TPH) and VOCs, respectively.

Laboratory results are summarized in Table 2 of Appendix D. Copies of individual laboratory reports are included in Appendix E. The soil samples that were collected at SB-3 and SB-6 for laboratory analyses contained no detectable concentrations of petroleum-related compounds. The samples were collected at depths of 9.5 to 11 bgs feet and 7 to 8 feet bgs, respectively. The laboratory results suggest that the petroleum

contamination at these borings does not extend to the depths that the samples were collected.

2.3 Groundwater Sampling Methodology and Results

Groundwater samples were collected for laboratory analyses from monitoring wells MW-1, MW-2, and MW-3 on November 17, 2005. Prior to initiating development and purging of the groundwater monitoring wells, the static groundwater levels were measured with a Solinist water level probe. To ensure that the groundwater samples would be representative of the groundwater quality, the monitoring wells were purged of a minimum of three well volumes, or until the well went dry, whichever came first, and then they were allowed to recover prior to sampling. Groundwater was purged and sampled using dedicated ¹/₂-inch diameter polyethylene tubing and a peristaltic pump.

Groundwater samples were collected in laboratory-provided 40-milliliter glass vials preserved with hydrochloric acid. All sample vials were labeled, chilled over ice, and shipped with chain-of-custody to Aquarian for analyses. The samples were analyzed by EPA Methods 8260B and 8015 for VOCs and TPH, respectively. The laboratory results are summarized in Table 2. Copies of the individual laboratory reports are included in Appendix E.

No VOCs were detected above the laboratory method detection limits from the groundwater samples collected at the upgradient well identified as MW-1, or at the downgradient well identified as MW-3. 1,2,4 trimethylbenzene and methyl-t-butyl ether (MTBE) were detected at MW-2, which is located in the former tank grave, at concentrations exceeding the Vermont Primary Groundwater Quality Standards (VPGQS).

The groundwater sample that was collected from the basement sump on October 18, 2005 was analyzed by EPA Method 8260B for VOCs. The groundwater sample contained detectable concentrations of naphthalene, 1,2,4 trimethylbenzene, 1,3,5 trimethylbenzene, xylenes, and MTBE. The sump sample exceeded the VPGQS for 1,2,4 trimethylbenzene and 1,3,5 trimethylbenzene. A separate work plan was submitted and approved by the VTANR for the installation of a carbon treatment system for the groundwater in the sump before it is discharged to the ground surface.

2.4 Indoor Air Monitoring

Indoor air monitoring was completed in the Currier residence, including the first floor living area and the basement of the recently constructed building addition. The indoor air monitoring was conducted using the PID. No PID readings were detected in any of the monitored spaces, including immediately above the groundwater collection sump in the basement where dissolved petroleum contaminants are present.

2.5 Preferential Migration Pathways

The soil-boring program detected elevated concentrations of petroleum-contaminated soil by field screening with the PID at borings SB-3 and SB-4, which are in the vicinity of the former UST grave, and at borings SB-6, SB-8, and SB-9, which are located farther

downgradient. The elevated PID readings were detected in saturated soil, which suggests that the contamination may be in the dissolved phase. Data collected from field observations, PID readings, and laboratory results were used to develop a contaminant plume, which is depicted on Figure 2.

A topographic survey of the monitoring wells was completed, and groundwater depths were recorded prior to purging the groundwater monitoring wells. Monitoring well and groundwater elevations are included in Table 3. The data were used to develop a groundwater contour map, included as Figure 3. The direction of groundwater flow is in a westerly direction.

3.0 CONCEPTUAL MODEL AND RISK CHARACTERIZATION

3.0 CONCEPTUAL MODEL AND RISK CHARACTERIZATION

3.1 Data Analyses

3.1.1 Known Contaminant Sources

The advancement of eleven soil borings on the Site on October 13, 2005 suggests that the presence of petroleum-contaminated soil on-site is associated with the former 500-gallon fuel oil UST. No PID readings were detected at the boring identified as SB-2 that was advanced upgradient of the former UST, or the three most downgradient soil borings identified as SB-7, SB-10, and SB-11. The data collected during this Initial Site Investigation suggest that petroleum contamination is limited to the area around the former tank grave, and it has migrated in a westerly direction.

3.1.2 Data Trends

3.1.2.1 Current Contaminant Plume

Figure 2 depicts the approximate area of soil contamination using PID readings and the results of laboratory analyses of soil samples. The contaminated plume appears to be limited to depths ranging from 3 to 9 feet bgs. The contamination appears to be contained within the saturated zone, and it may be inhibited from penetrating to deeper depths due to a more restrictive layer of silty clay observed at approximately 9.5 feet bgs.

3.2 Potential Receptors

3.2.1 Drinking Water Supplies/Groundwater Impacts

The Currier residence and surrounding residential properties are served by municipal water. The closest registered water supply well is located approximately 900 feet east of the Site. The petroleum contamination on the Currier property appears to be confined to the area around and downgradient to the former UST grave. The majority of petroleum-contaminated soils have been excavated from the source area, and they are stockpiled on-site and at an off-site location. This soil was excavated during construction of an addition to the residence or during closure of the UST. No impact to drinking water supplies is expected.

Soil borings were advanced to a maximum depth of 11 feet bgs. The soil stratigraphy consisted of fine sands and silts with some intermittent lenses of sand. Groundwater was encountered at depths of approximately 3 to 6 feet bgs. Three groundwater monitoring wells were installed, and groundwater samples were collected for laboratory analyses. The groundwater sample collected at monitoring well MW-2, in the former tank grave, exceeded the VPGQS for 1,2,4 trimethylbenzene and MTBE. No petroleum contamination was detected in the downgradient monitoring well identified as MW-3. This well is approximately 70 feet from the former UST grave. The extent of groundwater contamination appears to be contained to the immediate area around the former UST.

3.2.2 Currier Residence

The former UST was located adjacent to the southeast corner of the residential structure. The airspaces within the basement of the house and the recently constructed addition were monitored with the PID. No PID readings were detected in the ambient air spaces, including immediately above the sump in the basement of the addition.

3.2.3 Sensitive Receptors

Field observations, PID readings, and laboratory analyses of soil and groundwater samples indicate that the petroleum contamination is contained to an area within the former UST tank grave to approximately 70 feet downgradient. The contamination is not believed to have impacted other sensitive receptors, such as surface water, wetlands, sensitive ecologic areas, sewers, or utility corridors. The indoor air quality was evaluated using the PID, and there were no indications that vapors were releasing into the structure.

A floor sump was installed in the basement of the recently constructed basement that is connected to underdrains under the floor. Visible free product was observed in the floor sump, and absorbent pads were employed to capture the material. A groundwater sample was collected from the floor sump for laboratory analyses, and the sample contained concentrations of 1,2,4 trimethylbenzene, 1,3,5 trimethylbenzene, naphthalene, MTBE, and xylenes. The presence of dissolved contaminants in the groundwater resulted in the approval by the VTANR for the installation of a groundwater treatment system. The groundwater system was installed on January 10, 2006. The treated groundwater is pumped to the ground surface on the west side of the property.

4.0 SUMMARY AND RECOMMENDATIONS

4.0 SUMMARY AND RECOMMENDATIONS

In May 2005, the Curriers commenced construction of an addition on the south side of their residence. During excavation of the addition foundation, petroleum odors were detected in the soil on the easterly side of the excavation. The petroleum odors were most prominent in the vicinity of a 500-gallon UST. The petroleum odors suggested to the Curriers that the UST may be leaking; therefore, they enlisted the services of Daly Environmental Contracting to complete the closure of the tank.

The 500-gallon fuel oil UST was closed by removal from the ground on May 21, 2005. Multiple perforations were observed in the sides and bottom of the UST. Soil screening with the PID indicated that the soil around the UST was impacted by a release of petroleum. The soil beneath the tank exhibited a peak PID reading of 260 ppm. The PID reading was within the Agency Guidelines for Petroleum Contaminated Soils and Debris Soil Guideline Threshold of 40 to 400 ppm for #2 fuel oil-contaminated soil. Approximately 8 cubic yards of petroleum-contaminated soil were excavated from around the UST and polyencapsulated on-site.

Approximately 125 cubic yards of soil were excavated for the building addition foundation. The soil was transported off-site to another residential property to be used for fill. Mr. Currier recognized that some or all the soil that was excavated from the building addition and transported to the off-site location was likely contaminated with petroleum from the leaking UST. Therefore, Mr. Currier covered the soil piles with polyethylene. Follow-up investigations of the off-site soil piles confirmed that presence of petroleum contamination.

Soil samples collected during the boring phase of this Initial Site Investigation indicated that petroleum contamination was present within and surrounding the former UST grave. Field screening of soil samples with the PID detected elevated readings at soil boring SB-3 in the former tank grave, and SB-4, SB-6, SB-8, and SB-9, which are all downgradient of the former tank grave. The contaminant zone, where PID readings fall within the Soil Guideline Thresholds of 40 to 400 ppm for fuel oil-contaminated soil that is recommended for on-site or off-site treatment, is located between 4 and 9.5 feet bgs. The contaminated soil is within the saturated zone, and the PID is likely measuring dissolved phase contaminants.

Two soil samples were collected for laboratory analyses. The samples were collected at a depth of 9.5 feet bgs at the UST grave and 6 feet bgs at SB-6, which is approximately 50 feet downgradient. The PID readings at these sample depths were 62 ppm and 79 ppm, respectively. No VOCs or TPH were detected above the laboratory method detection limits in these samples. The vertical extent of soil contamination is above these depths.

Three groundwater monitoring wells were installed during the Initial Site Investigation. One monitoring well was installed at an anticipated upgradient location, one within the former tank grave, and one approximately 70 feet downgradient of the tank grave. The concentration of 1,2,4 trimethylbenzene detected at MW-2, located in the UST grave, was 6 micrograms per liter (μ g/l), and the concentration of MTBE was 51 μ g/l. The VPGQS for these compounds is 5 μ g/l and 40 μ g/l, respectively. No petroleum-related compounds were detected in the upgradient and downgradient monitoring wells.

The release of petroleum at the Currier property was associated with the leaking UST. Petroleum contaminants have migrated through coarse sand layers to as much as 100 feet from the source area.

Approximately 8 cubic yards of petroleum-contaminated soil were excavated from the tank grave and polyencapsulated on site. Approximately 125 cubic yards of soil were excavated in May 2005 during the construction of the building addition, and the soil was transported off-site. The building addition was located immediately downgradient of the UST. Petroleum odors were detected in the soil that was shipped off-site, and a follow-up evaluation of the off-site soil confirmed the presence of petroleum contamination.

A significant amount of the petroleum-contaminated soil in the source area has been excavated, and it was either stockpiled on-site or at an off-site residential location. The removal of the petroleum-contaminated soil will likely result in improvement to the groundwater quality at the Site. No sensitive receptors have been identified, and the soil and groundwater contamination is apparently limited to the Currier property.

A groundwater treatment system, consisting of a granular activated carbon filter, was installed on January 10, 2006 on the discharge from the basement sump pump in the new building addition. Spill pads were installed in the sump to capture any free-phase product.

We recommend biannual monitoring of the groundwater in the sump, on the discharge from the carbon treatment system, and the monitoring wells on a bi-annual basis during the months of April and October. Groundwater samples should be analyzed by EPA Method 8260B and 8100 for VOCs and TPH, respectively. The petroleum-contaminated soil stockpiled on-site and off-site should be treated at an approved soil disposal facility. The Currier's property insurance company has agreed to cover the cost for removal and disposal of the off-site petroleum-contaminated soil.

APPENDIX

A. FIGURES







B. BORING LOGS

		PROJECT:	Currier Prope	rty	CASING SAMPLER SHEET 1 OF 1			
			Norwich, VT		TYPE: GeoProbe Macro-Core	BORING NO:	SB-1	
	PRO	JECT NO .:	11210		SIZE: 1 1/2"	LOCATION:	See Plan	
	DA	FE START:	10/13/2005		HAMMER:	SURFACE		
	D.	ATE END:	10/13/2005		FALL:	ELEVATION:	N/A	
	BO	RING CO.:	Eastern Analy	rtical	GROUNDWATER OBSERVAT	TONS		
			Concord, NH		DATE DEPTH CASING AT STABI	LIZATION PERIO	DD	
	F	OREMAN:	Dave					
	РАТНЖ	AYS REP:	Brian D'Amou	ır				
		SA	MPLING		Sample	Stratum	PID	
Denth				Penetr/	Description	Change	Reading	
FT.	No.	Depth	Blows/6"	Recovery		Chunge	nnm	
1	1100	2 optim	210110/0	100000015	0' - 0.5' Sandy loam		PP···	
2					0.5' - 2.5' Sand and gravel fill	0.4	DD	
3					2.5' - 4.0' Sand then moist fine sand/silt	0 - 4	BD	
4	1	4'		4.0' / 3.2'	1			
5					4' - 6' Wet medium/fine sand			
6					1	4 - 7	BD	
7		01			6' - 8' Orange/gray silt and clay			
8	2	8'		4.0' / 4.0'	Odor at 8'	7 - 8	44	
9	3	9		1.0 / 0.0	8' - 9' No sample			
10					-			
12					+			
13								
14					1			
15]			
16					1			
17					4			
18					4			
19					4			
20					-			
					1			
					1			
					1			
					1			
NOTES	S:							
				I				
				Proportions used: trace	e (0-10%), little (10-20%), some (20-35%), and (35-50 (Blows/ft) Cohesionless Density (Blows/ft)	%)		
				very soft	0-2 very loose	0-4		
				soft	2-4 loose 4	-10		
				medium stiff stiff	4-8 medium dense 8-15 dense 3	10-30		
				very stiff	15-30 very dense	50+		
				hard	30+			
				Remarks: The stratific	cation lines represent the approximate boundary between	en soil types		
				times and under condi	tions stated on the boring logs. Fluctuations in the level	el of the		
1				groundwater may occu	ir due to other factors than those present at the time me	easurements		
				were made.				

Norwich, VT TYPE: GeoProbe Macro-Core BORING NO: PROJECT NO.: 11210 SIZE: 11/2" LOCATION: DATE START: 10/13/2005 HAMMER: SURFACE ELEVATION: DATE END: 10/13/2005 FALL: ELEVATION: BORING CO.: Eastern Analytical GROUNDWATER OBSERVATIONS ELEVATION: Concord, NH DATE DEPTH CASING AT STABILIZATION PERIOI FOREMAN: Dave PATHWAYS REP: Brian D'Amour Sample Stratum Change Penetr/ Description Change	SB-2 See Plan N/A D PID
PROJECT NO.: 11210 SIZE: 1 1/2" LOCATION: DATE START: 10/13/2005 HAMMER: SURFACE DATE END: 10/13/2005 FALL: ELEVATION: BORING CO:: Eastern Analytical GROUNDWATER OBSERVATIONS ELEVATION PERIOI Concord, NH DATE DEPTH CASING AT STABILIZATION PERIOI FOREMAN: Dave DATE DEPTH CASING AT STABILIZATION PERIOI PATHWAYS REP: Brian D'Amour Sample Stratum Depth Recovery O'. 0.5'. Sandy hom Change	See Plan N/A D PID
DATE START: 10/13/2005 HAMMER: SURFACE DATE END: 10/13/2005 FALL: ELEVATION: BORING CO.: Eastern Analytical Concord, NH GROUNDWATER OBSERVATIONS ELEVATION PERIOD FOREMAN: Dave DATE DEPTH CASING AT STABILIZATION PERIOD PATHWAYS REP: Brian D'Amour Sample Stratum Depth Penetr/ Description Change	N/A D PID
DATE END: 10/13/2005 FALL: ELEVATION: BORING CO: Eastern Analytical Concord, NH GROUNDWATER OBSERVATIONS FOREMAN: Dave PATHWAYS REP: Brian D'Amour SAMPLING Sample Depth Penetr/ FT. No. Depth Blows/6'' Recovery O'	N/A D PID
BORING CO.: Eastern Analytical Concord, NH GROUNDWATER OBSERVATIONS FOREMAN: Dave PATHWAYS REP: Brian D'Amour SAMPLING Sample Stratum Depth Penetr/ Description FT. No. Depth Blows/6''	D
Concord, NH FOREMAN: Dave PATHWAYS REP: Brian D'Amour SAMPLING Depth FT. No. Depth Blows/6'' Recovery Concord, NH DATE DEPTH CASING AT STABILIZATION PERIO DATE DEPTH CASING AT STABILIZATION PERIO Sample Stratum Change	D
FOREMAN: Dave PATHWAYS REP: Brian D'Amour SAMPLING Sample Stratum Depth Penetr/ Description Change T. No. Depth Blows/6'' Recovery O' 0.5' Sandy loam	PID
PATHWAYS REP: Brian D'Amour SAMPLING Sample Stratum Depth Penetr/ Description Change FT. No. Depth Blows/6'' Recovery O' 0.5' Sandy loam	PID
SAMPLING Sample Stratum Depth Penetr/ Description Change FT. No. Depth Blows/6'' Recovery 0'- 0.5' Sandy loam	PID
SAMPLING Sample Stratum Depth Penetr/ Description Change FT. No. Depth Blows/6'' Recovery	PID
Depth Penetr/ Description Change FT. No. Depth Blows/6'' Recovery 0'- 0.5' Sandy loam	1117
Depth Penetr/ Description Change FT. No. Depth Blows/6'' Recovery Change	
1 No. Depth Blows/o Recovery	Reading
	ppm
0.5' - 2.5' Sand and graval fill	
2 = 0.5 - 2.5 Sand and graver fine cond/cilt $0 - 4$	BD
4 1 4' 40'/35'	
5 4.0' - 5.5' Medium sand 4 - 5.5	BD
7 5.5' - 8.0' Gray/orange medium/fine sand 5.5 - 7	RD
8 2 8' 4.0' / 4.0' 7 - 8	BD
9	
10	
11	
12	
13	
14	
19	
20	
NOTES: Well installed in this boring - see monitoring well installation log.	
Proportions used: trace (0-10%), little (10-20%), some (20-35%), and (35-50%) Cohesive Consistency (Plows (ft.)	
very soft 0-2 very loose 0-4	
soft 2-4 loose 4-10	
medium stiff 4-8 medium dense 10-30	
still 8-15 dense 30-50 very stiff 15-30 very dense 50+	
hard 30+	
Remarks: The stratification lines represent the approximate boundary between soil types	
and the transition may be gradual. Water level readings have been made in the drill holes at	
times and under conditions stated on the boring logs. Fluctuations in the level of the groundwater may occur due to other factors than those present at the time measurements	
were made.	

			PROJECT:	Currier Prope	rty	CASING SAMPLER SHEET 1 OF 1			
				Norwich. VT	-	TYPE: GeoProbe Macro-Core	BORING NO:	SB-3	
		PRC	DIFCT NO ·	11210		SIZE: 1 1/2"	LOCATION	See Plan	
			TE START	10/13/2005		HAMMED	SUPEACE	See I lall	
			ATE END.	10/13/2005			ELEVATION	NI/A	
			AILLIND.	To/13/2003	rtigal	FALL.	ELEVATION.		
		DU	KING CO	Eastern Analy	lical	OROUNDWATER OBSERVAT		~~	
				Concord, NH		DATE DEPTH CASING AT STABIL	JZATION PERIC	DD	
		ŀ	OREMAN:	Dave					
		PATHW	AYS REP:	Brian D'Amo	ur				
			SA	MPLING	•	Sample	Stratum	PID	
T)enth				Penetr/	Description	Change	Reading	
1	FT	No	Denth	Blows/6''	Recovery	Description	Chunge	nnm	
	1	110.	Depth	D10 \(3/0	Recovery	0' - 4' Medium sand backfill		ppm	
	2								
	3					+	0 - 4	BD	
	4	1	4'		40/20	+			
┢	5	-				4' - 6' Medium sand backfill	4 - 5.5	BD	
+	6				1	Odor from 5.5' to 6' (Plastic at 6')	5.5 - 6	36	
	7					6.0' - 6.5' Med/fine sand w/some gravel	6 - 6.5	44	
┢	8	2	8'		4.0 / 4.0	6.5' - 8' Gray/orange silt/clay. odor	6.5 - 8	38	
	9					8' - 9.5' Wet clay and silt, strong odor	0.0 0		
	10					Sheen on groundwater	8 - 9.5	62	
	11	3	11'		3.0' / 3.0'	9.5' - 11' Wet very plastic clay, weak odor	9.5 - 11	BD	
	12								
	13					1			
	14								
	15								
	16								
	17								
	18								
	19								
	20								
L						4			
F						4			
						4			
_		1.	01 . 1		 11 C - 1 - 1				
N	OTES	> :	Sample take	en from $9.5' - 1$	I for laboratory a	naiyses. Well installed in this boring - see m	onitoring		
┢			wen installa	auon log.	Proportions used, trees	a = (0, 100%) little (10, 200%) some (20, 250%) and (25, 500)%)		
					Cohesive Consistency	(Blows/ft) Cohesionless Density (Blows/ft)	/0)		
	very soft					0-2 very loose ()-4		
	soft					2-4 loose 4-	10		
					medium stiff	4-8 medium dense	10-30		
					very stiff	o-1.5 dense 30	50+		
					hard	30+			
					Remarks: The stratific	cation lines represent the approximate boundary betwee	en soil types		
					and the transition may	be gradual. Water level readings have been made in the	e drill holes at		
					times and under condi- groundwater may occu	tions stated on the boring logs. Fluctuations in the leve	1 of the		
					were made.	a due to other ractors than those present at the time life	usurements		

		PROJECT:	Currier Proper	rty	CASING SAMPLER SHEET 1 OF 1			
			Norwich, VT	-	TYPE: GeoProbe Macro-Core	BORING NO:	SB-4	
	PRC	JECT NO.:	11210		SIZE: 1 1/2"	LOCATION:	See Plan	
	DA	FE START :	10/13/2005		HAMMER:	SURFACE		
	D	ATE END:	10/13/2005		FALL:	ELEVATION:	N/A	
	BO	RING CO.:	Eastern Analy	rtical	GROUNDWATER OBSERVATIONS			
			Concord, NH		DATE DEPTH CASING AT STABI	LIZATION PERIC)D	
	F	OREMAN:	Dave					
	PATHW	AYS REP:	Brian D'Amou	ır				
		SA	MPLING		Sample	Stratum	PID	
Denth				Penetr/	Description	Change	Reading	
FT.	No.	Depth	Blows/6"	Recovery	Description	Chunge	npm	
1	110	Deptii	Dio (15/0	Recovery	0' - 4' Medium sand backfill		ppin	
2						0 1	DD	
3					1	0 - 4	BD	
4	1	4'		3.0 / 4.0	1			
5					4' - 6' Medium sand backfill	4 - 6	BD	
6						1 0	DD	
7	-	01		4.0.7.4.0	6' - 7' Fine sand and silt	6 - 7	63	
8	2	8'		4.0 / 4.0	7' - 8' Orange/gray silt and clay	7 - 8	59	
9					8 - 9.5° Slit and clay	8 - 9.5	43	
11	3	11'		3.0 / 2.5	9.5' - 11' Clay and silt	9.5 - 11	24	
12								
13					4			
14					4			
15					4			
10					4			
18					+			
19					1			
20					1			
	 				4			
					4			
NOTE	<u> </u>		l	I	1	1		
TOLE								
				Proportions used: trace	e (0-10%), little (10-20%), some (20-35%), and (35-50)%)		
	Cohesive Consistency				(Blows/ft.) Cohesionless Density (Blows/ft.)	0.4		
				very soft	2-4 very loose 4	0-4 10		
				medium stiff	4-8 medium dense	10-30		
	stiff				8-15 dense 3	80-50		
				very stiff hard	15-30 very dense 30+	50+		
				Remarks: The stratific	cation lines represent the approximate boundary betwee	en soil types		
				and the transition may	be gradual. Water level readings have been made in the	he drill holes at		
				groundwater may occu	ir due to other factors than those present at the time me	easurements		
				were made.	· · · · · · · · · · · · · · · · · · ·			

		PROJECT:	Currier Proper	ty	CASING SAMPLER SHEET 1 OF 1			
			Norwich, VT	•	TYPE: GeoProbe Macro-Core	BORING NO:	SB-5	
	PRC	JECT NO.:	11210		SIZE: 1 1/2"	LOCATION:	See Plan	
	DA'	FE START:	10/13/2005		HAMMER:	SURFACE		
	D	ATE END:	10/13/2005		FALL	ELEVATION:	N/A	
	BO	RING CO ·	Eastern Analy	tical	GROUNDWATER OBSERVAT	FIONS		
	20		Concord NH	licui	DATE DEPTH CASING AT STABI	I IZATION PERIO	מו	
	F	OREMAN	Dave			LILITIONTLING		
	Ратни	AVS REP.	Brian D'Amou	ır				
	17.111.		Brian D / Milot	*1				
		C A						
		ЪA	WIFLING	I	Sample	Stratum	PID	
Depth				Penetr/	Description	Change	Reading	
FT.	No.	Depth	Blows/6"	Recovery			ррт	
1					0' - 0.5' Sandy loam			
2					0.5' - 1' Coarse sand	0 - 4	BD	
3				4.0.4.2.0	2.5' - 3.5' Medium sand	_		
4	1	4'		4.0/3.0	3.5' - 4' Fine sand and silt			
5		L			4° - 8° Silt and clay			
6					4	0 - 4	BD	
/	2	0'		40/40	4			
8	2	0		4.0 / 4.0		1		
9					+			
10					4			
12					1			
13					1			
14					1			
15]			
16								
17					1			
18					1			
19					4			
20					-			
					4			
					4			
		L			+			
					1			
NOTES	S:	L	I	I	I	1	1	
				Proportions used: trace	e (0-10%), little (10-20%), some (20-35%), and (35-50)%)		
				Cohesive Consistency	(Blows/ft.) Cohesionless Density (Blows/ft.)	0.4		
				very soft	0-2 very loose	0-4 I-10		
				medium stiff	4-8 medium dense	10-30		
				stiff	8-15 dense 3	30-50		
				very stiff	15-30 very dense	50+		
				hard	50+	en soil types		
				and the transition may	be gradual. Water level readings have been made in the	he drill holes at		
				times and under condi-	tions stated on the boring logs. Fluctuations in the lev	el of the		
				groundwater may occu	Ir due to other factors than those present at the time me	easurements		
				were made.				

		PROJECT:	Currier Proper	rty	CASING SAMPLER	SHEET 1 OF 1	
			Norwich, VT	•	TYPE: GeoProbe Macro-Core	BORING NO:	SB-6
	PRO	JECT NO.:	11210		SIZE: 1 1/2"	LOCATION:	See Plan
	DAT	FE START:	10/13/2005		HAMMER:	SURFACE	
	D	ATE END:	10/13/2005		FALL:	ELEVATION:	N/A
	BO	RING CO.:	Eastern Analy	tical	GROUNDWATER OBSERVAT	IONS	
			Concord, NH		DATE DEPTH CASING AT STABI	LIZATION PERIO	DD
	F	OREMAN:	Dave				
]	РАТНЖ	AYS REP:	Brian D'Amou	ır			
		SA	MPLING		Sample	Stratum	PID
Dandh		V 43	 	Domoter/	Description	Stratum	
Deptn	N	D		Penetr/	Description	Change	Reading
	INO.	Depth	Blows/0	Recovery	0' 0.5' Sandy loam		ppm
1					0 - 0.5 Sandy Ioani		
∠ 3					$1'_{-3}$ Medium sand	0 - 4	BD
	1	Δ'		40/28	3' - 4' Fine sand and silt		
5	1			1.07 2.0	4' - 6.5' Silt and clay	4 - 5	11
6					Odor starting at 5'		70
7	2	7.2'			Ī	5 - 6.5	79
8				4.0 / 3.2	6.5' - 8' Clay and silt, slight odor	6.5 - 8	BD
9							
10							
11							
12							
13					4		
14					4		
15					4		
16					4		
17					4		
10					+		
20					4		
20					4		
					1		
					1		
					1		
]		
NOTES	5:	Sample col	lected for labor	atory analyses from	m 7' - 8'.		
				Proportions used: trace	e (0-10%), little (10-20%), some (20-35%), and (35-50	9%)	
				very soft	0-2 verv loose	0-4	
				soft	2-4 loose 4	-10	
				medium stiff	4-8 medium dense	10-30	
				stiff very stiff	8-15 dense 3	0-50 50+	
				hard	30+ very dense	507	
				Remarks: The stratific	cation lines represent the approximate boundary betwee	en soil types	
				and the transition may	be gradual. Water level readings have been made in the	e drill holes at	
				times and under condi	tions stated on the boring logs. Fluctuations in the level in due to other factors than those present at the time me	el of the	
				were made.	a due to other factors than those present at the time life	asarchiellto	

		PROJECT:	Currier Prope	rty	CASING SAMPLER SHEET 1 OF 1			
			Norwich, VT		TYPE: GeoProbe Macro-Core	BORING NO:	SB-7	
	PRC	JECT NO.:	11210		SIZE: 1 1/2"	LOCATION:	See Plan	
	DA	FE START:	10/13/2005		HAMMER:	SURFACE		
	D.	ATE END:	10/13/2005		FALL:	ELEVATION:	N/A	
	BO	RING CO.:	Eastern Analy	rtical	GROUNDWATER OBSERVAT	IONS		
			Concord. NH		DATE DEPTH CASING AT STABI	LIZATION PERIO)D	
	F	OREMAN:	Dave					
	PATHW	AYS REP:	Brian D'Amo	ır				
	SAMDI INC				Same la	G 1 1	DVD	
		Д А			Sample	Stratum	PID	
Depth				Penetr/	Description	Change	Reading	
FT.	No.	Depth	Blows/6"	Recovery			ppm	
1					$0^{\circ} - 0.5^{\circ}$ Sandy loam			
2					0.5 - 1 Medium sand	0 - 4	BD	
3	1	41		40/40	1' - 3' Fine sand and silt			
4	1	4		4.0 / 4.0	4' 6' Orange/gray silt/alow			
5	2	6'		20/20	9 - 0 Orange/gray sill/clay	4 - 6	BD	
7	2	0		2.07 2.0	Dry and crumbry (not saturated)			
8					+			
9					4			
10					4			
11					1			
12					1			
13					1			
14								
15								
16								
17					4			
18					4			
19					4			
20					4			
					4			
					4			
<u> </u>					4			
 		ļ			1			
NOTES	S:				1		1	
				Proportions used: trace	e (0-10%), little (10-20%), some (20-35%), and (35-50	9%)		
				Cohesive Consistency	(Blows/ft.) Cohesionless Density (Blows/ft.)	0.4		
				very soft	0-2 very loose 4	0-4 -10		
				medium stiff	4-8 medium dense	10-30		
				stiff	8-15 dense 3	0-50		
	very stiff				15-30 very dense	50+		
				naru Remarks: The stratifi	50+	en soil types		
				and the transition may	be gradual. Water level readings have been made in the	e drill holes at		
				times and under condi	tions stated on the boring logs. Fluctuations in the leve	el of the		
				groundwater may occu	ar due to other factors than those present at the time me	easurements		
				were made.				

		PROJECT:	Currier Proper	rty	CASING SAMPLER SHEET 1 OF 1			
			Norwich, VT	•	TYPE: GeoProbe Macro-core	BORING NO:	SB-8	
	PRC	JECT NO.:	11210		SIZE: 1 1/2"	LOCATION:	See Plan	
	DA'	FE START:	10/13/2005		HAMMER:	SURFACE		
	D	ATE END:	10/13/2005		FALL:	ELEVATION:	N/A	
	BO	RING CO ·	Eastern Analy	tical	GROUNDWATER OBSERVAT	IONS		
	20		Concord NH	tiour	DATE DEPTH CASING AT STABIL	IZATION PERIO	מנ	
	F	ORFMAN	Dave					
	РАТНЖ	AYS REP	Brian D'Amou	ır				
			Dinan Di inio	*1				
		ЪA	MILLING		Sample	Stratum	PID	
Depth				Penetr/	Description	Change	Reading	
FT.	No.	Depth	Blows/6"	Recovery			ppm	
1					0' - 0.5' Sandy loam			
2					0.5' - 1.5' Brown fine sand	0 - 3	BD	
3		41			1.5' - 3' Medium sand			
4	1	4'		4.0 / 4.0	3 - 4 Orange/gray silt and clay	3 - 4	26	
5				20/20	4' - 6' Wet fine sand and silt w/some clay	4 - 6	78	
6	2	0		2.0 / 2.0	Dry and crumbly (not saturated)			
/					4			
8					+			
9					+			
10					4			
12					+			
13					1			
14	1				1			
15					Ī			
16								
17								
18					1			
19					1			
20					-			
					+			
					+			
					4			
					+			
NOTES	L 		1	1	1	1		
TOLE								
				Proportions used: trace	e (0-10%), little (10-20%), some (20-35%), and (35-50	%)		
				Cohesive Consistency	(Blows/ft.) Cohesionless Density (Blows/ft.)	*		
				very soft	0-2 very loose	0-4		
				soft medium stiff	2-4 loose 4- 4-8 medium dense	-10 10-30		
				stiff	8-15 dense 3	0-50		
				very stiff	15-30 very dense	50+		
				hard	30+			
				Remarks: The stratific	cation lines represent the approximate boundary between	en soil types		
				times and under condi-	tions stated on the boring logs. Fluctuations in the level	el of the		
				groundwater may occu	Ir due to other factors than those present at the time me	asurements		
				were made.				

		PROJECT:	Currier Proper	rty	CASING SAMPLER SHEET 1 OF 1			
			Norwich, VT	•	TYPE: GeoProbe Macro-Core	BORING NO:	SB-9	
	PRC	JECT NO.:	11210		SIZE: 1 1/2"	LOCATION:	See Plan	
	DA	FE START	10/13/2005		HAMMER	SURFACE		
	D	ATE END	10/13/2005		FALL:	FI EVATION.	N/A	
	BO	RING CO ·	Fastern Analy	tical	GPOLINDWATER OBSERVAT	TONS	10/1	
	D0	MI10 CO	Concord NH	tical	DATE DEPTH CASING AT STADI	IZATION DEDIC	מע	
	Г		Colicolu, NII		DATE DEPTH CASING AT STABIL	LIZATION PERIC	עו	
т	1 Сартна	UKEMAN.	Dave Drive D'Amor					
1 	PAIHN	AIS KEP:	Brian D Amou	11.				
		~ .					1	
		SA	MPLING		Sample	Stratum	PID	
Depth				Penetr/	Description	Change	Reading	
FT.	No.	Depth	Blows/6"	Recovery			nnm	
1	1100	2000	210 115/0	11000 + 01 5	0' - 0.5' Sandy loam	0 - 3.5	BD	
2					0.5' - 3' Orange sand, wet	0 0.0	22	
3					3' - 4' Fine sand and silt w/ some clav	3.5	85	
4	1	4'		4.0 / 3.8	Coarse sand layer at 3.5' w/ strong odor	3.5 - 4	BD	
5					4' - 4.5' Coarse gray sand. strong odor	4 - 4.5	58	
6	2	6'		2.0 / 2.0	4.5' - 6' Silt and clay	4.5 - 6	27	
7		-						
8					Water table at approximately 1'			
9								
10								
11								
12								
13								
14					1			
15					1			
16					1			
17					1			
18					1			
19					1			
20					1			
					1			
					1			
					1			
					1			
NOTES	5:	Monitoring	well installed	at this locatinon - s	ee monitoring well installation details.			
		0			C			
				Proportions used: trace	e (0-10%), little (10-20%), some (20-35%), and (35-50	%)		
				Cohesive Consistency	(Blows/ft.) Cohesionless Density (Blows/ft.)			
				very soft	0-2 very loose	U-4 10		
				medium stiff	4-8 medium dense	10-30		
				stiff	8-15 dense 3	0-50		
				very stiff	15-30 very dense	50+		
				hard	30+			
				Remarks: The stratific	cation lines represent the approximate boundary betwee	en soil types		
				and the transition may	be gradual. Water level readings have been made in the level tions stated on the boring logs. Eluctuations in the level	e drill holes at		
				groundwater may occu	ir due to other factors than those present at the time me	asurements		
				were made.	r			

		PROJECT:	Currier Proper	ty	CASING SAMPLER	SHEET 1 OF 1	
			Norwich, VT		TYPE: Dutch Auger	BORING NO:	SB-10
	PRO	JECT NO.:	11210		SIZE: 2"	LOCATION:	See Plan
	האת האת	TE START	10/13/2005		HAMMED.	SUPEACE	See I fuir
	ראש	ATE ENID.	10/13/2005			SUNFACE ELEVATION:	
		ATE END:	10/13/2005	(¹ 1	FALL:	TONE	<u>N/A</u>
	вu	KING CO.:	Eastern Analy	tical	GROUNDWATER OBSERVAT	IUNS	
			Concord, NH		DATE DEPTH CASING AT STABI	LIZATION PERIC	DD
)	F ратну	OREMAN:	Dave Brian D'Amou	ır			
		<u></u>	Dilan D Annot	•1			
		C A	MDI INC		C I	<i>a</i>	
		ЭA			Sample	Stratum	PID
Depth				Penetr/	Description	Change	Reading
FT.	No.	Depth	Blows/6"	Recovery			ppm
1					0' - 0.5' Sandy loam	0.25	PD
2					0.5' - 2.5' Wet medium sand	0 - 2.5	вр
3	1	3'		N/A	2.5' - 3' Silt and clay	2.5 - 3	9
4						1	
5					Water table at approximately 1'		
6							
7							
8							
9					1		
10					1		
11					4		
12					4		
12					+		
13					+		
15					+		
15					-		
10					4		
17					4		
10					4		
19					4		
20					4		
					+		
					4		
					4		
					4		
					1		
NOTES	5:	Boring was	completed using	ng a 2-inch dutch a	uger.		
				Proportions used: trace	e (0-10%), little (10-20%), some (20-35%), and (35-50	9%)	
				Cohesive Consistency	(Blows/ft.) Cohesionless Density (Blows/ft.)		
				very soft	0-2 very loose	0-4	
				SOII medium stiff	2-4 loose 4	-10 10-30	
				stiff	8-15 dense 3	0-50	
				very stiff	15-30 very dense	50+	
				hard	30+		
				Remarks: The stratific	cation lines represent the approximate boundary betwee	en soil types	
				and the transition may	be gradual. Water level readings have been made in the	ne drill holes at	
				times and under condi-	tions stated on the boring logs. Fluctuations in the level	el of the	
				groundwater may occu	if due to other factors than those present at the time me	easurements	
L				were made.			

		PROJECT:	Currier Proper	ty	CASING SAMPLER	SHEET 1 OF 1	
			Norwich, VT		TYPE: Dutch Auger	BORING NO:	SB-11
	PRO	JECT NO.:	11210		SIZE: 2"	LOCATION:	See Plan
	DAT	FE START	10/13/2005		HAMMER	SURFACE	
	D	ATE END	10/13/2005		FALL:	FI EVATION.	N/A
	BO	RING CO ·	Fastern Analy	tical	GROUNDWATER OBSERVAT	TONS	
	00	MINO CO	Concord NH	lical	DATE DEPTH CASING AT STABI	IZATION DEDIC	מו
	E	OPEMAN	Dave		DATE DEFTIL CASING AT STADI	LIZATION TERIC	
	ι ΡΑΤΗΝ	AYS REP	Brian D'Amou	ır			
			Brian D / Milot	•1			
		C A			C I	_	
		ЪA			Sample	Stratum	PID
Depth				Penetr/	Description	Change	Reading
FT.	No.	Depth	Blows/6"	Recovery			ppm
1					0' - 0.5' Sandy loam	0-25	BD
2					0.5' - 2.5' Wet medium sand	0 2.5	DD
3	1	3'		N/A	2.5' - 3' Silt and clay	2.5 - 3	BD
4							
5					Water table at approximately 1'		
6					4		
7					4		
8					4		
9					4		
10					4		
11					+		
12					+		
15					4		
14					4		
16					4		
17					†		
18					1		
19					1		
20					1		
					1		
					1		
					Ī		
					1		
NOTES	S:	Boring was	completed using	ng a 2-inch dutch a	uger.		
				Proportions used: trace	e (0-10%), little (10-20%), some (20-35%), and (35-50	%)	
				Cohesive Consistency	(BIOWS/IT.) Cohesionless Density (Blows/ft.)	0-4	
				soft	2-4 loose 4	-10	
				medium stiff	4-8 medium dense	10-30	
				stiff	8-15 dense 3	0-50	
				very stiff	15-30 very dense	50+	
				Ilaiu Remarks: The stratific	outh	en soil types	
				and the transition may	be gradual. Water level readings have been made in th	e drill holes at	
I				times and under condi	tions stated on the boring logs. Fluctuations in the level	el of the	
				groundwater may occu	r due to other factors than those present at the time me	asurements	
				were made.			

C. MONITORING WELL CONSTRUCTION DETAILS

MONITORING WELL LOG



MONITORING WELL LOG



MONITORING WELL LOG



D. TABLES

TABLE 1 SUMMARY OF FIELD SCREENING RESULTS – OCTOBER 13, 2005 CURRIER PROPERTY 82 CARPENTER STREET, NORWICH, VERMONT											
DEPTH					PID R	RORING ((PPM)				
(feet)	SB-1	SB-2	SB-3	SB-4	SB-5	SB-6	SB-7	SB-8	SB-9	SB-10	SB-11
1									BD		
2	RD	BD	ВD	BD	BD	BD	ВD	BD		BD	BD
3	DD	DD	BD	DD	DD	DD	DD		85		
4								26		9	BD
5	BD	BD	BD	RD		11	BD	78	BD		
6		BD	36	DD	מק	70		70	58		
7		BD	44	63	DD	13			27		
8	44	BD	38	59		BD					
9	·		62	12							
10			02	43							
11			BD	24							
12											

Notes: BD = Below detection limit

TABLE 2 SUMMARY OF GROUNDWATER ANALYTICAL RESULTS CURRIER PROPERTY 82 CARPENTER STREET, NORWICH, VERMONT							
PARAMETER	MW-1 11/17/2005	MW-2 11/17/2005	MW-3 11/17/2005	BASEMENT SUMP 10/18/05	VPGQS		
Benzene	BD	BD	BD	BD	5		
Toluene	BD	BD	BD	BD	1,000		
Ethylbenzene	BD	BD	BD	BD	700		
Xylenes	BD	BD	BD	13	10,000		
Naphthalene	BD	BD	BD	13	20		
1,2,4 Trimethylbenzene	BD	6	BD	12	5		
1,3,5 Trimethylbenzene	BD	BD	BD	5	4		
MTBE	BD	51	BD	4	40		
ТРН	BD	BD	BD	NA	NS		

VPGQS = Vermont Primary Groundwater Quality Standards All results in milligrams per liter (mg/l) MTBE = Methyl-t-butyl ether NS = No standard NA = No analyses Note:

TABLE 3 SUMMARY OF GROUNDWATER ELEVATION CURRIER PROPERTY 82 CARPENTER STREET, NORWICH, VERMONT						
WELL ID	TOWC ELEV.	11/17/2005				
		WATER DEPTH	WATER ELEV.			
MW-1	497.84	2.39	495.45			
MW-2	498.34	5.06	493.28			
MW-3	494.93	2.29	492.64			

Notes: TOWC = Top of well casing

E. LABORATORY REPORTS

Laboratory Services

P.O. Box 186 Canterbury, N.H. 03224 Ph. 603-783-9097 • Fax 603-783-0360

10-28-2005,14:47

Mr. Brian D'Amour Pathways Consulting, LLC 3 School House Lane P.O. Box 600 Etna, N.H. 03750

Dear Mr. D'Amour:

Please find enclosed the reports, and invoice for the samples that were logged in on, 10-18-2005.

AAI Date

Sample	Sampled	Project	De	escriptio	on	Sample	Location
96474	10-13-2005	11210	//	CURRIER	RESIDENCE	SB-3	(9.5-11')
96475	10-13-2005	11210		CURRIER	RESIDENCE	SB-6	(7-8')

To perform these analyses, the following methods were used:

QTY. EPA Methodologies/Applications

2 BTEX/TPH/Naphthalene by EPA-8260 Soil

Thank you for using Aquarian Analytical Inc. on this project. If I can be of any further help, please feel free to call.

Sincerely,

William M. Rice Laboratory Director Total Pages = ____

doc. # L23038



Laboratory Services

P.O. Box 186 Canterbury, N.H. 03224 Ph. 603-783-9097 • Fax 603-783-0360

10-28-2005,14:47

Project: 11210 / CURRIER RESIDENCE

As part of Aquarian's ongoing quality assurance program, all analyses included the following quality assurance measures.

Samples were received in an acceptable condition.

Samples were prepared and analyzed within the appropriate hold time specified in the method referred to on the analyses sheet.

The instrument that was used for the analyses was calibrated and/or tuned at the required frequency.

A daily calibration check was performed.

A daily blank was run, and contamination was not observed at levels that would affect the analyses.

For all work, internal standards, and surrogates gave appropriate response levels.

Matrix spikes were added where appropriate, and recoveries were within the acceptable range.

Duplicates were run at the frequency specified in the applicable state or federal regulations.

In addition to the above steps, all original-raw data is on file at Aquarian Analytical's offices for inspection when required.

Exceptions (if any)



Laboratory Services

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BTEX, Naphthalene and TPH Report 10-27-2005,16:42 Sample 96474

Date	Sar	mpled		=	10-13-2005,10:30
Date	Log	gged In		=	10-18-2005,10:52
Date	of	Analysis	BTEX	=	10-27-2005
Date	of	Analysis	TPH	=	10-19-2005
Perso	on s	Sampling		=	BRIAN D'AMOUR
Locat	ior	1		=	SB-3 (9.5-11')
Samp	Le M	Matrix		-	Soil

Volatile Organic Compound	Result mg/kg	Det. Lim. mg/kg
Benzene	BD	0.075
Toluene	BD	0.075
Ethylbenzene	BD	0.075
m&p-Xylene	BD	0.075
o-Xylene	BD	0.075
Methyl t-butyl ether	BD	0.075
Naphthalene	BD	0.150

TPH Total Petroleum Hydrocarbon mg/kg

Total Petroleum Hydrocarbon (Method = Modified EPA-8100)	BD	10.0 results are in ppm for TPH
---	----	---------------------------------------

Comments:

<u>Method of VOA Analyses = EPA-8260B.</u> BD = Below Detection Limit, All Results are in ppm



Laboratory Services

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BTEX, Naphthalene and TPH Report 10-27-2005,16:42 Sample 96475

Date Sampled	=	10-13-2005,12:30
Date Logged In	=	10-18-2005,10:55
Date of Analysis BTEX	=	10-26-2005
Date of Analysis TPH	=	10-19-2005
Person Sampling	=	BRIAN D'AMOUR
Location	=	SB-6 (7-8')
Sample Matrix	=	Soil

Volatile Organic Compound	Result mg/kg	Det. Lim. mg/kg
Benzene	BD	0.058
Toluene	BD	0.058
Ethylbenzene	BD	0.058
m&p-Xylene	BD	0.058
o-Xylene	BD	0.058
Methyl t-butyl ether	BD	0.058
Naphthalene	BD	0.116

TPH Total Petroleum Hydrocarbon mg/kg

Total Petroleum Hydrocarbon (Method = Modified EPA-8100)	BD	10.0 results are in ppm for TPH

Comments:

Method of VOA Analyses = EPA-8260B. BD = Below Detection Limit, All Results are in ppm



Aquarian Analytical, Inc.

153 West Road Canterbury, NH 03224 Phone:(603)783-9097 Fax:(603)783-0360

Laboratory Services

Turn	around Requirements (cr	eck one)												F	ro	jec	t In	for	ma	tio	n													
RUS	H SAMPLES NEED PRIOR APP	ROVAL	Project #	t:	1	121	0										P	roje	ct M	ana	igei	r:	Bria	an D)'An	noi	ur							
Sam	e day turnaround (150% upc	harge)	Project N	lam	ne: C	urri	er F	lesid	den	ce							R	Report to: Brian D'Amour																
24 h	our turnaround (100% upc	harge)	Town/Sit	te:	N	lorw	ich,	Ver	mo	ont							In	invoice to: Pathways																
48 h	our turnaround (50% upcha	arge)	Sampler: Brian D'Amour Ph							Phone: (603) 643-3511																								
72 h	our turnaround (25% upcha	arge)	Company: Pathways Consulting, LLC. Fax							ax:					(60:	3) 6	43-3	353	3															
x Norm	nal turnaround		Account	#:	#: 42500																													
	Sample Information	tion			VO	C's-	svo	C's	,	Τ	Add	litio	onal			M	etal	s								Oth	er (I	ist)						
AAI ID#	Sample ID	Date/Time	Sample Matrix		EPA 524.2 Drinking Water	EPA 8240 / EPA 624	BTEX / MTBE	BTEX+MTBE+Naphthalene	Chlorinated only	EPA 8270 A-B/N FPA 8270 PAH	EPA 8015M Gasoline	EPA 8100M Fuel Oil	TIC's added	Oxygenates added	Fingerprint	13 Priority Polutants RCRA R	TCLP:	Field Filtered:	Lab Filtered:	Total:	EPA 608 PCBS	EPA 8081 Pesticide	EPA 8150 Herbicides	EPA SW845-/ Keactivity	EPA 150 1 / 9045 nH	Alkelinity	Methane	EPA 300.0 Nitrate	EPA 300.0 Sulfate	EPA 300.0 Chloride	80218 6			
86474	SB-3 95-11'	10/13/05 10.30	S /	2	+	+				+	t	X			$^{+}$	T	T	T		1		1	+	1	\top	T	T	T			X	+	1	+
96475	SR-6 7-8'	10/13/05 12:30	5 2	2	1	+			+	+	t	X		1	1	+	t	T	\square	1	1	1	+	t	T	t	t	T			X	+	1	1
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Relinquished by:		Date: Time:		F	Kecei	ved b	y:											Те	mpe	ratu	Jre		5	_°C	;									

Sample Receipt Conditions & Client Conversations

AAI #s	96474-96475	Date 10-18-05 Time 10:30
Client	Porhuays	Contact Brian D'Amon
Project_	Currier Per	idence
Sample r	received at	_°C
Discrepa	ncy	
	λ	
Resolutio	on	
Changes	i	

Laboratory Services

P.O. Box 186 Canterbury, N.H. 03224 Ph. 603-783-9097 • Fax 603-783-0360 11-04-2005, 14:29

Mr. Brian D'Amour Pathways Consulting, LLC 3 School House Lane P.O. Box 600 Etna, N.H. 03750

Dear Mr. D'Amour:

Please find enclosed the reports, and invoice for the samples that were logged in on, 10-24-2005.

AAI Date Sample Sampled Project Description Sample Location 96640 10-18-2005 11210 / CURRIER RESIDENCE SUMP

To perform these analyses, the following methods were used:

QTY. EPA Methodologies/Applications

1 EPA-8260 VOA Water

Thank you for using Aquarian Analytical Inc. on this project. If I can be of any further help, please feel free to call.

Sincerely,

William M. Rice

Laboratory Director Total Pages = ____

doc. # L23074



Laboratory Services

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11-04-2005,14:30

Project: 11210 / CURRIER RESIDENCE

As part of Aquarian's ongoing quality assurance program, all analyses included the following quality assurance measures.

Samples were received in an acceptable condition.

Samples were prepared and analyzed within the appropriate hold time specified in the method referred to on the analyses sheet.

The instrument that was used for the analyses was calibrated and/or tuned at the required frequency.

A daily calibration check was performed.

A daily blank was run, and contamination was not observed at levels that would affect the analyses.

For all work, internal standards, and surrogates gave appropriate response levels.

Matrix spikes were added where appropriate, and recoveries were within the acceptable range.

Duplicates were run at the frequency specified in the applicable state or federal regulations.

In addition to the above steps, all original-raw data is on file at Aquarian Analytical's offices for inspection when required.

Exceptions (if any)

AQUARIAN ANALYTICAL INC.

Laboratory Services

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Page 1 of 2

Sample # 96640Volatile Organic Report & Oxygenates
11-04-2005,15:55Project= 11210 / CURRIER RESIDENCEMatrix= Water
SamplerDate Sampled= 10-18-2005,13:00Sampler= BRIAN D'AMOUR
LocationDate Logged In= 10-24-2005,16:12Location= SUMP
TownDate of Analysis= 11-03-2005Town= NORWICH

Organic Compound	Result ug	g/L Det.	Lim. ug/L
Benzene	BD		2
Bromobenzene	BD		2
Bromodichloromethane	BD		2
Bromoform	BD		2
Bromomethane	BD		2
Bromochloromethane	BD		2
n-Butylbenzene	BD		2
sec-Butylbenzene	BD		2
tert-Butylbenzene	BD		2
Carbon-Tetrachloride	BD		2
Chlorobenzene	BD		2
Chloroethane	BD		2
Chloroform	BD		2
Chloromethane	BD		3
2-Chlorotoluene	BD		2
4-Chlorotoluene	BD		2
Dibromochloromethane	BD		2
1,2 Dibromo-3-Chloropropane	BD		2
1,2 Dibromoethane	BD		2
Dibromomethane	BD		2
1,2 Dichlorobenzene	BD		2
1,3 Dichlorobenzene	BD		2
1,4 Dichlorobenzene	BD		2
Dichlorodifluoromethane	BD		5
1,1 Dichloroethane	BD		2
1,2 Dichloroethane	BD		2
1,1 Dichloroethene	BD		2
cis-1,2 Dichloroethene	BD		2
trans-1,2 Dichloroethene	BD		2
1,2 Dichloropropane	BD		4
1,3 Dichloropropane	BD		2
2,2 Dichloropropane	BD		2
1,1 Dichloropropene	BD		2
cis-1,3 Dichloropropene	BD		2
trans-1,3 Dichloropropene	BD		2
Ethylbenzene	BD		2
Hexachlorobutadiene	BD		4
Isopropylbenzene	BD		2
p-Isopropyltoluene	BD		2

Laboratory Services

P.O. Box 186 Canterbury, N.H. 03224 Ph. 603-783-9097 . Fax 603-783-0360 Page 2 of 2

Volatile Organic Report & Oxygenates Sample # 96640 11-04-2005,15:55

Project	=	11210 / CURRIER RESIDENCE	Matrix	=	Water
Date Sampled	=	10-18-2005,13:00	Sampler	=	BRIAN D'AMOUR
Date Logged In	=	10-24-2005,16:12	Location	=	SUMP
Date of Analysis	=	11-03-2005	Town	=	NORWICH

Organic Compound	Result ug/L	Det. Lim. ug/L
Organic Compound Methylene Chloride Naphthalene n-Propylbenzene Styrene 1,1,1,2 Tetrachloroethane 1,1,2,2 Tetrachloroethane Tetrachloroethene Toluene 1,2,3 Trichlorobenzene 1,2,4 Trichlorobenzene 1,1,1 Trichloroethane 1,1,2 Trichloroethane 1,2,3 Trichloroethane 1,2,3 Trichloropropane 1,2,4 Trimethylbenzene 1,2,4 Trimethylbenzene 1,3,5 Trimethylbenzene Vinyl Chloride o-Xylene m&p-Xylene Ethyl Ether	Result ug/L BD 13 BD BD BD BD BD BD BD BD BD BD BD BD BD	Det. Lim. ug/L 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2
1,3,5 Trimethylbenzene Vinyl Chloride o-Xylene m&p-Xylene Ethyl Ether Acetone Methylethylketone MEK	5 BD 6 7 BD BD BD BD	2 2 2 2 30 100 50
Methylisobutylketone Tetrahydrofuran Methyl-t-butyl ether Carbon Disulfide 2-Hexanone Diisopropylether Tertbutyl Alcohol Tertamylmethylether Ethyltertbutylether	BD BD 4 BD BD BD BD BD BD	50 30 2 7 50 4 20 4 4 4

Comments:

<u>Method of Analyses = EPA-8260B</u> BD = Below Detection Limit - Results are in parts per billion (ppb).



Aquarian Analytical, Inc.

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Turr	naround Requirements (c	neck one)												ł	Pro	ojec	ct li	nfo	rm	atic	n													
RUS	H SAMPLES NEED PRIOR API	PROVAL	Proje	ct #:		1121	0										F	Proj	ect l	Man	age	r:	Bri	an l	D'A	mo	ur							
San	ne day turnaround (150% upc	harge)	Proje	ct Nar	me:	Curr	ier F	Resi	ider	ice							F	Rep	ort t	o:			Bri	an I	D'A	mo	ur							
24 h	nour turnaround (100% upc	harge)	Town	/Site:		Norv	vich	, Ve	rmo	ont							1	nvo	ice	o:			Pat	hw	ays									
48 t	nour turnaround (50% upch	arge)	Samp	oler:		Bria	D'	Amo	our								F	ho	ne:				(60	3) 6	43-	351	1							
72 1	nour turnaround (25% upch	arge)	Company: Pathways Consulting, LLC. Fax						ax	ax: (603) 643-3533																								
_x_Nor	mal turnaround		Accou	unt #:		4250	0																											
	Sample Informa	tion	-	VOC's-SVOC's Additional					. N	leta	Is		Γ						Oth	ier (list)													
AAI ID#	Sample ID	Date/Time	Sample Matrix	Number of Containers	EPA 524.2 Drinking Water	EPA 8260 / EPA 82608 X FPA 8240 / FPA 624	BTEX / MTBE	BTEX+MTBE+Naphthalene	Chlorinated only	EPA 8270 A-B/N	EPA 82/0 PAH EPA 8015M Gasoline	EPA 8100M Fuel Oil	TIC's added	Oxygenates added	Fingerprint	13 Priority Polutants	RCRA 8	FICUP:	Lab Filtered:	Total:	EPA 608 PCBS	EPA 8081 Pesticide	EPA 8150 Herbicides	EPA SW846-7 Reactivity	EPA 1010 Flashpoint / Ignitabilty	EPA 150.1 / 9045 PH	Alkalinity Methane	EPA 300.0 Nitrate	EPA 300.0 Sulfate	EPA 300.0 Chloride				
94440	Sump	10/18/2005 13:00	L	2		x											1																	
						-			-	-	+				-	-	-	+	+				-	+	+	+	+	-	-			-	-	+
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Relinguished by:	alinguished by: Date: R			Received by:						-																								
Time:										Temperature 3°C																								

Sample Receipt Conditions & Client Conversations

AAI #s	96640	Date	10/24/	οςTime	3: 13 pm
Client	Pathways	C	Contact	Brian I)'Amour
Project	Curriès Lesiden	re			
Sample rece	eived at <u>3</u> .O	_°C			
Discrepancy	/				
Resolution_					
	4				
Changes					

Laboratory Services

P.O. Box 186 Canterbury, N.H. 03224 Ph. 603-783-9097 • Fax 603-783-0360 11-29-2005, 11:33

Mr. Dana Arey Pathways Consulting, LLC 3 School House Lane P.O. Box 600 Etna, N.H. 03750

Dear Mr. Arey:

Please find enclosed the reports, and invoice for the samples that were logged in on, 11-18-2005.

AAI Date Sample Sampled Project Description Sample Location

97361	11-17-2005	11210 /	CURRIER	RESIDENCE	MW-1
97362	11-17-2005	11210 /	CURRIER	RESIDENCE	MW - 2
97363	11-17-2005	11210 /	CURRIER	RESIDENCE	MW - 3

To perform these analyses, the following methods were used:

QTY. EPA Methodologies/Applications

3 VOA + TPH Water gasoline Mod. 8260/8015

Thank you for using Aquarian Analytical Inc. on this project. If I can be of any further help, please feel free to call.

Sincerely, ullion

William M. Rice Laboratory Director Total Pages = <u>14</u>

doc. # L23188



Laboratory Services

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11-29-2005,11:33

Project: 11210 / CURRIER RESIDENCE

As part of Aquarian's ongoing quality assurance program, all analyses included the following quality assurance measures.

Samples were received in an acceptable condition.

Samples were prepared and analyzed within the appropriate hold time specified in the method referred to on the analyses sheet.

The instrument that was used for the analyses was calibrated and/or tuned at the required frequency.

A daily calibration check was performed.

A daily blank was run, and contamination was not observed at levels that would affect the analyses.

For all work, internal standards, and surrogates gave appropriate response levels.

Matrix spikes were added where appropriate, and recoveries were within the acceptable range.

Duplicates were run at the frequency specified in the applicable state or federal regulations.

In addition to the above steps, all original-raw data is on file at Aquarian Analytical's offices for inspection when required.

Exceptions (if any)

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Laboratory Services

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Page 1 of 2

Sample # 97361Volatile Organic Report & Oxygenates
11-29-2005,11:30Project= 11210 / CURRIER RESIDENCEMatrix= Water
SampledDate Sampled= 11-17-2005,11:50Sampler= BRIAN D'AMOUR
Location = MW-1
TownDate of Analysis= 11-24-2005Town= NORWICH

Organic Compound	Result ug/L	Det. Lim. ug/L
Organic Compound Benzene Bromobenzene Bromodichloromethane Bromoform Bromomethane Bromochloromethane n-Butylbenzene sec-Butylbenzene tert-Butylbenzene Carbon-Tetrachloride Chlorobenzene Chlorobenzene Chlorotoluene 2-Chlorotoluene 4-Chlorotoluene Dibromochloromethane 1,2 Dibromo-3-Chloropropane 1,2 Dibromoethane Dibromomethane 1,2 Dichlorobenzene 1,3 Dichlorobenzene	Result ug/L BD BD BD BD BD BD BD BD BD BD	Det. Lim. ug/L 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
1,4 Dichlorobenzene Dichlorodifluoromethane 1,1 Dichloroethane 1,2 Dichloroethane 1,1 Dichloroethene cis-1,2 Dichloroethene trans-1,2 Dichloroethene 1,2 Dichloropropane 1,3 Dichloropropane 2,2 Dichloropropane 1,1 Dichloropropene cis-1,3 Dichloropropene trans-1,3 Dichloropropene Ethylbenzene Hexachlorobutadiene Isopropylbenzene p-Isopropyltoluene	BD BD BD BD BD BD BD BD BD BD BD BD BD B	2 5 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2



Laboratory Services

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Page 2 of 2

Volatile Organic Report & Oxygenates Sample # 97361 11-29-2005,11:30

Project	=	11210 / CURRIER RESIDENCE	Matrix	=	Water
Date Sampled	=	11-17-2005,11:50	Sampler	=	BRIAN D'AMOUR
Date Logged In	=	11-18-2005,11:35	Location	=	MW-1
Date of Analysis	=	11-24-2005	Town	=	NORWICH

Organic Compound	Result ug/	L Det. Lim. ug/L	
Methylene Chloride Naphthalene n-Propylbenzene Styrene 1,1,1,2 Tetrachloroethane 1,1,2,2 Tetrachloroethane Tetrachloroethene Toluene 1,2,3 Trichlorobenzene 1,2,4 Trichlorobenzene 1,1,1 Trichloroethane 1,1,2 Trichloroethane Trichlorofluoromethane 1,2,3 Trichloropropane 1,2,4 Trimethylbenzene 1,3,5 Trimethylbenzene Vinyl Chloride o-Xylene m&p-Xylene Ethyl Ether Acetone Methylethylketone MEK Methylisobutylketone Tetrahydrofuran Methyl-t-butyl ether Carbon Disulfide 2-Hexanone Diisopropylether Tertbutyl Alcohol	BD BD BD BD BD BD BD BD BD BD BD BD BD B	L Det. Lim. ug/L 4 4 2 2 2 2 2 2 2 2 2 2 2 2 2	
Ethyltertbutylether	BD	4	

Comments:

<u>Method of Analyses = EPA-8260B</u> BD = Below Detection Limit - Results are in parts per billion (ppb).



Laboratory Services

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Page 1 of 2

Sample # 97362 Volatile Organic Report & Oxygenates 11-29-2005,11:30

Project= 11210 / CURRIER RESIDENCEMatrix= WaterDate Sampled= 11-17-2005,12:40Sampler= BRIANDate Logged In= 11-18-2005,11:36Location= MW-2Date of Analysis= 11-24-2005Town= NORWIC

-

Sampler = BRIAN D'AMOUR Town = NORWICH

Organic Compound	Result ug/I	Det. Lim. ug/L
Benzene	BD	5
Bromobenzene	BD	5
Bromodichloromethane	BD	5
Bromotorm	BD	5
Bromomethane	BD	5
Bromochloromethane	BD	5
n-Butylbenzene	BD	5
sec-Butylbenzene	BD	5
tert-Butylbenzene	BD	5
Carbon-Tetrachloride	BD	5
Chlorobenzene	BD	5
Chloroethane	BD	5
Chloroform	BD	5
Chloromethane	BD	15
2-Chiorotoluene	BD	5
4-Chiorotoluene	BD	5
Dibromochloromethane	BD	5
1,2 Dibromo-3-Chloropropane	BD	5
1,2 Dibromoethane	BD	5
Dibromomethane	BD	5
1,2 Dichlorobenzene	BD	5
1,3 Dichlorobenzene	BD	5
1,4 Dichlorobenzene	BD	5
Dichlorodifluoromethane	BD	13
1,1 Dichloroethane	BD	5
1,2 Dichloroethane	BD	5
1,1 Dichloroethene	BD	5
cis-1,2 Dichloroethene	BD	5
trans-1,2 Dichloroethene	RD	5
1,2 Dichloropropane	BD	10
1,3 Dichloropropane	BD	5
2,2 Dichloropropane	BD	5
1,1 Dichloropropene	BD	5
cis-1,3 Dichloropropene	BD	5
trans-1,3 Dichloropropene	BD	5
Ethylbenzene	BD	5
Hexachlorobutadiene	BD	10
Isopropylbenzene	BD	5
p-isopropyitoiuene	RD	5

Laboratory Services

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Page 2 of 2

Sample # 97362 Volatile C

Volatile Organic Report & Oxygenates 11-29-2005,11:30

=	11210 / CURRIER RESIDENCE	Matrix	=	Water
=	11-17-2005,12:40	Sampler	=	BRIAN D'AMOUR
=	11-18-2005,11:36	Location	=	MW - 2
=	11-24-2005	Town	=	NORWICH
	1 1 1	= 11210 / CURRIER RESIDENCE = 11-17-2005,12:40 = 11-18-2005,11:36 = 11-24-2005	= 11210 / CURRIER RESIDENCE Matrix = 11-17-2005,12:40 Sampler = 11-18-2005,11:36 Location = 11-24-2005 Town	= 11210 / CURRIER RESIDENCE Matrix = = 11-17-2005,12:40 Sampler = = 11-18-2005,11:36 Location = = 11-24-2005 Town =

Organic Compound	Result ug/L	Det. Lim. ug/L	
Methylene Chloride Naphthalene n-Propylbenzene Styrene 1,1,1,2 Tetrachloroethane 1,1,2,2 Tetrachloroethane Tetrachloroethene Toluene 1,2,3 Trichlorobenzene 1,2,4 Trichloroethane 1,1,1 Trichloroethane 1,1,2 Trichloroethane Trichlorofluoromethane 1,2,3 Trichloropropane 1,2,4 Trimethylbenzene Vinyl Chloride o-Xylene Methylethylketone MEK Methylisobutylketone Tetrahydrofuran Methyl-t-butyl ether Carbon Disulfide 2-Hexanone Diisopropylether Tertbutyl Alcohol Tertamylmethylether	BD BD BD BD BD BD BD BD BD BD BD BD BD B	10 10 5 5 5 5 5 5 5 5 5 5 5 5 5	
PenArcerendeArecher	DD	TO	1

Comments:

Method of Analyses = EPA-8260B

BD = Below Detection Limit - Results are in parts per billion (ppb).



Laboratory Services

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Page 1 of 2

Sample # 97363 Volatile Organic Report & Oxygenates 11-29-2005,11:30 Project = 11210 / CURRIER RESIDENCE Matrix = Water Date Sampled = 11-17-2005,12:18 Sampler = BRIAN D'AMOUR Date Logged In = 11-18-2005,11:36 Location = MW-3 Date of Analysis = 11-24-2005 Town = NORWICH

Organic Compound	Result ug	J/L Det. Lim. ug/L
Benzene	BD	2
Bromobenzene	BD	2
Bromodichloromethane	BD	2
Bromoform	BD	2
Bromomethane	BD	2
Bromochloromethane	BD	2
n-Butvlbenzene	BD	2
sec-Butylbenzene	BD	2
tert-Butylbenzene	BD	2
Carbon-Tetrachloride	BD	2
Chlorobenzene	BD	2
Chloroethane	BD	2
Chloroform	BD	2
Chloromethane	BD	6
2-Chlorotoluene	BD	2
4-Chlorotoluene	BD	2
Dibromochloromethane	BD	2
1,2 Dibromo-3-Chloropropane	BD	2
1,2 Dibromoethane	BD	2
Dibromomethane	BD	2
1,2 Dichlorobenzene	BD	2
1,3 Dichlorobenzene	BD	2
1,4 Dichlorobenzene	BD	2
Dichlorodifluoromethane	BD	5
1,1 Dichloroethane	BD	2
1,2 Dichloroethane	BD	2
1,1 Dichloroethene	BD	2
cis-1,2 Dichloroethene	BD	2
trans-1,2 Dichloroethene	BD	2
1,2 Dichloropropane	BD	4
1,3 Dichloropropane	BD	2
2,2 Dichloropropane	BD	2
1,1 Dichloropropene	BD	2
cis-1,3 Dichloropropene	BD	2
trans-1,3 Dichloropropene	BD	2
Ethylbenzene	BD	2
Hexachlorobutadiene	BD	4
Isopropylbenzene	BD	2
p-Isopropyltoluene	BD	2

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Sample # 97363 Volatile Organic Report & Oxygenates 11-29-2005,11:30

Project	=	11210 / CURRIER RESIDENCE	Matrix	=	Water
Date Sampled	=	11-17-2005,12:18	Sampler	=	BRIAN D'AMOUR
Date Logged In	=	11-18-2005,11:36	Location	=	MW-3
Date of Analysis	=	11-24-2005	Town	=	NORWICH

Organic Compound	Result ug/L	Det. Lim. ug/L
Methylene Chloride Naphthalene n-Propylbenzene	BD BD BD	4 4 2
Styrene	BD	2
1,1,1,2 Tetrachloroethane	BD	2
Tetrachloroethere	BD	2
Toluene	BD	2
1,2,3 Trichlorobenzene	BD	4
1,2,4 Trichlorobenzene	BD	4
1,1,1 Trichloroethane	BD	2
1,1,2 Trichloroethane	BD	2
Trichlorofluoromethane		2
1.2.3 Trichloropropane	BD	2
1,2,4 Trimethylbenzene	BD	2
1,3,5 Trimethylbenzene	BD	2
Vinyl Chloride	BD	2
o-Xylene	BD	2
m&p-Xylene	BD	2
Ethyl Ether	BD	30
Methylethylketone MEK	BD	50
Methylisobutylketone	BD	50
Tetrahydrofuran	BD	30
Methyl-t-butyl ether	BD	2
Carbon Disulfide	BD	7
2-Hexanone	BD	50
Dilsopropylether	BD	4
Tertbutyl Alconol Tertamulmethylether		20
Ethyltertbutylether	BD	4

Comments:

Method of Analyses = EPA-8260B

BD = Below Detection Limit - Results are in parts per billion (ppb).

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> TPH only Report 11-29-2005,11:31 Sample 97361

Project	= 11210 / CURRIER RESIDENCE	
Date Sampled	= 11-17-2005,11:50	
Date Logged In	= 11-18-2005,11:35	
Date Analyzed	= 11-24-2005	
Person Sampling	= BRIAN D'AMOUR	
Location	= MW-1	
Town	= NORWICH	Sample Matrix = Water

Organic Compound	Result ug/L	Detection Limit ug/L
Total Petroleum Hydrocarbon	BD	0.20
Method = purge-trap-GC/MS (gasoline standard)		results are expressed in parts per million (ppm)

Comments:

BD = Below Detection Limit



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> TPH only Report 11-29-2005,11:31 Sample 97362

Project	= 11210 / CURRIER RESIDENCE	
Date Sampled	= 11-17-2005,12:40	
Date Logged In	= 11-18-2005,11:36	
Date Analyzed	= 11-24-2005	
Person Sampling	= BRIAN D'AMOUR	
Location	= MW-2	
Town	= NORWICH	Sample M

Sample Matrix = Water

Organic Compound	Result ug/L	Detection Limit ug/L
Total Petroleum Hydrocarbon	BD	0.50
Method = purge-trap-GC/MS (gasoline standard)		results are expressed in parts per million (ppm)

Comments:

BD = Below Detection Limit



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> TPH only Report 11-29-2005,11:31 Sample 97363

Project	= 11210 / CURRIER RESID	ENCE
Date Sampled	= 11-17-2005,12:18	
Date Logged In	= 11-18-2005,11:36	
Date Analyzed	= 11-24-2005	
Person Sampling	= BRIAN D'AMOUR	
Location	= MW-3	
Town	= NORWICH	

Sample Matrix = Water

Organic Compound	Result ug/L	Detection Limit ug/L
Total Petroleum Hydrocarbon	BD	0.20
Method = purge-trap-GC/MS (gasoline standard)		results are expressed in parts per million (ppm)

Comments:

BD = Below Detection Limit



Aquarian Analytical, Inc.

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Turnaround Requirements (check one)														F	roj	ject	Inf	orn	nati	on													
RUSH SAMPLES NEED PRIOR APPROVAL				Project #: 11210										Project Manager: Dana Arey																			
Same day turnaround (150% upcharge)			Proje	ct Nar	ne:	Currier Residence									Report to: Dana Arey																		
24 hour turnaround (100% upcharge)			Town	/Site:	Norwich, Vermont									Invoice to: Pathways																			
48 hour turnaround (50% upcharge)			Samp	oler:	Brian D'Amour P									Phone: (603) 643-3511																			
72 hour turnaround (25% upcharge)			Comp	bany:	Pathways Consulting, LLC. F								Fax: (603) 643-3533																				
_xNormal turnaround			Accou	unt #:	42500																												
Sample Information						VOC's-SVOC's						Additional					Metals					Other (list)											
AAI ID#	Sample ID	Date/Time	Sample Matrix	Number of Containers	EPA 524.2 Drinking Water	EPA 8260 / EPA 8260B X EPA 8240 / EPA 624	BTEX / MTBE	BTEX+MTBE+Naphthalene	Chlorinated only	EPA 82/0 A-B/N EDA 8270 DAH	EPA 8015M Gasoline	EPA 8100M Fuel OII	TIC's added	Oxygenates added	Fingerprint	13 Priority Polutants RCRA 8	TCLP:	Field Filtered:	Lab Filtered:	EPA 608 PCBS	EPA 8081 Pesticide	EPA 8150 Herbicides	EPA SW846-7 Reactivity	EPA 1010 Flashpoint / Ignitabilty	EPA 150.1 / 9045 pH	Alkalinity	Methane	EPA 300.0 Nitrate	EPA 300.0 Sultate EPA 300 0 Chloride	See Notes			
97361	MW-1	11/17/05 11:50	L	2	H			х	1	+	T				T					T													
97362	MW-2	11/17/05 12:40	L	2				х			Т				T		Γ																
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Relinquished by: Date: 11/1/65 Time: 1600					Received by: FED EX Notes:																												
Relinquished by: ECDCY Date: 11-18-0.3		5		Rec	Received by:																												
/ EUEA Time: //60				Passing by																													
Reinquisned by: Date:				Noonoo oj.									Temperature 3 °C																				