GROVER
ENGINEERING PC

Water and Wastewater - Site Design
Stormwater Management - Environmental Consulting

2044 Main Road, Huntington, Vermont 05462
phone: 802-434-2989; email: dean@groverengineeringpc.com

To: **Paul Craven, Vermont Railway, Inc**
From: **Dean Grover, PE, Grover Engineering PC**
Re: **Burlington Yard Site Investigation and Pipe Grouting – Phase I**
Date: **July 8, 2014**

On June 10, 2014, Grover Engineering PC assisted with site investigation work around and witnessed subsequent grouting of the 8-inch clay drainage line entering the main storm trunk under Vermont Rail System's Burlington Yard. Michael Mainer from Grover Engineering PC inspected soils, collected soil and liquid samples, screened soils via PID headspace analysis, took photographs of the work and offered additional technical support as necessary. Dean Grover was consulted at key points of the investigation by phone.

Paul Craven, Selden Houghton and Dave Wulfson were present on behalf of Vermont Railway. Hugo Martinez-Cazon and Tim Grover were present for most of the work on behalf of the State of Vermont Agency of Natural Resources and the City of Burlington Department of Public Works, respectively. The actual grouting of the pipe was performed by Vermont Well and Pump. All excavations were made by Roger Fisher (working for Vermont Rail) using a backhoe.

This work was performed roughly as described in the June 4, 2014 work plan prepared by Vermont Railway, Inc. and the Vermont Agency of Natural Resources June 9, 2014 review letter, with some modifications as the work progressed. For site history leading up to this work and for the results of sampling conducted inside the City of Burlington's drainage system on the site, refer to the Site Investigation Report prepared by Stone Environmental on November 12, 2014.

Note that Burlington DPW personnel had previously plugged the 8-inch clay pipe just upstream of its terminus in the storm trunk line in late March 2014 using a plumber's plug.

Locations of test pits, piping and other relevant features are shown on the attached sketch. All laboratory samples were placed in containers provided by Endyne Inc, of Williston Vermont and were stored on ice under GEPC custody. Analytical reports provided by Endyne are attached.

Test Pit Investigation, Soil & Liquid Sampling

Before starting work, Selden closed out Tracks #6 through #8, which run through the work area. The Department of Public Works had located subsurface sewer and drainage lines in the area and had marked their location with green and black paint.

The first excavation, TP-1 was located approximately 10 feet west of Track #6. This test pit exposed both the 36-inch concrete sewer and the 8-inch clay pipe running parallel to and immediately north of it. The 8-inch clay pipe was located 96-inches below grade and had a visible bell-and-spigot joint with a bitumastic gasket that appeared to be water-tight.

The soils in this area were composed of granular fill material (including masonry fragments and cinders) to a depth of approximately 52-inches. Below this was native, loose medium sand to a depth of 77-inches, below which was a wet, gray-blue silty fine sand to the depth of the pit. The water table in this pit was encountered at 101-inches. The finer material smelled faintly of petroleum and had a PID response of 15 to 100 ppm. This material was sampled as **TP-1-1** for laboratory analysis. All other material in this test pit showed a negligible PID response.

After breaking open the 8-inch clay pipe, approximately 100 gallons of petroleum-laden water flowed out. A plug had been inserted by the city of Burlington in late March 2014 to eliminate 2 to 4 gallons per minute of water from the clay pipe flowing into the city stormwater system. The free product fraction of petroleum-laden water from the broken pipe was reddish-brown and smelled like kerosene. After sampling this material as **L-1** (intending to sample only the aqueous phase but also inadvertently collecting some free product), it was pumped into a 500-gallon steel tank owned by Vermont Rail for future disposal. After removing the remaining free product with sorbent pads, Tim Grover gave permission for the non-oily liquid to be pumped into the nearby sewer manhole.

A push camera and radio-locator provided by Hartigan's was used to track the pipe towards the Macintyre Fuels loading racks. Refusal was encountered at approximately 80-feet east of TP-1. Two strong signals were found, one under the loading racks, and one approximately 25 feet southeast of the loading racks. During the camera work, no branches or tees were observed, though there were many sags in the pipe that were filled with liquid, making visibility poor.

Test pit TP-2 was dug 25-feet south of the loading racks, but no pipe was found to a depth of 90-inches. Soils were dense fill material composed of cinders and masonry fragments, with no PID response. This test pit was abandoned and later backfilled.

Test pit TP-3 was opened just to the east of the fuel loading racks, where the pipe would be assumed to be if it continued in the same direction. Material in this area was similar to TP-1, with fill material to 49-inches, overlying native fine blue-gray sand. Groundwater was encountered at 68-inches. The 8-inch clay pipe was encountered and broken open in this pit at a depth of 73-inches below grade. The PID was immediately inserted into the broken pipe, and the reading was over 50 ppm (the concentration that caused the alarm to trigger on the H-Nu). In addition, globules were seen in the pipe at the location of the break, It carried approximately 2 to 4 gallons per minute of clear water. This liquid was sampled twice: as sample **L-3**, taken when the line was initially broken open, and **L-3B**, taken when a milky sheen appeared while feeding the camera. No soil sample in this test pit gave a PID response over 1 ppm. Soil sample **TB3-1** was collected for laboratory analysis from the sandy material around the pipe.

A long piece of 1-inch waterline was pushed from TP-1, past the blockage and into TP-3, and red dye dropped into TP-3 was found in TP-1, confirming that the two sections of pipe are contiguous. Using their push-camera and radio-locator, the City of Burlington attempted to identify the location of the pipe further east. They were

able to feed their camera another 200-feet east of TP-3, finding the pipe somewhere under the parking lots to the east of the Vermont Rail facility, heading northeast but with no identifiable destination.

A testing of the fuel lines for the fuel transload facility was performed by the fuel terminal company, and is summarized in a separate report.

Grouting & Backfilling

Vermont Well and Pump completely grouted the 8-inch clay pipe, from the pipe's western terminus at the storm trunk line to approximately 20 feet beyond the eastern Vermont Rail property line. Grouting was done using a 1.5-inch HDPE tremie pipe. A total of twenty-seven 50-pound bags of "Grout Well DF" bentonite grout were used. Each section was grouted by inserting the tremie and pumping a thick grout mixture until grout returned from the end of the 8-inch clay pipe.

The section downstream from TP-1 to the trunk storm line was grouted first, followed by a section upstream from TP-1. Grouting of both of these sections returned globules of petroleum. After moving the grouting system, the section from TP-3 upstream (east) to 20 feet past the eastern property line was grouted. This returned a milky sheen but no petroleum globules. Grouting of the final section, downstream from TP-3 returned globules of petroleum. After grouting was completed all test pits were backfilled using excavated material. A 4-inch PVC hand-slotted monitoring well was installed to the bottom of TP-1 at this time, approximately two feet north of the 8-inch clay pipe. The bottom approximately 5-feet of this well was slotted.

Piezometer Inspection

There are three existing monitoring well piezometers in this area of the site. All three are located just east of Track #8, and are shown on the attached sketch, as P-1, P-2 and P-3. It is not known who, why, when or how these were installed. Each of these have 1-inch uncapped PVC casings extending approximately 18-inches above grade. Using a tape measure, they were found to be 8 to 11 feet deep. After inserting a tape measure to the bottom of P-2, and then removing it, the tape measure smelled strongly of kerosene. Inserting a different tape measure into wells P-1 and P-3, and upon removal, there was no odor detected.

Laboratory Analyses

All samples were stored on ice under GEPC custody, and submitted to Endyne for analysis via EPA Method 8015 - Total Petroleum Hydrocarbons – Diesel Range Organics (TPH-DRO), and EPA Method 8021 (VT Petroleum List). The 8021 test identified several hydrocarbons typical of diesel-range fuels, generally in concentrations that mirrored the total petroleum hydrocarbon concentrations.

Liquid Samples – Summary Table	Hydrocarbon Window	Total Petroleum Hydrocarbons	Toluene	Ethylbenzene	Xylenes, Total	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene
		mg/L	ug/L	ug/L	ug/L	ug/L	ug/L
L-1 (downstream)	C8-C28	682	957	1,180	8,760	3,190	4,660
L-3 (upstream)	N/A	<0.40	1.4	<1.0	2.3	<1.0	<1.0
L-3B (upstream, w/ sheen)	N/A	<0.40					

Note that there was a significant amount of petroleum identified in sample L-1, with virtually none detected in sample L-3. A fuel identification test performed on the free product fraction of L-1 identified the liquid as Kerosene or #2 Fuel Oil. Compounds such as MTBE and benzene were below detection limits, indicating that there is little if any gasoline present.

Soil Samples – Summary Table	Hydrocarbon Window	Total Petroleum Hydrocarbons	Toluene	Ethylbenzene	Xylenes, Total	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene
		mg/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
TP-1-1	C14-C36	11.2	<12.0	<12.0	<24.0	27.8	<12.0
TP-3-1	C14-C36	18.4					

Soil samples from both test pits showed modest, roughly equivalent diesel-range petroleum contamination. Note that based on PID measurements sample TP-1-1 should have a higher TPH content than TP-3-1. Therefore it is possible that sample TP-1-1 contains volatile hydrocarbons that generate a PID response, but are not diesel-range hydrocarbons, or that TP-3-1 was contaminated during handling or before collection, possibly via residual free product transferred to TP-3 from TP-1 on the excavation equipment or on footwear.

Conclusions

The upstream liquid samples taken from TP-3 approximately 20 minutes after the pipe was broken contained virtually no diesel-range organics, however, when the pipe was first opened, and the PID inserted a relatively high concentration of hydrocarbons was detected. Liquid sampled from TP-1 was effectively saturated with diesel-range organics and contained a significant amount of free product.. Further analysis of the clay pipe between TP-1 and TP-3, and upstream, is required in the Phase II investigation of this location.

The strong kerosene odor detected on the tape measure from piezometer P-2 and the proximity of P-2 and the 8-inch clay pipe may require further investigation. Groundwater and any free product that is potentially discovered from this area will need to be sampled and analyzed. The lack of evidence of contamination in piezometers P-1 and P-3, and the limited contamination found in TP-1 and TP-3 (which surround P-2) indicate that any contamination is probably localized.

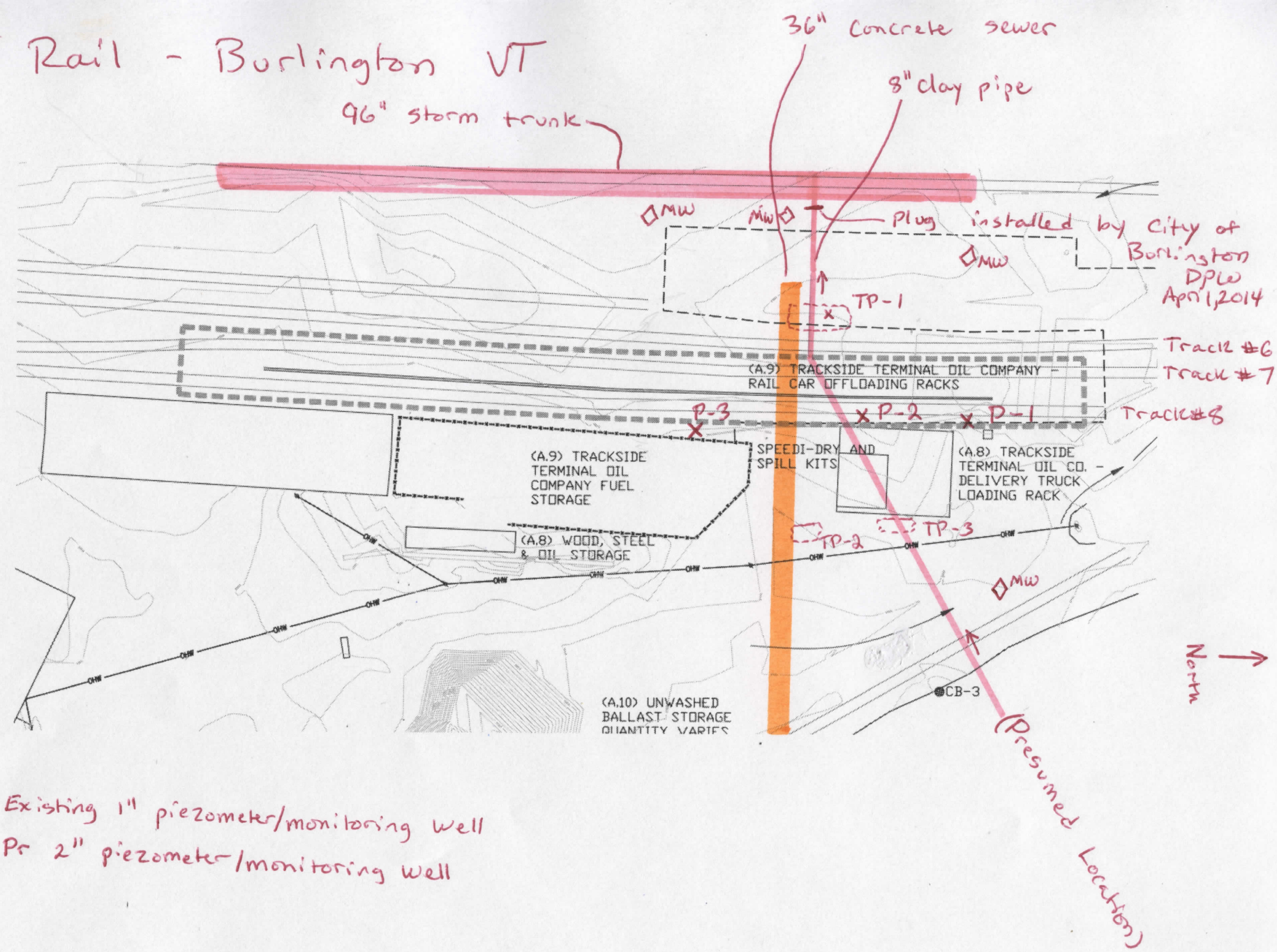
The 8-inch clay pipe has been grouted sufficiently to eliminate it as a preferential contaminant pathway relative to the fairly permeable sand and fill material found under the site. There was some evidence of sandy pipe bedding around the clay pipe which may provide a possible pathway, albeit one that has a much lower capacity and is not directly connected into the storm trunk line. Contact was made with the Burlington wastewater treatment plant and no other sheens have been observed since the pipe was grouted. The plumber's plug is still installed in the terminus of the pipe.

Recommendations

We recommend installation of additional monitoring wells to further define the origin, degree and extent of subsurface contamination. Four recommended locations of new wells are provided on the site sketch. The well at the east, up-gradient property line would determine whether any contamination originates offsite. We recommend installing 2-inch diameter wells with 10-foot factory-slotted screens and sand packs. Additionally, existing piezometer P-2 should be bored and re-installed as a 2-inch diameter well as described above. The relatively large diameters would leave more options for remedial activities if necessary. Bentonite seals above the screened sections would be provided, and the wells would be finished with flush-mounted curb boxes to eliminate tripping hazards. Following installation and equilibration for about a week, all wells would be checked for depth to the water table and presence/thickness of free product. Fingerprint analyses would be performed of any wells containing free product to help identify the distillate of petroleum present. Wells without any product would be tested for TPH (EPA Method 8015). Preparation of a groundwater contour map and spatial evaluation of the distribution of contamination should be sufficient to determine what if any remedial measures are required. There are limited receptors at this industrial, urban site, so hand-bailing of wells to remove free product may be considered a sufficient remedy if the extent of contamination is well-known.

We further recommend that PID headspace analyses be performed of the interstitial spaces between primary and secondary piping for all double-walled underground piping present at this fuel handling facility. Both ends of each pipe should be evaluated, where the pipes come above ground. A negative headspace analysis of these sleeves would more conclusively rule out this subsurface piping as a source of contamination.

VT Rail - Burlington VT



X = Existing 1" piezometer/monitoring well

◇ = Pr 2" piezometer/monitoring well

Dwg by MJM 6/23/2014 based on sketch made 6/10/2014

Not to Scale

ENDYNE Inc.
Environmental Laboratories

Vermont Railway	
1 Railway Lane	100642
Burlington, VT 05401	
Atten: Selden Houghton	

PROJECT: VT Rail Burlington
WORK ORDER: **1406-11104**
DATE RECEIVED: June 11, 2014
DATE REPORTED: June 17, 2014
SAMPLER: Michael Mainer

Laboratory Report

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. All required method quality control elements including instrument calibration were performed in accordance with method requirements and determined to be acceptable unless otherwise noted.

The column labeled Lab/Tech in the accompanying report denotes the laboratory facility where the testing was performed and the technician who conducted the assay. A "W" designates the Williston, VT lab under NELAC certification ELAP 11263; "R" designates the Lebanon, NH facility under certification NH 2037 and "N" the Plattsburgh, NY lab under certification ELAP 11892. "Sub" indicates the testing was performed by a subcontracted laboratory. The accreditation status of the subcontracted lab is referenced in the corresponding NELAC and Qual fields.

The NELAC column also denotes the accreditation status of each laboratory for each reported parameter. "A" indicates the referenced laboratory is NELAC accredited for the parameter reported. "N" indicates the laboratory is not accredited. "U" indicates that NELAC does not offer accreditation for that parameter in that specific matrix. Test results denoted with an "A" meet all National Environmental Laboratory Accreditation Program requirements except where denoted by pertinent data qualifiers. Test results are representative of the samples as they were received at the laboratory

Endyne, Inc. warrants, to the best of its knowledge and belief, the accuracy of the analytical test results contained in this report, but makes no other warranty, expressed or implied, especially no warranties of merchantability or fitness for a particular purpose.

Reviewed by:

Harry B. Locker, Ph.D.
Laboratory Director

Laboratory Report DATE REPORTED: 06/17/2014

CLIENT: Vermont Railway
PROJECT: VT Rail Burlington

WORK ORDER: **1406-11104**
DATE RECEIVED: 06/11/2014

001 Site: TP-1-1 Date Sampled: 6/10/14 Time: 9:08

Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
Vt Petroleum List							
Prep EPA 5035A High Level	Complete		EPA 5035A-H	6/16/14	W MHM	A	
Methyl-t-butyl ether (MTBE)	< 24.0	ug/Kg, Dry	EPA 8260C	6/12/14	W MHM	A	
Benzene	< 12.0	ug/Kg, Dry	EPA 8260C	6/16/14	W MHM	A	
Toluene	< 12.0	ug/Kg, Dry	EPA 8260C	6/16/14	W MHM	A	
Ethylbenzene	< 12.0	ug/Kg, Dry	EPA 8260C	6/16/14	W MHM	A	
Xylenes, Total	< 24.0	ug/Kg, Dry	EPA 8260C	6/16/14	W MHM	A	
1,3,5-Trimethylbenzene	27.8	ug/Kg, Dry	EPA 8260C	6/16/14	W MHM	A	
1,2,4-Trimethylbenzene	< 12.0	ug/Kg, Dry	EPA 8260C	6/16/14	W MHM	A	
Naphthalene	< 24.0	ug/Kg, Dry	EPA 8260C	6/12/14	W MHM	A	
Surr. 1 (Dibromofluoromethane)	83	%	EPA 8260C	6/16/14	W MHM	U	
Surr. 2 (Toluene d8)	93	%	EPA 8260C	6/16/14	W MHM	U	
Surr. 3 (4-Bromofluorobenzene)	111	%	EPA 8260C	6/16/14	W MHM	U	
Unidentified Peaks	0		EPA 8260C	6/16/14	W MHM	U	
TPH DRO Package							
Ultrasonic Extraction	Completed		EPA 3550B	6/13/14	W FAA	A	
C7-C10 TPH	< 3.0	mg/Kg, dry	EPA 8015B	6/16/14	W MDP	U	
C10-C28 TPH-DRO	8.58	mg/Kg, dry	EPA 8015B	6/16/14	W MDP	A	
C28-C40 TPH	2.67	mg/Kg, dry	EPA 8015B	6/16/14	W MDP	U	
Tot. Petroleum Hydrocarbons	11.2	mg/Kg, dry	EPA 8015B	6/16/14	W MDP	U	
Hydrocarbon Window	C14-C36		EPA 8015B	6/16/14	W MDP	U	

002 Site: L-1 (Aqueous fraction) Date Sampled: 6/10/14 Time: 8:21

Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
Vt Petroleum List 8021B							
Methyl-t-butyl ether (MTBE)	< 1,000	ug/L	EPA 8021B	6/13/14	W SJM	N	
Benzene	< 500	ug/L	EPA 8021B	6/13/14	W SJM	N	
Toluene	957	ug/L	EPA 8021B	6/13/14	W SJM	N	
Ethylbenzene	1,180	ug/L	EPA 8021B	6/13/14	W SJM	N	
Xylenes, Total	8,760	ug/L	EPA 8021B	6/13/14	W SJM	N	
1,3,5-Trimethylbenzene	3,190	ug/L	EPA 8021B	6/13/14	W SJM	N	
1,2,4-Trimethylbenzene	4,660	ug/L	EPA 8021B	6/13/14	W SJM	N	
Naphthalene	< 1,000	ug/L	EPA 8021B	6/13/14	W SJM	N	
Surr. 1 (Bromobenzene)	101	%	EPA 8021B	6/13/14	W SJM	N	
Unidentified Peaks	>10		EPA 8021B	6/13/14	W SJM	N	
TPH DRO Package							
Extraction Mod. EPA 3510C	Completed		EPA 3510C mod.	6/12/14	W MDP	U	
C7-C10 TPH	47.3	mg/L	EPA 8015D	6/13/14	W MDP	U	
C10-C28 TPH-DRO	635	mg/L	EPA 8015D	6/13/14	W MDP	N	
C28-C40 TPH	< 15.0	mg/L	EPA 8015D	6/13/14	W MDP	U	
Tot. Petroleum Hydrocarbons	682	mg/L	EPA 8015D	6/13/14	W MDP	U	
Hydrocarbon Window	C8-C28		EPA 8015D	6/13/14	W MDP	U	

003 Site: TP-3-1 Date Sampled: 6/10/14 Time: 15:57

Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.

Laboratory Report DATE REPORTED: 06/17/2014

CLIENT: Vermont Railway
PROJECT: VT Rail Burlington

WORK ORDER: **1406-11104**
DATE RECEIVED: 06/11/2014

003 Site: TP-3-1 Date Sampled: 6/10/14 Time: 15:57

Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
TPH DRO Package							
Ultrasonic Extraction	Completed		EPA 3550B	6/13/14	W FAA	A	
C7-C10 TPH	< 3.0	mg/Kg, dry	EPA 8015B	6/13/14	W MDP	U	
C10-C28 TPH-DRO	9.53	mg/Kg, dry	EPA 8015B	6/13/14	W MDP	A	
C28-C40 TPH	8.88	mg/Kg, dry	EPA 8015B	6/13/14	W MDP	U	
Tot. Petroleum Hydrocarbons	18.4	mg/Kg, dry	EPA 8015B	6/13/14	W MDP	U	
Hydrocarbon Window	C14-C36		EPA 8015B	6/13/14	W MDP	U	

004 Site: L-3 Date Sampled: 6/10/14 Time: 14:45

Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
Vt Petroleum List 8021B							
Methyl-t-butyl ether (MTBE)	< 2.0	ug/L	EPA 8021B	6/13/14	W SJM	N	
Benzene	< 1.0	ug/L	EPA 8021B	6/13/14	W SJM	N	
Toluene	1.4	ug/L	EPA 8021B	6/13/14	W SJM	N	
Ethylbenzene	< 1.0	ug/L	EPA 8021B	6/13/14	W SJM	N	
Xylenes, Total	2.3	ug/L	EPA 8021B	6/13/14	W SJM	N	
1,3,5-Trimethylbenzene	< 1.0	ug/L	EPA 8021B	6/13/14	W SJM	N	
1,2,4-Trimethylbenzene	< 1.0	ug/L	EPA 8021B	6/13/14	W SJM	N	
Naphthalene	< 2.0	ug/L	EPA 8021B	6/13/14	W SJM	N	
Surr. 1 (Bromobenzene)	100	%	EPA 8021B	6/13/14	W SJM	N	
Unidentified Peaks	1		EPA 8021B	6/13/14	W SJM	N	
TPH DRO Package							
Extraction Mod. EPA 3510C	Completed		EPA 3510C mod.	6/12/14	W MDP	U	
C7-C10 TPH	< 0.40	mg/L	EPA 8015D	6/12/14	W MDP	U	
C10-C28 TPH-DRO	< 0.40	mg/L	EPA 8015D	6/12/14	W MDP	N	
C28-C40 TPH	< 0.40	mg/L	EPA 8015D	6/12/14	W MDP	U	
Tot. Petroleum Hydrocarbons	< 0.40	mg/L	EPA 8015D	6/12/14	W MDP	U	
Hydrocarbon Window	NA		EPA 8015D	6/12/14	W MDP	U	

005 Site: L-3B Date Sampled: 6/10/14 Time: 15:34

Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
TPH DRO Package							
Extraction Mod. EPA 3510C	Completed		EPA 3510C mod.	6/12/14	W MDP	U	
C7-C10 TPH	< 0.40	mg/L	EPA 8015D	6/12/14	W MDP	U	
C10-C28 TPH-DRO	< 0.40	mg/L	EPA 8015D	6/12/14	W MDP	N	
C28-C40 TPH	< 0.40	mg/L	EPA 8015D	6/12/14	W MDP	U	
Tot. Petroleum Hydrocarbons	< 0.40	mg/L	EPA 8015D	6/12/14	W MDP	U	
Hydrocarbon Window	NA		EPA 8015D	6/12/14	W MDP	U	

006 Site: L-1 (Product fraction) Date Sampled: 6/10/14 0:00

Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
Hydrocarbon Range	C8-C24		EPA 8015D	6/12/14	W MDP	U	
Fuel Identification	Kerosene/#2 Oil		EPA 8015D	6/12/14	W MDP	U	AN1

Laboratory Report DATE REPORTED: 06/17/2014

CLIENT: Vermont Railway
PROJECT: VT Rail Burlington

WORK ORDER: **1406-11104**
DATE RECEIVED: 06/11/2014

Report Summary of Qualifiers and Notes

Sample -002, L-1 was received with Free Product present in the container. An attempt was made to analyze only the aqueous fraction for Volatiles and DRO analysis. The Free Product was analyzed for Fuel identification, sample -007

Samples were received at the laboratory with a temperature of 12.8 degrees Celsius. Samples must be received in a cooler with sufficient ice to attain a temperature of 6 degrees Celsius or below. Samples must not be frozen.

AN1: The sample is a mixture of kerosene and #2 diesel fuel oil.

= ENDYNE, INC.
160 James Brown Drive
Williston, Vermont 05495
(802) 879-4333

CHAIN-OF-CUSTODY-RECORD

№ 70293

Special Reporting Instructions/PO#: _____

Project Name: VT Rail - Burlington	Client/Contact Name: Vermont Rail Systems Paul Craven Phone #: 802-233-0336	Sampler Name: Michael Mainer Grover Engineering PC Phone #: 802-434-2484
State of Origin: VT __ NY __ NH __ Other __	Mailing Address: Grover Engineering PC 2044 Main Road Huntington VT 05462	Billing Address: VT Rail 1 Railway Lane Burlington VT 05401
Endyne WO # 1406-11104		

Sample Location	Matrix	GRAB	COMP	Date/Time Sampled	Sample Containers No.	Sample Containers Type/Size	Sample Preservation	Analysis Required	FieldResults/Remarks	Due Date
TP-1-1	Soil	x		6/10/14 9:08A	1 1	40mL 4oz	MeOH None	33, 23		
L-1	Liq	x		8:21 A	2	40mL	HCl	33, 23	Analyze aqueous fraction only	
TP-3-1	Soil	x		3:57P	1 1	40mL 4oz	MeOH None	23,		
L-3	Liq	x		2:45P	2	40mL	HCl	33, 23	Add Fuel TB	
L-3B	Liq	x		3:34P	2	40mL	HCl	~~33~~, 23	as per MM 6/12/14	

Relinquished by:	Date/Time	Received by:	Date/Time	Received by:	Date/Time
Michael Mainer	6/11/2014 17:30			Eileen Quoney	6/11/14 @ 17:30

1	pH	6	TKN	11	Total Solids	16	Sulfate	21	1664 TPH/FOG	26	8270 PAH Only
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	8015 GRO	27	8081 Pest
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	8015 DRO	28	8082 PCB
4	Nitrite N	9	BOD	14	Turbidity	19	VT PCF	24	8260B	29	PP13 Metals
5	Nitrate N	10	Alkalinity	15	Conductivity	20	VOC Halocarbons	25	8270 B/N or Acid	30	Total RCRA8
31	Metals (Total, Diss.) Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, Hg, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sn, Tl, U, V, Zn										
32	TCLP (volatiles, semi-volatiles, metals, pesticides, herbicides)					33	Other 8021 VOC's				
34	Corrosivity	35	Ignitability	36	Reactivity	37	Other				
38	Other										

LAB USE ONLY
Delivery: Client
Temp: 12.8
Comment:

(White - Laboratory / Yellow - Client)