



Site Investigation Report
Northeast Auto Accessory
684 Portland Street
St. Johnsbury, Vermont
SMS #20114197



**SITE INVESTIGATION REPORT
NORTHEAST AUTO ACCESSORY
684 PORTLAND STREET
ST. JOHNSBURY VERMONT, 05819**

June 26, 2012

**Prepared For:
Ronney Lyster
Post Office Box 601
Littleton, New Hampshire 03561
(603) 444-5678
Contact: Mr. Ronney Lyster**

**Prepared by:
Horizons Engineering, Inc.
34 School Street
Littleton, NH 03561
(603) 444-4111
Contact: Jennifer Stonecipher**

**PROJECT NO. 11217
Horizons Engineering, Inc.**

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Project No. 11217

June 26, 2012

Mr. Tim Cropley
Hazardous Materials Specialist
Agency of Natural Resources, Waste Management Division
103 South Main Street/West Building
Waterbury, VT 05671-0404

**Subject: Site Investigation Report - Northeast Auto Accessory
684 Portland Street, St. Johnsbury, Vermont
SMS #20114197**

Dear Mr. Cropley:

Horizons Engineering, Inc., (Horizons) has completed a Site Investigation at the 684 Portland Street Property located in St. Johnsbury, VT (the "Site") per the requirements of the August 19, 2011 Agency of Natural Resources, Department of Environmental Conservation, (VTDEC) letter issued to Northeast Auto Accessory. This report summarizes our field and research methods, results, and recommendations. As part of this assessment, four monitoring wells were installed and six additional soil borings were advanced in an effort to assess potential soils and groundwater impacts to the Site associated with former underground storage tanks (USTs).

Monitoring well locations were chosen by Horizons Engineering and approved by the VTANR prior to installation. Soil samples were collected from MW-2, MW-3 and MW-4, and SB-7. A soil sample was not collected from MW-1 as it was a background well with 0 ppm readings utilizing the PID. Groundwater samples were collected from MW-1, MW-2, and MW-4. MW-3 had 1.5' of free product at the time of sampling, therefore was not sampled. Soils were analyzed for the following: VOCs via EPA Method 8260B and TPH via Method 8015-DRO. Groundwater was analyzed for the following: VOCs via EPA Method 8260B and TPH via Method 8015-DRO. The Site location is shown on the **Site Locus Map** which is appended to this report. An **Aerial Photo**, which has also been provided, shows the approximate current configuration of the Site. **Photos** of the site are included.

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1.0 Site Description/History

The Site consists of one lot of record referred to as St. Johnsbury Tax ID 027-001-044-000. The Site contains approximately 1.29 acres and is operated by RHTL Partners LLC, c/o L & T Auto Group as Northeast Auto Accessory. The Site was purchased by the current owner in 2004.

The Site is located on the south side of Portland Street.

Abutting properties to the south include Lafayette Street followed by two residential properties, one owned by Armand Wright and located at 767 Concord Avenue and the second owned by David and Henrietta Lenton and located at 468 Lafayette Street. Abutting properties to the east include commercial properties: DG Roofing, 714 Portland Street, and Warren-Hardman Limited Liability Company, 744 Portland Street. Abutting properties to the west include a commercial property referred to as Coles and owned by Richard and Kathleen Martel located at 642 Portland Street. Abutting properties to the north include Portland Street followed by a commercial property owned by Steven Dolgin and located at 667 Portland Street and a commercial property owned by my Murphy Realty Company and located at 709 Portland Street.

Site topography is generally level across the entire Site. The nearest surface water body is the Moose River located approximately 800 feet north of the Site.

An interview was conducted with St. Johnsbury town personnel. Reportedly, there had been complaints within the Portland Street area of people smelling petroleum in their basement floor drains after heavy rains. Town personnel also informed Horizons that during a utility pole replacement that occurred on the northeast portion of the Site, heavy petroleum odors were evident.

The subject Site, as well as neighboring properties, are connected to municipal water and sewer.

2.0 Field Methods

On March 20, 2012 Horizons observed the advancement of ten soil borings and the installation of four monitoring wells at the Site by Northern Test Boring of Gorham, Maine utilizing a Dietrich D-50 drill rig. The monitoring well locations were selected in an effort to assess the areas of concern. Locations were described by VTANR in an August 19, 2011 comment letter. The monitoring well locations were selected by Horizons personnel and approved by the VTANR prior to installation. The locations of the monitoring wells are shown on the attached **Site Plan**.

Wells were installed using 4 ¼" hollow stem augers. Field screening was performed during installation of all monitoring wells and advancement of all soil borings. Materials consisted of medium to coarse sands with some silt (**see attached soil boring and monitoring well logs**) at all soil borings. Groundwater was encountered between five and ten feet below grade across the Site. Wells ranged in depth from twelve to seventeen feet below grade.

Soil samples were obtained from each split spoon sample and field screened for the presence of Volatile Organic Compounds (VOCs) with a Photo Ionization Detector (PID),

ThermoEnvironmental Model 580B. The results from this field screening and a description of the soils are indicated on the **Soil Boring Logs** which are attached to this report. PID readings ranged from 0.0 ppm to 394ppm. Based on PID readings, laboratory soil analysis was performed at three monitoring well locations (MW-2, MW-3, and MW-4) as well as one soil boring location (SB-7).

Soil samples were packaged on ice in a shipping cooler and transported to Eastern Analytical, Inc. under chain of custody documentation. The soil samples were submitted for laboratory analysis for VOCs via EPA method 8260B, and TPH via 8015-DRO.

Groundwater samples were collected on April 13, 2012. A water level meter was utilized to measure depth to groundwater in all four wells prior to sampling. The wells were purged of approximately three well volumes of water and allowed to recharge prior to collection of the groundwater sample. Samples were collected from MW-1, MW-2, and MW-4. MW-3 had 1.5' of free product at the time of sampling, therefore it was not sampled. Samples collected from MW-1, MW-2, and MW-4 were analyzed for EPA Method 8260B for VOCs and 8015 DRO for TPH. Groundwater was encountered at an average of five feet below grade during monitoring well sampling.

3.0 Results

3.1 Soil

Soils observed during the advancement of monitoring wells MW-1 through MW-4 as well as soil borings consisted primarily of medium to coarse sands with some silt. The water table was generally encountered between 5 and 10 feet below ground surface. PID readings ranged from 0.0 to 394 ppm. The following soil boring locations had PID readings at greater than 10 ppm: MW-2 (44 ppm @ 5-7'), MW-3 (84 ppm at 10-12' and 14 ppm at 15-17'), MW-4 (82 ppm at 6.5-7', 112 ppm at 10-12' and 16 ppm at 12-14'), SB-5 (89 ppm @ 6.5-7', 81 ppm @ 10-12'), SB-6 (62 ppm @ 6.5-7', 42 ppm @ 10-11.5'), SB-7 (74 ppm at 0-3', 84ppm at 3-5', 82 ppm @ 5-7', 42 ppm @ 10-11.5'), SB-8 (142 ppm @ 0-5', 128 ppm @ 5-8'), SB-10 (48 ppm @ 5-7', 78 ppm @ 10-12').

Target analytes were not detected at concentrations exceeding applicable Vermont Risk Based Standards in any of the soil samples submitted for laboratory analysis. VOCs were detected above laboratory limits in the following locations: MW-3, MW-4 and SB-7. TPH-DRO was detected, yet below Vermont Risk Based Standards within MW-2, MW-3 and MW-4. A table summarizing the laboratory analytical results and the laboratory analytical report is appended.

3.2 Groundwater

MW-1 remained at below detectable levels for all constituents analyzed. MW-2 exceeded the Preventive Action Goal, yet remained below the Enforcement Standard for 1,2,4-trimethylbenzene. MW-4 exceeded the Enforcement Standard for the following: benzene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene and naphthalene. MW-4 exceeded the Preventive Action Goal for MtBE yet remained below the Enforcement Standard. Free Product was detected at a 1.5' depth in MW-3 therefore was not sampled.

4.0 Conclusions

Four monitoring wells were installed at the subject Site on March 20, 2012. Locations were approved by the VTANR prior to installation.

Medium to coarse sands with some silt were observed across the Site, with groundwater encountered during drilling at five to ten feet below grade. Groundwater was encountered at an average of five feet below grade during monitoring well sampling.

An additional six soil borings were advanced on the north side of the building in an effort to assess potential soils and groundwater impacts to the Site associated with former on site USTs. Soil borings were located north and east of the former UST locations. During the advancement of the soil borings, an additional underground storage tank (gasoline) was located east of the former heating oil tank. PID readings within the locations of SB-6, SB-7, and SB-8 had an "old turpentine" smell to them, likely contributed to the gasoline tank located within the SB-8 location.

The following soil borings locations had PID readings at greater than 10 ppm: MW-2 (44 ppm @ 5-7'), MW-3 (84 ppm at 10-12' and 14 ppm at 15-17'), MW-4 (82 ppm at 6.5-7', 112 ppm at 10-12' and 16 ppm at 12-14'), SB-5 (89 ppm @ 6.5-7', 81 ppm @ 10-12'), SB-6 (62 ppm @ 6.5-7', 42 ppm @ 10-11.5'), SB-7 (74 ppm at 0-3', 84 ppm at 3-5', 82 ppm @ 5-7', 42 ppm @ 10-11.5'), SB-8 (142 ppm @ 0-5', 128 ppm @ 5-8'), SB-10 (48 ppm @ 5-7', 78 ppm @ 10-12').

Soil samples were submitted for laboratory analysis for VOCs via EPA Method 8260B, and TPH via 8015-DRO from the following locations: MW-2, MW-3, MW-4 and SB-7. Laboratory results indicated that the State of Vermont Risk Based Soil Standards were not exceeded in soil samples collected.

Groundwater samples were collected from MW-1, MW-2 and MW-4 and analyzed EPA Method 8260B for VOCs and 8015 DRO for TPH. Groundwater laboratory results indicate that Vermont Enforcement Standards were exceeded in the samples collected from MW-4 for benzene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and naphthalene. Groundwater laboratory results indicate that the Vermont Preventive Action Goals were exceeded in MW-4 for MtBE and in MW-2 for 1,2,4-trimethylebenzene.

Free product was observed within MW-3 at a 1.5 foot depth.

Based on the free product discovered at MW-3, there may be concerns regarding vapor intrusion at the abutting properties to the west including a commercial property referred to as Coles and owned by Richard and Kathleen Martel located at 642 Portland Street as well as properties to the north including Portland Street (and utilities beneath the street) followed by a commercial property owned by Steven Dolgin and located at 667 Portland Street and a commercial property owned by Murphy Realty Company and located at 709 Portland Street.

5.0 Recommendations

Horizons recommend the installation of two additional monitoring wells on the north side of Portland Street to determine if associated impacted groundwater has migrated off site.

Horizons also recommends the installation of one 8"-12" recovery well downgradient yet within the vicinity of MW-3. Horizons recommends performing enhanced free product recovery on a monthly basis.

Horizons recommends performing a sub slab vapor survey at the two north and west abutting properties and within the storm drains on Portland Street.

Please contact the undersigned with any questions or concerns.

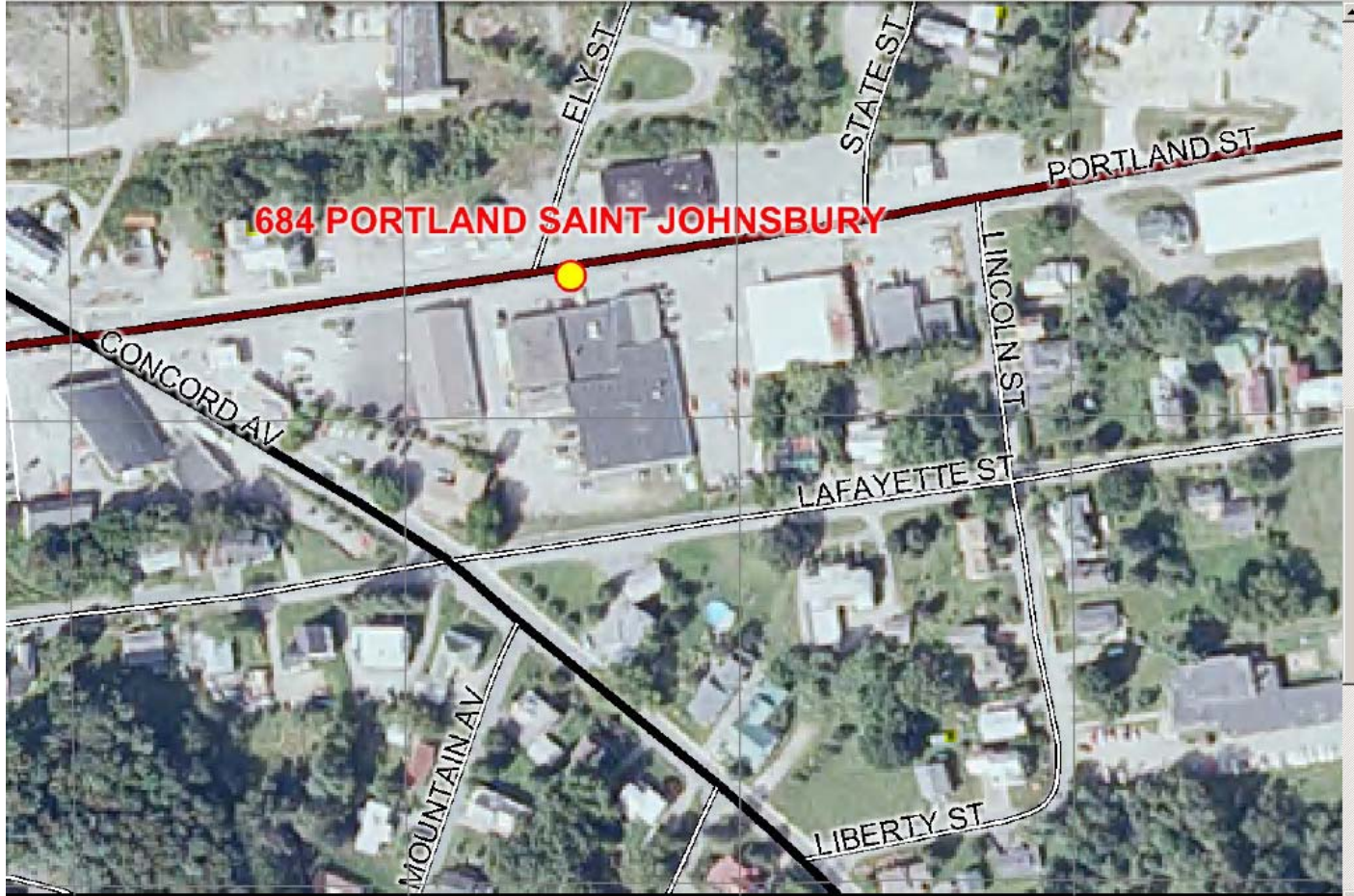
Sincerely,



Jennifer Stonecipher
Environmental Project Manager
Horizons Engineering, Inc.

Attachments

Site Locus Map



34 School Street
Littleton, NH 03561
(603) 444-4111

Northeast Auto Accessory
684 Portland Street
St. Johnsbury, Vermont
Vermont ID #20114197
Site Locus Map
Project No. 11217

Property Tax Card

ADMINISTRATIVE INFORMATION

PARCEL NUMBER
1V 133121
Parent Parcel Number

OWNERSHIP

RHTL PARTNERS LLC
C/O L & T AUTO GROUP
684 PORTLAND ST
ST JOHNSBURY, VT 05819

Tax ID 027-001-044-000

TRANSFER OF OWNERSHIP

Date

12/20/2004 N/A

Printed 03/21/2012 Card No. 1 of 1

Bk/Pg: 300, 317
\$393219

Property Address
PORTLAND ST 0684

Neighborhood
300 General Commercial

Property Class
336 Commercial Mixed Uses

TAXING DISTRICT INFORMATION

Jurisdiction 176 ST JOHNSBURY, VT
Area 176
District Y
Routing Number 550-176-10165

COMMERCIAL

VALUATION RECORD

Act 58 Value Allocations

Assessment Year	04/01/2005	04/01/2008	04/01/2009	
Reason for Change				Non Residential
	2006	2008	2009	
VALUATION	L 65562	0	90300	90300
2002 Market	B 439590	505200	479890	479890
	T 505152	505200	570190	570190

Site Description

Topography:

Public Utilities:
Water, Sewer, Electric

Street or Road:

Neighborhood:

Zoning:

Legal Acres:
1.2900

LAND DATA AND CALCULATIONS

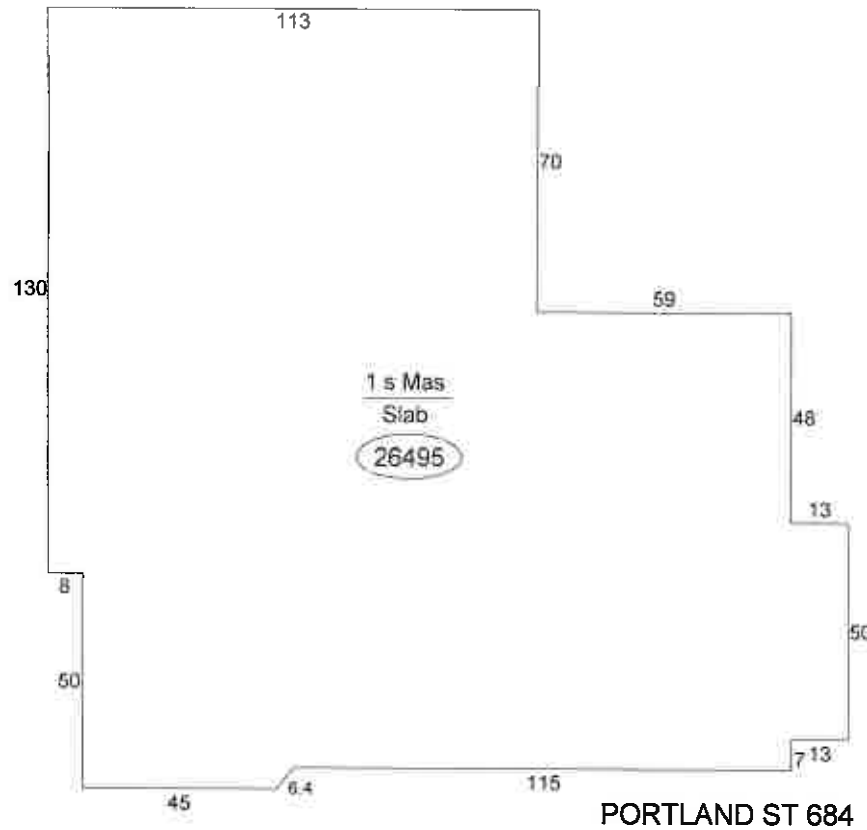
Rating	Measured	Table	Prod. Factor						
Soil ID	Acreage		-or-						
-or-	-or-		Depth Factor						
Actual	Effective	Effective	-or-	Base	Adjusted	Extended	Influence		
Frontage	Frontage	Depth	Square Feet	Rate	Rate	Value	Factor		Value
	1.2900		1.00	70000.00	70000.00	90300			90300

Supplemental Cards

TRUE TAX VALUE 90300

Supplemental Cards
TOTAL LAND VALUE

IMPROVEMENT DATA



PHYSICAL CHARACTERISTICS

ROOFING

Built-up

FRAMING

F Res	B	1	2	U
	0	26495	0	0

FINISH

1	UF	SF	FO	FD
	26495	0	0	0
Total	26495	0	0	0

HEATING AND AIR CONDITIONING

Heat	B	1	2	U
	0	26495	0	0

SPECIAL FEATURES

Description	Value
-------------	-------

SUMMARY OF IMPROVEMENTS

Description	Value	ID	Use	Stry Hgt	Const Type	Year Const	Eff Year	Cond	Base Rate	Feat-ure	Adj Rate	Size or Area	Computed Value	Phys Depr	Obsol Depr	Market Adj	% Comp	Value
		C	GENCOM	0.00		Fair	1900	1900	FR	0.00	N	0.00	26495	0	0	0	100	479890

Data Collector/Date

Appraiser/Date

Neighborhood

Supplemental Cards
TOTAL IMPROVEMENT VALUE

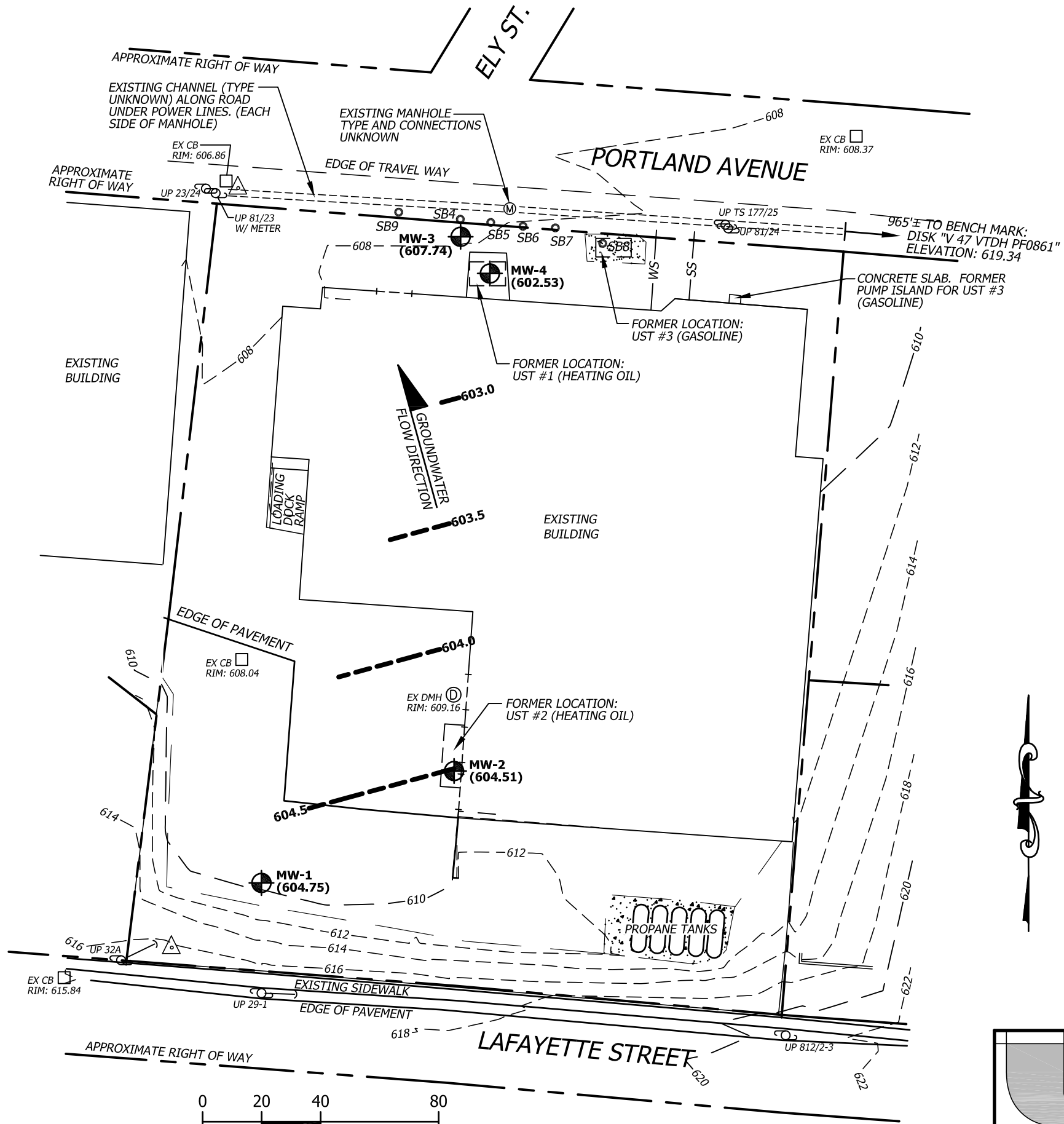
479890

STJ .04/01/2009

Neigh 300 AY

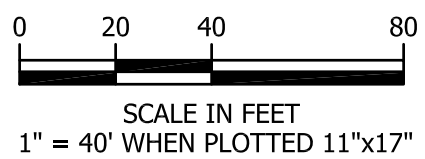
Site Plan

X:\11217 Lyster - Northeast Collision SI (A)\DWGS\FINAL\11217_Site.dwg, TBlock11x17, 6/28/2012 1:06:50 PM, SysAdmin



LEGEND

- EXISTING MONITORING WELL LOCATION
- GROUNDWATER ELEVATION
- NOT SAMPLED
- DESTROYED OR DECOMMISSIONED MONITORING WELL
- EXISTING DRINKING WATER SUPPLY WELL
- UTILITY POLE
- UNDERGROUND ELECTRIC
- UNDERGROUND GAS LINE
- EDGE OF GRAVEL
- MAJOR 10' CONTOUR INTERVAL
- MINOR 2' CONTOUR INTERVAL
- EXISTING WATER LINE
- GROUNDWATER CONTOUR (MAY 2012 DATA)
- EXISTING SOIL BORING LOCATION AND ID



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34 School Street
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Phone 603.444.4111 - Fax 603.444.1343

NORTHEAST AUTO ACCESSORY
SITE #220114197
PORTLAND AVENUE, ST. JOHNSBURY, VERMONT
APRIL 2012 GROUNDWATER SITE PLAN

PROJECT #:	11217
ENGIN'D BY:	JSS
DRAWN BY:	KRP
DATE:	APRIL 2012

Site Photographs

Northeast Auto Accessory 684 Portland Street – St. Johnsbury, VT Site Photographs - SMS #20114197



Upper left-MW-1-Upgradient Well Location, Remaining three pictures-MW-2 Location.

Northeast Auto Accessory

684 Portland Street – St. Johnsbury, VT
Site Photographs - SMS #20114197



Locations of MW-3 and MW-4 as well as SB-5 through 10.

Northeast Auto Accessory 684 Portland Street – St. Johnsbury, VT Site Photographs - SMS #20114197



Upper Left-SB-5 thru 9, Upper right-SB-8-Evidence UST location,
Lower left-former pump location on right of door, lower right-MW-3 .

Soil Boring / Monitoring Well Construction Logs



SOIL BORING LOG & WELL DIAGRAM

BORING NO.:

SB-1

WELL ID:

MW-1

Page 1 of 1

PROJECT Northeast Auto
LOCATION 684 Portland Street, St. Johnsbury
CLIENT Mr. Ronney Lyster
CONTRACTOR Northern Test Boring
DRILLER Northern Test Boring

HORIZONS FILE NO. 11217
PROJECT MGR. Jennifer Stonecipher
FIELD REP. Jennifer Stonecipher
DATE STARTED March 20th, 2012
DATE COMPLETED March 20th, 2012

Elevation _____ ft.		Datum: _____		Boring Location: upgradient of site				
GROUNDWATER READINGS			SAMPLER		Rig Make & Mode		Protective Casing	Well Development
Date	Depth (ft)	Reference	Type: ENTER	<input type="checkbox"/> Truck	<input checked="" type="checkbox"/> Hollow Stem Auger	<input type="checkbox"/> Mud Rotary	<input checked="" type="checkbox"/> Roadbox	<input type="checkbox"/> Whale Pump
			Hammer (lb 130#)	<input checked="" type="checkbox"/> ATV	<input type="checkbox"/> Cable Tool	<input type="checkbox"/> Dual Rotary	<input type="checkbox"/> Standpipe	<input checked="" type="checkbox"/> Bailer
			Fall (in): 30"	<input type="checkbox"/> Tripoc	<input type="checkbox"/> Drive & Wash	<input type="checkbox"/>	<input type="checkbox"/> None (temp. stick)	<input type="checkbox"/> Peristaltic

DEPTH (FT)	SAMPLE ID	BLOWS PER 6 IN	PEN / REC (IN)	FIELD SCREENING (ppm)	WELL DETAIL	SAMPLE DESCRIPTION		LITHOLOGIC DESCRIPTION
						Burmister Visual-Manual Identification & Description (density/consistency, color, maximum particle size in sampler, structure, odor, moisture, optional descriptions, geologic interpretation)		
0	0-2	2	24	0		greyish brown coarse SANDS		
		1						
		1						
		2						
5	5-7	2	12	0		dark grey medium SANDS and silt, moist-wet		
		2						
		3						
		2						
10	10-12	2	14	0		orangish medium SANDS		
		6						
		9						
		14						
15						set well at 15'		
20								

GRANULAR SOILS BLOWS/FT CONSISTENCY	COHESIVE SOILS BLOWS/FT CONSISTENCY	LEGEND	INTERVAL (FT)	SUMMARY	LITHOLOGIC DESCRIPTION
0 - 4 V. LOOSE	<2 V. SOFT	Concrete	ENTER BGS	Overburden (Linear ft.): ENTER	SAND
4 - 10 LOOSE	2 - 4 SOFT	Backfill	ENTER BGS	Feet of rock core/air hamm: ENTER	SILT
10 - 30 M. DENSE	4 - 8 M. STIFF	Grout	ENTER BGS	Well solid riser pipe length: ENTER	CLAY
30 - 50 DENSE	8 - 15 STIFF	Bentonite Seal	ENTER BGS	Well standpipe height ags: ENTER	SAND & GRAVEL
>50 V. DENSE	15 - 30 V. STIFF	Sandpack	ENTER BGS	Well PVC diameter (in. ENTER roadbox	TILL
	>30 HARD	Riser Pipe	ENTER BGS	Screen length (ft.): ENTER	R/C ROCK / COMPETENT
		Screen	ENTER BGS	Screen slot size: ENTER	R/W ROCK / WEATHERED

NOTES: _____



SOIL BORING LOG & WELL DIAGRAM

BORING NO.:

SB-2

WELL ID:

MW-2

Page 1 of 1

PROJECT Northeast Auto
LOCATION 684 Portland Street, St. Johnsbury
CLIENT Mr. Ronney Lyster
CONTRACTOR Northern Test Boring
DRILLER Northern Test Boring

HORIZONS FILE NO. 11217
PROJECT MGR. Jennifer Stonecipher
FIELD REP. Jennifer Stonecipher
DATE STARTED March 20th, 2012
DATE COMPLETED March 20th, 2012

Elevation _____ ft.		Datum: _____		Boring Location: Former UST#2 Area				
GROUNDWATER READINGS			SAMPLER		Rig Make & Mode		Protective Casing	Well Development
Date	Depth (ft)	Reference	Type: ENTER	<input type="checkbox"/> Truck	<input checked="" type="checkbox"/> Hollow Stem Auger	<input type="checkbox"/> Mud Rotary	<input checked="" type="checkbox"/> Roadbox	<input type="checkbox"/> Whale Pump
			Hammer (lb 130#)	<input checked="" type="checkbox"/> ATV	<input type="checkbox"/> Cable Tool	<input type="checkbox"/> Dual Rotary	<input type="checkbox"/> Standpipe	<input checked="" type="checkbox"/> Bailer
			Fall (in): 30"	<input type="checkbox"/> Tripoc	<input type="checkbox"/> Drive & Wash	<input type="checkbox"/>	<input type="checkbox"/> None (temp. sticku	<input type="checkbox"/> Peristaltic

DEPTH (FT)	SAMPLE ID	BLOWS PER 6 IN	PEN / REC (IN)	FIELD SCREENING (ppm)	WELL DETAIL	SAMPLE DESCRIPTION		LITHOLOGIC DESCRIPTION
						Burmister Visual-Manual Identification & Description (density/consistency, color, maximum particle size in sampler, structure, odor, moisture, optional descriptions, geologic interpretation)		
0	0-2			0		asphalt followed by crushed stone		
5	5-7	1 1 2 3	18	44		dark brown coarse SANDS, moist at 6.5' heavy petroleum odor		
10	10-12	3 4 4 4	12	0		medium coarse SANDS, gravels, saturated		
15						set well at 15'		
20								

GRANULAR SOILS BLOWS/FT CONSISTENCY	COHESIVE SOILS BLOWS/FT CONSISTENCY	LEGEND	INTERVAL (FT)	SUMMARY	LITHOLOGIC DESCRIPTION
0 - 4 V. LOOSE	<2 V. SOFT	Concrete	ENTER BGS	Overburden (Linear ft.): ENTER	SAND SILT CLAY SAND & GRAVEL TILL FILL R/C ROCK / COMPETENT R/W ROCK / WEATHERED
4 - 10 LOOSE	2 - 4 SOFT	Backfill	ENTER BGS	Feet of rock core/air hamm: ENTER	
10 - 30 M. DENSE	4 - 8 M. STIFF	Grout	ENTER BGS	Well solid riser pipe length: ENTER	
30 - 50 DENSE	8 - 15 STIFF	Bentonite Seal	ENTER BGS	Well standpipe height ags: ENTER	
>50 V. DENSE	15 - 30 V. STIFF	Sandpack	ENTER BGS	Well PVC diameter (in. ENTER roadbox	
	>30 HARD	Riser Pipe	ENTER BGS	Screen length (ft.): ENTER	
		Screen	ENTER BGS	Screen slot size: ENTER	

NOTES: _____



SOIL BORING LOG & WELL DIAGRAM

BORING NO.:

SB-3

WELL ID:

MW-3

Page 1 of 1

PROJECT: Northeast Auto
 LOCATION: 684 Portland Street, St. Johnsbury
 CLIENT: Mr. Ronney Lyster
 CONTRACTOR: Northern Test Boring
 DRILLER: Northern Test Boring

HORIZONS FILE NO. 11217
 PROJECT MGR. Jennifer Stonecipher
 FIELD REP. Jennifer Stonecipher
 DATE STARTED March 20th, 2012
 DATE COMPLETED March 20th, 2012

Elevation	ft.	Datum:	Boring Location: downgradient of Former UST #1 location	
GROUNDWATER READINGS		SAMPLER		Rig Make & Mode
Date	Depth (ft)	Reference	Type: ENTER	<input checked="" type="checkbox"/> Truck <input type="checkbox"/> Cable Tool <input type="checkbox"/> Tripoc
			Hammer (lb 130#)	<input checked="" type="checkbox"/> Hollow Stem Auger <input type="checkbox"/> Drive & Wash
			Fall (in): 30"	<input type="checkbox"/> Mud Rotary <input type="checkbox"/> Dual Rotary
				<input checked="" type="checkbox"/> Roadbox <input type="checkbox"/> Standpipe <input type="checkbox"/> None (temp. sticku)
				<input type="checkbox"/> Whale Pump <input checked="" type="checkbox"/> Bailer <input type="checkbox"/> Peristaltic

DEPTH (FT)	SAMPLE ID	BLOWS PER 6 IN	PEN / REC (IN)	FIELD SCREENING (ppm)	WELL DETAIL	SAMPLE DESCRIPTION		LITHOLOGIC DESCRIPTION
						Burmister Visual-Manual Identification & Description (density/consistency, color, maximum particle size in sampler, structure, odor, moisture, optional descriptions, geologic interpretation)		
0	0-2			0		coarse gravels-driveway layer		
5	5-7	2 4 4 6	12	9		medium- coarse SANDS, moist at 6.5' no odor		
10	10-12	10 10 12 10	4	84		rock in tip of spoon-brown coarse SANDS-saturated petroleum odor		
15	15-17	6 6 5 4	24	14		grey fine SANDS, little clay-saturated no odor set well at 17'		
20								

GRANULAR SOILS	COHESIVE SOILS	LEGEND	INTERVAL (FT)	SUMMARY	LITHOLOGIC DESCRIPTION
BLOWS/FT	CONSISTENCY				
0 - 4	V. LOOSE	Concrete	ENTER BGS	Overburden (Linear ft.):	ENTER
4 - 10	LOOSE	Backfill	ENTER BGS	Feet of rock core/air hamm	ENTER
10 - 30	M. DENSE	Grout	ENTER BGS	Well solid riser pipe length:	ENTER
30 - 50	DENSE	Bentonite Seal	ENTER BGS	Well standpipe height ags:	ENTER
>50	V. DENSE	Sandpack	ENTER BGS	Well PVC diameter (in. ENTER roadbox	ENTER
		Riser Pipe	ENTER BGS	Screen length (ft.):	ENTER
		Screen	ENTER BGS	Screen slot size:	ENTER

NOTES:



SOIL BORING LOG & WELL DIAGRAM

BORING NO.:

SB-4

WELL ID:

Page 1 of 1

PROJECT: Northeast Auto
 LOCATION: 684 Portland Street, St. Johnsbury
 CLIENT: Mr. Ronney Lyster
 CONTRACTOR: Northern Test Boring
 DRILLER: Northern Test Boring

HORIZONS FILE NO. 11217
 PROJECT MGR. Jennifer Stonecipher
 FIELD REP. Jennifer Stonecipher
 DATE STARTED March 20th, 2012
 DATE COMPLETED March 20th, 2012

Elevation	ft.	Datum:	Boring Location: 6' north of MW-3					
GROUNDWATER READINGS			SAMPLER		Rig Make & Mode		Protective Casing	Well Development
Date	Depth (ft)	Reference	Type: ENTER	<input checked="" type="checkbox"/> Truck	<input checked="" type="checkbox"/> Hollow Stem Auger	<input type="checkbox"/> Mud Rotary	<input type="checkbox"/> Roadbox	<input type="checkbox"/> Whale Pump
			Hammer (lb 130#)	<input type="checkbox"/> ATV	<input type="checkbox"/> Cable Tool	<input type="checkbox"/> Dual Rotary	<input type="checkbox"/> Standpipe	<input checked="" type="checkbox"/> Bailer
			Fall (in): 30"	<input type="checkbox"/> Tripoc	<input type="checkbox"/> Drive & Wash	<input type="checkbox"/>	<input type="checkbox"/> None (temp. sticku	<input type="checkbox"/> Peristaltic

DEPTH (FT)	SAMPLE ID	BLOWS PER 6 IN	PEN / REC (IN)	FIELD SCREENING (ppm)	WELL DETAIL	SAMPLE DESCRIPTION		LITHOLOGIC DESCRIPTION
						Burmister Visual-Manual Identification & Description (density/consistency, color, maximum particle size in sampler, structure, odor, moisture, optional descriptions, geologic interpretation)		
0	0-6.5			3.2			medium silty sand	
5	6.5-7			82			coarse silty SAND, heavy odor, dry	
10	10-12	5 4 6 5 10	4	112			coarse silty SAND, heavy odor	
15	12-14	10 12 12 10		16			dark brown coarse SANDS sheen on water	
20								

GRANULAR SOILS BLOWS/FT CONSISTENCY	COHESIVE SOILS BLOWS/FT CONSISTENCY	LEGEND	INTERVAL (FT)	SUMMARY	LITHOLOGIC DESCRIPTION
0 - 4 V. LOOSE	<2 V. SOFT	Concrete	ENTER BGS	Overburden (Linear ft.): ENTER	SAND SILT CLAY SAND & GRAVEL TILL FILL R/C ROCK / COMPETENT R/W ROCK / WEATHERED
4 - 10 LOOSE	2 - 4 SOFT	Backfill	ENTER BGS	Feet of rock core/air hamm ENTER	
10 - 30 M. DENSE	4 - 8 M. STIFF	Grout	ENTER BGS	Well solid riser pipe length: ENTER	
30 - 50 DENSE	8 - 15 STIFF	Bentonite Seal	ENTER BGS	Well standpipe height ags: ENTER	
>50 V. DENSE	15 - 30 V. STIFF	Sandpack	ENTER BGS	Well PVC diameter (in. ENTER roadbox	
	>30 HARD	Riser Pipe	ENTER BGS	Screen length (ft.): ENTER	
		Screen	ENTER BGS	Screen slot size: ENTER	

NOTES:



SOIL BORING LOG & WELL DIAGRAM

BORING NO.:

SB-5

WELL ID:

Page 1 of 1

PROJECT Northeast Auto
LOCATION 684 Portland Street, St. Johnsbury
CLIENT Mr. Ronney Lyster
CONTRACTOR Northern Test Boring
DRILLER Northern Test Boring

HORIZONS FILE NO. 11217
PROJECT MGR. Jennifer Stonecipher
FIELD REP. Jennifer Stonecipher
DATE STARTED March 20th, 2012
DATE COMPLETED March 20th, 2012

Elevation _____ ft.		Datum: _____		Boring Location: 10' east of SB-4				
GROUNDWATER READINGS			SAMPLER		Rig Make & Mode		Protective Casing	Well Development
Date	Depth (ft)	Reference	Type: ENTER	<input checked="" type="checkbox"/> Truck	<input checked="" type="checkbox"/> Hollow Stem Auger	<input type="checkbox"/> Mud Rotary	<input type="checkbox"/> Roadbox	<input type="checkbox"/> Whale Pump
			Hammer (lb 130#)	<input type="checkbox"/> ATV	<input type="checkbox"/> Cable Tool	<input type="checkbox"/> Dual Rotary	<input type="checkbox"/> Standpipe	<input checked="" type="checkbox"/> Bailer
			Fall (in): 30"	<input type="checkbox"/> Tripoc	<input type="checkbox"/> Drive & Wash	<input type="checkbox"/>	<input type="checkbox"/> None (temp. stick)	<input type="checkbox"/> Peristaltic

DEPTH (FT)	SAMPLE ID	BLOWS PER 6 IN	PEN / REC (IN)	FIELD SCREENING (ppm)	WELL DETAIL	SAMPLE DESCRIPTION		LITHOLOGIC DESCRIPTION
						Burmister Visual-Manual Identification & Description (density/consistency, color, maximum particle size in sampler, structure, odor, moisture, optional descriptions, geologic interpretation)		
0	0-6.5			14			medium-coarse silty sand	
5	6.5-7			99			coarse silty SAND, heavy odor, dry	
10	10-11.5			81			coarse silty SAND, heavy odor	
	11.5-12			8			medium brown SANDS	
15								
20								

GRANULAR SOILS BLOWS/FT CONSISTENCY	COHESIVE SOILS BLOWS/FT CONSISTENCY	LEGEND	INTERVAL (FT)	SUMMARY	LITHOLOGIC DESCRIPTION
0 - 4 V. LOOSE	<2 V. SOFT	Concrete	ENTER BGS	Overburden (Linear ft.): ENTER	SAND
4 - 10 LOOSE	2 - 4 SOFT	Backfill	ENTER BGS	Feet of rock core/air hamm: ENTER	SILT
10 - 30 M. DENSE	4 - 8 M. STIFF	Grout	ENTER BGS	Well solid riser pipe length: ENTER	CLAY
30 - 50 DENSE	8 - 15 STIFF	Bentonite Sea	ENTER BGS	Well standpipe height ags: ENTER	SAND & GRAVEL
>50 V. DENSE	15 - 30 V. STIFF	Sandpack	ENTER BGS	Well PVC diameter (in. ENTER roadbox	TILL
	30 - 35 HARD	Riser Pipe	ENTER BGS	Screen length (ft.): ENTER	R/C ROCK / COMPETENT
	>30 HARD	Screen	ENTER BGS	Screen slot size: ENTER	R/W ROCK / WEATHERED

NOTES:



SOIL BORING LOG & WELL DIAGRAM

BORING NO.: SB-6
WELL ID:
 Page 1 of 1

PROJECT: Northeast Auto
LOCATION: 684 Portland Street, St. Johnsbury
CLIENT: Mr. Ronney Lyster
CONTRACTOR: Northern Test Boring
DRILLER: Northern Test Boring

HORIZONS FILE NO.: 11217
PROJECT MGR.: Jennifer Stonecipher
FIELD REP.: Jennifer Stonecipher
DATE STARTED: March 20th, 2012
DATE COMPLETED: March 20th, 2012

Elevation _____ ft. Datum: _____ Boring Location: 10' east of SB-5

GROUNDWATER READINGS			SAMPLER		Rig Make & Mode				Protective Casing		Well Development		
Date	Depth (ft)	Reference	Type: ENTER	Hammer (lb 130#)	<input checked="" type="checkbox"/> Truck	<input type="checkbox"/> Cable Tool	<input type="checkbox"/> Drive & Wash	<input checked="" type="checkbox"/> Hollow Stem Auger	<input type="checkbox"/> Mud Rotary	<input type="checkbox"/> Roadbox	<input type="checkbox"/> Standpipe	<input type="checkbox"/> None (temp. stick)	<input type="checkbox"/> Whale Pump
			Fall (in): 30"		<input type="checkbox"/> ATV	<input type="checkbox"/> Tripoc		<input type="checkbox"/> Dual Rotary				<input checked="" type="checkbox"/> Bailer	
												<input type="checkbox"/> Peristaltic	

DEPTH (FT)	SAMPLE ID	BLOWS PER 6 IN	PEN / REC (IN)	FIELD SCREENING (ppm)	WELL DETAIL	SAMPLE DESCRIPTION		LITHOLOGIC DESCRIPTION
						Burmister Visual-Manual Identification & Description (density/consistency, color, maximum particle size in sampler, structure, odor, moisture, optional descriptions, geologic interpretation)		
0	0-6.5			0			medium-coarse silty sand	
5	6.5-7			62			grey medium silty SAND, slight odor,	
10	10-11.5			42			brown coarse SAND, saturated-sheen on water	
	11.5-12			1.2			brown coarse SANDS	
15								
20								

GRANULAR SOILS BLOWS/FT CONSISTENCY	COHESIVE SOILS BLOWS/FT CONSISTENCY	LEGEND	INTERVAL (FT)	SUMMARY	LITHOLOGIC DESCRIPTION
0 - 4 V. LOOSE	<2 V. SOFT	Concrete	ENTER BGS	Overburden (Linear ft.): ENTER	SAND SILT CLAY SAND & GRAVEL TILL FILL R/C ROCK / COMPETENT R/W ROCK / WEATHERED
4 - 10 LOOSE	2 - 4 SOFT	Backfill	ENTER BGS	Feet of rock core/air hamm: ENTER	
10 - 30 M. DENSE	4 - 8 M. STIFF	Grout	ENTER BGS	Well solid riser pipe length: ENTER	
30 - 50 DENSE	8 - 15 STIFF	Bentonite Seal	ENTER BGS	Well standpipe height ags: ENTER	
>50 V. DENSE	15 - 30 V. STIFF	Sandpack	ENTER BGS	Well PVC diameter (in. ENTER roadbox	
	>30 HARD	Riser Pipe	ENTER BGS	Screen length (ft.): ENTER	
		Screen	ENTER BGS	Screen slot size: ENTER	

NOTES:



SOIL BORING LOG & WELL DIAGRAM

BORING NO.:

SB-7

WELL ID:

Page 1 of 1

PROJECT Northeast Auto
LOCATION 684 Portland Street, St. Johnsbury
CLIENT Mr. Ronney Lyster
CONTRACTOR Northern Test Boring
DRILLER Northern Test Boring

HORIZONS FILE NO. 11217
PROJECT MGR. Jennifer Stonecipher
FIELD REP. Jennifer Stonecipher
DATE STARTED March 20th, 2012
DATE COMPLETED March 20th, 2012

Elevation _____ ft.		Datum: _____		Boring Location: 10' east of SB-6				
GROUNDWATER READINGS			SAMPLER		Rig Make & Mode		Protective Casing	Well Development
Date	Depth (ft)	Reference	Type: ENTER	<input checked="" type="checkbox"/> Truck	<input checked="" type="checkbox"/> Hollow Stem Auger	<input type="checkbox"/> Mud Rotary	<input type="checkbox"/> Roadbox	<input type="checkbox"/> Whale Pump
			Hammer (lb 130#)	<input type="checkbox"/> ATV	<input type="checkbox"/> Cable Tool	<input type="checkbox"/> Dual Rotary	<input type="checkbox"/> Standpipe	<input checked="" type="checkbox"/> Bailer
			Fall (in): 30"	<input type="checkbox"/> Tripoc	<input type="checkbox"/> Drive & Wash	<input type="checkbox"/>	<input type="checkbox"/> None (temp. stick)	<input type="checkbox"/> Peristaltic

DEPTH (FT)	SAMPLE ID	BLOWS PER 6 IN	PEN / REC (IN)	FIELD SCREENING (ppm)	WELL DETAIL	SAMPLE DESCRIPTION		LITHOLOGIC DESCRIPTION
						Burmister Visual-Manual Identification & Description (density/consistency, color, maximum particle size in sampler, structure, odor, moisture, optional descriptions, geologic interpretation)		
0	0-3			74			medium silty SAND, heavy petroleum odor, old kerosene like odor	
	3-5			84			medium silty SAND, heavy petroleum odor	
5	5-7			82			medium silty SAND, heavy petroleum odor, saturated, sheen on water	
10	10-11.5			42			medium coarse SAND, saturated-sheen on water	
	11.5-12			4			brown coarse SANDS	
15								
20								

GRANULAR SOILS BLOWS/FT CONSISTENCY	COHESIVE SOILS BLOWS/FT CONSISTENCY	LEGEND	INTERVAL (FT)	SUMMARY	LITHOLOGIC DESCRIPTION
0 - 4 V. LOOSE	<2 V. SOFT	Concrete	ENTER BGS	Overburden (Linear ft.): ENTER	SAND SILT CLAY SAND & GRAVEL TILL FILL R/C ROCK / COMPETENT R/W ROCK / WEATHERED
4 - 10 LOOSE	2 - 4 SOFT	Backfill	ENTER BGS	Feet of rock core/air hamm: ENTER	
10 - 30 M. DENSE	4 - 8 M. STIFF	Grout	ENTER BGS	Well solid riser pipe length: ENTER	
30 - 50 DENSE	8 - 15 STIFF	Bentonite Seal	ENTER BGS	Well standpipe height ags: ENTER	
>50 V. DENSE	15 - 30 V. STIFF	Sandpack	ENTER BGS	Well PVC diameter (in. ENTER roadbox	
	>30 HARD	Riser Pipe	ENTER BGS	Screen length (ft.): ENTER	
		Screen	ENTER BGS	Screen slot size: ENTER	

NOTES:

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SOIL BORING LOG & WELL DIAGRAM

BORING NO.:

SB-8

WELL ID:

Page 1 of 1

PROJECT Northeast Auto
LOCATION 684 Portland Street, St. Johnsbury
CLIENT Mr. Ronney Lyster
CONTRACTOR Northern Test Boring
DRILLER Northern Test Boring

HORIZONS FILE NO. 11217
PROJECT MGR. Jennifer Stonecipher
FIELD REP. Jennifer Stonecipher
DATE STARTED March 20th, 2012
DATE COMPLETED March 20th, 2012

Elevation _____ ft.		Datum: _____		Boring Location: 10' east of SB-6				
GROUNDWATER READINGS			SAMPLER		Rig Make & Mode		Protective Casing	Well Development
Date	Depth (ft)	Reference	Type: ENTER	<input checked="" type="checkbox"/> Truck	<input checked="" type="checkbox"/> Hollow Stem Auger	<input type="checkbox"/> Mud Rotary	<input type="checkbox"/> Roadbox	<input type="checkbox"/> Whale Pump
			Hammer (lb 130#)	<input type="checkbox"/> ATV	<input type="checkbox"/> Cable Tool	<input type="checkbox"/> Dual Rotary	<input type="checkbox"/> Standpipe	<input checked="" type="checkbox"/> Bailer
			Fall (in): 30"	<input type="checkbox"/> Tripoc	<input type="checkbox"/> Drive & Wash	<input type="checkbox"/>	<input type="checkbox"/> None (temp. stick)	<input type="checkbox"/> Peristaltic

DEPTH (FT)	SAMPLE ID	BLOWS PER 6 IN	PEN / REC (IN)	FIELD SCREENING (ppm)	WELL DETAIL	SAMPLE DESCRIPTION		LITHOLOGIC DESCRIPTION
						Burmister Visual-Manual Identification & Description (density/consistency, color, maximum particle size in sampler, structure, odor, moisture, optional descriptions, geologic interpretation)		
0	0-5			142			dark brown medium SANDS, heavy petroleum odor, turpentine or kerosene like odor	
5	5-8			128			dark brown medium SANDS, heavy petroleum odor, turpentine or kerosene like odor auger falls through empty space-old UST	
10								
15								
20								

GRANULAR SOILS BLOWS/FT CONSISTENCY	COHESIVE SOILS BLOWS/FT CONSISTENCY	LEGEND	INTERVAL (FT)	SUMMARY	LITHOLOGIC DESCRIPTION
0 - 4 V. LOOSE	<2 V. SOFT	Concrete	ENTER BGS	Overburden (Linear ft.): ENTER	SAND
4 - 10 LOOSE	2 - 4 SOFT	Backfill	ENTER BGS	Feet of rock core/air hamm: ENTER	SILT
10 - 30 M. DENSE	4 - 8 M. STIFF	Grout	ENTER BGS	Well solid riser pipe length: ENTER	CLAY
30 - 50 DENSE	8 - 15 STIFF	Bentonite Sea	ENTER BGS	Well standpipe height ags: ENTER	SAND & GRAVEL
>50 V. DENSE	15 - 30 V. STIFF	Sandpack	ENTER BGS	Well PVC diameter (in. ENTER roadbox	TILL
		Riser Pipe	ENTER BGS	Screen length (ft.): ENTER	R/C ROCK / COMPETENT
		Screen	ENTER BGS	Screen slot size: ENTER	R/W ROCK / WEATHERED

NOTES:



SOIL BORING LOG & WELL DIAGRAM

BORING NO.:

SB-9

WELL ID:

Page 1 of 1

PROJECT Northeast Auto
LOCATION 684 Portland Street, St. Johnsbury
CLIENT Mr. Ronney Lyster
CONTRACTOR Northern Test Boring
DRILLER Northern Test Boring

HORIZONS FILE NO. 11217
PROJECT MGR. Jennifer Stonecipher
FIELD REP. Jennifer Stonecipher
DATE STARTED March 20th, 2012
DATE COMPLETED March 20th, 2012

Elevation _____ ft.		Datum: _____		Boring Location: 20' west of SB-4						
GROUNDWATER READINGS			SAMPLER		Rig Make & Mode		Protective Casing	Well Development		
Date	Depth (ft)	Reference	Type: ENTER	<input type="checkbox"/> Truck <input checked="" type="checkbox"/> ATV <input type="checkbox"/> Tripoc		<input checked="" type="checkbox"/> Hollow Stem Auger <input type="checkbox"/> Cable Tool <input type="checkbox"/> Drive & Wash		<input type="checkbox"/> Mud Rotary <input type="checkbox"/> Dual Rotary <input type="checkbox"/> None (temp. sticku)	<input type="checkbox"/> Roadbox <input type="checkbox"/> Standpipe <input type="checkbox"/> None (temp. sticku)	<input type="checkbox"/> Whale Pump <input checked="" type="checkbox"/> Bailer <input type="checkbox"/> Peristaltic
			Hammer (lb 130#)							
			Fall (in): 30"							

DEPTH (FT)	SAMPLE ID	BLOWS PER 6 IN	PEN / REC (IN)	FIELD SCREENING (ppm)	WELL DETAIL	SAMPLE DESCRIPTION		LITHOLOGIC DESCRIPTION
						Burmister Visual-Manual Identification & Description (density/consistency, color, maximum particle size in sampler, structure, odor, moisture, optional descriptions, geologic interpretation)		
0	0-6.5			10			dark grey medium coarse SANDS	
5	6.5-12			1.2			grey coarse gravel, saturated, no sheen, no odor	
10								
15								
20								

GRANULAR SOILS	COHESIVE SOILS	LEGEND	INTERVAL (FT)	SUMMARY	LITHOLOGIC DESCRIPTION
BLOWS/FT CONSISTENCY	BLOWS/FT CONSISTENCY				
0 - 4 V. LOOSE	<2 V. SOFT	Concrete	ENTER BGS	Overburden (Linear ft.): ENTER	SAND
4 - 10 LOOSE	2 - 4 SOFT	Backfill	ENTER BGS	Feet of rock core/air hamm: ENTER	SILT
10 - 30 M. DENSE	4 - 8 M. STIFF	Grout	ENTER BGS	Well solid riser pipe length: ENTER	CLAY
30 - 50 DENSE	8 - 15 STIFF	Bentonite Sea	ENTER BGS	Well standpipe height ags: ENTER	SAND & GRAVEL
>50 V. DENSE	15 - 30 V. STIFF	Sandpack	ENTER BGS	Well PVC diameter (in. ENTER roadbox	TILL
	>30 HARD	Riser Pipe	ENTER BGS	Screen length (ft.): ENTER	R/C ROCK / COMPETENT
		Screen	ENTER BGS	Screen slot size: ENTER	R/W ROCK / WEATHERED

NOTES:



SOIL BORING LOG & WELL DIAGRAM

BORING NO.:

SB-10

WELL ID:

MW-4

Page 1 of 1

PROJECT Northeast Auto
LOCATION 684 Portland Street, St. Johnsbury
CLIENT Mr. Ronney Lyster
CONTRACTOR Northern Test Boring
DRILLER Northern Test Boring

HORIZONS FILE NO. 11217
PROJECT MGR. Jennifer Stonecipher
FIELD REP. Jennifer Stonecipher
DATE STARTED March 20th, 2012
DATE COMPLETED March 20th, 2012

Elevation _____ ft.		Datum: _____		Boring Location: location of former UST#1				
GROUNDWATER READINGS			SAMPLER		Rig Make & Mode		Protective Casing	Well Development
Date	Depth (ft)	Reference	Type: ENTER	<input checked="" type="checkbox"/> Truck	<input checked="" type="checkbox"/> Hollow Stem Auger	<input type="checkbox"/> Mud Rotary	<input checked="" type="checkbox"/> Roadbox	<input type="checkbox"/> Whale Pump
			Hammer (lb 130#)	<input type="checkbox"/> ATV	<input type="checkbox"/> Cable Tool	<input type="checkbox"/> Dual Rotary	<input type="checkbox"/> Standpipe	<input checked="" type="checkbox"/> Bailer
			Fall (in): 30"	<input type="checkbox"/> Tripoc	<input type="checkbox"/> Drive & Wash	<input type="checkbox"/>	<input type="checkbox"/> None (temp. sticku	<input type="checkbox"/> Peristaltic

DEPTH (FT)	SAMPLE ID	BLOWS PER 6 IN	PEN / REC (IN)	FIELD SCREENING (ppm)	WELL DETAIL	SAMPLE DESCRIPTION <small>Burmister Visual-Manual Identification & Description (density/consistency, color, maximum particle size in sampler, structure, odor, moisture, optional descriptions, geologic interpretation)</small>	LITHOLOGIC DESCRIPTION
0	0-2			0		asphalt with coarse SANDS	
5	5-7	2 5 2 1	24	48		grey medium to coarse silty SANDS	
10	10-12	7 6 7 11	78	78		dark coarse SANDS, saturated, sheen on water, petroleum odor	
15	15-17	12 14 10 8		9		dark coarse SANDS set well at 15'	
20							

GRANULAR SOILS BLOWS/FT CONSISTENCY	COHESIVE SOILS BLOWS/FT CONSISTENCY	LEGEND	INTERVAL (FT)	SUMMARY	LITHOLOGIC DESCRIPTION
0 - 4 V. LOOSE	<2 V. SOFT	Concrete	ENTER BGS	Overburden (Linear ft.): ENTER	SAND SILT CLAY SAND & GRAVEL TILL FILL R/C ROCK / COMPETENT R/W ROCK / WEATHERED
4 - 10 LOOSE	2 - 4 SOFT	Backfill	ENTER BGS	Feet of rock core/air hamm: ENTER	
10 - 30 M. DENSE	4 - 8 M. STIFF	Grout	ENTER BGS	Well solid riser pipe length: ENTER	
30 - 50 DENSE	8 - 15 STIFF	Bentonite Seal	ENTER BGS	Well standpipe height ags: ENTER	
>50 V. DENSE	15 - 30 V. STIFF	Sandpack	ENTER BGS	Well PVC diameter (in. ENTER roadbox	
	>30 HARD	Riser Pipe	ENTER BGS	Screen length (ft.): ENTER	
		Screen	ENTER BGS	Screen slot size: ENTER	

NOTES: _____

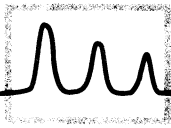
Soil & Groundwater Quality Tables & Lab Report

**NORTHEAST AUTO ACCESSORY
SOIL QUALITY ANALYTICAL RESULTS
SMS #20114197**

Analytes	Risk-Based Standards	MW-2	MW-3	MW-4	SB-7
		3/20/2012	3/20/2012	3/20/2012	3/20/2012
Sample Interval (depth)		5-7	10-12	10-12	5-7
PID Reading		44	84	78	82
Volatile Organic Compounds	VT ANR Standard (mg/kg)	<i>concentration mg/kg</i>			
Benzene	100.0	<0.05	<0.05	<0.05	<0.05
Toluene	20,000	<0.05	<0.05	<0.05	0.05
Ethylbenzene	14,000	<0.05	0.24	<0.05	0.23
<i>m&p-xylene</i>	NA	<0.05	0.40	0.22	0.51
<i>o-xylene</i>	NA	<0.05	0.11	<0.05	0.24
Total Detected Xylenes	200,000	<0.10	0.51	0.22	0.75
Total Detected BTEX	NA	<0.25	0.75	0.22	1.03
Volatile Organic Compounds	EPA Standard*	<i>concentration mg/kg</i>			
MTBE	70	<0.1	<0.1	0.22	<0.1
sec-Butylbenzene	220	<0.05	0.30	<0.05	<0.05
n-Butylbenzene	240	<0.05	0.82	<0.05	0.13
tert-Butylbenzene	390	<0.05	<0.05	<0.05	<0.05
1,2,4-Trimethylbenzene	170	<0.05	1.7	0.29	0.77
1,3,5-Trimethylbenzene	70	<0.05	0.81	0.08	0.33
n-Propylbenzene	240	<0.05	0.35	<0.05	0.17
p-Isopropyltoluene	N/A	<0.05	0.30	<0.05	<0.05
Isopropylbenzene	2,000	<0.05	0.16	<0.05	0.05
Naphthalene	190	<0.1	1.6	0.4	0.1
TPH-DRO		310	770	130	<8

* EPA Region IX Preliminary Remediation Goals for Industrial Soils





Jennifer Stonecipher
Horizons Engineering PLLC
34 School Street
Littleton, NH 03561



Subject: Laboratory Report

Eastern Analytical, Inc. ID: 108612
Client Identification: Northeast Auto | 11217
Date Received: 3/22/2012

Dear Ms. Stonecipher :

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at www.eailabs.com for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:

- Solid samples are reported on a dry weight basis, unless otherwise noted
- < : "less than" followed by the reporting limit
- > : "greater than" followed by the reporting limit
- %R : % Recovery

Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269) and Vermont (VT1012).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,


Lorraine Olashaw, Lab Director

3.29.12
Date

5
of pages (excluding cover letter)



Client: Horizons Engineering PLLC

Client Designation: Northeast Auto | 11217

Temperature upon receipt (°C): 5.5

Received on ice or cold packs (Yes/No): Y

Acceptable temperature range (°C): 0-6

Lab ID	Sample ID	Date Received	Date Sampled	Sample Matrix	% Dry Weight	Exceptions/Comments (other than thermal preservation)
108612.01	MW-2	3/22/12	3/20/12	soil	85.0	Adheres to Sample Acceptance Policy
108612.02	MW-3	3/22/12	3/20/12	soil	89.2	Adheres to Sample Acceptance Policy
108612.03	MW-4	3/22/12	3/20/12	soil	79.2	Adheres to Sample Acceptance Policy
108612.04	SB-7	3/22/12	3/20/12	soil	85.1	Adheres to Sample Acceptance Policy
108612.05	Trip Blank	3/22/12	3/20/12	soil	100.0	Adheres to Sample Acceptance Policy

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitibility, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis.

All results contained in this report relate only to the above listed samples.

References include:

- 1) EPA 600/4-79-020, 1983
- 2) Standard Methods for Examination of Water and Wastewater : Inorganics, 19th Edition, 1995; Microbiology, 20th Edition, 1998
- 3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
- 4) Hach Water Analysis Handbook, 2nd edition, 1992



LABORATORY REPORT

EAI ID#: 108612

Client: **Horizons Engineering PLLC**

Client Designation: **Northeast Auto | 11217**

Sample ID:	MW-2	MW-3	MW-4	SB-7	Trip Blank
Lab Sample ID:	108612.01	108612.02	108612.03	108612.04	108612.05
Matrix:	soil	soil	soil	soil	soil
Date Sampled:	3/20/12	3/20/12	3/20/12	3/20/12	3/20/12
Date Received:	3/22/12	3/22/12	3/22/12	3/22/12	3/22/12
Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Date of Analysis:	3/23/12	3/23/12	3/23/12	3/23/12	3/23/12
Analyst:	VG	VG	VG	VG	VG
Method:	8260B	8260B	8260B	8260B	8260B
Dilution Factor:	1	1	1	1	1
Dichlorodifluoromethane	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chloromethane	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Vinyl chloride	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bromomethane	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chloroethane	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Trichlorofluoromethane	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Diethyl Ether	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acetone	< 2	< 2	< 2	< 2	< 2
1,1-Dichloroethene	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Methylene chloride	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Carbon disulfide	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Methyl-t-butyl ether(MTBE)	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
trans-1,2-Dichloroethene	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,1-Dichloroethane	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,2-Dichloropropane	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
cis-1,2-Dichloroethene	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Butanone(MEK)	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Tetrahydrofuran(THF)	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,1,1-Trichloroethane	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Carbon tetrachloride	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,1-Dichloropropene	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzene	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichloroethane	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Trichloroethene	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichloropropane	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibromomethane	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bromodichloromethane	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dioxane	< 3	< 3	< 3	< 3	< 3
4-Methyl-2-pentanone(MIBK)	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
cis-1,3-Dichloropropene	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Toluene	< 0.05	< 0.05	< 0.05	0.05	< 0.05
trans-1,3-Dichloropropene	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,1,2-Trichloroethane	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Hexanone	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Tetrachloroethene	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichloropropane	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibromochloromethane	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dibromoethane(EDB)	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chlorobenzene	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,1,1,2-Tetrachloroethane	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Ethylbenzene	< 0.05	0.24	< 0.05	0.23	< 0.05
mp-Xylene	< 0.05	0.40	0.22	0.51	< 0.05
o-Xylene	< 0.05	0.11	< 0.05	0.24	< 0.05
Styrene	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05



LABORATORY REPORT

EAI ID#: 108612

Client: **Horizons Engineering PLLC**

Client Designation: **Northeast Auto | 11217**

Sample ID:	MW-2	MW-3	MW-4	SB-7	Trip Blank
Lab Sample ID:	108612.01	108612.02	108612.03	108612.04	108612.05
Matrix:	soil	soil	soil	soil	soil
Date Sampled:	3/20/12	3/20/12	3/20/12	3/20/12	3/20/12
Date Received:	3/22/12	3/22/12	3/22/12	3/22/12	3/22/12
Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Date of Analysis:	3/23/12	3/23/12	3/23/12	3/23/12	3/23/12
Analyst:	VG	VG	VG	VG	VG
Method:	8260B	8260B	8260B	8260B	8260B
Dilution Factor:	1	1	1	1	1
Bromoform	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
IsoPropylbenzene	< 0.05	0.16	< 0.05	0.05	< 0.05
Bromobenzene	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,1,2,2-Tetrachloroethane	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,3-Trichloropropane	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
n-Propylbenzene	< 0.05	0.35	< 0.05	0.17	< 0.05
2-Chlorotoluene	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorotoluene	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3,5-Trimethylbenzene	< 0.05	0.81	0.08	0.33	< 0.05
tert-Butylbenzene	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trimethylbenzene	< 0.05	1.7	0.29	0.77	< 0.05
sec-Butylbenzene	< 0.05	0.30	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
p-Isopropyltoluene	< 0.05	0.30	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
n-Butylbenzene	< 0.05	0.82	< 0.05	0.13	< 0.05
1,2-Dibromo-3-chloropropane	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trichlorobenzene	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	< 0.1	1.6	0.4	0.1	< 0.1
1,2,3-Trichlorobenzene	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Bromofluorobenzene (surr)	110 %R	128 %R	104 %R	105 %R	102 %R
1,2-Dichlorobenzene-d4 (surr)	101 %R	100 %R	98 %R	99 %R	101 %R
Toluene-d8 (surr)	104 %R	109 %R	103 %R	105 %R	125 %R

The values for n-Butylbenzene may be elevated due to non-target interference.



LABORATORY REPORT

EAI ID#: 108612

Client: **Horizons Engineering PLLC**

Client Designation: **Northeast Auto | 11217**

Sample ID:	MW-2	MW-3	MW-4	SB-7
Lab Sample ID:	108612.01	108612.02	108612.03	108612.04
Matrix:	soil	soil	soil	soil
Date Sampled:	3/20/12	3/20/12	3/20/12	3/20/12
Date Received:	3/22/12	3/22/12	3/22/12	3/22/12
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Date of Extraction/Prep:	3/22/12	3/22/12	3/22/12	3/22/12
Date of Analysis:	3/23/12	3/23/12	3/23/12	3/23/12
Analyst:	LAS	LAS	LAS	LAS
Method:	8015CDRO	8015CDRO	8015CDRO	8015CDRO
Dilution Factor:	1	5	2	1
DRO (Diesel Range C10-C28)	310	770	130	< 8
p-Terphenyl-D14 (TPH surr)	69 %R	91 %R	88 %R	70 %R

**NORTHEAST AUTO ACCESSORY
GROUNDWATER QUALITY ANALYTICAL RESULTS
SMS #20114197**

Analytes	VTANR Risk-Based Standards (ug/L)		MW-1 04/13/12	MW-2 04/13/12	MW-3 04/13/12	MW-4 4/13/12 *
	Top of Casing			609.77	608.91	607.74
Depth to Water			5.02	4.40	5.90	5.90
Depth to Product			--	--	--	--
Product Thickness			0.00	0.00	1.50	0.00
Water Table Elevation			604.75	604.51	602.95	602.53
Volatile Organic Compounds	Enforcement Standard	Preventive Action Level	CONCENTRATION, ug/L (ppb)			
Benzene	5	0.5	<1	<1		12
Tolulene	1,000	500	<1	<1		3
Ethylbenzene	700	350	<1	<1		7
<i>m&p-xylene</i>	NA	NA	<1	<1		31
<i>o-xylene</i>	NA	NA	<1	<1		34
Total Detected Xylenes	10,000	5,000	<2	<2		65
Total Detected BTEX	NA	NA	<5	<5		87
Methyl-t-butyl-ether (MTBE)	40	20	<5	<5		28
2-Butanone (MEK)	4,200	2,100	<10	<10		<10
sec-Butylbenzene	NA	NA	<1	<1		2
n-Butylbenzene	NA	NA	<1	<1		<1
tert-Butylbenzene	NA	NA	<1	<1		<1
1,2,4-Trimethylbenzene	5	2.5	<1	4		85
1,3,5-Trimethylbenzene	4	2	<1	<1		23
n-Propylbenzene	NA	NA	<1	<1		3
p-Isopropyltoluene	NA	NA	<1	<1		4
Isopropylbenzene	NA	NA	<1	<1		2
Naphthalene	20	10	<5	<5		62
DRO (Diesel Range Organics)	NA	NA	<0.1	34		15

Notes:

- < = Detected analyte concentration below indicated laboratory detection limit.
- Concentrations listed in **bold** equal to or greater than applicable VTANR standard.
- NA = Standard not available.
- * Lab results were incorrectly labeled MW-3 for this round.



Jennifer Stonecipher
Horizons Engineering PLLC
34 School Street
Littleton, NH 03561



Subject: Laboratory Report

Eastern Analytical, Inc. ID: 109329
Client Identification: NE Auto / 11217 | Apr. 2012
Date Received: 4/16/2012

Dear Ms. Stonecipher :

Enclosed please find the laboratory report for the above identified project. All analyses were performed in accordance with our QA/QC Program. Unless otherwise stated, holding times, preservation techniques, container types, and sample conditions adhered to EPA Protocol. Samples which were collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures. Eastern Analytical, Inc. certifies that the enclosed test results meet all requirements of NELAP and other applicable state certifications. Please refer to our website at www.eailabs.com for a copy of our NELAP certificate and accredited parameters.

The following standard abbreviations and conventions apply to all EAI reports:
Solid samples are reported on a dry weight basis, unless otherwise noted
< : "less than" followed by the reporting limit
> : "greater than" followed by the reporting limit
%R : % Recovery


Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269) and Vermont (VT1012).

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the the written approval of the laboratory.

If you have any questions regarding the results contained within, please feel free to directly contact me or the chemist(s) who performed the testing in question. Unless otherwise requested, we will dispose of the sample(s) 30 days from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,


Lorraine Olashaw, Lab Director

4.23.12
Date

5
of pages (excluding cover letter)



Client: Horizons Engineering PLLC

Client Designation: NE Auto / 11217 | Apr. 2012

Temperature upon receipt (°C): 2.5

Received on ice or cold packs (Yes/No): Y

Acceptable temperature range (°C): 0-6

Lab ID	Sample ID	Date Received	Date Sampled	Sample Matrix	% Dry Weight	Exceptions/Comments (other than thermal preservation)
109329.01	MW-1	4/16/12	4/13/12	aqueous		Adheres to Sample Acceptance Policy
109329.02	MW-2	4/16/12	4/13/12	aqueous		Adheres to Sample Acceptance Policy
109329.03	MW-3	4/16/12	4/13/12	aqueous		Adheres to Sample Acceptance Policy

MW-4 per field notes. Horizons Engineering error on chain of custody.

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitibility, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis.

All results contained in this report relate only to the above listed samples.

References include:

- 1) EPA 600/4-79-020, 1983
- 2) Standard Methods for Examination of Water and Wastewater : Inorganics, 19th Edition, 1995; Microbiology, 20th Edition, 1998
- 3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
- 4) Hach Water Analysis Handbook, 2nd edition, 1992



LABORATORY REPORT

EAI ID#: 109329

Client: Horizons Engineering PLLC

Client Designation: NE Auto / 11217 | Apr. 2012

Sample ID:	MW-1	MW-2	MW-3 MW-4
Lab Sample ID:	109329.01	109329.02	109329.03
Matrix:	aqueous	aqueous	aqueous
Date Sampled:	4/13/12	4/13/12	4/13/12
Date Received:	4/16/12	4/16/12	4/16/12
Units:	ug/l	ug/l	ug/l
Date of Analysis:	4/18/12	4/18/12	4/18/12
Analyst:	BAM	BAM	BAM
Method:	8260B	8260B	8260B
Dilution Factor:	1	1	1
Dichlorodifluoromethane	< 5	< 5	< 5
Chloromethane	< 2	< 2	< 2
Vinyl chloride	< 2	< 2	< 2
Bromomethane	< 2	< 2	< 2
Chloroethane	< 5	< 5	< 5
Trichlorofluoromethane	< 5	< 5	< 5
Diethyl Ether	< 5	< 5	< 5
Acetone	< 10	< 10	< 10
1,1-Dichloroethene	< 1	< 1	< 1
Methylene chloride	< 5	< 5	< 5
Carbon disulfide	< 5	< 5	< 5
Methyl-t-butyl ether(MTBE)	< 5	< 5	28
trans-1,2-Dichloroethene	< 2	< 2	< 2
1,1-Dichloroethane	< 2	< 2	< 2
2,2-Dichloropropane	< 2	< 2	< 2
cis-1,2-Dichloroethene	< 2	< 2	< 2
2-Butanone(MEK)	< 10	< 10	< 10
Bromochloromethane	< 2	< 2	< 2
Tetrahydrofuran(THF)	< 10	< 10	< 10
Chloroform	< 2	< 2	< 2
1,1,1-Trichloroethane	< 2	< 2	< 2
Carbon tetrachloride	< 2	< 2	< 2
1,1-Dichloropropene	< 2	< 2	< 2
Benzene	< 1	< 1	12
1,2-Dichloroethane	< 2	< 2	< 2
Trichloroethene	< 2	< 2	< 2
1,2-Dichloropropane	< 2	< 2	< 2
Dibromomethane	< 2	< 2	< 2
Bromodichloromethane	< 1	< 1	< 1
1,4-Dioxane	< 50	< 50	< 50
4-Methyl-2-pentanone(MIBK)	< 10	< 10	< 10
cis-1,3-Dichloropropene	< 1	< 1	< 1
Toluene	< 1	< 1	3
trans-1,3-Dichloropropene	< 1	< 1	< 1
1,1,2-Trichloroethane	< 2	< 2	< 2
2-Hexanone	< 10	< 10	< 10
Tetrachloroethene	< 2	< 2	< 2
1,3-Dichloropropane	< 2	< 2	< 2
Dibromochloromethane	< 2	< 2	< 2
1,2-Dibromoethane(EDB)	< 1	< 1	< 1
Chlorobenzene	< 2	< 2	< 2
1,1,1,2-Tetrachloroethane	< 2	< 2	< 2
Ethylbenzene	< 1	< 1	7
mp-Xylene	< 1	< 1	31
o-Xylene	< 1	< 1	34
Styrene	< 1	< 1	< 1



LABORATORY REPORT

EAI ID#: 109329

Client: **Horizons Engineering PLLC**

Client Designation: **NE Auto / 11217 | Apr. 2012**

Sample ID:	MW-1	MW-2	MW-3 MW-4
Lab Sample ID:	109329.01	109329.02	109329.03
Matrix:	aqueous	aqueous	aqueous
Date Sampled:	4/13/12	4/13/12	4/13/12
Date Received:	4/16/12	4/16/12	4/16/12
Units:	ug/l	ug/l	ug/l
Date of Analysis:	4/18/12	4/18/12	4/18/12
Analyst:	BAM	BAM	BAM
Method:	8260B	8260B	8260B
Dilution Factor:	1	1	1
Bromoform	< 2	< 2	< 2
IsoPropylbenzene	< 1	< 1	2
Bromobenzene	< 2	< 2	< 2
1,1,2,2-Tetrachloroethane	< 2	< 2	< 2
1,2,3-Trichloropropane	< 2	< 2	< 2
n-Propylbenzene	< 1	< 1	3
2-Chlorotoluene	< 2	< 2	< 2
4-Chlorotoluene	< 2	< 2	< 2
1,3,5-Trimethylbenzene	< 1	< 1	23
tert-Butylbenzene	< 1	< 1	< 1
1,2,4-Trimethylbenzene	< 1	4	85
sec-Butylbenzene	< 1	< 1	2
1,3-Dichlorobenzene	< 1	< 1	< 1
p-Isopropyltoluene	< 1	< 1	4
1,4-Dichlorobenzene	< 1	< 1	< 1
1,2-Dichlorobenzene	< 1	< 1	< 1
n-Butylbenzene	< 1	< 1	< 1
1,2-Dibromo-3-chloropropane	< 1	< 1	< 1
1,2,4-Trichlorobenzene	< 1	< 1	< 1
Hexachlorobutadiene	< 1	< 1	< 1
Naphthalene	< 5	< 5	62
1,2,3-Trichlorobenzene	< 1	< 1	< 1
4-Bromofluorobenzene (surr)	94 %R	104 %R	103 %R
1,2-Dichlorobenzene-d4 (surr)	112 %R	107 %R	110 %R
Toluene-d8 (surr)	100 %R	99 %R	101 %R



LABORATORY REPORT

EAI ID#: 109329

Client: **Horizons Engineering PLLC**

Client Designation: **NE Auto / 11217 | Apr. 2012**

Sample ID:	MW-1	MW-2	MW-3
Lab Sample ID:	109329.01	109329.02	109329.03
Matrix:	aqueous	aqueous	aqueous
Date Sampled:	4/13/12	4/13/12	4/13/12
Date Received:	4/16/12	4/16/12	4/16/12
Units:	mg/L	mg/L	mg/L
Date of Extraction/Prep:	4/17/12	4/17/12	4/17/12
Date of Analysis:	4/17/12	4/17/12	4/17/12
Analyst:	LAS	LAS	LAS
Method:	8015CDRO	8015CDRO	8015CDRO
Dilution Factor:	1	5	5
DRO (Diesel Range C10-C28)	< 0.1	34	15
p-Terphenyl-D14 (TPH surr)	71 %R	101 %R	143 %R

MW-4 per field notes.
Horizons Engineering error
on chain of custody.

MW-3: TPH surrogate exceeded method limits (30 - 130 %R). The high recovery was confirmed by re-analysis. Matrix interference is suspected as the Batch QC demonstrated acceptable recoveries.

CHAIN-OF-CUSTODY RECORD



eastern analytical, inc.

professional laboratory services

109329

5

Date/Time
Composites need start
and stop dates/times

Sample IDs	Date/Time	Matrix	Parameters and Sample Notes	# of containers
MW-1	4/13 1:30	aqueous <input checked="" type="radio"/> Grab or <input type="radio"/> Comp	AqTot/VNH8260BFullList/V8015 GRO DRO	<input type="checkbox"/>
<input type="checkbox"/> Sampler confirms ID and parameters are accurate		Circle preservative/s: HCL HNO ₃ H ₂ SO ₄ NaOH MEOH Na ₂ S ₂ O ₃ ICE		Dissolved Sample Field Filtered <input type="checkbox"/>
MW-2	4/13 2:30	aqueous <input checked="" type="radio"/> Grab or <input type="radio"/> Comp	AqTot/VNH8260BFullList/V8015 GRO DRO	<input type="checkbox"/>
<input type="checkbox"/> Sampler confirms ID and parameters are accurate		Circle preservative/s: HCL HNO ₃ H ₂ SO ₄ NaOH MEOH Na ₂ S ₂ O ₃ ICE		Dissolved Sample Field Filtered <input type="checkbox"/>
MW-3	4/13 3:15	aqueous <input checked="" type="radio"/> Grab or <input type="radio"/> Comp	AqTot/VNH8260BFullList/V8015 GRO DRO <div style="border: 1px solid red; padding: 2px; color: red; display: inline-block;">MW-4 former UST location (per field notes) Horizons Eng. label error.</div>	<input type="checkbox"/>
<input type="checkbox"/> Sampler confirms ID and parameters are accurate		Circle preservative/s: HCL HNO ₃ H ₂ SO ₄ NaOH MEOH Na ₂ S ₂ O ₃ ICE		Dissolved Sample Field Filtered <input type="checkbox"/>
MW-4	4/13	aqueous <input checked="" type="radio"/> Grab or <input type="radio"/> Comp	AqTot/VNH8260BFullList/V8015 GRO DRO <div style="font-size: 2em; text-align: center;">No Sample Free Product</div>	<input type="checkbox"/>
<input type="checkbox"/> Sampler confirms ID and parameters are accurate		Circle preservative/s: HCL HNO ₃ H ₂ SO ₄ NaOH MEOH Na ₂ S ₂ O ₃ ICE		Dissolved Sample Field Filtered <input type="checkbox"/>

Please ensure this auto COC is accurate, adheres to permit or sampling requirements for this sampling event, and modify as necessary.

EAI Project ID 0
 Project Name NE Auto / 11217 | Apr. 2012
 State VT
 Client (Pro Mgr) Jennifer Stonecipher
 Customer Horizons Engineering PLLC
 Address 34 School Street
 City Littleton NH 03561
 Phone 444-4111 Fax 444-1343 (12)
 EmailAddress: jstonecipher@horizonsengineering.co

Results Needed by: Preferred date _____
 Notes about project: (i.e. Special Limits, Billing info if different...)

DRO NOT GRO
 VT, Pet. fund

QC deliverables
 A A+ B B+ C PC

Reporting Options

- HC
- EDD PDF
- EDD email
- PDF prelim, NO FAX
- e-mail Login Confirmation
- NO FAX

PONumber: Verbal
 Quote No: _____
 Temperature 7.5 °C
 Ice present Yes No

Samples Collected by: JSS
 Relinquished by: [Signature] Date/Time: 4/13/12 Received by: [Signature]
 Relinquished by: JSS Date/Time: 4-16-12 14:05 Received by: [Signature]

Supporting Documentation



State of Vermont

AGENCY OF NATURAL RESOURCES
Department of Environmental Conservation
Waste Management Division
103 South Main Street/West Building
Waterbury, VT 05671-0404
FAX 802-241-3296
TEL 802-241-3888

August 19, 2011

ATTN JERRY KNOWLTON
NORTHEAST AUTO ACCESSORY
684 PORTLAND STREET
ST JOHNSBURY VT 05819

RE: Petroleum Contamination from #2 Fuel Oil UST (UST Facility ID# 5550565) at Northeast Collision Center
St Johnsbury, VT - Site # 20114197

Dear Mr. Knowlton:

The Vermont Department of Environmental Conservation, Waste Management Division, Sites Management Section (SMS) has received a site referral from the VT Underground Storage Tank (UST) Program which includes a report from Horizons Engineering dated June 20, 2001 documenting the site conditions during the permanent closure of two out-of-service USTs at the above location.

During closure of the two 1,000-gal #2 fuel oil USTs on May 13, 2011, the tanks were found to be in poor condition with visible rusting, pitting, and holes. During closure of the UST at the back of the facility, petroleum contaminated soil (PCS) was found in the fill pipe area and at the tank ends, sides, and bottom. Soil staining, petroleum odors, and photoionization detector (PID) readings of up to 48 parts per million (ppm) were observed. Groundwater was encountered at six feet below ground surface (bgs) and a slight sheen was observed. Further excavation revealed that the extent of contamination was limited and excavation continued until PID readings ranged from 4.8 to 9 ppm at the extent of the excavation. Samples were collected at the extent of contamination and analyzed for volatile organic compounds (VOCs) and total petroleum hydrocarbons (TPH). No target analytes were detected. A total of 59.66 tons of PCS were disposed of at ESMI in Loudon, NH and no additional work is required to mitigate the release in the area of the property.

During closure of the UST at the front of the property, PCS was found in the fill pipe area and at the tank ends, sides, and bottom. Excavation was extended in an attempt to remove all the contamination but overhead electrical lines, road right-of-way, and the presence of a building foundation prevented complete removal. Product was observed on the groundwater table at 8.5 feet bgs and was recovered with absorbent pads. Final PID readings at the extent of the contamination were 40 ppm at the bottom and west sidewall, 89 ppm at the east sidewall, and 120 ppm at the north side wall. Although not all the contamination could be removed and the extent of the contamination could not be determined, the disposal of the 51.55 tons of PCS was approved by the SMS to reduce the contaminant mass and reduce cleanup time.

Based on the above information, the SMS has determined that additional work is necessary at the site in order to determine the severity of contamination present in the area of the former UST at the front of the property. Due to the possibility of contaminant impact to nearby receptors, the SMS is requesting that Northeast Auto Accessory retain the services of a qualified environmental consultant to perform the following:

- Further define the degree and extent of contamination to the soil. Obtaining soil borings, digging test pits, or performing a soil gas survey may accomplish this.

Determine the degree and extent of contamination, if any, to groundwater. If soil is found to contain evidence of contamination at the water table, then a sufficient number of monitoring wells should be installed in locations that will adequately define the severity of



contamination at the site. All groundwater samples taken should be analyzed for VOCs by EPA Method 8260 and for TPH by EPA Method 8015 DRO.)

- Perform an assessment of the site to determine the potential for sensitive receptors to be impacted by the contamination. This should include basements of adjacent buildings, nearby surface water, storm water drainage systems, and any public or private drinking water wells that are located within the vicinity of the site. If any water supplies appear at risk from this contamination, they should be sampled and analyzed using EPA 524.2 or an acceptable alternative.
- Determine the need for a long-term treatment and/or monitoring plan that addresses the contamination present at the site. The need for such a plan should be based on the results of the above investigations.
- Actively recover any free product measured in the ground in excess of 1/8". If this is done manually, a log must be maintained which documents the dates product is measured, the thickness of the product and the amount removed.
- Submit to the WMD a summary report that outlines the work performed as well as provides conclusions and recommendations. Included should be detailed well logs, analytical data, site map, area map, and a groundwater contour map.

Please have your consultant submit a preliminary work plan and cost estimate within fifteen days of your receipt of this letter so that it may be approved prior to the initiation of onsite work.

The USTs at Northeast Collision Center in St. Johnsbury are covered by the Petroleum Cleanup Fund (PCF) as set forth in 10 V.S.A. Section 1941 as long as no private insurance exists which would apply to this situation. You must provide proof of no insurance before the PCF can be used to reimburse these expenses. An owner or permittee of a tank, who is not in significant violation of his or her permit, is eligible for reimbursement from the fund. The owner or permittee must pay for the removal or repair of the failed (or abandoned) tank and for the first \$250 of the cleanup for each tank covered (\$500 total for this site); after that the fund will reimburse the tank owner or permittee for additional cleanup costs up to \$1 million. The fund may not pay for cleanup costs which are for cleanup work that is not pre-approved by the Agency. For further information on this program, please refer to the guidance document titled, "Procedures for Reimbursement from the Petroleum Cleanup Fund" which may be viewed at: <http://www.anr.state.vt.us/dec/wastediv/sms/pubs/PCFReimb.pdf>. Additionally, the Secretary of the Agency of Natural Resources reserves the right to seek cost recovery of fund monies spent at the Northeast Collision Center site if the Secretary concludes that Northeast Auto Accessory is in significant violation of the Vermont Underground Storage Tank Regulations and the Underground Storage Tank statute (10 V.S.A., Chapter 59). If you have any questions or comments, please feel free to contact me.

If you have any questions or comments, please feel free to contact me by phone at (802) 241-3896, by email at tim.cropley@state.vt.us, or in writing at the above address.

Sincerely,



Timothy J. Cropley
Hazardous Materials Specialist

cc: Jennifer Stonecipher, Horizons Engineering (email only)
St. Johnsbury Selectboard
St. Johnsbury Health Officer
Steve Rebillard, DEC St. Johnsbury Regional Office (email only)

TC:\c:\jupiter\anrdocs\WM_Sites\Sites.Files\2010.4101.to.2011.4200\2011.4197.Northeast.Collision.Center\2011\0819.1st.Ltr.doc

From: Jennifer Stonecipher [jstonecipher@horizonsengineering.com]

Sent: Thursday, January 26, 2012 7:53 PM

To: vcarr@horizonsengineering.com

Subject: Fwd: RE: Northeast Auto Accessory Site # 20114197

Thanks Jennifer. The cost estimate is accepted with some minor adjustments.

- 1) Please be sure to bill the current GSA mileage rate throughout the invoicing. Mileage rate used in Task I was \$0.55 instead of the allowed \$0.51/per mile.
- 2) Note that the costs presented include a total estimated cost of \$1,730.00 for reporting costs. The max for this work is generally \$1,600 unless the site manager determines that more is required to adequately report site findings and recommendations. I request that you attempt to further reduce costs for Task IV to \$1,600 if at all possible.

Please ensure that invoices and RP info on reimbursement forms match when they are submitted for review. You may proceed with the proposed work at the costs outlined in the cost estimate dated 11/28/2011 except as noted above. Please let me know if you have any questions.

Thanks Jennifer.

Tim

Timothy J. Cropley - Hazardous Materials Specialist
Waste Management Division
103 So. Main St, Waterbury VT 05671-0404
email - tim.cropley@state.vt.us

Phone - (802) 241-3896

Fax - (802) 241-3296

Check out the Vermont Department of Environmental Conservation Web Page at:

<http://www.anr.state.vt.us/dec/dec.htm>

 **Please consider the environment before printing this e-mail**

From: Jennifer Stonecipher [mailto:jstonecipher@horizonsengineering.com]

Sent: Thursday, January 26, 2012 4:23 PM

To: Cropley, Tim

Subject:

Tim, attached is the work scope that I submitted on November 28, 2011 to your office. Somehow, it apparently did not make it to you. I apologize for the inconvenience.

Jennifer Stonecipher
Environmental Project Manager
Horizons Engineering
34 School Street
Littleton, New Hampshire
Phone: (603) 444-4111
Fax: (603) 444-1343
jstonecipher@horizonsengineering.com

Subtotal Engineering \$1,820.00

Subtotal Subs and Lab \$5,100.00

TASK TOTAL \$6,920.00

TASK III: Survey and Sampling

Horizons will survey the relative locations and elevations of the newly installed wells and other prominent site features. We will then collect groundwater samples from each of the wells and submit them for laboratory VOC/TPH analysis. Sampling will be completed approximately two weeks after the wells are installed.

Labor	Rate	Hours	Total	Subcontractors	Rate	Units	Total
Principal	\$150.00		\$0.00				\$0.00
Const Mgr	\$105.00		\$0.00				\$0.00
Project Manager	\$95.00	8	\$760.00				\$0.00
Proj Eng/Sci	\$75.00		\$0.00				\$0.00
Survey Tech	\$85.00	6	\$510.00				
Senior Designer	\$75.00	6	\$450.00				
Clerical	\$40.00		\$0.00				
			Subtotal \$1,720.00				Subtotal \$0.00
				Analytical	Rate	Units	Total
				8260B/8015-GW	\$245	4	\$980.00
							Subtotal \$980.00
			Subtotal \$1,895.00				Subtotal Subs and Lab \$980.00
							TASK TOTAL \$2,875.00

TASK IV: Report Preparation

Horizons will prepare a report summarizing the well installations, field screening results, and soil and groundwater quality data. The report will include soil boring logs, site photographs, data summary tables, and a site plan showing the well locations and groundwater contours constructed based on water table elevation data. The report will also include recommendations for additional investigation and/or remediation, if merited.

Labor	Rate	Hours	Total	Subcontractors	Rate	Units	Total
Principal	\$160.00	1	\$160.00				
Const Mgr	\$105.00		\$0.00				
Project Manager	\$95.00	8	\$760.00				
Proj Eng/Sci	\$75.00	12	\$900.00				
Staff Eng/Sci	\$65.00		\$0.00				
Tech	\$65.00		\$0.00				
Clerical	\$55.00	2	\$110.00				
			Subtotal \$1,930.00				Subtotal \$0.00
				Analytical	Rate	Units	Total
			Subtotal \$25.00				Subtotal \$0.00
			Subtotal Engineering \$1,955.00				Subtotal Subs and Lab \$0.00
							TASK TOTAL \$1,955.00

Project Total \$12,170.00