



Stantec Consulting Services Inc.
55 Green Mountain Drive, South Burlington, VT 05403

December 10, 2020
File: 179450053

Attention: Robert Young, PE
Vermont Agency of Transportation
Accelerated Bridge Program/Structures
219 North Main Street
Barre, Vermont

Dear Mr. Young,

Reference: Limited Phase II Environmental Site Assessment, Bennington BF 1000(20), Vt Rt 9, Bridge 6 Over Walloomsac River, Bennington, Vermont

Stantec Consulting Services, Inc. (Stantec) has completed a Limited Subsurface Exploration and Sampling program at the above referenced site in Bennington, Vermont (the Site). The Site location is depicted on Figure 1, attached. The Site is part of a bridge replacement project being completed by the Vermont Department of Transportation (VTrans). The Site, centered on the Route 9 bridge over the Walloomsac River, exists primarily within the existing road right of way. The Site also includes approximately 100 feet of Route 9 to the east and west of the bridge and approximately 40 feet of Morgan Street and Beech Street south from their intersections with Route 9. Properties adjacent to the Site are mixed residential and commercial. Work to be performed under the Project includes the construction of a new bridge and relocation of the town water and sewer mains. A Phase I Environmental Site Assessment (ESA) was completed at the Site by Stantec in December 2020. That study identified the following Recognized Environmental Conditions (RECs):

- The Mincers Market property, located at 733 Main Street, operated as an automotive fueling station from at least 1946 to present. Petroleum contaminated soils were first encountered at the site in 2007 during the closure of four underground storage tanks (UST). An initial site investigation was completed in 2008 and discovered VGES exceedances for multiple gasoline related compounds in one of six monitoring wells. Since it is likely that impacts to soil and groundwater still exist at the property, and the Project Area is downgradient and in close proximity, the Mincers Market property was considered to be a REC in connection with the Project Area.
- The Mobile Service Center and BuckStop Minimart site at 735 Main Street was listed in the Vermont Department of Environmental Conservation (VTDEC) UST database for six active USTs at the site: Two 8,000-gallon gasoline USTs, one 4,000-gallon gasoline UST, and three 4,000-gallon diesel USTs. VTDEC also lists a total of ten gasoline USTs that have been removed from the site between 1986 and 2007 which ranged from poor to good condition.

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The Mobile Service Center and BuckStop Minimart site was considered to be a REC in connection with the Project Area because six active USTs are currently utilized at the site. UST systems and related filling spills are a prevalent source of environmental contamination.

- The 713 Main Street site was listed as a historic drycleaner. The database listings describe the site as operating as a dry cleaner under multiple names from at least 1930 to approximately 1995. There was no additional information on the drycleaner operation, however, drycleaners commonly use solvents such as tetrachloroethylene (PCE) which can be released to the environment and are highly soluble in groundwater resulting in potential groundwater impacts and vapor intrusion issues. Based on the site's historical use as a drycleaner, the close proximity of the site to the Project Area, and the sites upgradient location in reference to the Project Area, the 713 Main Street site was considered to be a REC in connection with the Project Area.
- The Bell Laundry and Dry Cleaners site at 748 Main Street was listed as a drycleaner from at least 1998 to present. The site was also listed as a former hazardous waste generator site, being described as a small quantity generator of chromium, lead, PCE, trichloroethylene (TCE), and spent halogenated solvents between 1998 and 2015. Based on the site's historical use as a drycleaner, the close proximity of the site to the Project Area, and the sites upgradient location in reference to the Project Area, the 748 Main Street site was considered to be a REC in connection with the Project Area.
- The 100 Beech Street site, Martins East Side Laser Carwash, was listed in the environmental database report as a UST site. Note that the 733 Main Street, 735 Main Street, and 100 Beech Street properties are currently under the same ownership and operate as one business. The VTDEC UST database describes the site as having a 1000-gallon #2 or #4 fuel oil UST that was installed in 1993 and removed from the site in good condition in 2007. There was no information discovered that indicated a spill or leak related to the fuel oil UST. Based on aerial photography, the 100 Beech Street site appears to have operated as a carwash since at least 1992. Car wash soaps and rinses often contain per- and polyfluoroalkyl substances (PFAS) and can be inadvertently released to the environment. Based on the sites historical use as a car wash and the former presence of a UST at the site, the 100 Beech Street site was considered to be a REC in connection with the Project area because of its close proximity and upgradient location in reference to the Project Area.

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- Multiple properties adjacent to the east of the Project Area were historically operated as textile mills from at least 1885 to 1925. An 1885 Sanborn Map depicts the Bennington Full Fashioned Knitting Mills, Cooper Manufacturing Co. to the east-southeast of the Project Area with two large mill buildings along the river and other ancillary support buildings. Operations in the mill buildings included wool and cotton scouring, carding, spinning, dusting, and washing. There was water supply pipes running from the southwest into a washing room in Mill No. 1, then what appears to be a water drainage pipe with an outfall near the southeast corner of the bridge, which could have been a wastewater outfall from the washing room. Based off of the reviewed Sanborn Fire Insurance Maps, the outfall location adjacent to the southeast corner of the Project Area was used as outfall from the washing room in Mill No. 1 from at least 1885 to 1912. Textile mills during the 1800s and early 1900s have been responsible for polluting groundwater with contaminants such as solvents, metals, petroleum, and polychlorinated biphenyls. Based on a lack of information regarding the use of the outfall located adjacent to the southeast corner of the Project Area, the historic use of the outfall by the textile mills located on the eastern adjacent properties was considered to be a REC in connection with the Project Area.

Based on the findings of the 2020 Stantec Phase I ESA, a limited subsurface exploration was completed at the Site between October 12th and 15th, 2020 in conjunction with Stantec's geotechnical investigation of the Site. Based on the potential that asbestos, lead (paint), and polychlorinated biphenyl (PCB)-containing materials could be present on the bridge structure, Stantec contracted Clay Point Associates, Inc. (CPAI) in Williston, Vermont to carry out a Hazardous Materials inspection limited to PCBs, lead, and asbestos related to the bridge structure. New England Boring Contractors (NEBC) in Derry, New Hampshire coordinated utility clearances in preparation for subsurface exploration. Boring locations were cleared, and utilities were marked out at the Site.

WORK PERFORMED

During the period October 12-15, 2020, NEBC advanced three (3) soil borings using a truck-mounted hollow-stem auger rig to depths ranging up to 39 feet below ground surface (bgs). Boring locations are provided on Figure 2, attached. The subsurface soils were continuously recovered in 2-foot split spoon samples, which were characterized and screened by Stantec utilizing a photoionization detector (PID) to identify petroleum and/or industrial solvent impacts in each five-foot split spoon sample.

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Refusal was encountered during advancement of B-2. Five attempts were made in the vicinity of B-2, with similar results of refusal on concrete at approximately 0.3 feet bgs. Boring logs for each boring are attached.

Soil from all 3 borings were characterized and screened and select soil samples were collected for laboratory analysis. Two soil samples from soil borings B-1 and three soil samples from B-3 were collected for laboratory analysis by Alpha Analytical in Westborough, Massachusetts for one or more of the following based on PID headspace readings and visual and olfactory observations: VOCs by EPA Method 8260C, polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8270D, total petroleum hydrocarbons (TPH) by EPA Method 8015D, total arsenic by EPA Method 6010D, and/or total lead by EPA Method 6010D. The five (5) selected soil samples were as follows: B-1 (0.5'-2.0'), B-1 (4.0'-8.0'), B-3 (0'-1.5') and B-3 (4.0'-8.0'), and B-3 (9.0'-11.0'). Soil boring B-2 was not sampled for laboratory analysis because of shallow refusal at that location.

Soil boring B-3 was completed as a temporary one-inch polyvinyl chloride (PVC) monitoring well. On October 12, 2020 Stantec collected a groundwater sample for laboratory analysis of VOCs by EPA Method 8260C from the temporary monitoring well installed in B-3. The groundwater monitoring well installed in B-3 was completed at 13 feet bgs and was screened from 3.0' to 13.0' bgs with one-inch diameter 10-slot schedule 40 PVC screen. The well was completed with a sand pack from 2.0' to 13.0' bgs and bentonite seal above the sand pack to the surface. The PVC screen and riser were removed after sampling was completed. The sample was collected using a peristaltic pump and removing three well volumes prior to collecting a sample. The sample was collected in laboratory-supplied containers and submitted to Alpha Analytical in Westborough, Massachusetts.

RESULTS

Soil Screening, Sampling and Analysis - Soil PID headspace, visual and olfactory observations are detailed in the attached boring logs. Soil was characterized as sand and gravel from 0.0' – 8.0' bgs, sand and gravel with cobbles and boulders from 8.0' – 13.0' bgs, and light gray dolomite bedrock from 13.0' – 39.0' bgs. Visual, olfactory and headspace PID readings recorded at all three of the soil borings did not indicate evidence of petroleum impacts. Soil analytical results are discussed below and summarized in Table 1. The complete Alpha Analytical reports and Laboratory Certificates of Analysis are attached.

Soil sample B-1 (4.0'-8.0') had a detection of acetone above laboratory reporting limits, but well below the Vermont Soil Standard (VSS). There were no other detections of VOCs above laboratory

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reporting limits in any of the other soil samples. Soil samples B-1 (4.0'-8.0'), B-2 (0'-1.5'), and B-3 (4.0-8.0') all had multiple detections of PAHs, all of which were below VSS. Both soil samples from B-1 had detections of TPH; 197 milligrams per kilogram (mg/kg) from 0.5'-2.0' bgs and 810 mg/kg from 4.0'-8.0' bgs. TPH was not detected above laboratory reporting limits from soil samples collected from B-3. Total arsenic and total lead were detected above laboratory reporting limits, but below VSS in all five soil samples.

For Carcinogenic Polycyclic Aromatic Hydrocarbon (cPAHs), the toxic equivalency quotient (TEQ) was calculated for each of the samples. Benzo(a)pyrene is the index chemical for this group with a toxic equivalent factor (TEF) of 1. The other cPAH compounds with a TEF are benzo(a)anthracene (TEF=0.1), benzo(b)fluoranthene (TEF=0.1), benzo(k)fluoranthene (TEF=0.01), chrysene (TEF=0.001), dibenzo(a,h)anthracene (TEF=1), and indeno(1,2,3-cd)pyrene (TEF=0.1). The TEQ is calculated for each of the listed cPAHs by multiplying the detected concentration of each compound by its associated TEF, and a total TEQ is then calculated by summing the adjusted concentrations. The total TEQ is then compared to the cancer based residential VSS value for benzo(a)pyrene (BaP) of 70 micrograms per kilogram ($\mu\text{g}/\text{kg}$). B-1 (4.0'-8.0') had the highest calculated TEQ of 23.12 $\mu\text{g}/\text{kg}$. There were no regulatory exceedances in any of the analyzed soil samples.

Groundwater Sampling and Analysis - Groundwater analytical results are discussed below and summarized in Table 1. The complete Alpha groundwater analytical report and Laboratory Certificates of Analysis are attached.

No groundwater analyte concentrations exceeded applicable Vermont Groundwater Enforcement Standards (VGES). PCE was detected above laboratory reporting limits, but below VGES at a level of 3.4 $\mu\text{g}/\text{L}$. There were no other detections of VOCs above laboratory reporting limits. The groundwater data do not indicate that any releases of oil and /or hazardous material have impacted the locations investigated at levels exceeding VGES. It is likely that the detected PCE was from an off-site source, possibly from one of the off-site dry cleaners identified in the Phase I ESA report, located at 713 and 748 Main Street.

Asbestos, Lead and PCB Investigation - On October 12, 2020, CPAI collected samples from the bridge structure of materials that potentially contained PCBs, asbestos, and lead. CPAI's reports detailing their findings are attached to this report along with the sampling locations. The following is a summary of their findings:

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- Four (4) bulk samples were collected from one (1) suspect asbestos containing material. Based on CPAI's analysis no asbestos was detected in the 4 samples.
- CPAI collected three (3) paint chip samples from a coating on the bridge and paint on piping under the bridge. All three (3) samples were submitted to a Vermont certified analytical service where they were prepared and analyzed for lead content according to EPA method 7000B /3050. Lead was detected in one (1) sample at levels exceeding the regulatory definition of lead-based paint.
- CPAI collected two (2) representative samples from a coating on the bridge and paint on piping under the bridge both potentially containing PCBs. All samples were submitted to a qualified analytical service where they were prepared and analyzed in accordance with EPA Method 8082 with extraction by EPA Method 3540C (Soxhlet). The results of analysis indicate that PCBs were not present above the detection limit in the two (2) samples.

DISCUSSION

The Phase II Limited Subsurface Investigation revealed soil and groundwater analyte concentrations above laboratory reporting limits. None of the detected analyte concentrations exceeded their applicable VSS or VGES values, however.

Soil sample B-1 (4.0'-8.0') had a detection of acetone above laboratory reporting limits, but well below the VSS. There were multiple detections of PAH compounds in boring B-1 and B-3, all below their applicable VSS. The cPAH TEQ was calculated for each sample with detections of PAH compounds, which did not result in any exceedances. Total arsenic and total lead were detected above laboratory reporting limits, but below VSS in all five soil samples.

No groundwater analyte concentrations exceeded applicable VGES. Tetrachloroethene, a common dry-cleaning solvent, was detected above laboratory reporting limits, but below VGES, at a level of 3.4 µg/L. There were no other detections of VOCs above laboratory reporting limits. Two drycleaner sites in the vicinity of the Project Area could be the source of the identified PCE in the Project Area groundwater.

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CONCLUSIONS

Sampling conducted by Stantec resulted in data that characterized the general quality of soil and groundwater that may be encountered at the Site. Stantec concluded that based on the results of this study, for site-wide consideration, the soil and groundwater are not significantly impacted by petroleum or hazardous materials from current or past operations. Stantec does not recommend any further investigation related to petroleum and hazardous materials impacts at the Site.

It should be noted that the Vermont Department of Environmental Conservation (VTDEC) has acknowledged that per- and polyfluoroalkyl substances (PFAS), including perfluorooctanoic acid (PFOA) is present in soil throughout the Town of Bennington. Stantec was not mandated to collect analytical samples for PFAS analysis; however, consideration for the potential presence of PFAS should be considered when managing excavated soils.

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Following your review of the above, please do not hesitate to contact us with any questions or comments.

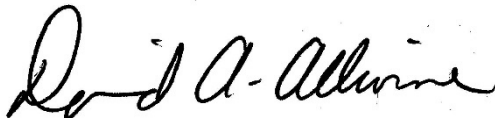
Yours truly,

Stantec Consulting Services Inc.



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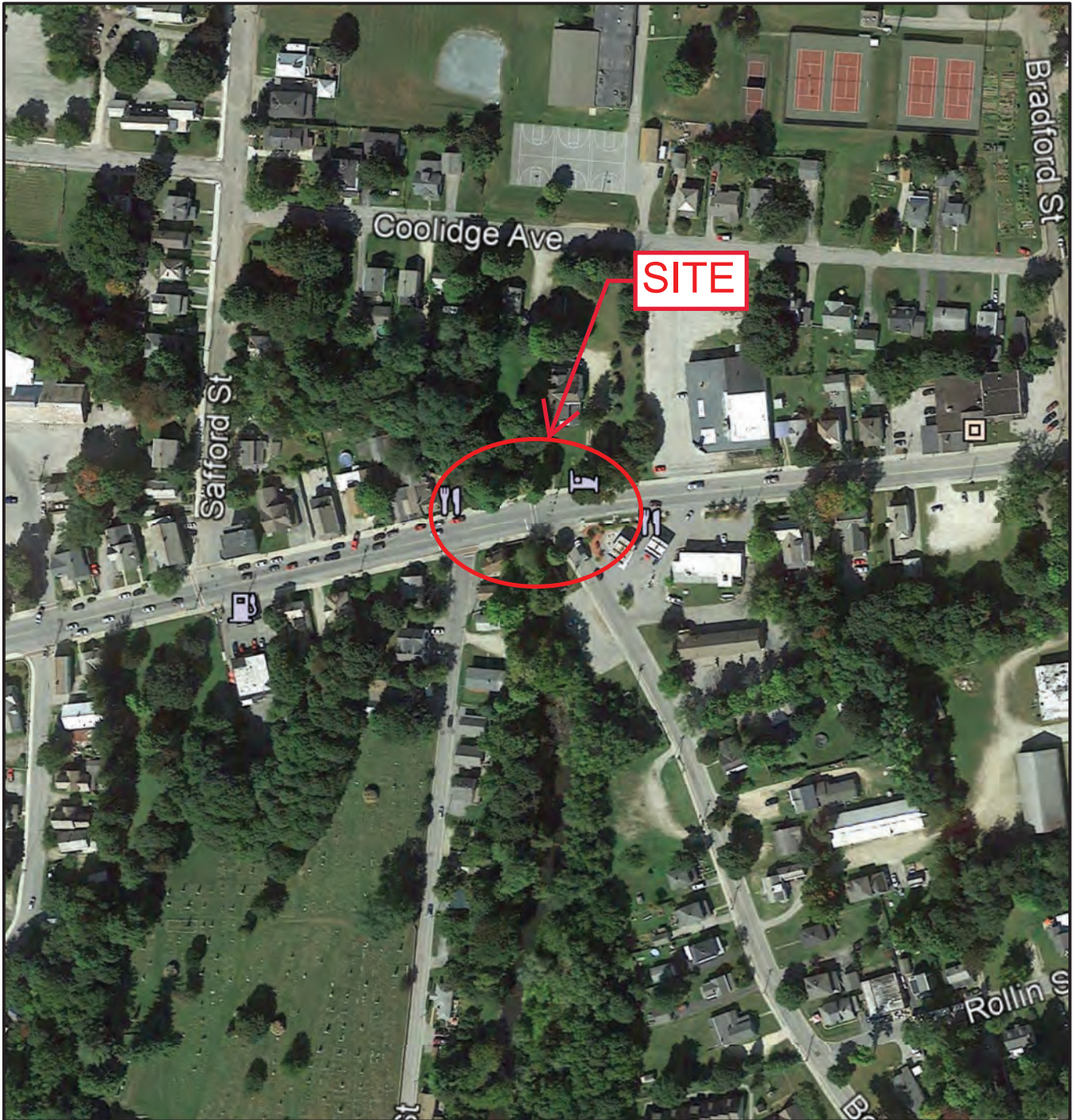


David A. Allwine, PG
Senior Associate

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Attachments:

- Figure 1: Project Location Plan
- Figure 2: Boring Location Plan
- Table 1: Summary of Analytical Data
- Boring Logs
- Lead, PCB, & Asbestos reports (Clay Point Associates, Inc.)
- Laboratory Analytical Reports



NOVEMBER 2020
179450053

ORIGINAL SHEET - ANSI A



55 Green Mountain Drive
South Burlington, Vermont
www.stantec.com

Client/Project

VERMONT AGENCY OF TRANSPORTATION
BENNINGTON BF 1000(20)
VT ROUTE 9, BRIDGE 6, OVER WALLOOMSAC

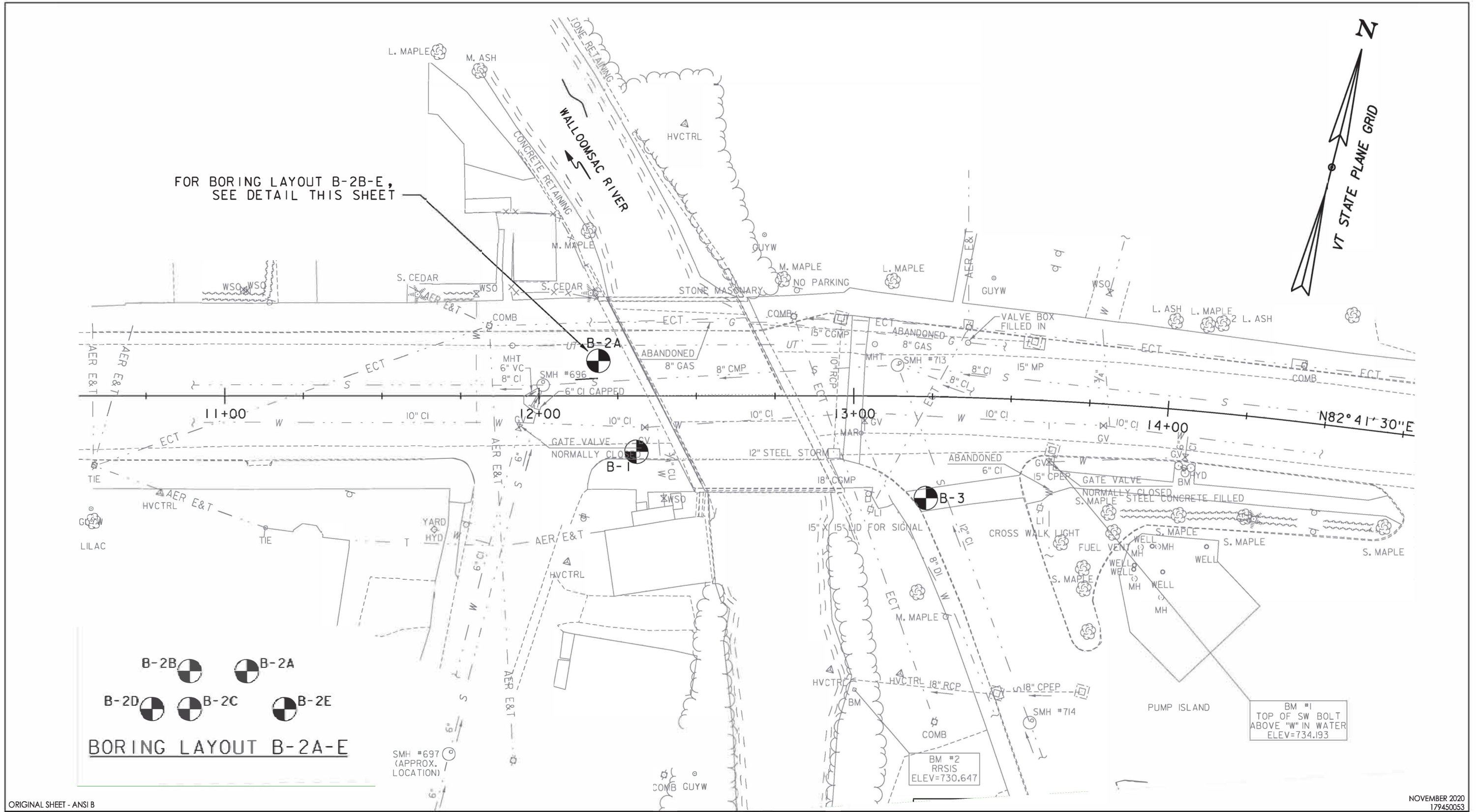
Figure No.

1

Title

PROJECT LOCATION PLAN

\\us0287-ppfss01\workgroup\1956\Temporary\GEO\TECHNICAL\179450053 - Bennington Rt 9 Bridge\AutoCAD\Boring Location Plan.dwg
 2020/11/19 9:15 PM By: Foley, Brian



Stantec

55 GREEN MOUNTAIN DRIVE
 SOUTH BURLINGTON, VERMONT
 www.stantec.com



NOVEMBER 2020
 179450053

Table 1
Summary of Analytical Data
Phase II Environmental Site Assessment
VT Rt 9, Bridge 6 Over Walloomsac River
Bennington, Vermont

Analyte ¹	Units ²	Vermont Soil Standards ³	Vermont Groundwater Enforcement Standards ⁴	B-1 (0.5'-2.0')	B-1 (4.0'-8.0')	B-3 (0'-1.5')	B-3 (4.0'-8.0')	B-3 (9.0'-11.0')	B-3
				10/13/2020 Soil	10/13/2020 Soil	10/12/2020 Soil	10/12/2020 Soil	10/12/2020 Soil	10/12/2020 Groundwater
Volatile Organic Compounds (VOCs) by EPA Method 8260C									
Acetone	mg/kg	40,609	-	<0.025	0.087	<20	NA	NA	ND
Tetrachloroethene	ug/L	-	5	NA	NA	NA	NA	NA	3.4
Polynuclear Aromatic Hydrocarbons (PAHs) by EPA Method 8270D									
Fluoranthene	ug/kg	2,301,000	-	<72	28	8.2	10	<7.3	NA
Benzo(a)anthracene	ug/kg	No Standard	-	<72	27	<6.9	<7.4	<7.3	NA
Benzo(a)pyrene	ug/kg	70	-	<72	17	<6.9	8.0	<7.3	NA
Benzo(b)fluoranthene	ug/kg	No Standard	-	<72	22	<6.9	7.7	<7.3	NA
Chrysene	ug/kg	No Standard	-	<72	17	<6.9	<7.4	<7.3	NA
Benzo(ghi)perylene	ug/kg	No Standard	-	<72	12	<6.9	<7.4	<7.3	NA
Phenanthrene	ug/kg	No Standard	-	<72	20	9.4	<7.4	<7.3	NA
Indeno(1,2,3-cd)pyrene	ug/kg	No Standard	-	<72	12	<6.9	<7.4	<7.3	NA
Pyrene	ug/kg	No Standard	-	<72	26	<6.9	12	<7.3	NA
Toxic Equivalent Concentration - cPAHs									
Benzo(a)anthracene	0.10	-	-	0	2.7	0	0	0	NA
Benzo(a)pyrene	1.00	-	-	0	17	0	8.00	0	NA
Benzo(b)fluoranthene	0.10	-	-	0	2.2	0	0.77	0	NA
Benzo(k)fluoranthene	0.01	-	-	0	0.0	0	0	0	NA
Chrysene	0.001	-	-	0	0.017	0	0	0	NA
Dibenz(a,h)anthracene	1.00	-	-	0	0.0	0	0	0	NA
Indeno(1,2,3-cd)pyrene	0.10	-	-	0	1.2	0	0	0	NA
Total TEQ	ug/kg	70	-	0.0	23.12	0.0	8.77	0.0	NA
Total Petroleum Hydrocarbons (TPH) by EPA Method 8015D (modified)									
TPH (C10-C36)	mg/kg	No Standard	-	197	810	<339	NA	NA	NA
Total Metals by EPA Method 6010D									
Arsenic	mg/kg	16	-	6.52	2.80	4.50	2.33	2.18	NA
Lead	mg/kg	400	-	7.91	57.3	2.07	21.5	5.63	NA

Notes:

¹ Only detected compounds listed - all others below laboratory reporting limits

² mg/kg = milligrams per kilogram = parts per million (ppm)

ug/kg = microgram per kilogram = parts per billion (ppb)

ug/L = microgram per liter

³ Vermont Department of Environmental Conservation, Investigation and Remediation of Contaminated Properties Rule, effective July 6, 2019

⁴ Vermont Department of Environmental Conservation, Groundwater Protection Rule and Strategy, effective July 6, 2019

NA = Not Analyzed

ND = Not Detected above laboratory reporting limits

Checked by: JHP 11/25/20



STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH SECTION
SUBSURFACE INFORMATION

BORING LOG

BENNINGTON
BF 1000 (20)
VT Rt 9, Bridge No. 6 Over Walloomsac

Boring No.: B-1
Page No.: 1 of 2
Pin No.: z12j606
Checked By: TAD

Boring Crew: New England Boring, Derry, NH, LGH (Stantec)
Date Started: 10/13/20 Date Finished: 10/15/20
VTSPG NAD83: N 138801.53 ft E 1456422.58 ft
Station: 12+30.94 Offset: 17.73' RT
Ground Elevation: 730.49 ft

Casing Sampler
Type: WASH BORE SS
I.D.: 4 in 1.38 in
Hammer Wt: 300 lb. 140 lb.
Hammer Fall: 24 in 30 in.
Hammer/Rod Type: Safety/N
Rig: Truck/Mobile B-53 C_E = 1

Groundwater Observations		
Date	Depth (ft)	Notes
10/12/20	7.5	
10/13/20	8.0	

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.5 ft								
2.5		Visual Classification, GrSa, brn, Dry, Rec. = 1.0 ft				8-7-6				
		Visual Classification, GrSa, brn, Dry, Rec. = 1.1 ft				7-7-6-8				
5.0		Visual Classification, SiGrSa, brn, Dry, Rec. = 1.5 ft				8-7-5-5				
7.5		Visual Classification, SiGrSa, brn, Dry, Rec. = 1.3 ft				6-6-2-3				
10.0		Field Note: Boulder at 8 feet could not advance roller or casing, offset boring 3 feet east								
		Visual Classification, Rock Fragments, Rec. = 0.1 ft				20-18-16-22				
12.5		Field Note: Based on drill action cobbles and boulders are present from approximately 8 to 14 feet.								
15.0		14.0 ft - 15.0 ft, Advanced roller bit through bedrock from 14 to 15 feet.								
17.5		15.0 ft - 20.0 ft, Light gray, Dolomite, Moderately hard, Slightly weathered, Poor rock, NQDC, Joints are moderately dipping, rough, slightly discolored, partly open. Highly fractured zone from 17 to 18 feet. RMR = 27	1 (45)	84 (38)	2.5					
					1.5					
					1.5					
					2					
					2					

Top of Bedrock @ 14.0 ft

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Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
2. N Values have not been corrected for hammer energy. C_E is the hammer energy correction factor.
3. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.



STATE OF VERMONT
 AGENCY OF TRANSPORTATION
 MATERIALS & RESEARCH SECTION
 SUBSURFACE INFORMATION

BORING LOG

BENNINGTON
BF 1000 (20)
VT Rt 9, Bridge No. 6 Over Walloomsac

Boring No.: B-1
 Page No.: 2 of 2
 Pin No.: z12j606
 Checked By: TAD

Boring Crew: New England Boring, Derry, NH, LGH (Stantec)
 Date Started: 10/13/20 Date Finished: 10/15/20
 VTSPG NAD83: N 138801.53 ft E 1456422.58 ft
 Station: 12+30.94 Offset: 17.73' RT
 Ground Elevation: 730.49 ft

Casing Sampler
 Type: WASH BORE SS
 I.D.: 4 in 1.38 in
 Hammer Wt: 300 lb. 140 lb.
 Hammer Fall: 24 in 30 in.
 Hammer/Rod Type: Safety/N
 Rig: Truck/Mobile B-53 C_E = 1

Groundwater Observations

Date	Depth (ft)	Notes
10/12/20	7.5	
10/13/20	8.0	

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
22.5		20.0 ft - 25.0 ft, Light gray, Dolomite, Moderately hard, Slightly weathered, Fair rock, NQDC, Joints are moderately dipping, rough, slightly discolored, tight to partly open. RMR = 46	2 (45)	100 (60)	2					
25.0		25.0 ft - 30.0 ft, Light gray, Dolomite, Moderately hard, Fresh, Fair rock, NQDC, Joints are low angle to moderately dipping, rough, slightly discolored, tight to partly open. RMR = 46	3 (25)	100 (53)	2.5					
30.0		30.0 ft - 35.0 ft, Light gray, Dolomite, Moderately hard, Fresh, Fair rock, NQDC, Joints are moderately dipping to high angle, rough, slightly discolored, tight to partly open. Highly fractured zone from 33 to 34 feet. RMR = 49	4 (65)	98 (80)	2.5					
35.0	Hole stopped @ 35.0 ft									
37.5										

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Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
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STATE OF VERMONT
 AGENCY OF TRANSPORTATION
 MATERIALS & RESEARCH SECTION
 SUBSURFACE INFORMATION

BORING LOG

BENNINGTON
BF 1000 (20)
VT Rt 9, Bridge No. 6 Over Walloomsac

Boring No.: B-2A
 Page No.: 1 of 1
 Pin No.: z12j606
 Checked By: TAD

Boring Crew: New England Boring, Derry, NH, LGH (Stantec)
 Date Started: 10/14/20 Date Finished: 10/14/20
 VTSPG NAD83: N 138826.55 ft E 1456403.72 ft
 Station: 12+18.86 Offset: 11.17' LT
 Ground Elevation: 730.61 ft

Casing Sampler
 Type: WASH BORE SS
 I.D.: 4 in 1.38 in
 Hammer Wt: 300 lb. 140 lb.
 Hammer Fall: 24 in 30 in.
 Hammer/Rod Type: Safety/N
 Rig: Truck/Mobile B-53 C_E = 1

Groundwater Observations

Date	Depth (ft)	Notes

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.3 ft					
		Refusal on concrete, 0.3 ft					
		Hole stopped @ 0.3 ft					
2.5							
5.0							
7.5							
10.0							
12.5							
15.0							
17.5							

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Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
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 AGENCY OF TRANSPORTATION
 MATERIALS & RESEARCH SECTION
 SUBSURFACE INFORMATION

BORING LOG

BENNINGTON
BF 1000 (20)
VT Rt 9, Bridge No. 6 Over Walloomsac

Boring No.: B-2B
 Page No.: 1 of 1
 Pin No.: z12j606
 Checked By: TAD

Boring Crew: New England Boring, Derry, NH, LGH (Stantec)
 Date Started: 10/14/20 Date Finished: 10/14/20
 VTSPG NAD83: N 138826.55 ft E 1456403.72 ft
 Station: 12+15.86 Offset: 11.17' LT
 Ground Elevation: 730.56 ft

Casing Sampler
 Type: WASH BORE SS
 I.D.: 4 in 1.38 in
 Hammer Wt: 300 lb. 140 lb.
 Hammer Fall: 24 in 30 in.
 Hammer/Rod Type: Safety/N
 Rig: Truck/Mobile B-53 C_E = 1

Groundwater Observations

Date	Depth (ft)	Notes

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0.0		Asphalt Pavement, 0.0 ft - 0.3 ft					
0.3		Refusal on steel plate, 0.3 ft					
2.5		Hole stopped @ 0.3 ft					
5.0							
7.5							
10.0							
12.5							
15.0							
17.5							

2010 COPY 179450053 - BENNINGTON BRIDGE REPLACEMENT.GPJ - VERMONT AOT.GDT 11/4/20

Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
 2. N Values have not been corrected for hammer energy. C_E is the hammer energy correction factor.
 3. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.



STATE OF VERMONT
 AGENCY OF TRANSPORTATION
 MATERIALS & RESEARCH SECTION
 SUBSURFACE INFORMATION

BORING LOG

BENNINGTON
BF 1000 (20)
VT Rt 9, Bridge No. 6 Over Walloomsac

Boring No.: B-2C
 Page No.: 1 of 1
 Pin No.: z12j606
 Checked By: TAD

Boring Crew: New England Boring, Derry, NH, LGH (Stantec)
 Date Started: 10/14/20 Date Finished: 10/14/20
 VTSPG NAD83: N 138826.55 ft E 1456403.72 ft
 Station: 12+15.86 Offset: 9.17' LT
 Ground Elevation: 730.58 ft

Casing Sampler
 Type: WASH BORE SS
 I.D.: 4 in 1.38 in
 Hammer Wt: 300 lb. 140 lb.
 Hammer Fall: 24 in 30 in.
 Hammer/Rod Type: Safety/N
 Rig: Truck/Mobile B-53 C_E = 1

Groundwater Observations

Date	Depth (ft)	Notes

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0.0 - 0.3	Asphalt Pavement	Asphalt Pavement, 0.0 ft - 0.3 ft					
0.3 - 0.7	Concrete	5 inches of Concrete, 0.3 ft - 0.7 ft					
0.7 - 2.5	Void	22 inch diameter void, partially filled with soil, 0.7 ft - 2.5 ft					
2.5	Refusal	Refusal on concrete, 2.5 ft Hole stopped @ 2.5 ft					
5.0							
7.5							
10.0							
12.5							
15.0							
17.5							

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Notes:
 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
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 3. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.



STATE OF VERMONT
 AGENCY OF TRANSPORTATION
 MATERIALS & RESEARCH SECTION
 SUBSURFACE INFORMATION

BORING LOG

BENNINGTON
BF 1000 (20)
VT Rt 9, Bridge No. 6 Over Walloomsac

Boring No.: B-2D
 Page No.: 1 of 1
 Pin No.: z12j606
 Checked By: TAD

Boring Crew: New England Boring, Derry, NH, LGH (Stantec)
 Date Started: 10/14/20 Date Finished: 10/14/20
 VTSPG NAD83: N 138826.55 ft E 1456403.72 ft
 Station: 12+13.86 Offset: 9.17' LT
 Ground Elevation: 730.56 ft

Casing Sampler
 Type: WASH BORE SS
 I.D.: 4 in 1.38 in
 Hammer Wt: 300 lb. 140 lb.
 Hammer Fall: 24 in 30 in.
 Hammer/Rod Type: Safety/N
 Rig: Truck/Mobile B-53 C_E = 1

Groundwater Observations

Date	Depth (ft)	Notes

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
		Asphalt Pavement, 0.0 ft - 0.3 ft					
		Refusal on concrete, 0.3 ft					
2.5		Hole stopped @ 0.3 ft					
5.0							
7.5							
10.0							
12.5							
15.0							
17.5							

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Notes: 1. Stratification lines represent approximate boundary between material types. Transition may be gradual.
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 3. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.



STATE OF VERMONT
 AGENCY OF TRANSPORTATION
 MATERIALS & RESEARCH SECTION
 SUBSURFACE INFORMATION

BORING LOG

BENNINGTON
BF 1000 (20)
VT Rt 9, Bridge No. 6 Over Walloomsac

Boring No.: B-2E
 Page No.: 1 of 1
 Pin No.: z12j606
 Checked By: TAD

Boring Crew: New England Boring, Derry, NH, LGH (Stantec)
 Date Started: 10/14/20 Date Finished: 10/14/20
 VTSPG NAD83: N 138826.55 ft E 1456403.72 ft
 Station: 12+20.86 Offset: 9.17' LT
 Ground Elevation: 730.67 ft

Casing Sampler
 Type: WASH BORE SS
 I.D.: 4 in 1.38 in
 Hammer Wt: 300 lb. 140 lb.
 Hammer Fall: 24 in 30 in.
 Hammer/Rod Type: Safety/N
 Rig: Truck/Mobile B-53 C_E = 1

Groundwater Observations

Date	Depth (ft)	Notes

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0.0 - 0.3		Asphalt Pavement, 0.0 ft - 0.3 ft					
0.3 - 0.7		5 inches of concrete, 0.3 ft - 0.7 ft					
0.7 - 1.0		Auger encountered a void of unknown depth, partially filled with soil, 0.7 ft - 1.0 ft					
1.0 - 17.5		Hole stopped @ 1.0 ft					

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STATE OF VERMONT
 AGENCY OF TRANSPORTATION
 MATERIALS & RESEARCH SECTION
 SUBSURFACE INFORMATION

BORING LOG

BENNINGTON
BF 1000 (20)
VT Rt 9, Bridge No. 6 Over Walloomsac

Boring No.: B-3
 Page No.: 1 of 2
 Pin No.: z12j606
 Checked By: TAD

Boring Crew: New England Boring, Derry, NH, LGH (Stantec)
 Date Started: 10/12/20 Date Finished: 10/12/20
 VTSPG NAD83: N 138810.02 ft E 1456515.30 ft
 Station: 13+23.48 Offset: 32.24' RT
 Ground Elevation: 730.81 ft

Casing Sampler
 Type: WASH BORE SS
 I.D.: 4 in 1.38 in
 Hammer Wt: 300 lb. 140 lb.
 Hammer Fall: 24 in 30 in.
 Hammer/Rod Type: Safety/N
 Rig: Truck/Mobile B-53 C_E = 1

Groundwater Observations

Date	Depth (ft)	Notes

Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
0.0 - 0.5		Asphalt Pavement, 0.0 ft - 0.5 ft								
0.5 - 1.0		Visual Classification, GrSa, brn, Dry, Rec. = 0.75 ft				18-16-12 (28)				
1.0 - 1.5		Visual Classification, GrSa, brn, Dry, Rec. = 0.3 ft				15-20-17-20 (37)				
1.5 - 2.0		Visual Classification, SiGrSa, brn, Moist, Rec. = 0.25 ft				15-18-21-45 (39)				
2.0 - 2.5		Visual Classification, SiGrSa, brn, Wet, Rec. = 0.25 ft				10-7-9-10 (16)				
2.5 - 3.0		Field Note: Cobbles/boulders								
3.0 - 3.5		Visual Classification, GrSa, brn, Wet, Rec. = 0.3 ft				10-9-10-50/3" (19)				
3.5 - 4.0		Field Note: Based on drill action cobbles and boulders are present from approximately 11 to 13 feet., Rec. = 0.0 ft				50/0" (-)				
4.0 - 13.0		13.0 ft - 15.0 ft, Advanced roller bit through bedrock from 13 to 15 feet.								
13.0 - 15.0		15.0 ft - 20.0 ft, Light gray, Dolomite, Moderately hard, Slightly weathered, Poor rock, NQDC, Joints are low angle to moderately dipping, rough, slightly discolored, partly open. RMR = 32	1 (30)	100 (23)	2.5					
15.0 - 17.5					2.5					
17.5 - 20.0					2					
20.0 - 22.5					2					
22.5 - 25.0					2.5					

Top of Bedrock @ 13.0 ft

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STATE OF VERMONT
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BORING LOG

BENNINGTON
BF 1000 (20)
VT Rt 9, Bridge No. 6 Over Walloomsac

Boring No.: B-3
 Page No.: 2 of 2
 Pin No.: z12j606
 Checked By: TAD

Boring Crew: New England Boring, Derry, NH, LGH (Stantec)
 Date Started: 10/12/20 Date Finished: 10/12/20
 VTSPG NAD83: N 138810.02 ft E 1456515.30 ft
 Station: 13+23.48 Offset: 32.24' RT
 Ground Elevation: 730.81 ft

Casing Sampler
 Type: WASH BORE SS
 I.D.: 4 in 1.38 in
 Hammer Wt: 300 lb. 140 lb.
 Hammer Fall: 24 in 30 in.
 Hammer/Rod Type: Safety/N
 Rig: Truck/Mobile B-53 C_E = 1

Groundwater Observations

Date	Depth (ft)	Notes

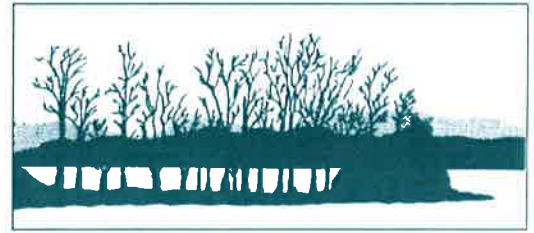
Depth (ft)	Strata (1)	CLASSIFICATION OF MATERIALS (Description)	Run (Dip deg.)	Core Rec. % (RQD %)	Drill Rate minutes/ft	Blows/6" (N Value)	Moisture Content %	Gravel %	Sand %	Fines %
22.5		20.0 ft - 25.0 ft, Light gray, Dolomite, Moderately hard, Fresh, Fair rock, NQDC, Joints are low angle to moderately dipping, rough, fresh, tight to partly open. RMR = 42	2 (15)	100 (83)	2.5 2 2.5 2					
25.0		25.0 ft - 29.0 ft, Advanced roller bit through bedrock from 25 to 29 feet.								
30.0		29.0 ft - 34.0 ft, Light gray, Dolomite, Moderately hard, Fresh, Fair rock, NQDC, Joints are low angle to moderately dipping, rough, fresh, tight. RMR = 42	3 (15)	96 (87)	3.5 3.5 2.5 2 2					
35.0		34.0 ft - 39.0 ft, Light gray, Dolomite, Moderately hard, Fresh, Fair rock, NQDC, Joints are low angle to moderately dipping, rough, fresh, tight. RMR = 46	4 (15)	98 (92)	2.5 2.5 2.5 2 2					
37.5		Hole stopped @ 39.0 ft								

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Clay Point Associates, Inc.

www.claypointassociates.com



November 19, 2020

Mr. Jeffrey Sterritt, M.Sc.
Associate
Stantec, Inc.
55 Green Mountain Drive
South Burlington, Vermont 05403-7824

Re: Inspection for Asbestos Containing Materials
Bridge 6, Vermont Route 9, Bennington, Vermont
CPAI Project #15350

Dear Mr. Sterritt:

Enclosed is documentation related to professional asbestos inspection activities performed by Clay Point Associates, Inc. (CPAI) on October 12, 2020 on the exterior of Bridge 6, Vermont Route 9, Bennington, Vermont. Inspection activities were performed to evaluate suspect asbestos containing materials prior to planned renovation of the bridge.

On October 12, 2020, CPAI collected four (4) bulk samples from one (1) suspect asbestos containing material. All bulk samples were submitted to a Vermont certified analytical service. All bulk samples were analyzed by Polarized Light Microscopy (PLM), Visual Estimation Method, according to EPA Method 600/R-93/116. Identification of asbestos by PLM is based on optical crystallographic properties, and gives a qualitative differentiation between types of asbestos and other fibrous materials. It also allows for a quantitative estimate of percent asbestos using EPA approved methods.

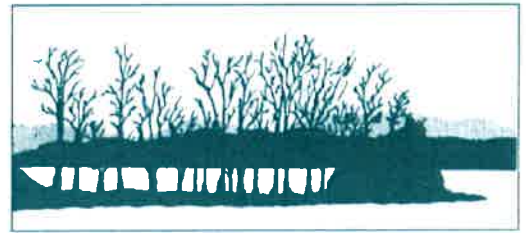
A Drawing depicting sample collection points, the Bulk Sample Analysis Inventory (Table 1), the analytical service bulk sample analysis report and CPAI/analytical service certification information are attached to this report.

Thank you for the opportunity to service your professional environmental management needs. If you have any questions concerning this report, or require additional information, please contact us at (802) 879-2600, or by email at info@claypointassociates.com.

Sincerely,
CLAY POINT ASSOCIATES, INC.

A handwritten signature in black ink, appearing to read 'Todd C. Hobson'. The signature is fluid and cursive, with a long horizontal stroke at the end.

Todd C. Hobson
President



**Table 1
Asbestos Bulk Sample Analysis Inventory**

Client:	Stantec, Inc.
CPAI Project No.:	15350
Project Location:	Bridge 6 Vermont Route 9 Bennington, Vermont

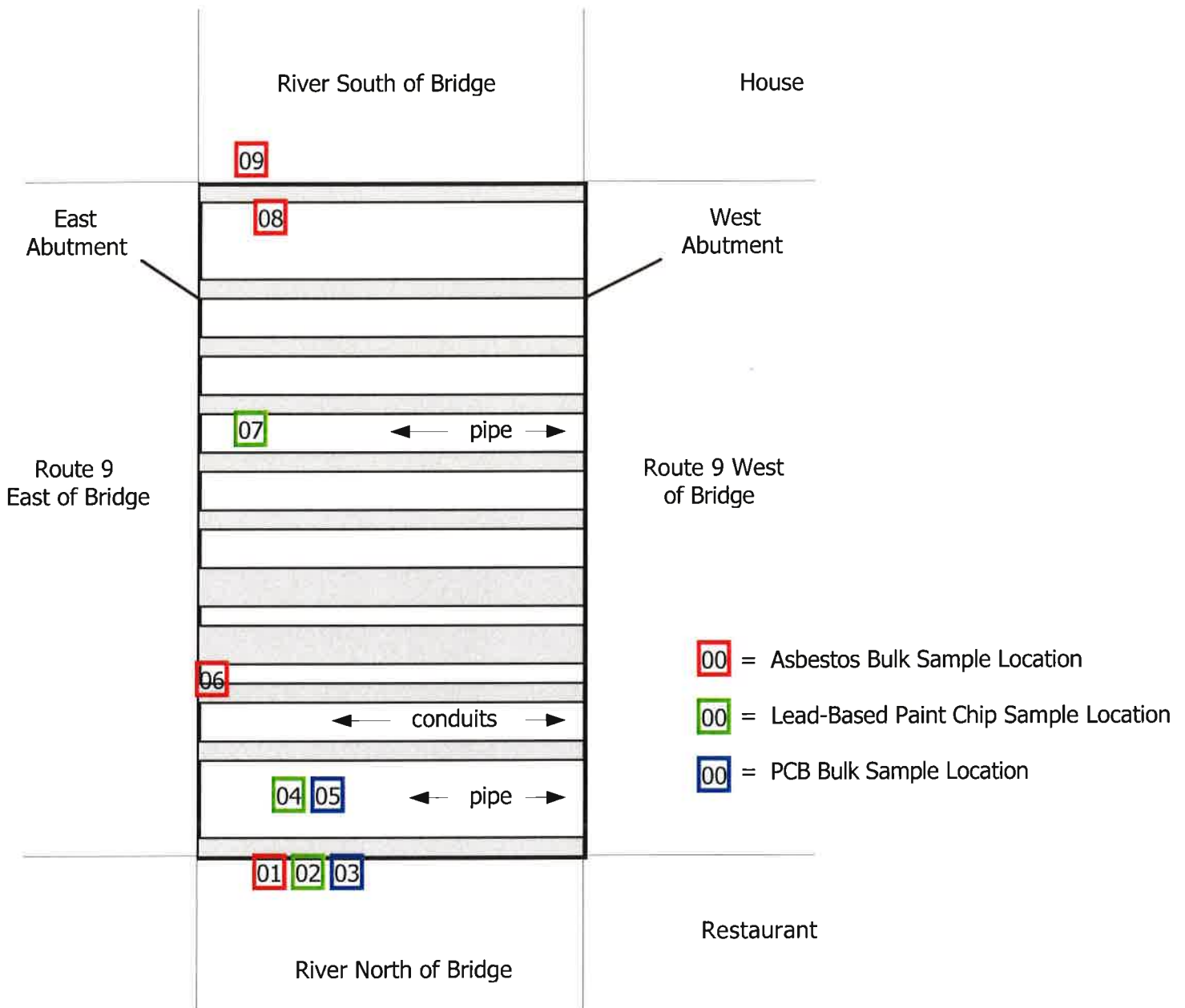
Homogeneous Area	Sample No.	Date Collected	Lab I.D. No.	Sample Location	PLM Result
Concrete	10122015350-01	10/12/20	2034970-001	From north edge of structure (junction of north side and bottom), 5 ft. 7 in. from east abutment.	NAD
	10122015350-06	10/12/20	2034970-002	From bottom of structure. From the south side of the third span from the north, above the east abutment.	NAD
	10122015350-08	10/12/20	2034970-003	From bottom of structure. From the north side of the southernmost span, 5 ft. 6 in. from the east abutment.	NAD
	10122015350-09	10/12/20	2034970-004	From south side of south "railing" structure (above road level) 4 ft. 5 in. from east end of "railing" structure, near junction with bridge deck.	NAD

PLM = Polarized Light Microscopy
NAD = No Asbestos Detected



Project North

Schematic of Underside



Clay Point Associates, Inc.
Project #15350
October 12, 2020

Bridge 6
Vermont Route 9
Bennington, Vermont

Environmental Inspections
Not to Scale
Drawn by: Todd C. Hobson



Todd Hobson
Clay Point Associates, Inc.
P.O. Box 1254
Williston VT 05495

Project Reference: 15350
Laboratory Batch #: 2034970
Date Samples Received: 10/14/2020
Date Samples Analyzed: 10/20/2020
Date of Final Report: 10/20/2020

SAMPLE IDENTIFICATION:

Four (4) samples from 15350 project were submitted by Client on 10/14/2020

This bulk sample(s) was delivered to Optimum Analytical Consulting, LLC (Optimum) located in Salem, New Hampshire for asbestos content determination.

ANALYTICAL METHOD:

Analytical procedures were performed in accordance with the U.S. Environmental Protection Agency (EPA) Recommended Method for the Determination of Asbestos in Bulk Samples by Polarized Light Microscopy and Dispersion Staining (PLM/DS)(EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, EPA-600/ R-93-116 Method for Determination of Asbestos in Bulk Building Materials). This report relates only to those samples analyzed, and may not be indicative of other similar appearing materials existing at this, or other sites. Quantification of asbestos content was determined by Calibrated Visual Estimation. Optimum is not responsible for sample collection activities or analytical method limitations. The laboratory is not responsible for the accuracy of results when requested to physically separate and analyze layered samples.

In any given material, fibers with a small diameter (<0.25µm) may not be detected by the PLM method. Floor tile and other resinously bound material may yield a false negative if the asbestos fibers are too small to be resolved using PLM. Additional analytical methods may be required. Optimum recommends using Transmission Electron Microscopy (TEM) for a more definitive analysis.

Optimum will retain all samples for a minimum of three months. Further analysis or return of samples must be requested within this three month period to guarantee their availability. This report may not be reproduced except in full, without the written approval of Optimum Analytical and Consulting, LLC.

Use of the NVLAP and AIHA Logo in no way constitutes or implies product certification, approval, or endorsement by the National Institute of Standards and Technology or the American Industrial Hygiene Association.

Detection Limit <1%, Reporting Limits: CVES = 1%, 400 Point Count = .25%, 1000 Point Count = 0.1%; Present or Absent are observations made during a qualitative analysis.

This report is considered preliminary until signed by both the Laboratory Analyst and Laboratory Director or Supervisor. If you have any questions regarding this report, please do not hesitate to contact us.

Jamie L. Noel
Laboratory Director

Kristina Scaviola
Laboratory Supervisor



OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

CLIENT: Clay Point Associates, Inc.
ADDRESS: P.O. Box 1254
CITY / STATE / ZIP: Williston VT 05495
CONTACT: Todd Hobson
DESCRIPTION: PLM Analysis
LOCATION: 15350

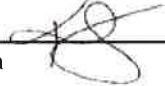
BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, EPA-600/ R-93-116 Method for Determination of Asbestos in Bulk Building Materials) NVLAP Lab Code: 101433-0

ORDER #: 2034970
PROJECT #: 15350
DATE COLLECTED: 10/12/2020
COLLECTED BY: Client
DATE RECEIVED: 10/14/2020
ANALYSIS DATE: 10/20/2020
REPORT DATE: 10/20/2020
ANALYST: Kristina Scaviola

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type (%)	Non-Asbestos Components (%)
2034970-001 10122015350.01	Bulk Material, Beige	LAYER 1 100%	None Detected	Cellulose Fiber 1% Non-Fibrous Material 99%
			Total % Asbestos: No Asbestos Detected	Total % Non-Asbestos: 100.0%
2034970-002 10122015350.06	Bulk Material, Beige	LAYER 1 100%	None Detected	Cellulose Fiber 1% Non-Fibrous Material 99%
			Total % Asbestos: No Asbestos Detected	Total % Non-Asbestos: 100.0%
2034970-003 10122015350.08	Bulk Material, Beige	LAYER 1 100%	None Detected	Cellulose Fiber 1% Non-Fibrous Material 99%
			Total % Asbestos: No Asbestos Detected	Total % Non-Asbestos: 100.0%
2034970-004 10122015350.09	Bulk Material, Beige	LAYER 1 100%	None Detected	Cellulose Fiber 1% Non-Fibrous Material 99%
			Total % Asbestos: No Asbestos Detected	Total % Non-Asbestos: 100.0%

Analyst Signatory: 
 Kristina Scaviola





OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

CLIENT: Clay Point Associates, Inc.
 ADDRESS: P.O. Box 1254
 CITY / STATE / ZIP: Williston VT 05495
 CONTACT: Todd Hobson
 DESCRIPTION: PLM Analysis
 LOCATION: 15350

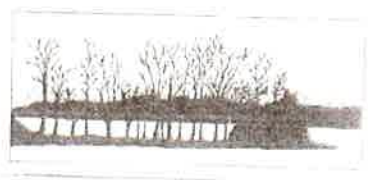
BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, EPA-600/ R-93-116 Method for Determination of Asbestos in Bulk Building Materials) NVLAP Lab Code: 101433-0

ORDER #: 2034970
 PROJECT #: 15350
 DATE COLLECTED: 10/12/2020
 COLLECTED BY: Client
 DATE RECEIVED: 10/14/2020
 ANALYSIS DATE: 10/20/2020
 REPORT DATE: 10/20/2020
 ANALYST: Kristina Scaviola

2034970

Clay Point Associates, Inc.



CHAIN OF CUSTODY FORM

CPA Proj #

15350

Asb?	Gth?	Type			Sample Number(s)
		Air	Bulk	H2O	
X			X		10122015350.01.06.09. 09

	Date	Time	Name	Signature
Transfer #1	10/13/20	18:48	Todd Hobson	
to		sent to	Optimum by	Fed X
Transfer #2	10/14/20	14:45	Notwend Clark	
to				
Transfer #3				
to				

P.O. BOX 1254 • WILLISTON, VERMONT • 05495-1254 • 802-879-2600



OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

CLIENT: Clay Point Associates, Inc.
 ADDRESS: P.O. Box 1254
 CITY / STATE / ZIP: Williston VT 05495
 CONTACT: Todd Hobson
 DESCRIPTION: PLM Analysis
 LOCATION: 15350

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples, EPA-600/ R-93-116 Method for Determination of Asbestos in Bulk Building Materials) NVLAP Lab Code: 101433-0

ORDER #: 2034970
 PROJECT #: 15350
 DATE COLLECTED: 10/12/2020
 COLLECTED BY: Client
 DATE RECEIVED: 10/14/2020
 ANALYSIS DATE: 10/20/2020
 REPORT DATE: 10/20/2020
 ANALYST: Kristina Scaviola

2034970

Clay Point Associates, Inc.



4 day turnaround

BULK SAMPLE ANALYSIS REQUEST FORM

Date of Submission: 13 Oct. 2020 CPAI Proj. #: 15350

Analytical Service: Optimum

Bulk Sample Number	Date of Collection	Type of Analysis	Group No.	Instructions
1012215350.01	10.12.20	PLM	1	Analyze PLM
.02	↓	↓	2	↓
.03	↓	↓	3	↓
.04	↓	↓	4	↓

Chain of Custody Form Attached? Yes No

Consultant Signature: [Signature] Page No.: 1 of 1

Nathaniel Clark 10/14/2020 14:45
P.O. BOX 1254 • WILLISTON, VERMONT • 05495-1254 • 802-879-2600

ASBESTOS CONSULTING ENTITY

CLAY POINT ASSOCIATES INC.
P.O. BOX 1254
WILLISTON, VT 05495-1254

Vermont Department of Health
Environmental Health
P.O. Box 70 - Drawer 30
Burlington, VT 05402-0070

LICENSE: CE998564

EXPIRES: Tuesday, April 6, 2021

CERTIFICATE OF LICENSE
VERMONT ASBESTOS REGULATORY PROGRAM

THIS CERTIFICATE SHALL REMAIN IN FORCE UNTIL THE EXPIRATION DATE UNLESS REVOKED
OR VOIDED BEFORE THAT TIME.

THIS CERTIFICATE IS NOT TRANSFERABLE AND IS VALID ONLY FOR THE ABOVE PARTY.

COPY OF THIS CERTIFICATE MUST BE ON SITE AT ALL TIMES.

ASBESTOS INSPECTOR/MANAGEMENT PLANNER

TODD C. HOBSON
117 OSGOOD HILL ROAD
ESSEX, VT 05452

Vermont Department of Health
Environmental Health
P.O. Box 70 - Drawer 30
Burlington, VT 05402-0070

LICENSE: MP262143

EXPIRES: Saturday, February 6, 2021

CERTIFICATE OF LICENSE
VERMONT ASBESTOS REGULATORY PROGRAM

THIS CERTIFICATE SHALL REMAIN IN FORCE UNTIL THE EXPIRATION DATE UNLESS REVOKED OR VOIDED BEFORE THAT TIME. THIS CERTIFICATE IS NOT TRANSFERABLE AND IS VALID ONLY FOR THE ABOVE PARTY.

COPY OF THIS CERTIFICATE AND PHOTO ID CARD MUST BE ON SITE AT ALL TIMES.

ASBESTOS PROJECT DESIGNER

TODD C. HOBSON
117 OSGOOD HILL ROAD
ESSEX, VT 05452

Vermont Department of Health
Environmental Health
P.O. Box 70 - Drawer 30
Burlington, VT 05402-0070

LICENSE: PD262143

EXPIRES: Saturday, February 6, 2021

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VERMONT ASBESTOS REGULATORY PROGRAM

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ASBESTOS PROJECT MONITOR

TODD C. HOBSON
117 OSGOOD HILL ROAD
ESSEX, VT 05452

Vermont Department of Health
Environmental Health
P.O. Box 70 - Drawer 30
Burlington, VT 05402-0070

LICENSE: PM262143

EXPIRES: Monday, March 1, 2021

CERTIFICATE OF LICENSE
VERMONT ASBESTOS REGULATORY PROGRAM

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ASBESTOS ANALYTICAL SERVICES

OPTIMUM ANALYTICAL AND CONSULTING, LLC
85 STILES ROAD, STE. 201
SALEM, NH 03078

Vermont Department of Health
Environmental Health
P.O. Box 70 - Drawer 30
Burlington, VT 05402-0070

LICENSE: AL143503

EXPIRES: Thursday, June 17, 2021

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AIR ANALYSIS BY PCM

BULK ANALYSIS BY PLM

ASBESTOS PCM ANALYST

NATHANIEL CLARK
64B MERRIMACK ST
MANCHESTER, NH 03101

Vermont Department of Health
Environmental Health
P.O. Box 70 - Drawer 30
Burlington, VT 05402-0070

LICENSE: PA361610

EXPIRES: Friday, January 22, 2021

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VERMONT DEPARTMENT OF HEALTH
Asbestos & Lead Regulatory Program

Asbestos Pcm Analyst
Not a Legal Form of ID

NATHANIEL CLARK

Eff. Date **01/22/20**
Exp. Date **01/22/21**



New

CONES
PA361610

VT



Clay Point Associates, Inc.

www.claypointassociates.com



November 19, 2020

Mr. Jeffrey Sterritt, M.Sc.
Associate
Stantec, Inc.
55 Green Mountain Drive
South Burlington, Vermont 05403-7824

Re: Lead Paint Chip Sample Collection/Analysis
Bridge 6, Vermont Route 9, Bennington, Vermont
CPAI Project #15350

Dear Mr. Sterritt:

The following correspondence summarizes lead-based paint chip sample collection/analysis activities performed by Clay Point Associates, Inc. (CPAI) on October 12, 2020 on the Exterior and adjacent to Bridge 6, Vermont Route 9, Bennington, Vermont. Inspection activities were performed to evaluate paint/coatings prior to planned renovation of the bridge.

On October 12, 2020, CPAI collected three (3) paint chip samples from a coating on the bridge and paint on piping under the bridge. All three (3) samples were submitted to a Vermont certified analytical service where they were prepared and analyzed for lead content according to EPA method 7000B /3050. Lead was detected in one (1) sample at levels exceeding the regulatory definition of lead-based paint.

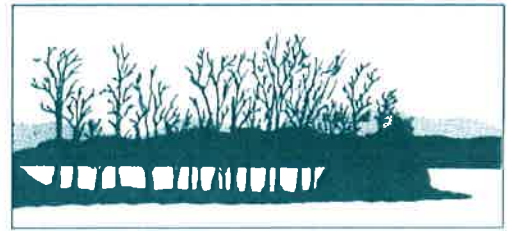
A Drawing depicting sample collection points, the Lead-Based Paint Chip Sample Analysis Inventory (Table 1), the analytical service sample analysis report and appropriate CPAI/analytical service certifications are attached to this report.

Thank you for the opportunity to service your professional environmental management needs. If you have any questions concerning this report, or require additional information, please contact us at (802) 879-2600, or by email at info@claypointassociates.com.

Sincerely,
CLAY POINT ASSOCIATES, INC.



Todd C. Hobson
President



**Table 1
Lead-Based Paint Chip Sample Analysis Inventory**

Client:	Stantec, Inc.
CPAI Project No.:	15350
Project Location:	Bridge 6 Vermont Route 9 Bennington, Vermont

Sample Number	Sample Description	Sample Location	Result (Pb)
15350-02	Coating on Concrete	From north side of structure, 5 ft. 10 in. from east abutment.	0.00489% by weight
15350-04	Paint Chip, black	From northernmost pipe under bridge, approx. 6 ft. from east abutment.	10.2% by weight
15350-07	Paint Chip – black	From southernmost pipe under bridge, approx. 3 ft. from east abutment.	< 0.00313% by weight

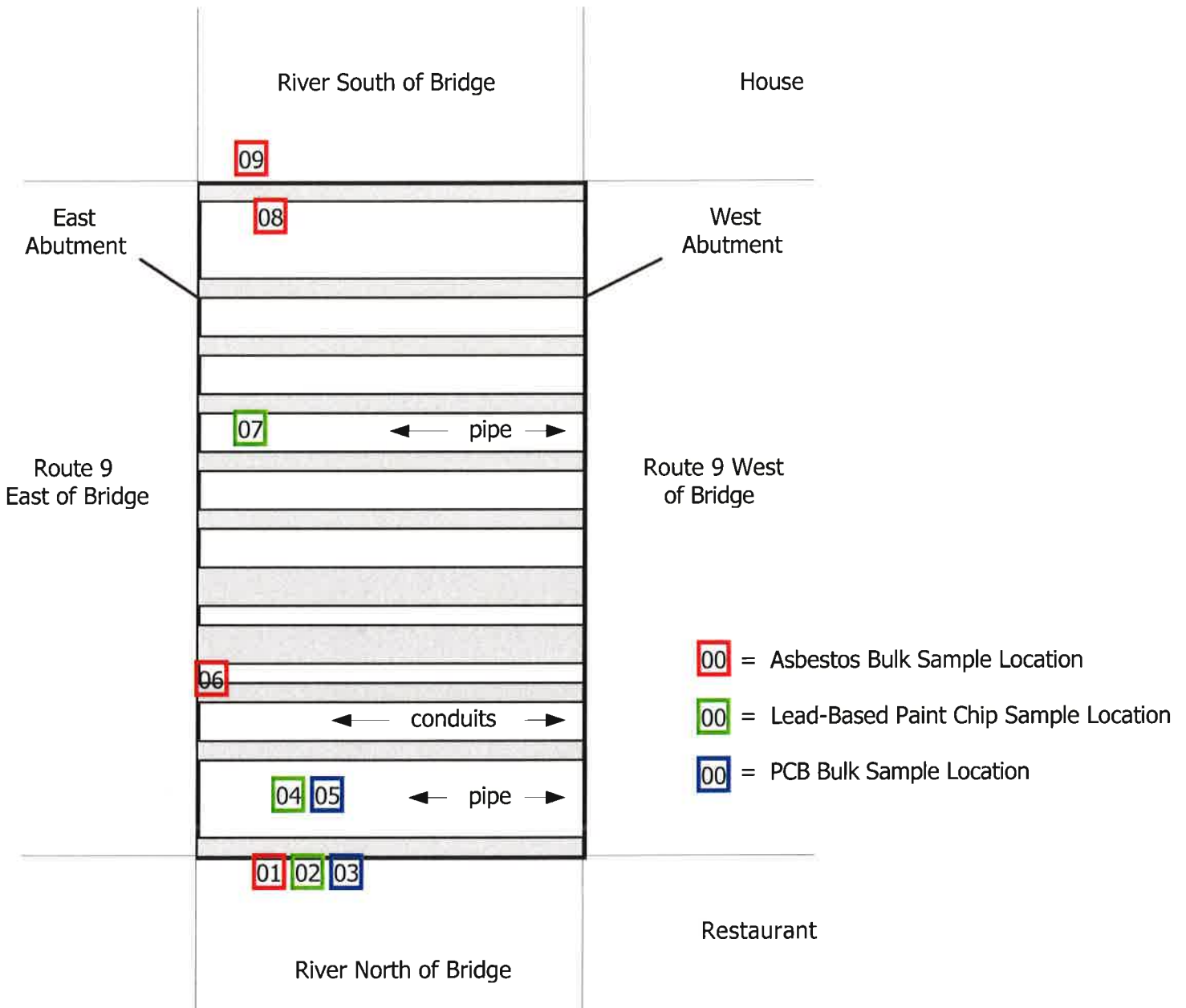
The Vermont Regulations For Lead Control, V.S.A. Title 18, Chapter 38, Effective October 2, 1994, defines Lead-Based Paint as "paint or other surface coatings that contain lead in excess of 1.0 mg/sq. cm. or 0.5 percent by weight (5,000 ppm), or (1) in the case of paint or other surface coatings such lower level as may be established by the Secretary of Housing and Urban Development, as defined by Section 302 (c) of the Lead Based Paint Poisoning Prevention Act, or (2) in the case of any other paint or surface coatings, such other level as may be established by the Administrator of EPA."

The Vermont Occupational Safety and Health Administration (VOSHA) does not specify a regulated quantity of lead within paint. Applicable VOSHA regulations address the presence of lead within paint regardless of specific quantity present.



Project North

Schematic of Underside



Clay Point Associates, Inc.
Project #15350
October 12, 2020

Bridge 6
Vermont Route 9
Bennington, Vermont

Environmental Inspections
Not to Scale
Drawn by: Todd C. Hobson



Customer: Clay Point Associates, Inc. (1846)
Address: PO Box 1254
Williston, VT 05495

Order #: 390063

Matrix Paint
Received 10/14/20
Analyzed 10/14/20
Reported 10/14/20

Attn:
Project:
Location:
Number: 15350

PO Number:

Sample ID	Cust. Sample ID	Location Method	Sample Date	Weight Total µg	% / Wt.	Conc.	RL*
390063-001	15350.02		10/13/20	340 mg			
Lead		EPA 7000B		16.6 µg	0.00489 %	48.9 mg/kg	29.4 mg/kg
390063-002	15350.04		10/13/20	341 mg			
Lead		EPA 7000B		34900 µg	10.2 %	102000 mg/kg	2200 mg/kg
<i>Sample contains substrate which may affect the calculation of weight percent and mg/kg.</i>							
390063-003	15350.07		10/13/20	320 mg			
Lead		EPA 7000B		<10.0 µg	<0.00313 %	<31.3 mg/kg	31.3 mg/kg
<i>Sample contains substrate which may affect the calculation of weight percent and mg/kg.</i>							

Analyst: MY
390063-10/14/20 03:23 PM

Reviewed By: **Jennifer Lee**
Manager

Federal Lead Paint Statute

Location	Level	Unit
Lead in paint by weight	0.50	%
Lead in paint as PPM	5000	mg/kg

Minimum reporting limit: 10.0 µg. All internal QC parameters were met. Unusual sample conditions, if any, are described. Do not reproduce this report except in full. Values are reported to three significant figures. PPM = mg/kg | PPB = µg/kg. The test results reported relate only to the samples submitted. AIHA-LAP, LLC accredited for Lead (Lab ID 100527).

S 3

390063

V:\390\390063

thawks 10/14/2020 9:53:06 AM
Federal Express 815260417024

Lead Based Paint Analysis Request Form

Date of Submission: 13 Octb. 2020 CPAI Proj. #: 15350

Analytical Service: Schneider

~~Fax Results to: (802) 879-0788~~
e mail results to habson@claypointassociates.com

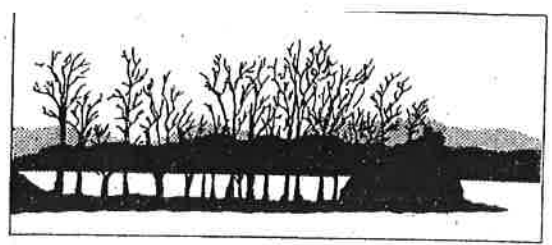
Sample Type	Results in	Turn Around Time
Lead in Dust Wipe	ug/sq. ft.	
<u>Lead in Paint Chip</u>	<u>ppm</u>	<u>Same day</u>
Lead In Soil	ppm	

Sample #	Sample Size (inches)
<u>15350.02</u>	<u>-</u>
<u>.04</u>	<u>-</u>
<u>.07</u>	<u>-</u>

Sample #	Sample Size (inches)

Consultant Signature:  Page No.: 1 of 1

Clay Point Associates, Inc.



CHAIN OF CUSTODY FORM

CPAI Proj. #:

15350

Type					Sample Number(s)
Asb?	Oth?	Air	Bulk	H2O	
	PB X		X		15350.02,04,07

	Date	Time	Name	Signature
Transfer #1	13 Oct. 20	18:48	Todd Hobson	
to:		Sent to	Schneider by	FedEx

Transfer #2				
to:				

Transfer #3				
to:				

LEAD CONSULTING ENTITY

CLAY POINT ASSOCIATES INC.
P.O. BOX 1254
WILLISTON, VT 05495-1254

Vermont Department of Health
Environmental Health
P.O. Box 70 - Drawer 30
Burlington, VT 05402-0070

LICENSE: LC200999

EXPIRES: Friday, March 26, 2021

CERTIFICATE OF LICENSE
VERMONT LEAD REGULATORY PROGRAM

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LEAD INSPECTOR TECHNICIAN I

TODD C. HOBSON
117 OSGOOD HILL ROAD
ESSEX JUNCTION, VT 05452

Vermont Department of Health
Environmental Health
P.O. Box 70 - Drawer 30
Burlington, VT 05402-0070

LICENSE: IT732966

EXPIRES: Wednesday, April 14, 2021

**CERTIFICATE OF CONDITIONAL LICENSE
VERMONT LEAD REGULATORY PROGRAM**

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LEAD INSPECTOR TECHNICIAN I

TODD C. HOBSON
117 OSGOOD HILL ROAD
ESSEX JUNCTION, VT 05452

Vermont Department of Health
Environmental Health
P.O. Box 70 - Drawer 30
Burlington, VT 05402-0070

LICENSE: IT732966

EXPIRES: Wednesday, April 14, 2021

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LEAD LABORATORY

SCHNEIDER LABORATORIES GLOBAL INC
2512 W CARY STREET
RICHMOND, VA 23220-5117

Vermont Department of Health
Environmental Health
P.O. Box 70 - Drawer 30
Burlington, VT 05402-0070

LICENSE: LL322380

EXPIRES: Monday, August 30, 2021

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VERMONT LEAD REGULATORY PROGRAM

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COPY OF THIS CERTIFICATE MUST BE ON SITE AT ALL TIMES. ANALYSIS OF SOIL, DUST
AND PAINT CHIPS

LEAD LABORATORY

SCHNEIDER LABORATORIES GLOBAL INC
2512 W CARY STREET
RICHMOND, VA 23220-5117

Vermont Department of Health
Environmental Health
P.O. Box 70 - Drawer 30
Burlington, VT 05402-0070

LICENSE: LL322380

EXPIRES: Monday, August 30, 2021

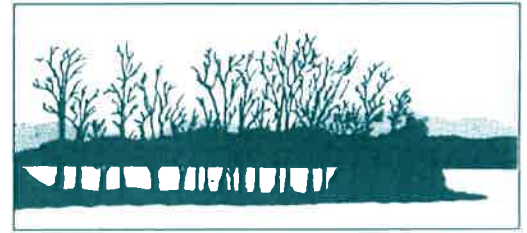
CERTIFICATE OF LICENSE
VERMONT LEAD REGULATORY PROGRAM

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COPY OF THIS CERTIFICATE MUST BE ON SITE AT ALL TIMES. ANALYSIS OF SOIL, DUST
AND PAINT CHIPS

Clay Point Associates, Inc.

www.claypointassociates.com



November 19, 2020

Mr. Jeffrey Sterritt, M.Sc.
Associate
Stantec, Inc.
55 Green Mountain Drive
South Burlington, Vermont 05403-7824

Re: Screening for Polychlorinated Biphenyls (PCBs) in Bulk Materials
Bridge 6, Vermont Route 9, Bennington, Vermont
CPAI Project #15350

Dear Mr. Sterritt:

The following correspondence summarizes bulk material sample collection/analysis activities performed by Clay Point Associates, Inc. (CPAI) on October 12, 2020 on the Exterior and adjacent to Bridge 6, Vermont Route 9, Bennington, Vermont. Inspection activities were performed to evaluate paint/coatings prior to planned renovation of the bridge.

On October 12, 2020, CPAI collected two (2) representative samples from a coating on the bridge and paint on piping under the bridge. All samples were submitted to a qualified analytical service where they were prepared and analyzed in accordance with EPA Method 8082 with extraction by EPA Method 3540C (Soxhlet). The results of analysis indicate that PCBs were not present above the detection limit in the two (2) samples.

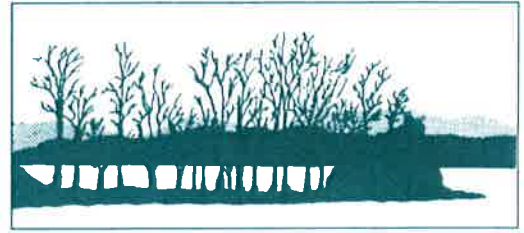
A Drawing depicting sample collection points, the PCB Bulk Material Sampling Locations (Table 1), the PCBs in Bulk Materials Analysis Result Summary (Table 2) and the analytical service sample analysis report are attached to this report.

Thank you for the opportunity to service your professional environmental management needs. If you have any questions concerning this report, please contact us at (802) 879-2600 or by email at info@claypointassociates.com.

Sincerely,
CLAY POINT ASSOCIATES, INC.

A handwritten signature in black ink, appearing to be 'T. Hobson', written in a cursive style.

Todd C. Hobson
President



**TABLE 1
PCB BULK MATERIAL SAMPLING LOCATIONS**

Client: Stantec, Inc.
CPAI Project No.: 15350
Project Location: Bridge 6
Vermont Route 9
Bennington, Vermont

CPAI SAMPLE NO.	Date Collected	DESCRIPTION	LOCATION
15350-03	10/12/20	Coating on concrete.	From north side of structure, 5 ft. 7 in. from east abutment.
15350-05	10/12/20	Paint, black, on piping	From northernmost pipe under bridge, approx. 6 ft. from east abutment.

TABLE 2 – PCBs IN BULK MATERIALS ANALYSIS RESULTS SUMMARY

October 12, 2020

CLAY POINT ASSOCIATES, INC.
 (802) 879-2600 info@claypointassociates.com
 P.O. Box 1254 • Williston, VT • 05495-1254

CLIENT:

CPAI PROJECT NO.:

PROJECT LOCATION:

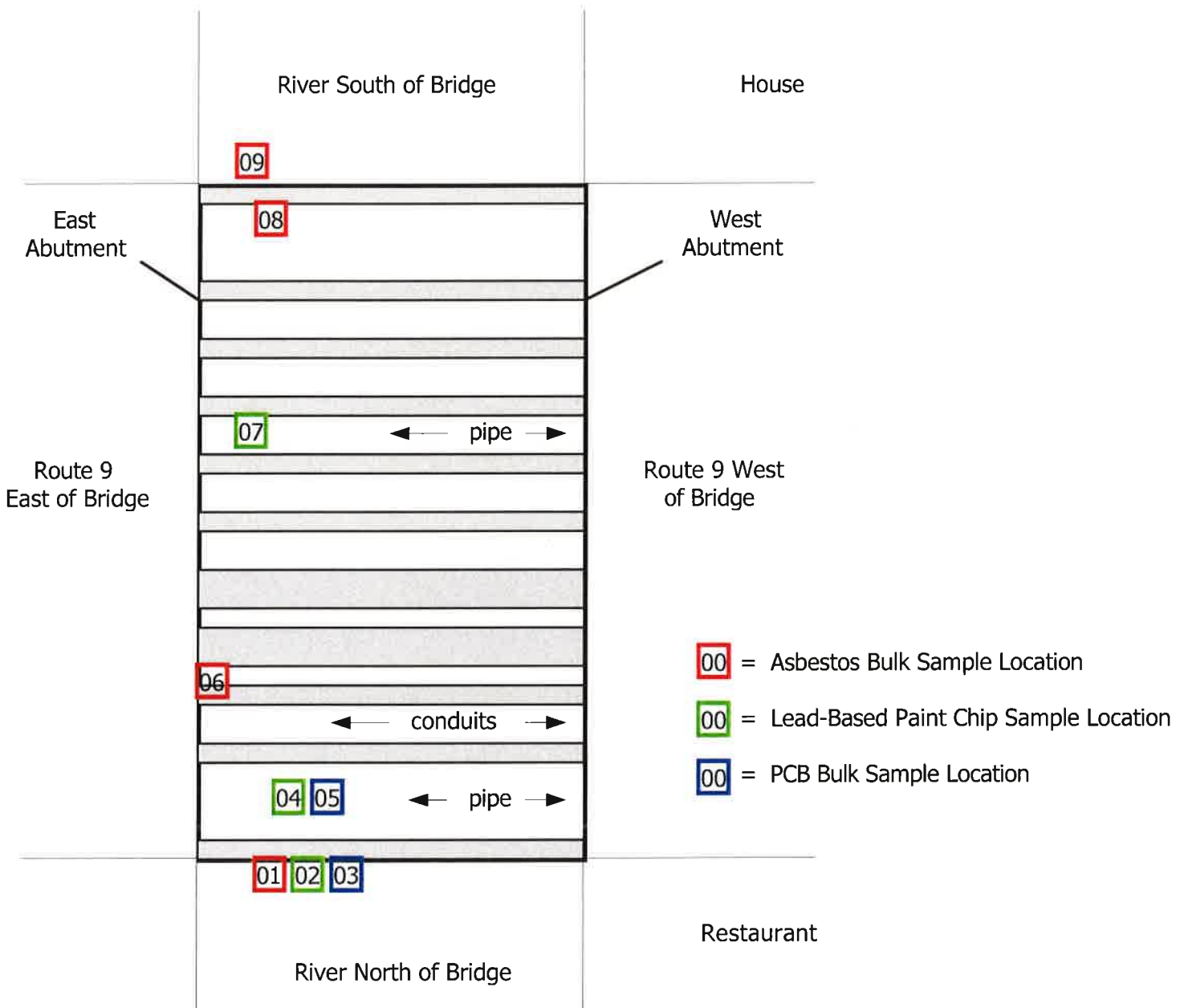
Stantec, Inc.
 15350
 Bridge 6
 Vermont Route 9
 Bennington, Vermont

SAMPLE I.D.	DATE	PCB-1016	PCB-1221	PCB-1232	PCB-1242	PCB-1248	PCB-1254	PCB-1260	PCB-1262	PCB-1268	TOTAL PCB (mg/kg)	BUILDING MATERIAL
15350-03	10/12/20	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	Coating on Concrete
15350-05	10/12/20	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	Paint, black, on piping



Project North

Schematic of Underside



Clay Point Associates, Inc.
Project #15350
October 12, 2020

Bridge 6
Vermont Route 9
Bennington, Vermont

Environmental Inspections
Not to Scale
Drawn by: Todd C. Hobson



Eastern Analytical, Inc.

professional laboratory and drilling services

Todd Hobson
Clay Point Associates, Inc.
25 Bishop Avenue
Williston, VT 05495



Subject: Laboratory Report

Eastern Analytical, Inc. ID: 217282
Client Identification: 15350
Date Received: 10/16/2020

Dear Mr. Hobson :

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.easternanalytical.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

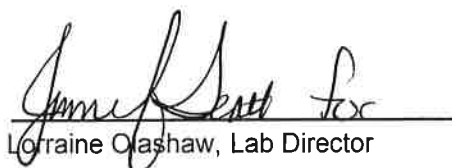
Eastern Analytical Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269), Vermont (VT1012) and New York (12072).

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 O'Leary, Lab Director

10.22.20
Date

3
of pages (excluding cover letter)



SAMPLE CONDITIONS PAGE

EAI ID#: 217282

Client: **Clay Point Associates, Inc.**

Client Designation: **15350**

Temperature upon receipt (°C): **3.1**

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

Acceptable temperature range (°C): 0-6

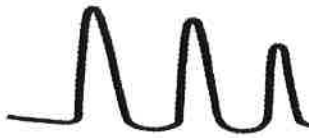
Lab ID	Sample ID	Date Received	Date/Time Sampled	Sample Matrix	% Dry Weight	Exceptions/Comments (other than thermal preservation)
217282.01	15350.03	10/16/20	10/12/20	solid		Adheres to Sample Acceptance Policy
217282.02	15350.05	10/16/20	10/12/20	solid		Adheres to Sample Acceptance Policy

Samples were properly preserved and the pH measured when applicable unless otherwise noted. Analysis of solids for pH, Flashpoint, Ignitability, Paint Filter, Corrosivity, Conductivity and Specific Gravity are reported on an "as received" basis. Immediate analyses, pH, Total Residual Chlorine, Dissolved Oxygen and Sulfite, performed at the laboratory were run outside of the recommended 15 minute hold time.

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, 20th, 21st, 22nd & 23rd Edition or noted Revision year.
- 3) Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
- 4) Hach Water Analysis Handbook, 4th edition, 1992



LABORATORY REPORT

EAI ID#: 217282

Client: **Clay Point Associates, Inc.**

Client Designation: **15350**

Sample ID:	15350.03	15350.05
Lab Sample ID:	217282.01	217282.02
Matrix:	solid	solid
Date Sampled:	10/12/20	10/12/20
Date Received:	10/16/20	10/16/20
Units:	mg/kg	mg/kg
Date of Extraction/Prep:	10/19/20	10/19/20
Date of Analysis:	10/20/20	10/20/20
Analyst:	MA	MA
Method:	8082A	8082A
Dilution Factor:	5	5
PCB-1016	< 0.08	< 0.08
PCB-1221	< 0.08	< 0.08
PCB-1232	< 0.08	< 0.08
PCB-1242	< 0.08	< 0.08
PCB-1248	< 0.08	< 0.08
PCB-1254	< 0.08	< 0.08
PCB-1260	< 0.08	< 0.08
PCB-1262	< 0.08	< 0.08
PCB-1268	< 0.08	< 0.08
TMX (surr)	93 %R	34 %R
DCB (surr)	99 %R	MI

MI: Matrix Interference.

Results are reported on a solids as received basis.

Acid clean-up was performed on the samples and associated batch QC.

Detection limits elevated due to sample matrix and in response to the lower initial mass used for analysis.



LABORATORY REPORT

EAI ID#: 217282

Client: Clay Point Associates, Inc.

Client Designation: 15350

Sample ID:	15350.03	15350.05
Lab Sample ID:	217282.01	217282.02
Matrix:	solid	solid
Date Sampled:	10/12/20	10/12/20
Date Received:	10/16/20	10/16/20
Units:	mg/kg	mg/kg
Date of Extraction/Prep:	10/19/20	10/19/20
Date of Analysis:	10/20/20	10/20/20
Analyst:	MA	MA
Method:	8082A	8082A
Dilution Factor:	5	5
PCB-1016	< 0.08	< 0.08
PCB-1221	< 0.08	< 0.08
PCB-1232	< 0.08	< 0.08
PCB-1242	< 0.08	< 0.08
PCB-1248	< 0.08	< 0.08
PCB-1254	< 0.08	< 0.08
PCB-1260	< 0.08	< 0.08
PCB-1262	< 0.08	< 0.08
PCB-1268	< 0.08	< 0.08
TMX (surr)	93 %R	34 %R
DCB (surr)	99 %R	MI

MI: Matrix Interference.

Results are reported on a solids as received basis.

Acid clean-up was performed on the samples and associated batch QC.

Detection limits elevated due to sample matrix and in response to the lower initial mass used for analysis.



ANALYTICAL REPORT

Lab Number:	L2043672
Client:	Stantec 5 Dartmouth Drive Suite 200 Auburn, NH 03032
ATTN:	Jeff Sterritt
Phone:	(603) 669-8600
Project Name:	BENNINGTON BRIDGE
Project Number:	179450053
Report Date:	10/19/20

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2043672-01	B-3 (0'-1.5')	SOIL	BENNINGTON, VT	10/12/20 10:15	10/12/20
L2043672-02	B-3 (4'-8')	SOIL	BENNINGTON, VT	10/12/20 10:45	10/12/20
L2043672-03	B-3 (9'-11')	SOIL	BENNINGTON, VT	10/12/20 11:45	10/12/20
L2043672-04	B-3	WATER	BENNINGTON, VT	10/12/20 12:35	10/12/20
L2043672-05	TRIP	WATER	BENNINGTON, VT	10/12/20 00:00	10/12/20

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Jennifer L. Clements

Title: Technical Director/Representative

Date: 10/19/20

ORGANICS

VOLATILES

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

SAMPLE RESULTS

Lab ID: L2043672-01
 Client ID: B-3 (0'-1.5')
 Sample Location: BENNINGTON, VT

Date Collected: 10/12/20 10:15
 Date Received: 10/12/20
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8260C
 Analytical Date: 10/16/20 13:10
 Analyst: MKS
 Percent Solids: 96%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	4.0	--	1
1,1-Dichloroethane	ND		ug/kg	0.81	--	1
Chloroform	ND		ug/kg	1.2	--	1
Carbon tetrachloride	ND		ug/kg	0.81	--	1
1,2-Dichloropropane	ND		ug/kg	0.81	--	1
Dibromochloromethane	ND		ug/kg	0.81	--	1
1,1,2-Trichloroethane	ND		ug/kg	0.81	--	1
Tetrachloroethene	ND		ug/kg	0.40	--	1
Chlorobenzene	ND		ug/kg	0.40	--	1
Trichlorofluoromethane	ND		ug/kg	3.2	--	1
1,2-Dichloroethane	ND		ug/kg	0.81	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.40	--	1
Bromodichloromethane	ND		ug/kg	0.40	--	1
trans-1,3-Dichloropropene	ND		ug/kg	0.81	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.40	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.40	--	1
1,1-Dichloropropene	ND		ug/kg	0.40	--	1
Bromoform	ND		ug/kg	3.2	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.40	--	1
Benzene	ND		ug/kg	0.40	--	1
Toluene	ND		ug/kg	0.81	--	1
Ethylbenzene	ND		ug/kg	0.81	--	1
Chloromethane	ND		ug/kg	3.2	--	1
Bromomethane	ND		ug/kg	1.6	--	1
Vinyl chloride	ND		ug/kg	0.81	--	1
Chloroethane	ND		ug/kg	1.6	--	1
1,1-Dichloroethene	ND		ug/kg	0.81	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.2	--	1

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

SAMPLE RESULTS

Lab ID: L2043672-01
Client ID: B-3 (0'-1.5')
Sample Location: BENNINGTON, VT

Date Collected: 10/12/20 10:15
Date Received: 10/12/20
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.40	--	1
1,2-Dichlorobenzene	ND		ug/kg	1.6	--	1
1,3-Dichlorobenzene	ND		ug/kg	1.6	--	1
1,4-Dichlorobenzene	ND		ug/kg	1.6	--	1
Methyl tert butyl ether	ND		ug/kg	1.6	--	1
p/m-Xylene	ND		ug/kg	1.6	--	1
o-Xylene	ND		ug/kg	0.81	--	1
Xylenes, Total	ND		ug/kg	0.81	--	1
cis-1,2-Dichloroethene	ND		ug/kg	0.81	--	1
1,2-Dichloroethene, Total	ND		ug/kg	0.81	--	1
Dibromomethane	ND		ug/kg	1.6	--	1
1,4-Dichlorobutane	ND		ug/kg	8.1	--	1
1,2,3-Trichloropropane	ND		ug/kg	1.6	--	1
Styrene	ND		ug/kg	0.81	--	1
Dichlorodifluoromethane	ND		ug/kg	8.1	--	1
Acetone	ND		ug/kg	20	--	1
Carbon disulfide	ND		ug/kg	8.1	--	1
2-Butanone	ND		ug/kg	8.1	--	1
Vinyl acetate	ND		ug/kg	8.1	--	1
4-Methyl-2-pentanone	ND		ug/kg	8.1	--	1
2-Hexanone	ND		ug/kg	8.1	--	1
Ethyl methacrylate	ND		ug/kg	8.1	--	1
Acrylonitrile	ND		ug/kg	3.2	--	1
Bromochloromethane	ND		ug/kg	1.6	--	1
Tetrahydrofuran	ND		ug/kg	3.2	--	1
2,2-Dichloropropane	ND		ug/kg	1.6	--	1
1,2-Dibromoethane	ND		ug/kg	0.81	--	1
1,3-Dichloropropane	ND		ug/kg	1.6	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.40	--	1
Bromobenzene	ND		ug/kg	1.6	--	1
n-Butylbenzene	ND		ug/kg	0.81	--	1
sec-Butylbenzene	ND		ug/kg	0.81	--	1
tert-Butylbenzene	ND		ug/kg	1.6	--	1
o-Chlorotoluene	ND		ug/kg	1.6	--	1
p-Chlorotoluene	ND		ug/kg	1.6	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.4	--	1
Hexachlorobutadiene	ND		ug/kg	3.2	--	1

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

SAMPLE RESULTS

Lab ID: L2043672-01
 Client ID: B-3 (0'-1.5')
 Sample Location: BENNINGTON, VT

Date Collected: 10/12/20 10:15
 Date Received: 10/12/20
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Isopropylbenzene	ND		ug/kg	0.81	--	1
p-Isopropyltoluene	ND		ug/kg	0.81	--	1
Naphthalene	ND		ug/kg	3.2	--	1
n-Propylbenzene	ND		ug/kg	0.81	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	1.6	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.6	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.6	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.6	--	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	4.0	--	1
Ethyl ether	ND		ug/kg	1.6	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	119		70-130
Dibromofluoromethane	94		70-130

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

SAMPLE RESULTS

Lab ID: L2043672-04
 Client ID: B-3
 Sample Location: BENNINGTON, VT

Date Collected: 10/12/20 12:35
 Date Received: 10/12/20
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260C
 Analytical Date: 10/14/20 09:22
 Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	3.0	--	1
1,1-Dichloroethane	ND		ug/l	0.75	--	1
Chloroform	ND		ug/l	0.75	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.8	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	0.75	--	1
Tetrachloroethene	3.4		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	0.50	--	1
Trichlorofluoromethane	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	0.50	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.5	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	0.75	--	1
Ethylbenzene	ND		ug/l	0.50	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	1.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	1.0	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	--	1

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

SAMPLE RESULTS

Lab ID: L2043672-04
Client ID: B-3
Sample Location: BENNINGTON, VT

Date Collected: 10/12/20 12:35
Date Received: 10/12/20
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2-Dichloroethene, Total	ND		ug/l	0.50	--	1
Trichloroethene	ND		ug/l	0.50	--	1
1,2-Dichlorobenzene	ND		ug/l	2.5	--	1
1,3-Dichlorobenzene	ND		ug/l	2.5	--	1
1,4-Dichlorobenzene	ND		ug/l	2.5	--	1
Methyl tert butyl ether	ND		ug/l	1.0	--	1
p/m-Xylene	ND		ug/l	1.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	--	1
Dibromomethane	ND		ug/l	5.0	--	1
1,4-Dichlorobutane	ND		ug/l	5.0	--	1
1,2,3-Trichloropropane	ND		ug/l	5.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	5.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Ethyl methacrylate	ND		ug/l	5.0	--	1
Acrylonitrile	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.5	--	1
Tetrahydrofuran	ND		ug/l	5.0	--	1
2,2-Dichloropropane	ND		ug/l	2.5	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.5	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Bromobenzene	ND		ug/l	2.5	--	1
n-Butylbenzene	ND		ug/l	0.50	--	1
sec-Butylbenzene	ND		ug/l	0.50	--	1
tert-Butylbenzene	ND		ug/l	2.5	--	1
o-Chlorotoluene	ND		ug/l	2.5	--	1
p-Chlorotoluene	ND		ug/l	2.5	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	--	1
Hexachlorobutadiene	ND		ug/l	0.50	--	1

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

SAMPLE RESULTS

Lab ID: L2043672-04
Client ID: B-3
Sample Location: BENNINGTON, VT

Date Collected: 10/12/20 12:35
Date Received: 10/12/20
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Isopropylbenzene	ND		ug/l	0.50	--	1
p-Isopropyltoluene	ND		ug/l	0.50	--	1
Naphthalene	ND		ug/l	2.5	--	1
n-Propylbenzene	ND		ug/l	0.50	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	--	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	--	1
Ethyl ether	ND		ug/l	2.5	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	101		70-130

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

SAMPLE RESULTS

Lab ID: L2043672-05
 Client ID: TRIP
 Sample Location: BENNINGTON, VT

Date Collected: 10/12/20 00:00
 Date Received: 10/12/20
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260C
 Analytical Date: 10/14/20 09:00
 Analyst: AJK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	3.0	--	1
1,1-Dichloroethane	ND		ug/l	0.75	--	1
Chloroform	ND		ug/l	0.75	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.8	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	0.75	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	0.50	--	1
Trichlorofluoromethane	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	0.50	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.5	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	0.75	--	1
Ethylbenzene	ND		ug/l	0.50	--	1
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	1.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	1.0	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	--	1

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

SAMPLE RESULTS

Lab ID: L2043672-05
Client ID: TRIP
Sample Location: BENNINGTON, VT

Date Collected: 10/12/20 00:00
Date Received: 10/12/20
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2-Dichloroethene, Total	ND		ug/l	0.50	--	1
Trichloroethene	ND		ug/l	0.50	--	1
1,2-Dichlorobenzene	ND		ug/l	2.5	--	1
1,3-Dichlorobenzene	ND		ug/l	2.5	--	1
1,4-Dichlorobenzene	ND		ug/l	2.5	--	1
Methyl tert butyl ether	ND		ug/l	1.0	--	1
p/m-Xylene	ND		ug/l	1.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	--	1
Dibromomethane	ND		ug/l	5.0	--	1
1,4-Dichlorobutane	ND		ug/l	5.0	--	1
1,2,3-Trichloropropane	ND		ug/l	5.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	5.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Ethyl methacrylate	ND		ug/l	5.0	--	1
Acrylonitrile	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.5	--	1
Tetrahydrofuran	ND		ug/l	5.0	--	1
2,2-Dichloropropane	ND		ug/l	2.5	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.5	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Bromobenzene	ND		ug/l	2.5	--	1
n-Butylbenzene	ND		ug/l	0.50	--	1
sec-Butylbenzene	ND		ug/l	0.50	--	1
tert-Butylbenzene	ND		ug/l	2.5	--	1
o-Chlorotoluene	ND		ug/l	2.5	--	1
p-Chlorotoluene	ND		ug/l	2.5	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	--	1
Hexachlorobutadiene	ND		ug/l	0.50	--	1

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

SAMPLE RESULTS

Lab ID: L2043672-05
Client ID: TRIP
Sample Location: BENNINGTON, VT

Date Collected: 10/12/20 00:00
Date Received: 10/12/20
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Isopropylbenzene	ND		ug/l	0.50	--	1
p-Isopropyltoluene	ND		ug/l	0.50	--	1
Naphthalene	ND		ug/l	2.5	--	1
n-Propylbenzene	ND		ug/l	0.50	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	--	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	--	1
Ethyl ether	ND		ug/l	2.5	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	99		70-130

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/14/20 08:39
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 04-05 Batch: WG1422182-5					
Methylene chloride	ND		ug/l	3.0	--
1,1-Dichloroethane	ND		ug/l	0.75	--
Chloroform	ND		ug/l	0.75	--
Carbon tetrachloride	ND		ug/l	0.50	--
1,2-Dichloropropane	ND		ug/l	1.8	--
Dibromochloromethane	ND		ug/l	0.50	--
1,1,2-Trichloroethane	ND		ug/l	0.75	--
2-Chloroethylvinyl ether	ND		ug/l	10	--
Tetrachloroethene	ND		ug/l	0.50	--
Chlorobenzene	ND		ug/l	0.50	--
Trichlorofluoromethane	ND		ug/l	2.5	--
1,2-Dichloroethane	ND		ug/l	0.50	--
1,1,1-Trichloroethane	ND		ug/l	0.50	--
Bromodichloromethane	ND		ug/l	0.50	--
trans-1,3-Dichloropropene	ND		ug/l	0.50	--
cis-1,3-Dichloropropene	ND		ug/l	0.50	--
1,3-Dichloropropene, Total	ND		ug/l	0.50	--
1,1-Dichloropropene	ND		ug/l	2.5	--
Bromoform	ND		ug/l	2.0	--
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--
Benzene	ND		ug/l	0.50	--
Toluene	ND		ug/l	0.75	--
Ethylbenzene	ND		ug/l	0.50	--
Chloromethane	ND		ug/l	2.5	--
Bromomethane	ND		ug/l	1.0	--
Vinyl chloride	ND		ug/l	1.0	--
Chloroethane	ND		ug/l	1.0	--
1,1-Dichloroethene	ND		ug/l	0.50	--
trans-1,2-Dichloroethene	ND		ug/l	0.75	--

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/14/20 08:39
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 04-05 Batch: WG1422182-5					
1,2-Dichloroethene, Total	ND		ug/l	0.50	--
Trichloroethene	ND		ug/l	0.50	--
1,2-Dichlorobenzene	ND		ug/l	2.5	--
1,3-Dichlorobenzene	ND		ug/l	2.5	--
1,4-Dichlorobenzene	ND		ug/l	2.5	--
Methyl tert butyl ether	ND		ug/l	1.0	--
p/m-Xylene	ND		ug/l	1.0	--
o-Xylene	ND		ug/l	1.0	--
Xylenes, Total	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	0.50	--
Dibromomethane	ND		ug/l	5.0	--
1,4-Dichlorobutane	ND		ug/l	5.0	--
1,2,3-Trichloropropane	ND		ug/l	5.0	--
Styrene	ND		ug/l	1.0	--
Dichlorodifluoromethane	ND		ug/l	5.0	--
Acetone	ND		ug/l	5.0	--
Carbon disulfide	ND		ug/l	5.0	--
2-Butanone	ND		ug/l	5.0	--
Vinyl acetate	ND		ug/l	5.0	--
4-Methyl-2-pentanone	ND		ug/l	5.0	--
2-Hexanone	ND		ug/l	5.0	--
Ethyl methacrylate	ND		ug/l	5.0	--
Acrolein	ND		ug/l	5.0	--
Acrylonitrile	ND		ug/l	5.0	--
Bromochloromethane	ND		ug/l	2.5	--
Tetrahydrofuran	ND		ug/l	5.0	--
2,2-Dichloropropane	ND		ug/l	2.5	--
1,2-Dibromoethane	ND		ug/l	2.0	--
1,3-Dichloropropane	ND		ug/l	2.5	--

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/14/20 08:39
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 04-05 Batch: WG1422182-5					
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	--
Bromobenzene	ND		ug/l	2.5	--
n-Butylbenzene	ND		ug/l	0.50	--
sec-Butylbenzene	ND		ug/l	0.50	--
tert-Butylbenzene	ND		ug/l	2.5	--
o-Chlorotoluene	ND		ug/l	2.5	--
p-Chlorotoluene	ND		ug/l	2.5	--
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	--
Hexachlorobutadiene	ND		ug/l	0.50	--
Isopropylbenzene	ND		ug/l	0.50	--
p-Isopropyltoluene	ND		ug/l	0.50	--
Naphthalene	ND		ug/l	2.5	--
n-Propylbenzene	ND		ug/l	0.50	--
1,2,3-Trichlorobenzene	ND		ug/l	2.5	--
1,2,4-Trichlorobenzene	ND		ug/l	2.5	--
1,3,5-Trimethylbenzene	ND		ug/l	2.5	--
1,3,5-Trichlorobenzene	ND		ug/l	2.0	--
1,2,4-Trimethylbenzene	ND		ug/l	2.5	--
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	--
Halothane	ND		ug/l	2.5	--
Ethyl ether	ND		ug/l	2.5	--
Methyl Acetate	ND		ug/l	10	--
Ethyl Acetate	ND		ug/l	10	--
Isopropyl Ether	ND		ug/l	2.0	--
Cyclohexane	ND		ug/l	10	--
Tert-Butyl Alcohol	ND		ug/l	10	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
1,4-Dioxane	ND		ug/l	250	--

Project Name: BENNINGTON BRIDGE
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Lab Number: L2043672
Report Date: 10/19/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/14/20 08:39
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 04-05 Batch: WG1422182-5					
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	10	--
Methyl cyclohexane	ND		ug/l	10	--
p-Diethylbenzene	ND		ug/l	2.0	--
4-Ethyltoluene	ND		ug/l	2.0	--
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	101		70-130

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/16/20 09:43
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01 Batch: WG1423086-5					
Methylene chloride	ND		ug/kg	5.0	--
1,1-Dichloroethane	ND		ug/kg	1.0	--
Chloroform	ND		ug/kg	1.5	--
Carbon tetrachloride	ND		ug/kg	1.0	--
1,2-Dichloropropane	ND		ug/kg	1.0	--
Dibromochloromethane	ND		ug/kg	1.0	--
1,1,2-Trichloroethane	ND		ug/kg	1.0	--
2-Chloroethylvinyl ether	ND		ug/kg	20	--
Tetrachloroethene	ND		ug/kg	0.50	--
Chlorobenzene	ND		ug/kg	0.50	--
Trichlorofluoromethane	ND		ug/kg	4.0	--
1,2-Dichloroethane	ND		ug/kg	1.0	--
1,1,1-Trichloroethane	ND		ug/kg	0.50	--
Bromodichloromethane	ND		ug/kg	0.50	--
trans-1,3-Dichloropropene	ND		ug/kg	1.0	--
cis-1,3-Dichloropropene	ND		ug/kg	0.50	--
1,3-Dichloropropene, Total	ND		ug/kg	0.50	--
1,1-Dichloropropene	ND		ug/kg	0.50	--
Bromoform	ND		ug/kg	4.0	--
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	--
Benzene	ND		ug/kg	0.50	--
Toluene	ND		ug/kg	1.0	--
Ethylbenzene	ND		ug/kg	1.0	--
Chloromethane	ND		ug/kg	4.0	--
Bromomethane	ND		ug/kg	2.0	--
Vinyl chloride	ND		ug/kg	1.0	--
Chloroethane	ND		ug/kg	2.0	--
1,1-Dichloroethene	ND		ug/kg	1.0	--
trans-1,2-Dichloroethene	ND		ug/kg	1.5	--

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/16/20 09:43
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01 Batch: WG1423086-5					
Trichloroethene	ND		ug/kg	0.50	--
1,2-Dichlorobenzene	ND		ug/kg	2.0	--
1,3-Dichlorobenzene	ND		ug/kg	2.0	--
1,4-Dichlorobenzene	ND		ug/kg	2.0	--
Methyl tert butyl ether	ND		ug/kg	2.0	--
p/m-Xylene	ND		ug/kg	2.0	--
o-Xylene	ND		ug/kg	1.0	--
Xylenes, Total	ND		ug/kg	1.0	--
cis-1,2-Dichloroethene	ND		ug/kg	1.0	--
1,2-Dichloroethene, Total	ND		ug/kg	1.0	--
Dibromomethane	ND		ug/kg	2.0	--
1,4-Dichlorobutane	ND		ug/kg	10	--
1,2,3-Trichloropropane	ND		ug/kg	2.0	--
Styrene	ND		ug/kg	1.0	--
Dichlorodifluoromethane	ND		ug/kg	10	--
Acetone	ND		ug/kg	25	--
Carbon disulfide	ND		ug/kg	10	--
2-Butanone	ND		ug/kg	10	--
Vinyl acetate	ND		ug/kg	10	--
4-Methyl-2-pentanone	ND		ug/kg	10	--
2-Hexanone	ND		ug/kg	10	--
Ethyl methacrylate	ND		ug/kg	10	--
Acrolein	ND		ug/kg	25	--
Acrylonitrile	ND		ug/kg	4.0	--
Bromochloromethane	ND		ug/kg	2.0	--
Tetrahydrofuran	ND		ug/kg	4.0	--
2,2-Dichloropropane	ND		ug/kg	2.0	--
1,2-Dibromoethane	ND		ug/kg	1.0	--
1,3-Dichloropropane	ND		ug/kg	2.0	--

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/16/20 09:43
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01 Batch: WG1423086-5					
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	--
Bromobenzene	ND		ug/kg	2.0	--
n-Butylbenzene	ND		ug/kg	1.0	--
sec-Butylbenzene	ND		ug/kg	1.0	--
tert-Butylbenzene	ND		ug/kg	2.0	--
1,3,5-Trichlorobenzene	ND		ug/kg	2.0	--
o-Chlorotoluene	ND		ug/kg	2.0	--
p-Chlorotoluene	ND		ug/kg	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	--
Hexachlorobutadiene	ND		ug/kg	4.0	--
Isopropylbenzene	ND		ug/kg	1.0	--
p-Isopropyltoluene	ND		ug/kg	1.0	--
Naphthalene	ND		ug/kg	4.0	--
n-Propylbenzene	ND		ug/kg	1.0	--
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	--
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	--
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	--
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	--
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	--
Ethyl ether	ND		ug/kg	2.0	--
Methyl Acetate	ND		ug/kg	4.0	--
Ethyl Acetate	ND		ug/kg	10	--
Isopropyl Ether	ND		ug/kg	2.0	--
Cyclohexane	ND		ug/kg	10	--
Tert-Butyl Alcohol	ND		ug/kg	20	--
Ethyl-Tert-Butyl-Ether	ND		ug/kg	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/kg	2.0	--
1,4-Dioxane	ND		ug/kg	80	--
Methyl cyclohexane	ND		ug/kg	4.0	--

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/16/20 09:43
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01 Batch: WG1423086-5					
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/kg	4.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	120		70-130
Dibromofluoromethane	92		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: BENNINGTON BRIDGE

Lab Number: L2043672

Project Number: 179450053

Report Date: 10/19/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04-05 Batch: WG1422182-3 WG1422182-4								
Methylene chloride	100		110		70-130	10		20
1,1-Dichloroethane	100		110		70-130	10		20
Chloroform	98		100		70-130	2		20
Carbon tetrachloride	98		100		63-132	2		20
1,2-Dichloropropane	97		110		70-130	13		20
Dibromochloromethane	94		100		63-130	6		20
1,1,2-Trichloroethane	99		100		70-130	1		20
2-Chloroethylvinyl ether	66	Q	89		70-130	30	Q	20
Tetrachloroethene	100		110		70-130	10		20
Chlorobenzene	100		110		75-130	10		25
Trichlorofluoromethane	110		110		62-150	0		20
1,2-Dichloroethane	98		100		70-130	2		20
1,1,1-Trichloroethane	99		110		67-130	11		20
Bromodichloromethane	96		100		67-130	4		20
trans-1,3-Dichloropropene	93		99		70-130	6		20
cis-1,3-Dichloropropene	92		98		70-130	6		20
1,1-Dichloropropene	100		100		70-130	0		20
Bromoform	90		100		54-136	11		20
1,1,2,2-Tetrachloroethane	96		100		67-130	4		20
Benzene	100		100		70-130	0		25
Toluene	100		110		70-130	10		25
Ethylbenzene	110		110		70-130	0		20
Chloromethane	110		120		64-130	9		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: BENNINGTON BRIDGE

Lab Number: L2043672

Project Number: 179450053

Report Date: 10/19/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04-05 Batch: WG1422182-3 WG1422182-4								
Bromomethane	90		100		39-139	11		20
Vinyl chloride	110		120		55-140	9		20
Chloroethane	130		130		55-138	0		20
1,1-Dichloroethene	100		110		61-145	10		25
trans-1,2-Dichloroethene	99		110		70-130	11		20
Trichloroethene	100		100		70-130	0		25
1,2-Dichlorobenzene	110		110		70-130	0		20
1,3-Dichlorobenzene	110		110		70-130	0		20
1,4-Dichlorobenzene	110		110		70-130	0		20
Methyl tert butyl ether	90		97		63-130	7		20
p/m-Xylene	110		115		70-130	4		20
o-Xylene	110		115		70-130	4		20
cis-1,2-Dichloroethene	100		110		70-130	10		20
Dibromomethane	94		98		70-130	4		20
1,4-Dichlorobutane	96		100		70-130	4		20
1,2,3-Trichloropropane	97		110		64-130	13		20
Styrene	110		120		70-130	9		20
Dichlorodifluoromethane	120		130		36-147	8		20
Acetone	84		93		58-148	10		20
Carbon disulfide	110		110		51-130	0		20
2-Butanone	97		94		63-138	3		20
Vinyl acetate	86		93		70-130	8		20
4-Methyl-2-pentanone	86		88		59-130	2		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: BENNINGTON BRIDGE

Lab Number: L2043672

Project Number: 179450053

Report Date: 10/19/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04-05 Batch: WG1422182-3 WG1422182-4								
2-Hexanone	79		88		57-130	11		20
Ethyl methacrylate	82		87		70-130	6		20
Acrolein	78		88		70-130	12		20
Acrylonitrile	95		92		70-130	3		20
Bromochloromethane	100		110		70-130	10		20
Tetrahydrofuran	82		92		58-130	11		20
2,2-Dichloropropane	110		110		63-133	0		20
1,2-Dibromoethane	94		100		70-130	6		20
1,3-Dichloropropane	99		100		70-130	1		20
1,1,1,2-Tetrachloroethane	99		100		64-130	1		20
Bromobenzene	100		110		70-130	10		20
n-Butylbenzene	110		110		53-136	0		20
sec-Butylbenzene	110		120		70-130	9		20
tert-Butylbenzene	97		99		70-130	2		20
o-Chlorotoluene	110		120		70-130	9		20
p-Chlorotoluene	110		110		70-130	0		20
1,2-Dibromo-3-chloropropane	83		96		41-144	15		20
Hexachlorobutadiene	110		120		63-130	9		20
Isopropylbenzene	110		120		70-130	9		20
p-Isopropyltoluene	110		120		70-130	9		20
Naphthalene	86		90		70-130	5		20
n-Propylbenzene	110		120		69-130	9		20
1,2,3-Trichlorobenzene	95		100		70-130	5		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: BENNINGTON BRIDGE

Lab Number: L2043672

Project Number: 179450053

Report Date: 10/19/20

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04-05 Batch: WG1422182-3 WG1422182-4								
1,2,4-Trichlorobenzene	100		100		70-130	0		20
1,3,5-Trimethylbenzene	110		120		64-130	9		20
1,3,5-Trichlorobenzene	110		110		70-130	0		20
1,2,4-Trimethylbenzene	110		120		70-130	9		20
trans-1,4-Dichloro-2-butene	90		100		70-130	11		20
Halothane	100		110		70-130	10		20
Ethyl ether	97		100		59-134	3		20
Methyl Acetate	84		93		70-130	10		20
Ethyl Acetate	83		89		70-130	7		20
Isopropyl Ether	95		98		70-130	3		20
Cyclohexane	100		110		70-130	10		20
Tert-Butyl Alcohol	84		88		70-130	5		20
Ethyl-Tert-Butyl-Ether	91		98		70-130	7		20
Tertiary-Amyl Methyl Ether	89		96		66-130	8		20
1,4-Dioxane	76		72		56-162	5		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	110		120		70-130	9		20
Methyl cyclohexane	100		110		70-130	10		20
p-Diethylbenzene	110		110		70-130	0		20
4-Ethyltoluene	110		120		70-130	9		20
1,2,4,5-Tetramethylbenzene	100		110		70-130	10		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: BENNINGTON BRIDGE

Lab Number: L2043672

Project Number: 179450053

Report Date: 10/19/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 04-05 Batch: WG1422182-3 WG1422182-4

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	94		96		70-130
Toluene-d8	101		102		70-130
4-Bromofluorobenzene	102		101		70-130
Dibromofluoromethane	97		98		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: BENNINGTON BRIDGE

Lab Number: L2043672

Project Number: 179450053

Report Date: 10/19/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01 Batch: WG1423086-3 WG1423086-4								
Methylene chloride	87		83		70-130	5		30
1,1-Dichloroethane	88		83		70-130	6		30
Chloroform	88		84		70-130	5		30
Carbon tetrachloride	78		75		70-130	4		30
1,2-Dichloropropane	87		84		70-130	4		30
Dibromochloromethane	84		80		70-130	5		30
1,1,2-Trichloroethane	99		94		70-130	5		30
2-Chloroethylvinyl ether	99		100		70-130	1		30
Tetrachloroethene	82		79		70-130	4		30
Chlorobenzene	85		82		70-130	4		30
Trichlorofluoromethane	78		74		70-139	5		30
1,2-Dichloroethane	88		82		70-130	7		30
1,1,1-Trichloroethane	82		79		70-130	4		30
Bromodichloromethane	84		82		70-130	2		30
trans-1,3-Dichloropropene	96		93		70-130	3		30
cis-1,3-Dichloropropene	87		84		70-130	4		30
1,1-Dichloropropene	90		86		70-130	5		30
Bromoform	91		88		70-130	3		30
1,1,2,2-Tetrachloroethane	105		102		70-130	3		30
Benzene	88		86		70-130	2		30
Toluene	93		91		70-130	2		30
Ethylbenzene	92		90		70-130	2		30
Chloromethane	66		61		52-130	8		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: BENNINGTON BRIDGE

Lab Number: L2043672

Project Number: 179450053

Report Date: 10/19/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01 Batch: WG1423086-3 WG1423086-4								
Bromomethane	106		98		57-147	8		30
Vinyl chloride	77		72		67-130	7		30
Chloroethane	83		77		50-151	8		30
1,1-Dichloroethene	85		80		65-135	6		30
trans-1,2-Dichloroethene	88		84		70-130	5		30
Trichloroethene	85		83		70-130	2		30
1,2-Dichlorobenzene	90		90		70-130	0		30
1,3-Dichlorobenzene	93		92		70-130	1		30
1,4-Dichlorobenzene	92		92		70-130	0		30
Methyl tert butyl ether	93		86		66-130	8		30
p/m-Xylene	87		85		70-130	2		30
o-Xylene	87		86		70-130	1		30
cis-1,2-Dichloroethene	86		83		70-130	4		30
Dibromomethane	88		85		70-130	3		30
1,4-Dichlorobutane	101		99		70-130	2		30
1,2,3-Trichloropropane	106		103		68-130	3		30
Styrene	90		88		70-130	2		30
Dichlorodifluoromethane	67		62		30-146	8		30
Acetone	81		72		54-140	12		30
Carbon disulfide	80		76		59-130	5		30
2-Butanone	75		67	Q	70-130	11		30
Vinyl acetate	82		77		70-130	6		30
4-Methyl-2-pentanone	96		88		70-130	9		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: BENNINGTON BRIDGE

Lab Number: L2043672

Project Number: 179450053

Report Date: 10/19/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01 Batch: WG1423086-3 WG1423086-4								
2-Hexanone	83		79		70-130	5		30
Ethyl methacrylate	102		96		70-130	6		30
Acrolein	81		74		70-130	9		30
Acrylonitrile	86		77		70-130	11		30
Bromochloromethane	81		76		70-130	6		30
Tetrahydrofuran	86		79		66-130	8		30
2,2-Dichloropropane	88		84		70-130	5		30
1,2-Dibromoethane	94		90		70-130	4		30
1,3-Dichloropropane	98		96		69-130	2		30
1,1,1,2-Tetrachloroethane	81		78		70-130	4		30
Bromobenzene	90		89		70-130	1		30
n-Butylbenzene	105		105		70-130	0		30
sec-Butylbenzene	99		99		70-130	0		30
tert-Butylbenzene	95		94		70-130	1		30
1,3,5-Trichlorobenzene	89		90		70-139	1		30
o-Chlorotoluene	87		85		70-130	2		30
p-Chlorotoluene	103		102		70-130	1		30
1,2-Dibromo-3-chloropropane	83		81		68-130	2		30
Hexachlorobutadiene	86		87		67-130	1		30
Isopropylbenzene	100		99		70-130	1		30
p-Isopropyltoluene	96		95		70-130	1		30
Naphthalene	90		91		70-130	1		30
n-Propylbenzene	105		104		70-130	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: BENNINGTON BRIDGE

Lab Number: L2043672

Project Number: 179450053

Report Date: 10/19/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01 Batch: WG1423086-3 WG1423086-4								
1,2,3-Trichlorobenzene	85		87		70-130	2		30
1,2,4-Trichlorobenzene	89		90		70-130	1		30
1,3,5-Trimethylbenzene	98		97		70-130	1		30
1,2,4-Trimethylbenzene	98		97		70-130	1		30
trans-1,4-Dichloro-2-butene	105		101		70-130	4		30
Ethyl ether	91		86		67-130	6		30
Methyl Acetate	75		69		65-130	8		30
Ethyl Acetate	81		74		70-130	9		30
Isopropyl Ether	82		76		66-130	8		30
Cyclohexane	81		77		70-130	5		30
Tert-Butyl Alcohol	86		74		70-130	15		30
Ethyl-Tert-Butyl-Ether	86		82		70-130	5		30
Tertiary-Amyl Methyl Ether	89		85		70-130	5		30
1,4-Dioxane	107		101		65-136	6		30
Methyl cyclohexane	84		80		70-130	5		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	83		78		70-130	6		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	106		102		70-130
Toluene-d8	110		108		70-130
4-Bromofluorobenzene	119		119		70-130
Dibromofluoromethane	98		97		70-130

SEMIVOLATILES

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

SAMPLE RESULTS

Lab ID: L2043672-01
 Client ID: B-3 (0'-1.5')
 Sample Location: BENNINGTON, VT

Date Collected: 10/12/20 10:15
 Date Received: 10/12/20
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8270D-SIM
 Analytical Date: 10/14/20 17:46
 Analyst: JRW
 Percent Solids: 96%

Extraction Method: EPA 3546
 Extraction Date: 10/14/20 03:41

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/kg	6.9	--	1
2-Chloronaphthalene	ND		ug/kg	6.9	--	1
Fluoranthene	8.2		ug/kg	6.9	--	1
Naphthalene	ND		ug/kg	6.9	--	1
Benzo(a)anthracene	ND		ug/kg	6.9	--	1
Benzo(a)pyrene	ND		ug/kg	6.9	--	1
Benzo(b)fluoranthene	ND		ug/kg	6.9	--	1
Benzo(k)fluoranthene	ND		ug/kg	6.9	--	1
Chrysene	ND		ug/kg	6.9	--	1
Acenaphthylene	ND		ug/kg	6.9	--	1
Anthracene	ND		ug/kg	6.9	--	1
Benzo(ghi)perylene	ND		ug/kg	6.9	--	1
Fluorene	ND		ug/kg	6.9	--	1
Phenanthrene	9.4		ug/kg	6.9	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	6.9	--	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	6.9	--	1
Pyrene	ND		ug/kg	6.9	--	1
1-Methylnaphthalene	ND		ug/kg	6.9	--	1
2-Methylnaphthalene	ND		ug/kg	6.9	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	93		23-120
2-Fluorobiphenyl	77		30-120
4-Terphenyl-d14	64		18-120

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

SAMPLE RESULTS

Lab ID: L2043672-02
 Client ID: B-3 (4'-8')
 Sample Location: BENNINGTON, VT

Date Collected: 10/12/20 10:45
 Date Received: 10/12/20
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8270D-SIM
 Analytical Date: 10/14/20 18:03
 Analyst: JRW
 Percent Solids: 89%

Extraction Method: EPA 3546
 Extraction Date: 10/14/20 03:41

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/kg	7.4	--	1
2-Chloronaphthalene	ND		ug/kg	7.4	--	1
Fluoranthene	10		ug/kg	7.4	--	1
Naphthalene	ND		ug/kg	7.4	--	1
Benzo(a)anthracene	ND		ug/kg	7.4	--	1
Benzo(a)pyrene	8.0		ug/kg	7.4	--	1
Benzo(b)fluoranthene	7.7		ug/kg	7.4	--	1
Benzo(k)fluoranthene	ND		ug/kg	7.4	--	1
Chrysene	ND		ug/kg	7.4	--	1
Acenaphthylene	ND		ug/kg	7.4	--	1
Anthracene	ND		ug/kg	7.4	--	1
Benzo(ghi)perylene	ND		ug/kg	7.4	--	1
Fluorene	ND		ug/kg	7.4	--	1
Phenanthrene	ND		ug/kg	7.4	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	7.4	--	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	7.4	--	1
Pyrene	12		ug/kg	7.4	--	1
1-Methylnaphthalene	ND		ug/kg	7.4	--	1
2-Methylnaphthalene	ND		ug/kg	7.4	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	74		23-120
2-Fluorobiphenyl	67		30-120
4-Terphenyl-d14	51		18-120

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

SAMPLE RESULTS

Lab ID: L2043672-03
 Client ID: B-3 (9'-11')
 Sample Location: BENNINGTON, VT

Date Collected: 10/12/20 11:45
 Date Received: 10/12/20
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8270D-SIM
 Analytical Date: 10/14/20 18:20
 Analyst: JRW
 Percent Solids: 90%

Extraction Method: EPA 3546
 Extraction Date: 10/14/20 03:41

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/kg	7.3	--	1
2-Chloronaphthalene	ND		ug/kg	7.3	--	1
Fluoranthene	ND		ug/kg	7.3	--	1
Naphthalene	ND		ug/kg	7.3	--	1
Benzo(a)anthracene	ND		ug/kg	7.3	--	1
Benzo(a)pyrene	ND		ug/kg	7.3	--	1
Benzo(b)fluoranthene	ND		ug/kg	7.3	--	1
Benzo(k)fluoranthene	ND		ug/kg	7.3	--	1
Chrysene	ND		ug/kg	7.3	--	1
Acenaphthylene	ND		ug/kg	7.3	--	1
Anthracene	ND		ug/kg	7.3	--	1
Benzo(ghi)perylene	ND		ug/kg	7.3	--	1
Fluorene	ND		ug/kg	7.3	--	1
Phenanthrene	ND		ug/kg	7.3	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	7.3	--	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	7.3	--	1
Pyrene	ND		ug/kg	7.3	--	1
1-Methylnaphthalene	ND		ug/kg	7.3	--	1
2-Methylnaphthalene	ND		ug/kg	7.3	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	86		23-120
2-Fluorobiphenyl	73		30-120
4-Terphenyl-d14	62		18-120

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 10/14/20 17:29
Analyst: JRW

Extraction Method: EPA 3546
Extraction Date: 10/14/20 03:41

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-03 Batch: WG1421782-1					
Acenaphthene	ND		ug/kg	6.4	--
2-Chloronaphthalene	ND		ug/kg	6.4	--
Fluoranthene	ND		ug/kg	6.4	--
Naphthalene	ND		ug/kg	6.4	--
Benzo(a)anthracene	ND		ug/kg	6.4	--
Benzo(a)pyrene	ND		ug/kg	6.4	--
Benzo(b)fluoranthene	ND		ug/kg	6.4	--
Benzo(k)fluoranthene	ND		ug/kg	6.4	--
Chrysene	ND		ug/kg	6.4	--
Acenaphthylene	ND		ug/kg	6.4	--
Anthracene	ND		ug/kg	6.4	--
Benzo(ghi)perylene	ND		ug/kg	6.4	--
Fluorene	ND		ug/kg	6.4	--
Phenanthrene	ND		ug/kg	6.4	--
Dibenzo(a,h)anthracene	ND		ug/kg	6.4	--
Indeno(1,2,3-cd)pyrene	ND		ug/kg	6.4	--
Pyrene	ND		ug/kg	6.4	--
1-Methylnaphthalene	ND		ug/kg	6.4	--
2-Methylnaphthalene	ND		ug/kg	6.4	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	98		23-120
2-Fluorobiphenyl	79		30-120
4-Terphenyl-d14	82		18-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: BENNINGTON BRIDGE

Lab Number: L2043672

Project Number: 179450053

Report Date: 10/19/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-03 Batch: WG1421782-2 WG1421782-3								
Acenaphthene	65		66		40-140	2		50
2-Chloronaphthalene	70		73		40-140	4		50
Fluoranthene	72		71		40-140	1		50
Naphthalene	62		66		40-140	6		50
Benzo(a)anthracene	67		66		40-140	2		50
Benzo(a)pyrene	74		72		40-140	3		50
Benzo(b)fluoranthene	67		63		40-140	6		50
Benzo(k)fluoranthene	73		76		40-140	4		50
Chrysene	72		70		40-140	3		50
Acenaphthylene	76		78		40-140	3		50
Anthracene	79		80		40-140	1		50
Benzo(ghi)perylene	70		69		40-140	1		50
Fluorene	68		69		40-140	1		50
Phenanthrene	62		63		40-140	2		50
Dibenzo(a,h)anthracene	78		76		40-140	3		50
Indeno(1,2,3-cd)pyrene	77		75		40-140	3		50
Pyrene	71		70		35-142	1		50
1-Methylnaphthalene	79		82		40-140	4		50
2-Methylnaphthalene	67		70		40-140	4		50

Lab Control Sample Analysis

Batch Quality Control

Project Name: BENNINGTON BRIDGE

Lab Number: L2043672

Project Number: 179450053

Report Date: 10/19/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-03 Batch: WG1421782-2 WG1421782-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	90		96		23-120
2-Fluorobiphenyl	75		78		30-120
4-Terphenyl-d14	79		77		18-120

PETROLEUM HYDROCARBONS

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

SAMPLE RESULTS

Lab ID: L2043672-01
 Client ID: B-3 (0'-1.5')
 Sample Location: BENNINGTON, VT

Date Collected: 10/12/20 10:15
 Date Received: 10/12/20
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8015D(M)
 Analytical Date: 10/15/20 02:27
 Analyst: MEO
 Percent Solids: 96%

Extraction Method: EPA 3546
 Extraction Date: 10/14/20 15:27

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Petroleum Hydrocarbon Quantitation - Westborough Lab						
--	--	--	--	--	--	--

TPH (C10-C36)	ND		ug/kg	33900	--	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	71		40-140

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8015D(M)
Analytical Date: 10/15/20 01:12
Analyst: MEO

Extraction Method: EPA 3546
Extraction Date: 10/14/20 15:27

Parameter	Result	Qualifier	Units	RL	MDL
Petroleum Hydrocarbon Quantitation - Westborough Lab for sample(s): 01 Batch: WG1422091-1					
TPH (C10-C36)	ND		ug/kg	32700	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	68		40-140

Lab Control Sample Analysis Batch Quality Control

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Petroleum Hydrocarbon Quantitation - Westborough Lab Associated sample(s): 01 Batch: WG1422091-2								
TPH (C10-C36)	78		-		40-140	-		40

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
o-Terphenyl	73				40-140

METALS

Project Name: BENNINGTON BRIDGE

Lab Number: L2043672

Project Number: 179450053

Report Date: 10/19/20

SAMPLE RESULTS

Lab ID: L2043672-01

Date Collected: 10/12/20 10:15

Client ID: B-3 (0'-1.5')

Date Received: 10/12/20

Sample Location: BENNINGTON, VT

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 96%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	4.50		mg/kg	0.414	--	1	10/15/20 21:22	10/16/20 21:03	EPA 3050B	1,6010D	BV
Lead, Total	4.70		mg/kg	2.07	--	1	10/15/20 21:22	10/16/20 21:03	EPA 3050B	1,6010D	BV



Project Name: BENNINGTON BRIDGE

Lab Number: L2043672

Project Number: 179450053

Report Date: 10/19/20

SAMPLE RESULTS

Lab ID: L2043672-02

Date Collected: 10/12/20 10:45

Client ID: B-3 (4'-8')

Date Received: 10/12/20

Sample Location: BENNINGTON, VT

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 89%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.33		mg/kg	0.440	--	1	10/15/20 21:22	10/16/20 21:07	EPA 3050B	1,6010D	BV
Lead, Total	21.5		mg/kg	2.20	--	1	10/15/20 21:22	10/16/20 21:07	EPA 3050B	1,6010D	BV



Project Name: BENNINGTON BRIDGE

Lab Number: L2043672

Project Number: 179450053

Report Date: 10/19/20

SAMPLE RESULTS

Lab ID: L2043672-03

Date Collected: 10/12/20 11:45

Client ID: B-3 (9'-11')

Date Received: 10/12/20

Sample Location: BENNINGTON, VT

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 90%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.18		mg/kg	0.435	--	1	10/15/20 21:22	10/16/20 21:12	EPA 3050B	1,6010D	BV
Lead, Total	5.63		mg/kg	2.17	--	1	10/15/20 21:22	10/16/20 21:12	EPA 3050B	1,6010D	BV



Project Name: BENNINGTON BRIDGE

Lab Number: L2043672

Project Number: 179450053

Report Date: 10/19/20

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-03 Batch: WG1421664-1									
Arsenic, Total	ND	mg/kg	0.400	--	1	10/15/20 21:22	10/16/20 18:41	1,6010D	BV
Lead, Total	ND	mg/kg	2.00	--	1	10/15/20 21:22	10/16/20 18:41	1,6010D	BV

Prep Information

Digestion Method: EPA 3050B

Lab Control Sample Analysis Batch Quality Control

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1421664-2 SRM Lot Number: D109-540								
Arsenic, Total	108		-		70-130	-		
Lead, Total	106		-		72-128	-		

Matrix Spike Analysis Batch Quality Control

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1421664-3 WG1421664-4 QC Sample: L2043629-06 Client ID: MS Sample												
Arsenic, Total	2.43	10.3	12.9	102		14.6	121		75-125	12		20
Lead, Total	41.3	43.7	95.1	123		71.7	71	Q	75-125	28	Q	20

INORGANICS & MISCELLANEOUS

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

SAMPLE RESULTS

Lab ID: L2043672-01
Client ID: B-3 (0'-1.5')
Sample Location: BENNINGTON, VT

Date Collected: 10/12/20 10:15
Date Received: 10/12/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	95.7		%	0.100	NA	1	-	10/13/20 10:06	121,2540G	RI



Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

SAMPLE RESULTS

Lab ID: L2043672-02
Client ID: B-3 (4'-8')
Sample Location: BENNINGTON, VT

Date Collected: 10/12/20 10:45
Date Received: 10/12/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.1		%	0.100	NA	1	-	10/13/20 10:06	121,2540G	RI



Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

SAMPLE RESULTS

Lab ID: L2043672-03
Client ID: B-3 (9'-11')
Sample Location: BENNINGTON, VT

Date Collected: 10/12/20 11:45
Date Received: 10/12/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	90.3		%	0.100	NA	1	-	10/13/20 10:06	121,2540G	RI



Lab Duplicate Analysis

Batch Quality Control

Project Name: BENNINGTON BRIDGE

Project Number: 179450053

Lab Number: L2043672

Report Date: 10/19/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1421369-1 QC Sample: L2043633-01 Client ID: DUP Sample						
Solids, Total	91.3	90.6	%	1		20

Project Name: BENNINGTON BRIDGE**Lab Number:** L2043672**Project Number:** 179450053**Report Date:** 10/19/20**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2043672-01A	Vial MeOH preserved	A	NA		3.9	Y	Absent		8260HLW(14)
L2043672-01B	Vial water preserved	A	NA		3.9	Y	Absent	13-OCT-20 00:11	8260HLW(14)
L2043672-01C	Vial water preserved	A	NA		3.9	Y	Absent	13-OCT-20 00:11	8260HLW(14)
L2043672-01D	Plastic 2oz unpreserved for TS	A	NA		3.9	Y	Absent		TS(7)
L2043672-01E	Plastic 2oz unpreserved for TS	A	NA		3.9	Y	Absent		PAHTCL-SIM(14),TPH-DRO-D(14)
L2043672-01F	Glass 60mL/2oz unpreserved	A	NA		3.9	Y	Absent		PAHTCL-SIM(14),TPH-DRO-D(14)
L2043672-01G	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.9	Y	Absent		AS-TI(180),PB-TI(180)
L2043672-01H	Glass 120ml/4oz unpreserved	A	NA		3.9	Y	Absent		PAHTCL-SIM(14),TPH-DRO-D(14)
L2043672-02A	Plastic 2oz unpreserved for TS	A	NA		3.9	Y	Absent		TS(7)
L2043672-02B	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.9	Y	Absent		AS-TI(180),PB-TI(180)
L2043672-02C	Glass 120ml/4oz unpreserved	A	NA		3.9	Y	Absent		PAHTCL-SIM(14)
L2043672-03A	Plastic 2oz unpreserved for TS	A	NA		3.9	Y	Absent		TS(7)
L2043672-03B	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.9	Y	Absent		AS-TI(180),PB-TI(180)
L2043672-03C	Glass 120ml/4oz unpreserved	A	NA		3.9	Y	Absent		PAHTCL-SIM(14)
L2043672-04A	Vial HCl preserved	A	NA		3.9	Y	Absent		8260(14)
L2043672-04B	Vial HCl preserved	A	NA		3.9	Y	Absent		8260(14)
L2043672-04C	Vial HCl preserved	A	NA		3.9	Y	Absent		8260(14)
L2043672-05A	Vial HCl preserved	A	NA		3.9	Y	Absent		8260(14)
L2043672-05B	Vial HCl preserved	A	NA		3.9	Y	Absent		8260(14)

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report



Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benzo(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.

Report Format: Data Usability Report



Project Name: BENNINGTON BRIDGE**Lab Number:** L2043672**Project Number:** 179450053**Report Date:** 10/19/20**Data Qualifiers**

- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.

Project Name: BENNINGTON BRIDGE
Project Number: 179450053

Lab Number: L2043672
Report Date: 10/19/20

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene

EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

SM 2540D: TSS

EPA 8082A: NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

EPA TO-12 Non-methane organics

EPA 3C Fixed gases

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.

EPA 522.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 10/12/20

ALPHA Job #: L2043672

8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300

Project Information

Project Name: Bennington Bridge
Project Location: Bennington, Vt
Project #: 179450053
Project Manager: JEFF STERRITT
ALPHA Quote #:

Report Information - Data Deliverables

ADEx EMAIL

Billing Information

Same as Client info PO #:

Client Information

Client: STANTEC
Address: 5 Dartmouth Dr
AUBURN NH 03032
Phone: 603-498-4674
Email:

Turn-Around Time

Standard RUSH (only confirmed if pre-approved)
Date Due:

Additional Project Information:

MS# 1/1/19

Regulatory Requirements & Project Information Requirements

Yes No MA MCP Analytical Methods Yes No CT RCP Analytical Methods
 Yes No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
 Yes No GW1 Standards (Info Required for Metals & EPH with Targets)
 Yes No NPDES RGP
 Other State /Fed Program Vt. Criteria

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler Initials
		Date	Time		
43672-01	B-3 (0'-1.5')	10/12/20	1015	SO	JJW
-02	B-3 (4'-8')		1045	SO	JJW
-03	B-3 (9'-11')		1145	SO	JJW
-04	B-3		1235	GW	JJW
-05	TRIP	10/12/20	1000	PHW H2O	JJW

ANALYSIS	VOC: <input checked="" type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> 524.2	SVOC: <input type="checkbox"/> ABN <input checked="" type="checkbox"/> PAH	METALS: <input type="checkbox"/> MCP 13 <input type="checkbox"/> MCP 14 <input type="checkbox"/> RCP 15	METALS: <input type="checkbox"/> RCRA45 <input type="checkbox"/> RCRA48 <input type="checkbox"/> PP13	EPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	VPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	PCB <input type="checkbox"/> PEST	TPH: <input type="checkbox"/> Quant Only <input type="checkbox"/> Fingerprint	SAMPLE INFO Filtration <input type="checkbox"/> Field <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do	TOTAL # BOTTLES

TPH-DEQ
Total As, Pb

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO3
D= H2SO4
E= NaOH
F= MeOH
G= NaHSO4
H= Na2S2O3
I= Ascorbic Acid
J= NH4Cl
K= Zn Acetate
O= Other

Container Type	<u>V</u>					<u>A</u>	<u>A</u>
Preservative	<u>7/1</u>					<u>A</u>	<u>A</u>

Relinquished By: [Signature] Date/Time: 10/12/20 10:15
 Received By: [Signature] Date/Time: 10/12/20 2:30

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.
FORM NO: 01-01 (rev. 12-Mar-2012)



ANALYTICAL REPORT

Lab Number:	L2044711
Client:	Stantec 5 Dartmouth Drive Suite 200 Auburn, NH 03032
ATTN:	Jeff Sterritt
Phone:	(603) 669-8600
Project Name:	Not Specified
Project Number:	179450053
Report Date:	10/23/20

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: Not Specified
Project Number: 179450053

Lab Number: L2044711
Report Date: 10/23/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2044711-01	B-1(0.5'-2.0')	SOIL	Not Specified	10/13/20 11:00	10/16/20
L2044711-02	B-1(4.0'-8.0')	SOIL	Not Specified	10/13/20 11:30	10/16/20

Project Name: Not Specified
Project Number: 179450053

Lab Number: L2044711
Report Date: 10/23/20

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: Not Specified
Project Number: 179450053

Lab Number: L2044711
Report Date: 10/23/20

Case Narrative (continued)

Sample Receipt

L2044711-01: The sample identified as "B-3(0.5'-2.0')\" on the chain of custody was identified as "B-1(0.5'-2.0')\" on the container label. At the client's request, the sample is reported as "B-1(0.5'-2.0')\".

L2044711-02: The sample identified as "B-3(4.0'-8.0')\" on the chain of custody was identified as "B-1(4.0'-8.0')\" on the container label. At the client's request, the sample is reported as "B-1(4.0'-8.0')\".

Semivolatile Organics by SIM

L2044711-01: The sample has elevated detection limits due to the dilution required by the sample matrix.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Melissa Sturgis

Title: Technical Director/Representative

Date: 10/23/20

ORGANICS

VOLATILES

Project Name: Not Specified

Lab Number: L2044711

Project Number: 179450053

Report Date: 10/23/20

SAMPLE RESULTS

Lab ID: L2044711-01

Date Collected: 10/13/20 11:00

Client ID: B-1(0.5'-2.0')

Date Received: 10/16/20

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 10/21/20 10:29

Analyst: JC

Percent Solids: 91%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.0	--	1
1,1-Dichloroethane	ND		ug/kg	1.0	--	1
Chloroform	ND		ug/kg	1.5	--	1
Carbon tetrachloride	ND		ug/kg	1.0	--	1
1,2-Dichloropropane	ND		ug/kg	1.0	--	1
Dibromochloromethane	ND		ug/kg	1.0	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.0	--	1
Tetrachloroethene	ND		ug/kg	0.50	--	1
Chlorobenzene	ND		ug/kg	0.50	--	1
Trichlorofluoromethane	ND		ug/kg	4.0	--	1
1,2-Dichloroethane	ND		ug/kg	1.0	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.50	--	1
Bromodichloromethane	ND		ug/kg	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.50	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.50	--	1
1,1-Dichloropropene	ND		ug/kg	0.50	--	1
Bromoform	ND		ug/kg	4.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	--	1
Benzene	ND		ug/kg	0.50	--	1
Toluene	ND		ug/kg	1.0	--	1
Ethylbenzene	ND		ug/kg	1.0	--	1
Chloromethane	ND		ug/kg	4.0	--	1
Bromomethane	ND		ug/kg	2.0	--	1
Vinyl chloride	ND		ug/kg	1.0	--	1
Chloroethane	ND		ug/kg	2.0	--	1
1,1-Dichloroethene	ND		ug/kg	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	--	1

Project Name: Not Specified

Lab Number: L2044711

Project Number: 179450053

Report Date: 10/23/20

SAMPLE RESULTS

Lab ID: L2044711-01

Date Collected: 10/13/20 11:00

Client ID: B-1(0.5'-2.0')

Date Received: 10/16/20

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.50	--	1
1,2-Dichlorobenzene	ND		ug/kg	2.0	--	1
1,3-Dichlorobenzene	ND		ug/kg	2.0	--	1
1,4-Dichlorobenzene	ND		ug/kg	2.0	--	1
Methyl tert butyl ether	ND		ug/kg	2.0	--	1
p/m-Xylene	ND		ug/kg	2.0	--	1
o-Xylene	ND		ug/kg	1.0	--	1
Xylenes, Total	ND		ug/kg	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	--	1
1,2-Dichloroethene, Total	ND		ug/kg	1.0	--	1
Dibromomethane	ND		ug/kg	2.0	--	1
1,4-Dichlorobutane	ND		ug/kg	10	--	1
1,2,3-Trichloropropane	ND		ug/kg	2.0	--	1
Styrene	ND		ug/kg	1.0	--	1
Dichlorodifluoromethane	ND		ug/kg	10	--	1
Acetone	ND		ug/kg	25	--	1
Carbon disulfide	ND		ug/kg	10	--	1
2-Butanone	ND		ug/kg	10	--	1
Vinyl acetate	ND		ug/kg	10	--	1
4-Methyl-2-pentanone	ND		ug/kg	10	--	1
2-Hexanone	ND		ug/kg	10	--	1
Ethyl methacrylate	ND		ug/kg	10	--	1
Acrylonitrile	ND		ug/kg	4.0	--	1
Bromochloromethane	ND		ug/kg	2.0	--	1
Tetrahydrofuran	ND		ug/kg	4.0	--	1
2,2-Dichloropropane	ND		ug/kg	2.0	--	1
1,2-Dibromoethane	ND		ug/kg	1.0	--	1
1,3-Dichloropropane	ND		ug/kg	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	--	1
Bromobenzene	ND		ug/kg	2.0	--	1
n-Butylbenzene	ND		ug/kg	1.0	--	1
sec-Butylbenzene	ND		ug/kg	1.0	--	1
tert-Butylbenzene	ND		ug/kg	2.0	--	1
o-Chlorotoluene	ND		ug/kg	2.0	--	1
p-Chlorotoluene	ND		ug/kg	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	--	1
Hexachlorobutadiene	ND		ug/kg	4.0	--	1

Project Name: Not Specified

Lab Number: L2044711

Project Number: 179450053

Report Date: 10/23/20

SAMPLE RESULTS

Lab ID: L2044711-01

Date Collected: 10/13/20 11:00

Client ID: B-1(0.5'-2.0')

Date Received: 10/16/20

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Isopropylbenzene	ND		ug/kg	1.0	--	1
p-Isopropyltoluene	ND		ug/kg	1.0	--	1
Naphthalene	ND		ug/kg	4.0	--	1
n-Propylbenzene	ND		ug/kg	1.0	--	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	--	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	--	1
Ethyl ether	ND		ug/kg	2.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	97		70-130

Project Name: Not Specified

Lab Number: L2044711

Project Number: 179450053

Report Date: 10/23/20

SAMPLE RESULTS

Lab ID: L2044711-02

Date Collected: 10/13/20 11:30

Client ID: B-1(4.0'-8.0')

Date Received: 10/16/20

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 1,8260C

Analytical Date: 10/20/20 20:25

Analyst: AJK

Percent Solids: 61%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.3	--	1
1,1-Dichloroethane	ND		ug/kg	1.0	--	1
Chloroform	ND		ug/kg	1.6	--	1
Carbon tetrachloride	ND		ug/kg	1.0	--	1
1,2-Dichloropropane	ND		ug/kg	1.0	--	1
Dibromochloromethane	ND		ug/kg	1.0	--	1
1,1,2-Trichloroethane	ND		ug/kg	1.0	--	1
Tetrachloroethene	ND		ug/kg	0.53	--	1
Chlorobenzene	ND		ug/kg	0.53	--	1
Trichlorofluoromethane	ND		ug/kg	4.2	--	1
1,2-Dichloroethane	ND		ug/kg	1.0	--	1
1,1,1-Trichloroethane	ND		ug/kg	0.53	--	1
Bromodichloromethane	ND		ug/kg	0.53	--	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	--	1
cis-1,3-Dichloropropene	ND		ug/kg	0.53	--	1
1,3-Dichloropropene, Total	ND		ug/kg	0.53	--	1
1,1-Dichloropropene	ND		ug/kg	0.53	--	1
Bromoform	ND		ug/kg	4.2	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.53	--	1
Benzene	ND		ug/kg	0.53	--	1
Toluene	ND		ug/kg	1.0	--	1
Ethylbenzene	ND		ug/kg	1.0	--	1
Chloromethane	ND		ug/kg	4.2	--	1
Bromomethane	ND		ug/kg	2.1	--	1
Vinyl chloride	ND		ug/kg	1.0	--	1
Chloroethane	ND		ug/kg	2.1	--	1
1,1-Dichloroethene	ND		ug/kg	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	--	1

Project Name: Not Specified

Lab Number: L2044711

Project Number: 179450053

Report Date: 10/23/20

SAMPLE RESULTS

Lab ID: L2044711-02

Date Collected: 10/13/20 11:30

Client ID: B-1(4.0'-8.0')

Date Received: 10/16/20

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.53	--	1
1,2-Dichlorobenzene	ND		ug/kg	2.1	--	1
1,3-Dichlorobenzene	ND		ug/kg	2.1	--	1
1,4-Dichlorobenzene	ND		ug/kg	2.1	--	1
Methyl tert butyl ether	ND		ug/kg	2.1	--	1
p/m-Xylene	ND		ug/kg	2.1	--	1
o-Xylene	ND		ug/kg	1.0	--	1
Xylenes, Total	ND		ug/kg	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	--	1
1,2-Dichloroethene, Total	ND		ug/kg	1.0	--	1
Dibromomethane	ND		ug/kg	2.1	--	1
1,2,3-Trichloropropane	ND		ug/kg	2.1	--	1
Styrene	ND		ug/kg	1.0	--	1
Dichlorodifluoromethane	ND		ug/kg	10	--	1
Acetone	87		ug/kg	26	--	1
Carbon disulfide	ND		ug/kg	10	--	1
2-Butanone	ND		ug/kg	10	--	1
4-Methyl-2-pentanone	ND		ug/kg	10	--	1
2-Hexanone	ND		ug/kg	10	--	1
Bromochloromethane	ND		ug/kg	2.1	--	1
Tetrahydrofuran	ND		ug/kg	4.2	--	1
2,2-Dichloropropane	ND		ug/kg	2.1	--	1
1,2-Dibromoethane	ND		ug/kg	1.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.53	--	1
Bromobenzene	ND		ug/kg	2.1	--	1
n-Butylbenzene	ND		ug/kg	1.0	--	1
sec-Butylbenzene	ND		ug/kg	1.0	--	1
tert-Butylbenzene	ND		ug/kg	2.1	--	1
1,3,5-Trichlorobenzene	ND		ug/kg	2.1	--	1
o-Chlorotoluene	ND		ug/kg	2.1	--	1
p-Chlorotoluene	ND		ug/kg	2.1	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.2	--	1
Hexachlorobutadiene	ND		ug/kg	4.2	--	1
Isopropylbenzene	ND		ug/kg	1.0	--	1
p-Isopropyltoluene	ND		ug/kg	1.0	--	1
Naphthalene	ND		ug/kg	4.2	--	1
n-Propylbenzene	ND		ug/kg	1.0	--	1

Project Name: Not Specified

Lab Number: L2044711

Project Number: 179450053

Report Date: 10/23/20

SAMPLE RESULTS

Lab ID: L2044711-02

Date Collected: 10/13/20 11:30

Client ID: B-1(4.0'-8.0')

Date Received: 10/16/20

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/kg	2.1	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.1	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.1	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.1	--	1
Ethyl ether	ND		ug/kg	2.1	--	1
Isopropyl Ether	ND		ug/kg	2.1	--	1
Tert-Butyl Alcohol	ND		ug/kg	21	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	2.1	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	2.1	--	1
1,4-Dioxane	ND		ug/kg	84	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	86		70-130

Project Name: Not Specified
Project Number: 179450053

Lab Number: L2044711
Report Date: 10/23/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/20/20 15:48
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 02 Batch: WG1424398-5					
Methylene chloride	ND		ug/kg	5.0	--
1,1-Dichloroethane	ND		ug/kg	1.0	--
Chloroform	ND		ug/kg	1.5	--
Carbon tetrachloride	ND		ug/kg	1.0	--
1,2-Dichloropropane	ND		ug/kg	1.0	--
Dibromochloromethane	ND		ug/kg	1.0	--
1,1,2-Trichloroethane	ND		ug/kg	1.0	--
2-Chloroethylvinyl ether	ND		ug/kg	20	--
Tetrachloroethene	ND		ug/kg	0.50	--
Chlorobenzene	ND		ug/kg	0.50	--
Trichlorofluoromethane	ND		ug/kg	4.0	--
1,2-Dichloroethane	ND		ug/kg	1.0	--
1,1,1-Trichloroethane	ND		ug/kg	0.50	--
Bromodichloromethane	ND		ug/kg	0.50	--
trans-1,3-Dichloropropene	ND		ug/kg	1.0	--
cis-1,3-Dichloropropene	ND		ug/kg	0.50	--
1,3-Dichloropropene, Total	ND		ug/kg	0.50	--
1,1-Dichloropropene	ND		ug/kg	0.50	--
Bromoform	ND		ug/kg	4.0	--
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	--
Benzene	ND		ug/kg	0.50	--
Toluene	ND		ug/kg	1.0	--
Ethylbenzene	ND		ug/kg	1.0	--
Chloromethane	ND		ug/kg	4.0	--
Bromomethane	ND		ug/kg	2.0	--
Vinyl chloride	ND		ug/kg	1.0	--
Chloroethane	ND		ug/kg	2.0	--
1,1-Dichloroethene	ND		ug/kg	1.0	--
trans-1,2-Dichloroethene	ND		ug/kg	1.5	--

Project Name: Not Specified
Project Number: 179450053

Lab Number: L2044711
Report Date: 10/23/20

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/20/20 15:48
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 02 Batch: WG1424398-5					
Trichloroethene	ND		ug/kg	0.50	--
1,2-Dichlorobenzene	ND		ug/kg	2.0	--
1,3-Dichlorobenzene	ND		ug/kg	2.0	--
1,4-Dichlorobenzene	ND		ug/kg	2.0	--
Methyl tert butyl ether	ND		ug/kg	2.0	--
p/m-Xylene	ND		ug/kg	2.0	--
o-Xylene	ND		ug/kg	1.0	--
Xylenes, Total	ND		ug/kg	1.0	--
cis-1,2-Dichloroethene	ND		ug/kg	1.0	--
1,2-Dichloroethene, Total	ND		ug/kg	1.0	--
Dibromomethane	ND		ug/kg	2.0	--
1,4-Dichlorobutane	ND		ug/kg	10	--
1,2,3-Trichloropropane	ND		ug/kg	2.0	--
Styrene	ND		ug/kg	1.0	--
Dichlorodifluoromethane	ND		ug/kg	10	--
Acetone	ND		ug/kg	25	--
Carbon disulfide	ND		ug/kg	10	--
2-Butanone	ND		ug/kg	10	--
Vinyl acetate	ND		ug/kg	10	--
4-Methyl-2-pentanone	ND		ug/kg	10	--
2-Hexanone	ND		ug/kg	10	--
Ethyl methacrylate	ND		ug/kg	10	--
Acrolein	ND		ug/kg	25	--
Acrylonitrile	ND		ug/kg	4.0	--
Bromochloromethane	ND		ug/kg	2.0	--
Tetrahydrofuran	ND		ug/kg	4.0	--
2,2-Dichloropropane	ND		ug/kg	2.0	--
1,2-Dibromoethane	ND		ug/kg	1.0	--
1,3-Dichloropropane	ND		ug/kg	2.0	--

Project Name: Not Specified
Project Number: 179450053

Lab Number: L2044711
Report Date: 10/23/20

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/20/20 15:48
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 02 Batch: WG1424398-5					
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	--
Bromobenzene	ND		ug/kg	2.0	--
n-Butylbenzene	ND		ug/kg	1.0	--
sec-Butylbenzene	ND		ug/kg	1.0	--
tert-Butylbenzene	ND		ug/kg	2.0	--
1,3,5-Trichlorobenzene	ND		ug/kg	2.0	--
o-Chlorotoluene	ND		ug/kg	2.0	--
p-Chlorotoluene	ND		ug/kg	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	--
Hexachlorobutadiene	ND		ug/kg	4.0	--
Isopropylbenzene	ND		ug/kg	1.0	--
p-Isopropyltoluene	ND		ug/kg	1.0	--
Naphthalene	ND		ug/kg	4.0	--
n-Propylbenzene	ND		ug/kg	1.0	--
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	--
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	--
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	--
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	--
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	--
Ethyl ether	ND		ug/kg	2.0	--
Methyl Acetate	ND		ug/kg	4.0	--
Ethyl Acetate	ND		ug/kg	10	--
Isopropyl Ether	ND		ug/kg	2.0	--
Cyclohexane	ND		ug/kg	10	--
Tert-Butyl Alcohol	ND		ug/kg	20	--
Ethyl-Tert-Butyl-Ether	ND		ug/kg	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/kg	2.0	--
1,4-Dioxane	ND		ug/kg	80	--
Methyl cyclohexane	ND		ug/kg	4.0	--

Project Name: Not Specified
Project Number: 179450053

Lab Number: L2044711
Report Date: 10/23/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/20/20 15:48
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 02 Batch: WG1424398-5					
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/kg	4.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	98		70-130

Project Name: Not Specified
Project Number: 179450053

Lab Number: L2044711
Report Date: 10/23/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/21/20 06:09
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01 Batch: WG1424677-5					
Methylene chloride	ND		ug/kg	5.0	--
1,1-Dichloroethane	ND		ug/kg	1.0	--
Chloroform	ND		ug/kg	1.5	--
Carbon tetrachloride	ND		ug/kg	1.0	--
1,2-Dichloropropane	ND		ug/kg	1.0	--
Dibromochloromethane	ND		ug/kg	1.0	--
1,1,2-Trichloroethane	ND		ug/kg	1.0	--
2-Chloroethylvinyl ether	ND		ug/kg	20	--
Tetrachloroethene	ND		ug/kg	0.50	--
Chlorobenzene	ND		ug/kg	0.50	--
Trichlorofluoromethane	ND		ug/kg	4.0	--
1,2-Dichloroethane	ND		ug/kg	1.0	--
1,1,1-Trichloroethane	ND		ug/kg	0.50	--
Bromodichloromethane	ND		ug/kg	0.50	--
trans-1,3-Dichloropropene	ND		ug/kg	1.0	--
cis-1,3-Dichloropropene	ND		ug/kg	0.50	--
1,3-Dichloropropene, Total	ND		ug/kg	0.50	--
1,1-Dichloropropene	ND		ug/kg	0.50	--
Bromoform	ND		ug/kg	4.0	--
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	--
Benzene	ND		ug/kg	0.50	--
Toluene	ND		ug/kg	1.0	--
Ethylbenzene	ND		ug/kg	1.0	--
Chloromethane	ND		ug/kg	4.0	--
Bromomethane	ND		ug/kg	2.0	--
Vinyl chloride	ND		ug/kg	1.0	--
Chloroethane	ND		ug/kg	2.0	--
1,1-Dichloroethene	ND		ug/kg	1.0	--
trans-1,2-Dichloroethene	ND		ug/kg	1.5	--

Project Name: Not Specified
Project Number: 179450053

Lab Number: L2044711
Report Date: 10/23/20

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/21/20 06:09
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01 Batch: WG1424677-5					
Trichloroethene	ND		ug/kg	0.50	--
1,2-Dichlorobenzene	ND		ug/kg	2.0	--
1,3-Dichlorobenzene	ND		ug/kg	2.0	--
1,4-Dichlorobenzene	ND		ug/kg	2.0	--
Methyl tert butyl ether	ND		ug/kg	2.0	--
p/m-Xylene	ND		ug/kg	2.0	--
o-Xylene	ND		ug/kg	1.0	--
Xylenes, Total	ND		ug/kg	1.0	--
cis-1,2-Dichloroethene	ND		ug/kg	1.0	--
1,2-Dichloroethene, Total	ND		ug/kg	1.0	--
Dibromomethane	ND		ug/kg	2.0	--
1,4-Dichlorobutane	ND		ug/kg	10	--
1,2,3-Trichloropropane	ND		ug/kg	2.0	--
Styrene	ND		ug/kg	1.0	--
Dichlorodifluoromethane	ND		ug/kg	10	--
Acetone	ND		ug/kg	25	--
Carbon disulfide	ND		ug/kg	10	--
2-Butanone	ND		ug/kg	10	--
Vinyl acetate	ND		ug/kg	10	--
4-Methyl-2-pentanone	ND		ug/kg	10	--
2-Hexanone	ND		ug/kg	10	--
Ethyl methacrylate	ND		ug/kg	10	--
Acrolein	ND		ug/kg	25	--
Acrylonitrile	ND		ug/kg	4.0	--
Bromochloromethane	ND		ug/kg	2.0	--
Tetrahydrofuran	ND		ug/kg	4.0	--
2,2-Dichloropropane	ND		ug/kg	2.0	--
1,2-Dibromoethane	ND		ug/kg	1.0	--
1,3-Dichloropropane	ND		ug/kg	2.0	--

Project Name: Not Specified
Project Number: 179450053

Lab Number: L2044711
Report Date: 10/23/20

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8260C
Analytical Date: 10/21/20 06:09
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01 Batch: WG1424677-5					
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	--
Bromobenzene	ND		ug/kg	2.0	--
n-Butylbenzene	ND		ug/kg	1.0	--
sec-Butylbenzene	ND		ug/kg	1.0	--
tert-Butylbenzene	ND		ug/kg	2.0	--
1,3,5-Trichlorobenzene	ND		ug/kg	2.0	--
o-Chlorotoluene	ND		ug/kg	2.0	--
p-Chlorotoluene	ND		ug/kg	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	--
Hexachlorobutadiene	ND		ug/kg	4.0	--
Isopropylbenzene	ND		ug/kg	1.0	--
p-Isopropyltoluene	ND		ug/kg	1.0	--
Naphthalene	ND		ug/kg	4.0	--
n-Propylbenzene	ND		ug/kg	1.0	--
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	--
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	--
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	--
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	--
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	--
Ethyl ether	ND		ug/kg	2.0	--
Methyl Acetate	ND		ug/kg	4.0	--
Ethyl Acetate	ND		ug/kg	10	--
Isopropyl Ether	ND		ug/kg	2.0	--
Cyclohexane	ND		ug/kg	10	--
Tert-Butyl Alcohol	ND		ug/kg	20	--
Ethyl-Tert-Butyl-Ether	ND		ug/kg	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/kg	2.0	--
1,4-Dioxane	ND		ug/kg	80	--
Methyl cyclohexane	ND		ug/kg	4.0	--

Project Name: Not Specified
Project Number: 179450053

Lab Number: L2044711
Report Date: 10/23/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/21/20 06:09
Analyst: MV

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01 Batch: WG1424677-5					
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/kg	4.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	102		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Lab Number: L2044711

Project Number: 179450053

Report Date: 10/23/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 02 Batch: WG1424398-3 WG1424398-4								
Methylene chloride	83		88		70-130	6		30
1,1-Dichloroethane	86		91		70-130	6		30
Chloroform	86		90		70-130	5		30
Carbon tetrachloride	76		81		70-130	6		30
1,2-Dichloropropane	89		93		70-130	4		30
Dibromochloromethane	88		93		70-130	6		30
1,1,2-Trichloroethane	90		94		70-130	4		30
2-Chloroethylvinyl ether	85		90		70-130	6		30
Tetrachloroethene	75		78		70-130	4		30
Chlorobenzene	85		88		70-130	3		30
Trichlorofluoromethane	69	Q	74		70-139	7		30
1,2-Dichloroethane	88		92		70-130	4		30
1,1,1-Trichloroethane	80		85		70-130	6		30
Bromodichloromethane	88		93		70-130	6		30
trans-1,3-Dichloropropene	91		95		70-130	4		30
cis-1,3-Dichloropropene	91		97		70-130	6		30
1,1-Dichloropropene	83		86		70-130	4		30
Bromoform	85		89		70-130	5		30
1,1,1,2-Tetrachloroethane	90		93		70-130	3		30
Benzene	87		91		70-130	4		30
Toluene	86		89		70-130	3		30
Ethylbenzene	85		88		70-130	3		30
Chloromethane	78		82		52-130	5		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Lab Number: L2044711

Project Number: 179450053

Report Date: 10/23/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 02 Batch: WG1424398-3 WG1424398-4								
Bromomethane	77		79		57-147	3		30
Vinyl chloride	81		83		67-130	2		30
Chloroethane	86		91		50-151	6		30
1,1-Dichloroethene	77		82		65-135	6		30
trans-1,2-Dichloroethene	82		88		70-130	7		30
Trichloroethene	85		88		70-130	3		30
1,2-Dichlorobenzene	85		88		70-130	3		30
1,3-Dichlorobenzene	85		88		70-130	3		30
1,4-Dichlorobenzene	85		89		70-130	5		30
Methyl tert butyl ether	88		93		66-130	6		30
p/m-Xylene	86		89		70-130	3		30
o-Xylene	86		90		70-130	5		30
cis-1,2-Dichloroethene	84		89		70-130	6		30
Dibromomethane	89		92		70-130	3		30
1,4-Dichlorobutane	90		93		70-130	3		30
1,2,3-Trichloropropane	89		92		68-130	3		30
Styrene	90		94		70-130	4		30
Dichlorodifluoromethane	56		61		30-146	9		30
Acetone	108		96		54-140	12		30
Carbon disulfide	82		86		59-130	5		30
2-Butanone	95		94		70-130	1		30
Vinyl acetate	96		100		70-130	4		30
4-Methyl-2-pentanone	95		97		70-130	2		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Lab Number: L2044711

Project Number: 179450053

Report Date: 10/23/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 02 Batch: WG1424398-3 WG1424398-4								
2-Hexanone	95		95		70-130	0		30
Ethyl methacrylate	92		95		70-130	3		30
Acrolein	98		102		70-130	4		30
Acrylonitrile	93		98		70-130	5		30
Bromochloromethane	86		93		70-130	8		30
Tetrahydrofuran	94		95		66-130	1		30
2,2-Dichloropropane	83		88		70-130	6		30
1,2-Dibromoethane	89		93		70-130	4		30
1,3-Dichloropropane	90		94		69-130	4		30
1,1,1,2-Tetrachloroethane	87		91		70-130	4		30
Bromobenzene	84		88		70-130	5		30
n-Butylbenzene	80		82		70-130	2		30
sec-Butylbenzene	81		84		70-130	4		30
tert-Butylbenzene	81		84		70-130	4		30
1,3,5-Trichlorobenzene	87		90		70-139	3		30
o-Chlorotoluene	83		86		70-130	4		30
p-Chlorotoluene	86		88		70-130	2		30
1,2-Dibromo-3-chloropropane	83		86		68-130	4		30
Hexachlorobutadiene	75		79		67-130	5		30
Isopropylbenzene	82		85		70-130	4		30
p-Isopropyltoluene	82		85		70-130	4		30
Naphthalene	90		94		70-130	4		30
n-Propylbenzene	83		86		70-130	4		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Lab Number: L2044711

Project Number: 179450053

Report Date: 10/23/20

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 02 Batch: WG1424398-3 WG1424398-4								
1,2,3-Trichlorobenzene	87		90		70-130	3		30
1,2,4-Trichlorobenzene	89		91		70-130	2		30
1,3,5-Trimethylbenzene	83		86		70-130	4		30
1,2,4-Trimethylbenzene	84		88		70-130	5		30
trans-1,4-Dichloro-2-butene	93		94		70-130	1		30
Ethyl ether	89		95		67-130	7		30
Methyl Acetate	93		94		65-130	1		30
Ethyl Acetate	98		101		70-130	3		30
Isopropyl Ether	90		94		66-130	4		30
Cyclohexane	72		76		70-130	5		30
Tert-Butyl Alcohol	94		90		70-130	4		30
Ethyl-Tert-Butyl-Ether	88		91		70-130	3		30
Tertiary-Amyl Methyl Ether	88		92		70-130	4		30
1,4-Dioxane	87		90		65-136	3		30
Methyl cyclohexane	71		74		70-130	4		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	67	Q	72		70-130	7		30

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
1,2-Dichloroethane-d4	100		100		70-130
Toluene-d8	100		100		70-130
4-Bromofluorobenzene	100		99		70-130
Dibromofluoromethane	97		99		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Lab Number: L2044711

Project Number: 179450053

Report Date: 10/23/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01 Batch: WG1424677-3 WG1424677-4								
Methylene chloride	96		93		70-130	3		30
1,1-Dichloroethane	98		97		70-130	1		30
Chloroform	106		103		70-130	3		30
Carbon tetrachloride	111		110		70-130	1		30
1,2-Dichloropropane	97		97		70-130	0		30
Dibromochloromethane	100		98		70-130	2		30
1,1,2-Trichloroethane	93		91		70-130	2		30
2-Chloroethylvinyl ether	95		91		70-130	4		30
Tetrachloroethene	108		110		70-130	2		30
Chlorobenzene	104		103		70-130	1		30
Trichlorofluoromethane	131		126		70-139	4		30
1,2-Dichloroethane	100		99		70-130	1		30
1,1,1-Trichloroethane	104		103		70-130	1		30
Bromodichloromethane	93		93		70-130	0		30
trans-1,3-Dichloropropene	98		95		70-130	3		30
cis-1,3-Dichloropropene	101		99		70-130	2		30
1,1-Dichloropropene	110		108		70-130	2		30
Bromoform	95		92		70-130	3		30
1,1,1,2-Tetrachloroethane	88		85		70-130	3		30
Benzene	104		103		70-130	1		30
Toluene	102		102		70-130	0		30
Ethylbenzene	101		102		70-130	1		30
Chloromethane	87		84		52-130	4		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Lab Number: L2044711

Project Number: 179450053

Report Date: 10/23/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01 Batch: WG1424677-3 WG1424677-4								
Bromomethane	167	Q	163	Q	57-147	2		30
Vinyl chloride	114		109		67-130	4		30
Chloroethane	116		113		50-151	3		30
1,1-Dichloroethene	98		98		65-135	0		30
trans-1,2-Dichloroethene	104		104		70-130	0		30
Trichloroethene	104		103		70-130	1		30
1,2-Dichlorobenzene	102		102		70-130	0		30
1,3-Dichlorobenzene	105		103		70-130	2		30
1,4-Dichlorobenzene	103		102		70-130	1		30
Methyl tert butyl ether	98		95		66-130	3		30
p/m-Xylene	105		106		70-130	1		30
o-Xylene	104		104		70-130	0		30
cis-1,2-Dichloroethene	104		103		70-130	1		30
Dibromomethane	105		103		70-130	2		30
1,4-Dichlorobutane	84		81		70-130	4		30
1,2,3-Trichloropropane	95		90		68-130	5		30
Styrene	103		103		70-130	0		30
Dichlorodifluoromethane	96		94		30-146	2		30
Acetone	83		84		54-140	1		30
Carbon disulfide	94		94		59-130	0		30
2-Butanone	85		74		70-130	14		30
Vinyl acetate	87		84		70-130	4		30
4-Methyl-2-pentanone	85		83		70-130	2		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Lab Number: L2044711

Project Number: 179450053

Report Date: 10/23/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01 Batch: WG1424677-3 WG1424677-4								
2-Hexanone	74		70		70-130	6		30
Ethyl methacrylate	82		81		70-130	1		30
Acrolein	86		79		70-130	8		30
Acrylonitrile	86		82		70-130	5		30
Bromochloromethane	107		106		70-130	1		30
Tetrahydrofuran	88		84		66-130	5		30
2,2-Dichloropropane	104		103		70-130	1		30
1,2-Dibromoethane	102		100		70-130	2		30
1,3-Dichloropropane	100		98		69-130	2		30
1,1,1,2-Tetrachloroethane	101		101		70-130	0		30
Bromobenzene	100		100		70-130	0		30
n-Butylbenzene	103		102		70-130	1		30
sec-Butylbenzene	104		103		70-130	1		30
tert-Butylbenzene	103		102		70-130	1		30
1,3,5-Trichlorobenzene	104		103		70-139	1		30
o-Chlorotoluene	100		99		70-130	1		30
p-Chlorotoluene	100		99		70-130	1		30
1,2-Dibromo-3-chloropropane	93		89		68-130	4		30
Hexachlorobutadiene	101		101		67-130	0		30
Isopropylbenzene	102		100		70-130	2		30
p-Isopropyltoluene	105		104		70-130	1		30
Naphthalene	98		94		70-130	4		30
n-Propylbenzene	101		100		70-130	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Lab Number: L2044711

Project Number: 179450053

Report Date: 10/23/20

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01 Batch: WG1424677-3 WG1424677-4								
1,2,3-Trichlorobenzene	101		98		70-130	3		30
1,2,4-Trichlorobenzene	102		101		70-130	1		30
1,3,5-Trimethylbenzene	102		101		70-130	1		30
1,2,4-Trimethylbenzene	102		101		70-130	1		30
trans-1,4-Dichloro-2-butene	87		81		70-130	7		30
Ethyl ether	113		107		67-130	5		30
Methyl Acetate	83		79		65-130	5		30
Ethyl Acetate	85		82		70-130	4		30
Isopropyl Ether	86		85		66-130	1		30
Cyclohexane	93		91		70-130	2		30
Tert-Butyl Alcohol	88		85		70-130	3		30
Ethyl-Tert-Butyl-Ether	93		92		70-130	1		30
Tertiary-Amyl Methyl Ether	99		97		70-130	2		30
1,4-Dioxane	110		103		65-136	7		30
Methyl cyclohexane	104		104		70-130	0		30
1,1,2-Trichloro-1,2,2-Trifluoroethane	106		104		70-130	2		30

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
1,2-Dichloroethane-d4	94		93		70-130
Toluene-d8	97		98		70-130
4-Bromofluorobenzene	94		94		70-130
Dibromofluoromethane	100		100		70-130

SEMIVOLATILES

Project Name: Not Specified**Lab Number:** L2044711**Project Number:** 179450053**Report Date:** 10/23/20**SAMPLE RESULTS**

Lab ID: L2044711-01 D

Date Collected: 10/13/20 11:00

Client ID: B-1(0.5'-2.0')

Date Received: 10/16/20

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Extraction Method: EPA 3546

Analytical Method: 1,8270D-SIM

Extraction Date: 10/19/20 12:17

Analytical Date: 10/22/20 18:03

Analyst: JRW

Percent Solids: 91%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/kg	72	--	10
2-Chloronaphthalene	ND		ug/kg	72	--	10
Fluoranthene	ND		ug/kg	72	--	10
Naphthalene	ND		ug/kg	72	--	10
Benzo(a)anthracene	ND		ug/kg	72	--	10
Benzo(a)pyrene	ND		ug/kg	72	--	10
Benzo(b)fluoranthene	ND		ug/kg	72	--	10
Benzo(k)fluoranthene	ND		ug/kg	72	--	10
Chrysene	ND		ug/kg	72	--	10
Acenaphthylene	ND		ug/kg	72	--	10
Anthracene	ND		ug/kg	72	--	10
Benzo(ghi)perylene	ND		ug/kg	72	--	10
Fluorene	ND		ug/kg	72	--	10
Phenanthrene	ND		ug/kg	72	--	10
Dibenzo(a,h)anthracene	ND		ug/kg	72	--	10
Indeno(1,2,3-cd)pyrene	ND		ug/kg	72	--	10
Pyrene	ND		ug/kg	72	--	10
1-Methylnaphthalene	ND		ug/kg	72	--	10
2-Methylnaphthalene	ND		ug/kg	72	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	104		23-120
2-Fluorobiphenyl	101		30-120
4-Terphenyl-d14	75		18-120

Project Name: Not Specified
Project Number: 179450053

Lab Number: L2044711
Report Date: 10/23/20

SAMPLE RESULTS

Lab ID: L2044711-02
 Client ID: B-1(4.0'-8.0')
 Sample Location: Not Specified

Date Collected: 10/13/20 11:30
 Date Received: 10/16/20
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8270D-SIM
 Analytical Date: 10/22/20 18:20
 Analyst: JRW
 Percent Solids: 61%

Extraction Method: EPA 3546
 Extraction Date: 10/19/20 12:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PAHs by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/kg	11	--	1
2-Chloronaphthalene	ND		ug/kg	11	--	1
Fluoranthene	28		ug/kg	11	--	1
Naphthalene	ND		ug/kg	11	--	1
Benzo(a)anthracene	27		ug/kg	11	--	1
Benzo(a)pyrene	17		ug/kg	11	--	1
Benzo(b)fluoranthene	22		ug/kg	11	--	1
Benzo(k)fluoranthene	ND		ug/kg	11	--	1
Chrysene	17		ug/kg	11	--	1
Acenaphthylene	ND		ug/kg	11	--	1
Anthracene	ND		ug/kg	11	--	1
Benzo(ghi)perylene	12		ug/kg	11	--	1
Fluorene	ND		ug/kg	11	--	1
Phenanthrene	20		ug/kg	11	--	1
Dibenzo(a,h)anthracene	ND		ug/kg	11	--	1
Indeno(1,2,3-cd)pyrene	12		ug/kg	11	--	1
Pyrene	26		ug/kg	11	--	1
1-Methylnaphthalene	ND		ug/kg	11	--	1
2-Methylnaphthalene	ND		ug/kg	11	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	91		23-120
2-Fluorobiphenyl	72		30-120
4-Terphenyl-d14	57		18-120

Project Name: Not Specified
Project Number: 179450053

Lab Number: L2044711
Report Date: 10/23/20

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8270D-SIM
Analytical Date: 10/19/20 14:38
Analyst: DV

Extraction Method: EPA 3546
Extraction Date: 10/19/20 01:04

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG1423489-1					
Acenaphthene	ND		ug/kg	6.6	--
2-Chloronaphthalene	ND		ug/kg	6.6	--
Fluoranthene	ND		ug/kg	6.6	--
Naphthalene	ND		ug/kg	6.6	--
Benzo(a)anthracene	ND		ug/kg	6.6	--
Benzo(a)pyrene	ND		ug/kg	6.6	--
Benzo(b)fluoranthene	ND		ug/kg	6.6	--
Benzo(k)fluoranthene	ND		ug/kg	6.6	--
Chrysene	ND		ug/kg	6.6	--
Acenaphthylene	ND		ug/kg	6.6	--
Anthracene	ND		ug/kg	6.6	--
Benzo(ghi)perylene	ND		ug/kg	6.6	--
Fluorene	ND		ug/kg	6.6	--
Phenanthrene	ND		ug/kg	6.6	--
Dibenzo(a,h)anthracene	ND		ug/kg	6.6	--
Indeno(1,2,3-cd)pyrene	ND		ug/kg	6.6	--
Pyrene	ND		ug/kg	6.6	--
1-Methylnaphthalene	ND		ug/kg	6.6	--
2-Methylnaphthalene	ND		ug/kg	6.6	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	88		23-120
2-Fluorobiphenyl	78		30-120
4-Terphenyl-d14	73		18-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Lab Number: L2044711

Project Number: 179450053

Report Date: 10/23/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1423489-2 WG1423489-3								
Acenaphthene	77		67		40-140	14		50
2-Chloronaphthalene	75		64		40-140	16		50
Fluoranthene	85		74		40-140	14		50
Naphthalene	75		61		40-140	21		50
Benzo(a)anthracene	92		82		40-140	11		50
Benzo(a)pyrene	90		78		40-140	14		50
Benzo(b)fluoranthene	85		78		40-140	9		50
Benzo(k)fluoranthene	84		73		40-140	14		50
Chrysene	86		74		40-140	15		50
Acenaphthylene	81		71		40-140	13		50
Anthracene	89		79		40-140	12		50
Benzo(ghi)perylene	85		75		40-140	13		50
Fluorene	78		71		40-140	9		50
Phenanthrene	85		75		40-140	13		50
Dibenzo(a,h)anthracene	87		76		40-140	13		50
Indeno(1,2,3-cd)pyrene	88		77		40-140	13		50
Pyrene	84		73		35-142	14		50
1-Methylnaphthalene	73		62		40-140	16		50
2-Methylnaphthalene	74		62		40-140	18		50

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Lab Number: L2044711

Project Number: 179450053

Report Date: 10/23/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1423489-2 WG1423489-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	79		63		23-120
2-Fluorobiphenyl	72		61		30-120
4-Terphenyl-d14	75		66		18-120

PETROLEUM HYDROCARBONS

Project Name: Not Specified**Lab Number:** L2044711**Project Number:** 179450053**Report Date:** 10/23/20**SAMPLE RESULTS**

Lab ID: L2044711-01

Date Collected: 10/13/20 11:00

Client ID: B-1(0.5'-2.0')

Date Received: 10/16/20

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Extraction Method: EPA 3546

Analytical Method: 1,8015D(M)

Extraction Date: 10/18/20 01:03

Analytical Date: 10/19/20 10:16

Analyst: MEO

Percent Solids: 91%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH (C10-C36)	197000		ug/kg	34700	--	1
Surrogate			% Recovery	Qualifier	Acceptance Criteria	
o-Terphenyl			66		40-140	

Project Name: Not Specified**Lab Number:** L2044711**Project Number:** 179450053**Report Date:** 10/23/20**SAMPLE RESULTS**

Lab ID: L2044711-02

Date Collected: 10/13/20 11:30

Client ID: B-1(4.0'-8.0')

Date Received: 10/16/20

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Extraction Method: EPA 3546

Analytical Method: 1,8015D(M)

Extraction Date: 10/18/20 09:36

Analytical Date: 10/19/20 15:38

Analyst: MEO

Percent Solids: 61%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Petroleum Hydrocarbon Quantitation - Westborough Lab						
TPH (C10-C36)	81000		ug/kg	53500	--	1
Surrogate			% Recovery	Qualifier	Acceptance Criteria	
o-Terphenyl			74		40-140	

Project Name: Not Specified
Project Number: 179450053

Lab Number: L2044711
Report Date: 10/23/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8015D(M)
Analytical Date: 10/17/20 11:56
Analyst: MAD

Extraction Method: EPA 3546
Extraction Date: 10/17/20 04:40

Parameter	Result	Qualifier	Units	RL	MDL
Petroleum Hydrocarbon Quantitation - Westborough Lab for sample(s): 01 Batch: WG1423202-1					
TPH (C10-C36)	ND		ug/kg	31900	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	72		40-140

Project Name: Not Specified
Project Number: 179450053

Lab Number: L2044711
Report Date: 10/23/20

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8015D(M)
Analytical Date: 10/19/20 13:45
Analyst: MEO

Extraction Method: EPA 3546
Extraction Date: 10/18/20 09:36

Parameter	Result	Qualifier	Units	RL	MDL
Petroleum Hydrocarbon Quantitation - Westborough Lab for sample(s): 02 Batch: WG1423417-1					
TPH (C10-C36)	ND		ug/kg	33100	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	75		40-140

Lab Control Sample Analysis Batch Quality Control

Project Name: Not Specified
Project Number: 179450053

Lab Number: L2044711
Report Date: 10/23/20

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
Petroleum Hydrocarbon Quantitation - Westborough Lab Associated sample(s): 01 Batch: WG1423202-2								
TPH (C10-C36)	70		-		40-140	-		40

<i>Surrogate</i>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> Criteria
o-Terphenyl	71				40-140

Lab Control Sample Analysis Batch Quality Control

Project Name: Not Specified
Project Number: 179450053

Lab Number: L2044711
Report Date: 10/23/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Petroleum Hydrocarbon Quantitation - Westborough Lab Associated sample(s): 02 Batch: WG1423417-2								
TPH (C10-C36)	87		-		40-140	-		40

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
o-Terphenyl	74				40-140

METALS

Project Name: Not Specified
Project Number: 179450053

Lab Number: L2044711
Report Date: 10/23/20

SAMPLE RESULTS

Lab ID: L2044711-01
 Client ID: B-1(0.5'-2.0')
 Sample Location: Not Specified

Date Collected: 10/13/20 11:00
 Date Received: 10/16/20
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil
 Percent Solids: 91%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	6.52		mg/kg	0.430	--	1	10/21/20 09:20	10/22/20 00:51	EPA 3050B	1,6010D	BV
Lead, Total	7.91		mg/kg	2.15	--	1	10/21/20 09:20	10/22/20 00:51	EPA 3050B	1,6010D	BV



Project Name: Not Specified
Project Number: 179450053

Lab Number: L2044711
Report Date: 10/23/20

SAMPLE RESULTS

Lab ID: L2044711-02
 Client ID: B-1(4.0'-8.0')
 Sample Location: Not Specified

Date Collected: 10/13/20 11:30
 Date Received: 10/16/20
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil
 Percent Solids: 61%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.80		mg/kg	0.627	--	1	10/21/20 09:20	10/22/20 00:56	EPA 3050B	1,6010D	BV
Lead, Total	57.3		mg/kg	3.14	--	1	10/21/20 09:20	10/22/20 00:56	EPA 3050B	1,6010D	BV



Project Name: Not Specified

Lab Number: L2044711

Project Number: 179450053

Report Date: 10/23/20

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1424345-1									
Arsenic, Total	ND	mg/kg	0.400	--	1	10/21/20 09:20	10/21/20 23:45	1,6010D	BV
Lead, Total	ND	mg/kg	2.00	--	1	10/21/20 09:20	10/21/20 23:45	1,6010D	BV

Prep Information

Digestion Method: EPA 3050B

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: 179450053

Lab Number: L2044711

Report Date: 10/23/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1424345-2 SRM Lot Number: D109-540								
Arsenic, Total	99		-		70-130	-		
Lead, Total	92		-		72-128	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: Not Specified

Lab Number: L2044711

Project Number: 179450053

Report Date: 10/23/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1424345-3 QC Sample: L2044318-01 Client ID: MS Sample												
Arsenic, Total	3.72	10.5	14.8	106		-	-		75-125	-		20
Lead, Total	6.97	44.6	47.1	90		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: 179450053

Lab Number: L2044711

Report Date: 10/23/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1424345-4 QC Sample: L2044318-01 Client ID: DUP Sample						
Arsenic, Total	3.72	4.08	mg/kg	9		20
Lead, Total	6.97	7.80	mg/kg	11		20

INORGANICS & MISCELLANEOUS

Project Name: Not Specified
Project Number: 179450053

Lab Number: L2044711
Report Date: 10/23/20

SAMPLE RESULTS

Lab ID: L2044711-01
Client ID: B-1(0.5'-2.0')
Sample Location: Not Specified

Date Collected: 10/13/20 11:00
Date Received: 10/16/20
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	90.6		%	0.100	NA	1	-	10/17/20 10:22	121,2540G	RI



Project Name: Not Specified

Lab Number: L2044711

Project Number: 179450053

Report Date: 10/23/20

SAMPLE RESULTS

Lab ID: L2044711-02

Date Collected: 10/13/20 11:30

Client ID: B-1(4.0'-8.0')

Date Received: 10/16/20

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	61.3		%	0.100	NA	1	-	10/17/20 10:22	121,2540G	RI



Lab Duplicate Analysis
*Batch Quality Control***Project Name:** Not Specified**Project Number:** 179450053**Lab Number:** L2044711**Report Date:** 10/23/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1423218-1 QC Sample: L2044733-03 Client ID: DUP Sample						
Solids, Total	81.4	81.5	%	0		20

Project Name: Not Specified**Lab Number:** L2044711**Project Number:** 179450053**Report Date:** 10/23/20**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2044711-01A	Vial MeOH preserved	A	NA		2.2	Y	Absent		8260HLW(14)
L2044711-01B	Vial water preserved	A	NA		2.2	Y	Absent	13-OCT-20 16:00	8260HLW(14)
L2044711-01C	Vial water preserved	A	NA		2.2	Y	Absent	13-OCT-20 16:00	8260HLW(14)
L2044711-01D	Plastic 2oz unpreserved for TS	A	NA		2.2	Y	Absent		TS(7)
L2044711-01E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.2	Y	Absent		AS-TI(180),PB-TI(180)
L2044711-01F	Glass 60mL/2oz unpreserved	A	NA		2.2	Y	Absent		PAHTCL-SIM(14),TPH-DRO-D(14)
L2044711-01G	Glass 120ml/4oz unpreserved	A	NA		2.2	Y	Absent		PAHTCL-SIM(14),TPH-DRO-D(14)
L2044711-02A	Vial MeOH preserved	A	NA		2.2	Y	Absent		8260HLW(14)
L2044711-02B	Vial water preserved	A	NA		2.2	Y	Absent	13-OCT-20 16:00	8260HLW(14)
L2044711-02C	Vial water preserved	A	NA		2.2	Y	Absent	13-OCT-20 16:00	8260HLW(14)
L2044711-02D	Plastic 2oz unpreserved for TS	A	NA		2.2	Y	Absent		TS(7)
L2044711-02E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.2	Y	Absent		AS-TI(180),PB-TI(180)
L2044711-02F	Glass 60mL/2oz unpreserved	A	NA		2.2	Y	Absent		PAHTCL-SIM(14),TPH-DRO-D(14)
L2044711-02G	Glass 120ml/4oz unpreserved	A	NA		2.2	Y	Absent		PAHTCL-SIM(14),TPH-DRO-D(14)

Project Name: Not Specified
Project Number: 179450053

Lab Number: L2044711
Report Date: 10/23/20

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report



Project Name: Not Specified
Project Number: 179450053

Lab Number: L2044711
Report Date: 10/23/20

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benzo(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.

Report Format: Data Usability Report



Project Name: Not Specified
Project Number: 179450053

Lab Number: L2044711
Report Date: 10/23/20

Data Qualifiers

- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.

Project Name: Not Specified
Project Number: 179450053

Lab Number: L2044711
Report Date: 10/23/20

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene

EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

SM 2540D: TSS

EPA 8082A: NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

EPA TO-12 Non-methane organics

EPA 3C Fixed gases

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.

EPA 522.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

