

# SITEC

## ENVIRONMENTAL

Civil and Environmental Engineering, Land Use  
Planning, Hazardous and Solid Waste Consulting

SITEC ENVIRONMENTAL, Inc.

769 Plain Street, Unit C

Marshfield, MA 02050

Tel. (781) 319-0100 FAX (781) 834-4783

449 Faunce Corner Road

Dartmouth, MA 02747

Tel. (508) 998-2125 FAX (508) 998-7554

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## IMMEDIATE RESPONSE ACTION (IRA) PLAN

**Release Tracking No.: 4-27363**

***Property Located at:***

Residential Lot

85 McCabe Street

Dartmouth, Massachusetts

***Prepared For:***

Terceira Construction

1 Cookie Way

Dartmouth, MA 02748

***Prepared By:***

SITEC Environmental, Inc.

769 Plain Street, Unit C

Marshfield, MA 02050

***SITEC Project Number:***

SE18-1375

***Date:***

August 30, 2018

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FIGURE 2 - Site Sketch

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ATTACHMENT 1 - Laboratory Analysis

ATTACHMENT 2 - PRP Authorization

## **1.0 INTRODUCTION**

This document is an Immediate Response Action (IRA) Plan prepared by SITEC Environmental, Inc. (SITEC) regarding a reported release of oil and/or hazardous materials (OHM) at a vacant residential lot located at 85 McCabe Street in Dartmouth, Massachusetts (the "Site"). This report serves to notify the Massachusetts Department of Environmental Protection (MassDEP) of the results of the completed assessment and planned activities which are performed under authorization from Terceira Construction, the potentially responsible party (PRP) for this release.

The actions were conducted in compliance with Massachusetts General Laws Chapter 21E (MGL Chapter 21E), and the Massachusetts Contingency Plan (MCP), 310 CMR 40.0000. The purpose of this report is to satisfy MCP requirements for IRAs at 310 CMR 40.0424. As per 310 CMR 40.0425, SITEC will prepare and submit an IRA status report within 120 days of submission of this IRA Plan and subsequent status reports every six (6) months thereafter, until an IRA Completion Report is submitted. In addition, due to odor complaints, MassDEP has required the submission of this IRA Plan by September 2, 2018 as an interim deadline.

### **1.1 Limitations**

The conclusions contained in this report are based solely upon and limited to the information described herein. Overall site observations were limited to clearly visible, unobstructed conditions. In completing this IRA Plan, SITEC did not consider whether this property is in compliance with any other statutes, laws, by-laws, regulations or policies unless compliance was directly related to the reported release. A portion of the information provided in this report is based upon personal interviews by the parties involved. SITEC did not attempt to independently verify the completeness, correctness or accuracy of this information. SITEC reserves the right to change its conclusions upon learning that this information was incomplete, incorrect or inaccurate.

## **2.0 PROPERTY DESCRIPTION**

The following information was obtained during SITEC's Property reconnaissance, from local records review, and a review of publicly available maps and plans.

### **2.1 Property Location**

The Site is located at 85 McCabe Street, Bristol County, Dartmouth, Massachusetts. According to the Town of Dartmouth Assessors Office, the land on which the Site is located is identified on Map 144, as Lot 64 (the "Property"). The coordinates for the Site is approximately 41° 36' 59" North Latitude and 70° 56' 51" West Longitude. The Property is rectangular and consists of approximately 0.20 acres. A Locus Map is included as Figure 1.

### **2.2 Vicinity Characteristics**

The Property is zoned residential and is located in a residential area in the South Dartmouth. The Property is located approximately 0.3 miles west from the Dartmouth-New Bedford town line. The Property and the vicinity are served by municipal water, gas, and telephone/cable services.

## **2.3 Property Uses**

The Property is currently unoccupied. There was a former single family residence located on the Property (constructed in 1949) which was recently demolished. The construction of a new single family residence began in July 2018. The foundation excavation has been completed and the bottom of the excavation is covered with pea stone. Construction was halted upon discovery of the release.

## **2.4 Uses of Adjoining Properties**

Single family residences abut the Property to the west, north, and east. McCabe Street abuts the Property to the south with single family residences located across McCabe Street from the Property.

## **3.0 RELEASE DESCRIPTION**

On July 30, 2018 MassDEP received verbal notification from Michael O'Reilly, Environmental Affairs Coordinator for the Town of Dartmouth regarding a release of OHM at the Site. Mr. O'Reilly reported that several deteriorated metal drums of various sizes containing a black petroleum-based liquid, as well as rusted metal objects, rubber tires, glass, and other discarded debris, were excavated during foundation demolition at the single family residential lot.

On July 31, 2018, SITEC along with MassDEP visited the Site and observed conditions consistent with the observations of Mr. O'Reilly. Visible on the side wall of the excavation was various debris including rusted metal objects, tires, glass bottles, and a black petroleum based substance in the soil. In addition, two damaged metal containers were observed on the pile of excavated soil which were leaking a viscous black petroleum based liquid.

## **4.0 INITIAL SOIL SAMPLING AND ANALYSIS**

On July 31, 2018, two grab soil samples were collected from the side wall of the excavation by SITEC. Soil sample SS-1 was collected from the western excavation wall at approximately 2 feet below grade where red metal stained soil was observed. Sample SS-2 was collected from the northern wall of the excavation at approximately 2 feet below grade where the black petroleum based substance was observed. Approximate locations of the soil samples are depicted on Figure 2 - Site Sketch.

Both samples were submitted to Alpha Analytical Laboratories for the analysis of semi-volatile organic compounds (SVOCs), total petroleum hydrocarbons (TPH), pesticides, polychlorinated biphenyls (PCBs), and MCP Metals. In addition, SITEC submitted the soil sample SS-2 for analysis of Volatile organic Compounds (VOCs). Due to the elevated concentration of total chromium reported in sample SS-1, this sample was also analyzed for Chromium VI.

Table 1 summarizes the VOC analysis and compares the results to the applicable Method 1 Standards. As noted from Table 1 no VOCs were reported above their respective Method 1 Standard. Table 2 summarizes the SVOC and TPH soil analysis and compares the results to the Method 1 Standards. As noted from Table 2, elevated concentrations of several SVOCs and TPH, attributable to the black tar substance, were reported in soil sample SS-2. Table 3 summarizes the pesticides, PCB, and metals soil analysis. As noted from Table 3 there was no instance where a pesticide or PCB was reported exceeding its Method 1 Standard. Elevated concentrations of several metals including lead and chromium were reported in soil sample SS-1 exceeding their Method 1 standards which may be attributable to the oxidized metal in the soil. The laboratory reports are included in Attachment 1.

## **5.0 IMMEDIATE RESPONSE ACTION (IRA) PLAN**

The primary objective of the proposed IRA is to reduce concentrations of OHM and to further evaluate the Property. In order to accomplish this SITEC proposes to conduct an IRA activity that will consist of evaluating, removing, and disposing of the vicious black petroleum based liquid from the excavated drums; disposing/recycling of the excavated soil stockpile; and the advancement of test pits on the Property.

### **5.1 Assessment and Removal of the Viscous Black Petroleum Based Liquid**

On August 28, 2018, Geoffrey Souza, LSP, of SITEC, George Verissomo of Terceira Construction, and Felix Fontanez of New England Disposal Technologies, Inc. (NEDT) an environmental contractor, met at the site to discuss the process of removing the drums and viscous black petroleum based liquid from the soil stockpile. The agreed general procedure is to remove the viscous black petroleum based liquid using hand tools and placing the substance and any contaminated soil/debris into 85-gallon drum overpacks. The overpacks will then be sealed and remain on the Property until such time they can be disposed under a hazardous waste manifest by NEDT. After removal of the surficial viscous tar from the soil pile, the pile will be probed with an excavator to determine if any additional substances have impacted the pile.

As requested by MassDEP, on August 28, 2018, SITEC collected two samples of the viscous black petroleum based liquid leaking out of the drums on the north side of the soil pile. One sample of the black substance was leaking out of a 5 gallon pail and the other sample was collected from the substance leaking out of the 55-gallon drum. The samples were submitted to Alpha Analytical Laboratories for characterization (petroleum hydrocarbon identification) including analysis of PCBs.

### **5.2 Removal and Disposal of Soil Pile**

Once the viscous black petroleum based liquid is removed, the stockpile of excavated soil will be transported to a disposal/recycling facility. On July 31, 2018, a composite soil sample was collected from the soil stockpile for waste characterization purposes (TCLP results remain pending). Elevated concentrations of VOCs, SVOCs, and TPH were reported in the waste characterization sample. PCBs were not detected in the waste characterization sample.

The disposal/recycling facility to which the soil will be transported, will be determined on the basis of results of the soil characterization sample, availability, cost, and distance from the Property. The transportation and disposal of the soil will be managed under the Bill of Lading (BOL) process. Possible disposal/recycling facilities include Aggregate Industries in Stoughton or ESMI in New Hampshire. Massachusetts lined or unlined solid waste landfills are not considered as a disposal/recycling facility; since the total VOC, SVOC, and TPH concentrations exceeded state criteria for disposal of contaminated soil in lined or unlined landfills (MassDEP Policy COMM-97-001).

### **5.3 Odor Control Plan**

Due to recent complaints of odors from the Property, two layers of 6-mil poly-ethylene sheeting will remain covering the soil pile. In addition to daily visual inspections by Terceira Construction, SITEC will inspect the Property at least once per week or after a significant wind event. During the inspection, the poly-ethylene sheeting will be evaluated and secured as necessary. In addition, the ambient air around the stockpile will be screened with a photo-ionization detector (PID) and observed for odors. If there is a response by the PID or odors are otherwise detected, additional plastic sheeting will be added to the soil stockpile. On August 28, 2018, Terceira Construction placed the second layer of poly-ethylene sheeting on the soil stockpile.

### **5.4 Additional Assessment**

After removal of soil stockpile from the Property, a series of test pits will be excavated on the Property to delineate and characterize any buried debris, drums, or contamination on the Property. In addition to the visually characterizing and logging the material in each test pit, soil samples will be collected, field screening and submitted for appropriate laboratory analysis.

### **5.5 Implementation Schedule**

SITEC anticipates this IRA can begin within one week of MassDEP approval (specific or presumptive).

### **5.6 Federal, State, and Local Permits**

There are no additional federal, state, or local permits anticipated for this work.

### **5.7 PRP Authorization**

Authorization for SITEC to file this IRA Plan and status report with MassDEP on behalf of the PRP is included as Attachment 2.

Subject to the limitations previously described and otherwise reference herein, all the available information, research, and Property observations documented to date and contained in this report are, to the best of SITEC's knowledge, true, accurate, and complete.

SITEC ENVIRONMENTAL, INC.

A handwritten signature in black ink, appearing to read 'Geoffrey Souza', is written over a horizontal line.

Geoffrey Souza, LSP  
Project Manager

**TABLES**

TABLE 1 - VOLATILE ORGANIC COMPOUND (VOC) SOIL ANALYSIS SUMMARY
TABLE 2 - SEMI-VOLATILE ORGANIC COMPOUND (SVOC) AND TOTAL PETROLEUM HYDROCARBON (TPH) SOIL ANALYSIS SUMMARY
TABLE 3 - PESTICIDES, POLY-CHLORINATED BIPHENYLS (PCB) AND METALS SOIL ANALYSIS SUMMARY



**Table 1**  
**Volatile Organic Compounds (VOCs) Soil Analysis Summary**


**Residential Lot**  
**85 McCable Street**  
**Dartmouth, Massachusetts**


COMPOUND	Method 1 Soil Standards (mg/kg)						Results
	S-1,GW-2	S-1,GW-3	S-2,GW-2	S-2,GW-3	S-3,GW-2	S-3,GW-3	SS-2
Methylene chloride	4	400	4	700	4	700	0.7 U
1,1-Dichloroethane	9	500	9	1000	9	1000	0.14 U
Chloroform	0.2	500	0.2	1000	0.2	1000	0.21 U
Carbon tetrachloride	5	30	5	100	5	1000	0.14 U
1,2-Dichloropropane	0.1	30	0.1	100	0.1	1000	0.14 U
Dibromochloromethane	0.03	20	0.03	100	0.03	500	0.14 U
1,1,2-Trichloroethane	2	40	2	200	2	500	0.14 U
Tetrachloroethene	10	30	10	200	10	1000	0.07 U
Chlorobenzene	3	100	3	100	3	100	0.07 U
Trichlorofluoromethane	NS	NS	NS	NS	NS	NS	0.56 U
1,2-Dichloroethane	0.1	20	0.1	100	0.1	300	0.14 U
1,1,1-Trichloroethane	500	500	600	1000	600	3000	0.07 U
Bromodichloromethane	0.1	30	0.1	100	0.1	500	0.07 U
trans-1,3-Dichloropropene	0.4	20	0.4	90	0.4	100	0.14 U
cis-1,3-Dichloropropene	0.4	20	0.4	90	0.4	100	0.07 U
1,3-Dichloropropene, Total	0.4	20	0.4	90	0.4	100	0.07 U
1,1-Dichloropropene	NS	NS	NS	NS	NS	NS	0.07 U
Bromoform	1	300	1	800	1	800	0.56 U
1,1,1,2-Tetrachloroethane	0.02	10	0.02	50	0.02	400	0.07 U
Benzene	40	40	200	200	400	1000	0.24
Toluene	500	500	1000	1000	2000	3000	0.57
Ethylbenzene	500	500	1000	1000	1000	3000	0.14 U
Chloromethane	NS	NS	NS	NS	NS	NS	0.56 U
Bromomethane	0.5	30	0.5	30	0.5	30	0.28 U
Vinyl chloride	0.7	1	0.7	7	0.7	60	0.14 U
Chloroethane	NS	NS	NS	NS	NS	NS	0.28 U
1,1-Dichloroethene	40	500	40	1000	40	3000	0.14 U
trans-1,2-Dichloroethene	1	500	1	1000	1	3000	0.21 U
Trichloroethene	0.3	30	0.3	60	0.3	60	0.07 U
1,2-Dichlorobenzene	100	300	100	300	100	300	0.28 U
1,3-Dichlorobenzene	100	100	200	500	200	500	0.28 U
1,4-Dichlorobenzene	1	80	1	400	1	2000	0.28 U
Methyl tert butyl ether	100	100	100	500	100	500	0.28 U
p/m-Xylene	100	500	100	1000	100	3000	0.33
o-Xylene	100	500	100	1000	100	3000	0.14 U
Xylenes, Total	100	500	100	1000	100	3000	0.33
cis-1,2-Dichloroethene	0.1	100	0.1	500	0.1	500	0.14 U
1,2-Dichloroethene, Total	NS	NS	NS	NS	NS	NS	0.14 U
Dibromomethane	NS	NS	NS	NS	NS	NS	0.28 U
1,2,3-Trichloropropane	NS	NS	NS	NS	NS	NS	0.28 U
Styrene	4	70	4	300	4	2000	0.28
Dichlorodifluoromethane	NS	NS	NS	NS	NS	NS	1.4 U
Acetone	50	400	50	400	50	400	1.4 U
Carbon disulfide	NS	NS	NS	NS	NS	NS	1.4 U
Methyl ethyl ketone	50	400	50	400	50	400	1.4 U
Methyl isobutyl ketone	50	400	50	400	50	400	1.4 U
2-Hexanone	NS	NS	NS	NS	NS	NS	1.4 U
Bromochloromethane	NS	NS	NS	NS	NS	NS	0.28 U
Tetrahydrofuran	NS	NS	NS	NS	NS	NS	0.56 U
2,2-Dichloropropane	NS	NS	NS	NS	NS	NS	0.28 U
1,2-Dibromoethane	0.1	1	0.1	5	0.1	40	0.14 U
1,3-Dichloropropane	NS	NS	NS	NS	NS	NS	0.28 U
1,1,1,2-Tetrachloroethane	0.1	80	0.1	400	0.1	500	0.07 U
Bromobenzene	NS	NS	NS	NS	NS	NS	0.28 U
n-Butylbenzene	NS	NS	NS	NS	NS	NS	0.14 U
sec-Butylbenzene	NS	NS	NS	NS	NS	NS	0.14 U
tert-Butylbenzene	NS	NS	NS	NS	NS	NS	0.28 U
o-Chlorotoluene	NS	NS	NS	NS	NS	NS	0.28 U
p-Chlorotoluene	NS	NS	NS	NS	NS	NS	0.28 U
1,2-Dibromo-3-chloropropane	NS	NS	NS	NS	NS	NS	0.42 U
Hexachlorobutadiene	30	30	100	100	100	100	0.56 U
Isopropylbenzene	NS	NS	NS	NS	NS	NS	0.14 U
p-Isopropyltoluene	NS	NS	NS	NS	NS	NS	0.14 U
Naphthalene	20	500	20	1000	20	3000	1.2
n-Propylbenzene	NS	NS	NS	NS	NS	NS	0.14 U
1,2,3-Trichlorobenzene	NS	NS	NS	NS	NS	NS	0.28 U
1,2,4-Trichlorobenzene	6	700	6	3000	6	5000	0.28 U
1,3,5-Trimethylbenzene	NS	NS	NS	NS	NS	NS	0.28 U
1,2,4-Trimethylbenzene	NS	NS	NS	NS	NS	NS	0.28 U
Diethyl ether	NS	NS	NS	NS	NS	NS	0.28 U
Diisopropyl Ether	NS	NS	NS	NS	NS	NS	0.28 U
Ethyl-Tert-Butyl-Ether	NS	NS	NS	NS	NS	NS	0.28 U
Tertiary-Amyl Methyl Ether	NS	NS	NS	NS	NS	NS	0.28 U
1,4-Dioxane	6	20	6	90	6	500	14 U


U = Analyzed but not found; detection limit listed

NS = No Standard for Indicated Parameter

NA = Not Analyzed for Indicated Parameter

 = Yellow shade Indicates an exceedances of MCP S-1, GW-1, GW-2 or GW-3 Method 1 Standard

 = Blue Hatching Indicates an exceedances of MCP S-2, GW-1, GW-2 or GW-3 Method 1 Standard

 = Red Text Indicates an exceedances of MCP S-3, GW-1, GW-2 or GW-3 Method 1 Standard

**Table 2**  
**Semi-Volatile Organic Compounds (VOCs) and Total Petroleum Hydrocarbon (TPH) Soil Analysis Summary**

**Residential Lot**  
**85 McCable Street**  
**Dartmouth, Massachusetts**


COMPOUND	Method 1 Soil Standards (mg/kg)						Results (mg/kg)	
	S-1,GW-2	S-1,GW-3	S-2,GW-2	S-2,GW-3	S-3,GW-2	S-3,GW-3	SS-1	SS-2
Semivolatile Organic Compounds (SVOCs)								
Acenaphthene	1000	1000	3000	3000	5000	5000	0.74 U	7.7
1,2,4-Trichlorobenzene	6	700	6	3000	6	5000	0.92 U	6 U
Hexachlorobenzene	0.7	0.7	0.8	0.8	0.8	0.8	0.55 U	3.6 U
Bis(2-chloroethyl)ether	0.7	2	0.7	8	0.7	80	0.83 U	5.4 U
2-Chloronaphthalene	NS	NS	NS	NS	NS	NS	0.92 U	6 U
1,2-Dichlorobenzene	100	300	100	300	100	300	0.92 U	6 U
1,3-Dichlorobenzene	100	100	200	500	200	500	0.92 U	6 U
1,4-Dichlorobenzene	1	80	1	400	1	2000	0.92 U	6 U
3,3'-Dichlorobenzidine	3	3	20	20	100	100	0.92 U	6 U
2,4-Dinitrotoluene	2	2	10	10	50	80	0.92 U	6 U
2,6-Dinitrotoluene	NS	NS	NS	NS	NS	NS	0.92 U	6 U
Azobenzene	NS	NS	NS	NS	NS	NS	0.92 U	6 U
Fluoranthene	1000	1000	3000	3000	5000	5000	4	45
4-Bromophenyl phenyl ether	NS	NS	NS	NS	NS	NS	0.92 U	6 U
Bis(2-chloroisopropyl)ether	0.7	30	0.7	100	0.7	1000	1.1 U	7.2 U
Bis(2-chloroethoxy)methane	NS	NS	NS	NS	NS	NS	1 U	6.4 U
Hexachlorobutadiene	30	30	100	100	100	100	0.92 U	6 U
Hexachloroethane	3	50	3	200	3	200	0.74 U	4.8 U
Isophorone	NS	NS	NS	NS	NS	NS	0.83 U	5.4 U
Naphthalene	20	500	20	1000	20	3000	0.92 U	28
Nitrobenzene	NS	NS	NS	NS	NS	NS	0.83 U	5.4 U
Bis(2-ethylhexyl)phthalate	90	90	600	600	2000	2000	0.92 U	6 U
Butyl benzyl phthalate	NS	NS	NS	NS	NS	NS	0.92 U	6 U
Di-n-butylphthalate	NS	NS	NS	NS	NS	NS	0.92 U	6 U
Di-n-octylphthalate	NS	NS	NS	NS	NS	NS	0.92 U	6 U
Diethyl phthalate	200	300	200	300	200	300	0.92 U	6 U
Dimethyl phthalate	50	600	50	600	50	600	0.92 U	6 U
Benzo(a)anthracene	7	7	40	40	300	300	2.8	46
Benzo(a)pyrene	2	2	7	7	30	30	2.3	42
Benzo(b)fluoranthene	7	7	40	40	300	300	2.9	42
Benzo(k)fluoranthene	70	70	400	400	3000	3000	0.73	10
Chrysene	70	70	400	400	3000	3000	3.5	56
Acenaphthylene	600	10	600	10	600	10	2.5	64
Anthracene	1000	1000	3000	3000	5000	5000	1.8	47
Benzo(ghi)perylene	1000	1000	3000	3000	5000	5000	1.5	22
Fluorene	1000	1000	3000	3000	5000	5000	0.92 U	20
Phenanthrene	500	500	1000	1000	3000	3000	3	49
Dibenzo(a,h)anthracene	0.7	0.7	4	4	30	30	0.55 U	8.9
Indeno(1,2,3-cd)pyrene	7	7	40	40	300	300	1.4	21
Pyrene	1000	1000	3000	3000	5000	5000	5.6	89
Aniline	NS	NS	NS	NS	NS	NS	1.1 U	7.2 U
4-Chloroaniline	7	3	40	3	40	3	0.92 U	6 U
Dibenzofuran	NS	NS	NS	NS	NS	NS	0.92 U	6 U
2-Methylnaphthalene	80	300	80	500	80	500	1.1 U	33
Acetophenone	NS	NS	NS	NS	NS	NS	0.92 U	6 U
2,4,6-Trichlorophenol	20	20	20	20	20	20	0.55 U	3.6 U
2-Chlorophenol	100	100	100	300	100	300	0.92 U	6 U
2,4-Dichlorophenol	60	40	60	40	60	40	0.83 U	5.4 U
2,4-Dimethylphenol	100	500	100	1000	100	1000	0.92 U	6 U
2-Nitrophenol	NS	NS	NS	NS	NS	NS	2 U	13 U
4-Nitrophenol	NS	NS	NS	NS	NS	NS	1.3 U	8.4 U
2,4-Dinitrophenol	50	50	50	100	50	100	4.4 U	29 U
Pentachlorophenol	3	3	20	10	70	10	1.8 U	12 U
Phenol	50	20	50	20	50	20	0.92 U	6 U
2-Methylphenol	NS	NS	NS	NS	NS	NS	0.92 U	6 U
3-Methylphenol/4-Methylphenol	NS	NS	NS	NS	NS	NS	1.3 U	8.6 U
2,4,5-Trichlorophenol	1000	600	1000	600	1000	600	0.92 U	6 U
Petroleum Hydrocarbon Quantitation								
Total Petroleum Hydrocarbons (TPH)	1000	1000	3000	3000	5000	5000	2320	9210


U = Analyzed but not found; detection limit listed

NS = No Standard for Indicated Parameter

NA = Not Analyzed for Indicated Parameter

 = Yellow shade Indicates an exceedances of MCP S-1, GW-2 or GW-3 Method 1 Standard

 = Blue Hatching Indicates an exceedances of MCP S-2, GW-2 or GW-3 Method 1 Standard

 = Red Text Indicates an exceedances of MCP S-3, GW-2 or GW-3 Method 1 Standard

**Table 3**  
**Pesticides, Polychlorinated Biphenyls (PCBs) and Metals Soil Analysis Summary**

**Residential Lot**  
**85 McCable Street**  
**Dartmouth, Massachusetts**


COMPOUND	Method 1 Soil Standards (mg/kg)						Results (mg/kg)	
	S-1,GW-2	S-1,GW-3	S-2,GW-2	S-2,GW-3	S-3,GW-2	S-3,GW-3	SS-1	SS-2
Organochlorine Pesticides								
Delta-BHC	NS	NS	NS	NS	NS	NS	0.00176 U	0.00926 U
Lindane	1	0.5	2	0.5	2	0.5	0.000588 U	0.00309 U
Alpha-BHC	NS	NS	NS	NS	NS	NS	0.000736 U	0.00386 U
Beta-BHC	NS	NS	NS	NS	NS	NS	0.00176 U	0.00926 U
Heptachlor	0.3	0.3	2	2	10	10	0.000883 U	0.00463 U
Aldrin	0.08	0.08	0.5	0.5	3	3	0.00176 U	0.00926 U
Heptachlor epoxide	0.1	0.1	0.9	0.9	1	1	0.00331 U	0.0174 U
Endrin	10	10	20	20	20	20	0.000736 U	0.00386 U
Endrin ketone	NS	NS	NS	NS	NS	NS	0.00176 U	0.00926 U
Dieldrin	0.08	0.08	0.5	0.5	3	3	0.0011 U	0.00579 U
4,4'-DDE	6	6	30	30	60	60	0.00252 PI	0.00926 U
4,4'-DDD	8	8	40	40	60	60	0.00541 PI	0.00926 U
4,4'-DDT	6	6	30	30	60	60	0.0402	0.0174 U
Endosulfan I	300	1	500	1	500	1	0.00176 U	0.00926 U
Endosulfan II	300	1	500	1	500	1	0.00546 PI	0.00926 U
Endosulfan sulfate	NS	NS	NS	NS	NS	NS	0.000736 U	0.00386 U
Methoxychlor	200	200	400	400	400	400	0.00331 U	0.0174 U
Chlordane	5	5	30	30	60	60	0.0143 U	0.0752 U
Hexachlorobenzene	0.7	0.7	0.8	0.8	0.8	0.8	0.00176 U	0.00926 U
Polychlorinated Biphenyls (PCBs)								
Aroclor 1016	1	1	4	4	4	4	0.0372 U	0.0398 U
Aroclor 1221	1	1	4	4	4	4	0.0372 U	0.0398 U
Aroclor 1232	1	1	4	4	4	4	0.0372 U	0.0398 U
Aroclor 1242	1	1	4	4	4	4	0.0372 U	0.0398 U
Aroclor 1248	1	1	4	4	4	4	0.0372 U	0.0398 U
Aroclor 1254	1	1	4	4	4	4	0.0372 U	0.0398 U
Aroclor 1260	1	1	4	4	4	4	0.0607	0.0398 U
Aroclor 1262	1	1	4	4	4	4	0.0372 U	0.0398 U
Aroclor 1268	1	1	4	4	4	4	0.0372 U	0.0398 U
PCBs, Total	1	1	4	4	4	4	0.0607	0.0398 U
Total Metals								
Antimony	20	20	30	30	30	30	13.7	9.48
Arsenic	20	20	20	20	50	50	18.4	23.3
Barium	1000	1000	3000	3000	5000	5000	943	339
Beryllium	90	90	200	200	200	200	0.213 U	0.234 U
Cadmium	70	70	100	100	100	100	0.426 U	37.2
Chromium	100	100	200	200	200	200	3200	102
Chromium XI	100	100	200	200	200	200	4.5 U	NA
Lead	200	200	600	600	600	600	4270	1370
Nickel	600	600	1000	1000	1000	1000	145	79.4
Selenium	400	400	700	700	700	700	12.3	2.34 U
Silver	100	100	200	200	200	200	1	1.18
Thallium	8	8	60	60	80	80	2.13 U	2.34 U
Vanadium	400	400	700	700	700	700	854	37.3
Zinc	1000	1000	3000	3000	5000	5000	303	910


U = Analyzed but not found; detection limit listed


NS = No Standard for Indicated Parameter

PI - The RPD between the results for the two columns exceeds method-specified criteria. The lower value for the two columns reported due to obvious interference.

NA = Not Analyzed for Indicated Parameter

 = Yellow shade Indicates an exceedances of MCP S-1, GW-2 or GW-3 Method 1 Standard

 = Blue Hatching Indicates an exceedances of MCP S-2, GW-2 or GW-3 Method 1 Standard

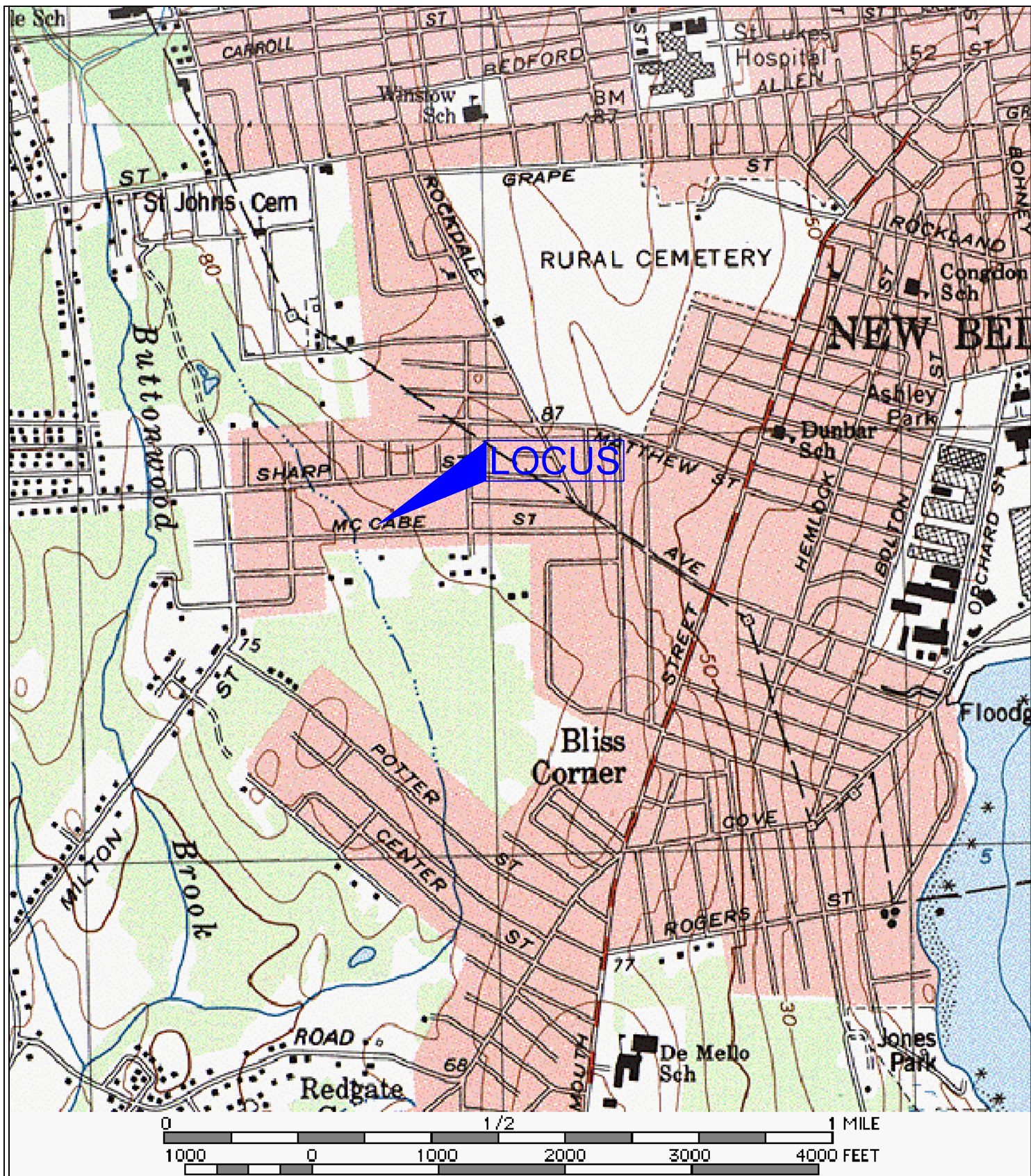
 = Red Text Indicates an exceedances of MCP S-3, GW-2 or GW-3 Method 1 Standard

**FIGURES**

**FIGURE 1 - LOCUS MAP**

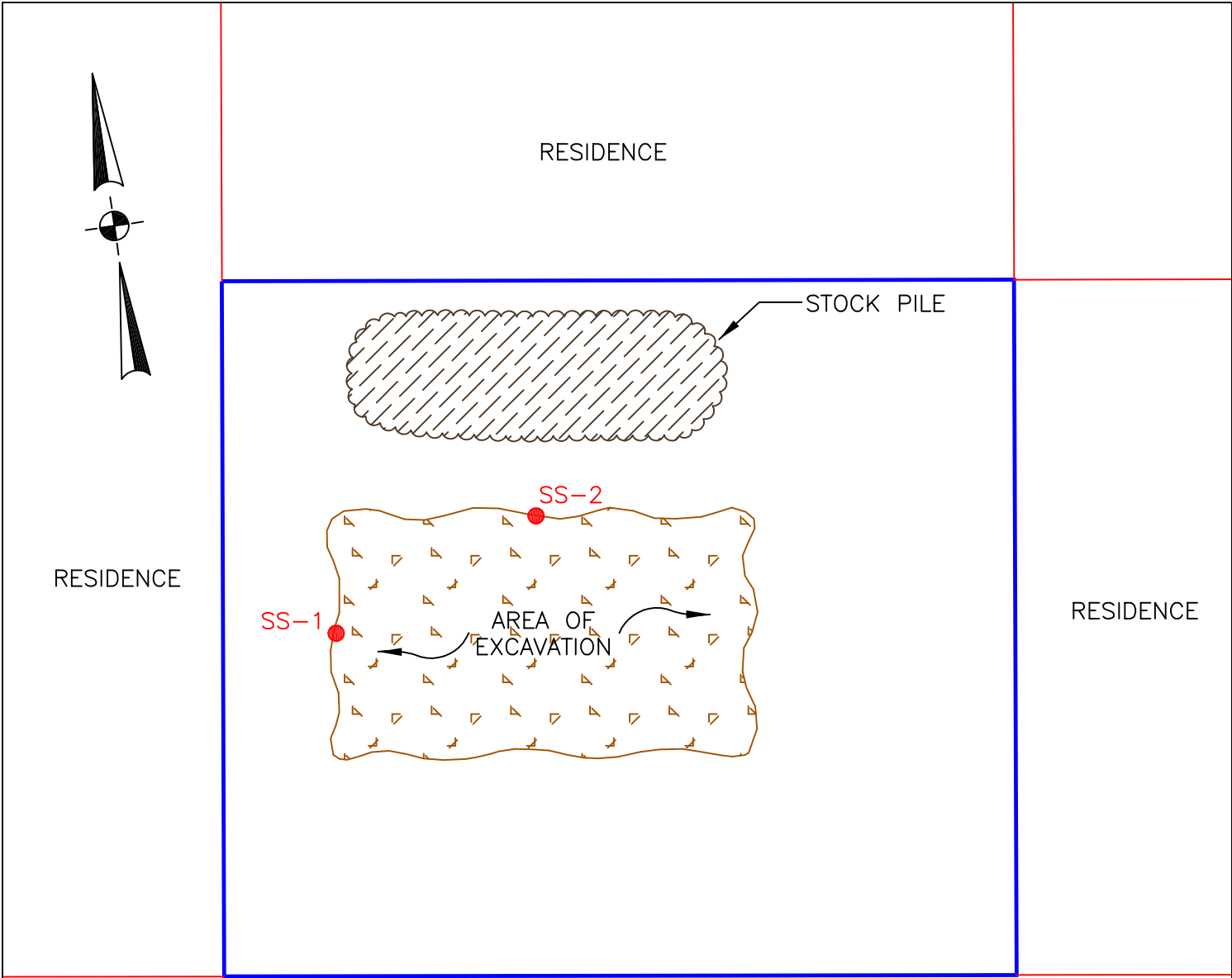
**FIGURE 2 - SITE SKETCH**





BASE IMAGE: USGS TOPOGRAPHIC MAP – NEW BEDFORD SOUTH 1977

FIGURE 1	LOCUS MAP	<b>SITEC</b> ENVIRONMENTAL 769 Plain Street, Unit C Marshfield, MA 02050 Tel. (781) 319-0100 FAX (781) 834-4783
<i>appx. scale:</i>		
AS SHOWN	85 MCCABE STREET DARTMOUTH, MASSACHUSETTS	



*McCABE STREET*

LEGEND		
<span style="color: blue;">—</span>	PROPERTY LINE	<span style="color: red;">●</span> SOIL SAMPLE LOCATION

FIGURE 2	SITE SKETCH	<b>SITEC</b> ENVIRONMENTAL 769 Plain Street, Unit C Marshfield, MA 02050 Tel. (781) 319-0100 FAX (781) 834-4783
<i>appx. scale:</i> 1" = 20' 	85 McCABE STREET DARTMOUTH, MASSACHUSETTS	

## **ATTACHMENT 1**

### **LABORATORY REPORTS**



## ANALYTICAL REPORT

Lab Number:	L1829544
Client:	Sitec Environmental, Inc. 769 Plain Street Unit C Marshfield, MA 02050
ATTN:	Geoff Souza
Phone:	(781) 319-0100
Project Name:	MCCABE ST.
Project Number:	SE18-1375
Report Date:	08/10/18

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).

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





**Project Name:** MCCABE ST.  
**Project Number:** SE18-1375

**Lab Number:** L1829544  
**Report Date:** 08/10/18

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1829544-01	SS-1	SOIL	Not Specified	07/31/18 11:45	07/31/18
L1829544-02	SS-2	SOIL	Not Specified	07/31/18 12:00	07/31/18

Project Name: MCCABE ST.

Lab Number: L1829544

Project Number: SE18-1375

Report Date: 08/10/18

**MADEP MCP Response Action Analytical Report Certification**

**This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.**

<b>An affirmative response to questions A through F is required for "Presumptive Certainty" status</b>		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES
<b>A response to questions G, H and I is required for "Presumptive Certainty" status</b>		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	NO
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES
<b>For any questions answered "No", please refer to the case narrative section on the following page(s).</b>		

**Please note that sample matrix information is located in the Sample Results section of this report.**



**Project Name:** MCCABE ST.  
**Project Number:** SE18-1375

**Lab Number:** L1829544  
**Report Date:** 08/10/18

### 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. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated 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.

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 table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

#### 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 Client Service Representative 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 Client Services at 800-624-9220 with any questions.

**Project Name:** MCCABE ST.  
**Project Number:** SE18-1375

**Lab Number:** L1829544  
**Report Date:** 08/10/18

### Case Narrative (continued)

#### Report Submission

August 10, 2018: This final report includes the results of all requested analyses.

August 10, 2018: This is a preliminary report.

#### MCP Related Narratives

##### Sample Receipt

In reference to question H:

A Matrix Spike was not submitted for the analysis of Total Metals.

#### Volatile Organics

In reference to question G:

L1829544-02: One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

The initial calibration, associated with L1829544-02, did not meet the method required minimum response factor on the lowest calibration standard for trichloroethene (0.1978), 2-butanone (0.0660), 4-methyl-2-pentanone (0.0786), and 1,4-dioxane (0.0012), as well as the average response factor for acetone, 2-butanone, 4-methyl-2-pentanone, and 1,4-dioxane.

The continuing calibration standard, associated with L1829544-02, is outside the acceptance criteria for several compounds; however, it is within overall method allowances. A copy of the continuing calibration standard is included as an addendum to this report.

#### Semivolatile Organics

L1829544-01: The sample has elevated detection limits due to the dilution required by the sample matrix.

L1829544-02: The sample has elevated detection limits due to the dilution required by the matrix interferences encountered during the concentration of the sample and the analytical dilution required by the sample matrix.

In reference to question G:

L1829544-01 and -02: One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

**Project Name:** MCCABE ST.  
**Project Number:** SE18-1375

**Lab Number:** L1829544  
**Report Date:** 08/10/18

### Case Narrative (continued)

L1829544-02: The surrogate recoveries are below the acceptance criteria for 2-fluorophenol (0%), phenol-d6 (0%), nitrobenzene-d5 (0%), 2-fluorobiphenyl (0%), 2,4,6-tribromophenol (0%), and 4-terphenyl-d14 (0%) due to the dilution required to quantitate the sample. Re-extraction was not required; therefore, the results of the original analysis are reported.

#### PCBs

In reference to question H:

L1829544-02: The internal standard (IS) response for 1-bromo-2-nitrobenzene was above the acceptance criteria on the b-channel; however, the sample was not re-analyzed due to obvious interferences. Since the IS response was above method criteria, all associated compounds are considered to have a potentially low bias. The surrogate recoveries are outside the method acceptance criteria for 2,4,5,6-tetrachloro-m-xylene (3%) and decachlorobiphenyl (6%) due to interference with the Internal Standard.

#### Pesticides

L1829544-02: The sample has elevated detection limits due to the dilution required by the sample matrix.

In reference to question G:

L1829544-02: One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

L1829544-01: The surrogate recoveries are outside the acceptance criteria for decachlorobiphenyl (163%/172%); however, the sample was not re-extracted due to coelution with obvious interferences.

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:



Kelly Stenstrom

Title: Technical Director/Representative

Date: 08/10/18

# ORGANICS

# **VOLATILES**

**Project Name:** MCCABE ST.**Lab Number:** L1829544**Project Number:** SE18-1375**Report Date:** 08/10/18**SAMPLE RESULTS**

Lab ID: L1829544-02

Date Collected: 07/31/18 12:00

Client ID: SS-2

Date Received: 07/31/18

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Analytical Method: 97,8260C

Analytical Date: 08/08/18 20:57

Analyst: MV

Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
Methylene chloride	ND		ug/kg	700	--	1
1,1-Dichloroethane	ND		ug/kg	140	--	1
Chloroform	ND		ug/kg	210	--	1
Carbon tetrachloride	ND		ug/kg	140	--	1
1,2-Dichloropropane	ND		ug/kg	140	--	1
Dibromochloromethane	ND		ug/kg	140	--	1
1,1,2-Trichloroethane	ND		ug/kg	140	--	1
Tetrachloroethene	ND		ug/kg	70	--	1
Chlorobenzene	ND		ug/kg	70	--	1
Trichlorofluoromethane	ND		ug/kg	560	--	1
1,2-Dichloroethane	ND		ug/kg	140	--	1
1,1,1-Trichloroethane	ND		ug/kg	70	--	1
Bromodichloromethane	ND		ug/kg	70	--	1
trans-1,3-Dichloropropene	ND		ug/kg	140	--	1
cis-1,3-Dichloropropene	ND		ug/kg	70	--	1
1,3-Dichloropropene, Total	ND		ug/kg	70	--	1
1,1-Dichloropropene	ND		ug/kg	70	--	1
Bromoform	ND		ug/kg	560	--	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	70	--	1
Benzene	240		ug/kg	70	--	1
Toluene	570		ug/kg	140	--	1
Ethylbenzene	ND		ug/kg	140	--	1
Chloromethane	ND		ug/kg	560	--	1
Bromomethane	ND		ug/kg	280	--	1
Vinyl chloride	ND		ug/kg	140	--	1
Chloroethane	ND		ug/kg	280	--	1
1,1-Dichloroethene	ND		ug/kg	140	--	1
trans-1,2-Dichloroethene	ND		ug/kg	210	--	1



Project Name: MCCABE ST.

Lab Number: L1829544

Project Number: SE18-1375

Report Date: 08/10/18

## SAMPLE RESULTS

Lab ID: L1829544-02

Date Collected: 07/31/18 12:00

Client ID: SS-2

Date Received: 07/31/18

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
Trichloroethene	ND		ug/kg	70	--	1
1,2-Dichlorobenzene	ND		ug/kg	280	--	1
1,3-Dichlorobenzene	ND		ug/kg	280	--	1
1,4-Dichlorobenzene	ND		ug/kg	280	--	1
Methyl tert butyl ether	ND		ug/kg	280	--	1
p/m-Xylene	330		ug/kg	280	--	1
o-Xylene	ND		ug/kg	140	--	1
Xylenes, Total	330		ug/kg	140	--	1
cis-1,2-Dichloroethene	ND		ug/kg	140	--	1
1,2-Dichloroethene, Total	ND		ug/kg	140	--	1
Dibromomethane	ND		ug/kg	280	--	1
1,2,3-Trichloropropane	ND		ug/kg	280	--	1
Styrene	280		ug/kg	140	--	1
Dichlorodifluoromethane	ND		ug/kg	1400	--	1
Acetone	ND		ug/kg	1400	--	1
Carbon disulfide	ND		ug/kg	1400	--	1
Methyl ethyl ketone	ND		ug/kg	1400	--	1
Methyl isobutyl ketone	ND		ug/kg	1400	--	1
2-Hexanone	ND		ug/kg	1400	--	1
Bromochloromethane	ND		ug/kg	280	--	1
Tetrahydrofuran	ND		ug/kg	560	--	1
2,2-Dichloropropane	ND		ug/kg	280	--	1
1,2-Dibromoethane	ND		ug/kg	140	--	1
1,3-Dichloropropane	ND		ug/kg	280	--	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	70	--	1
Bromobenzene	ND		ug/kg	280	--	1
n-Butylbenzene	ND		ug/kg	140	--	1
sec-Butylbenzene	ND		ug/kg	140	--	1
tert-Butylbenzene	ND		ug/kg	280	--	1
o-Chlorotoluene	ND		ug/kg	280	--	1
p-Chlorotoluene	ND		ug/kg	280	--	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	420	--	1
Hexachlorobutadiene	ND		ug/kg	560	--	1
Isopropylbenzene	ND		ug/kg	140	--	1
p-Isopropyltoluene	ND		ug/kg	140	--	1
Naphthalene	1200		ug/kg	560	--	1
n-Propylbenzene	ND		ug/kg	140	--	1

Project Name: MCCABE ST.

Lab Number: L1829544

Project Number: SE18-1375

Report Date: 08/10/18

## SAMPLE RESULTS

Lab ID: L1829544-02

Date Collected: 07/31/18 12:00

Client ID: SS-2

Date Received: 07/31/18

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics by 8260/5035 - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/kg	280	--	1
1,2,4-Trichlorobenzene	ND		ug/kg	280	--	1
1,3,5-Trimethylbenzene	ND		ug/kg	280	--	1
1,2,4-Trimethylbenzene	ND		ug/kg	280	--	1
Diethyl ether	ND		ug/kg	280	--	1
Diisopropyl Ether	ND		ug/kg	280	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/kg	280	--	1
Tertiary-Amyl Methyl Ether	ND		ug/kg	280	--	1
1,4-Dioxane	ND		ug/kg	14000	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	96		70-130

Project Name: MCCABE ST.

Lab Number: L1829544

Project Number: SE18-1375

Report Date: 08/10/18

### Method Blank Analysis Batch Quality Control

Analytical Method: 97,8260C  
 Analytical Date: 08/08/18 20:30  
 Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 02 Batch: WG1144620-5					
Methylene chloride	ND		ug/kg	250	--
1,1-Dichloroethane	ND		ug/kg	50	--
Chloroform	ND		ug/kg	75	--
Carbon tetrachloride	ND		ug/kg	50	--
1,2-Dichloropropane	ND		ug/kg	50	--
Dibromochloromethane	ND		ug/kg	50	--
1,1,2-Trichloroethane	ND		ug/kg	50	--
Tetrachloroethene	ND		ug/kg	25	--
Chlorobenzene	ND		ug/kg	25	--
Trichlorofluoromethane	ND		ug/kg	200	--
1,2-Dichloroethane	ND		ug/kg	50	--
1,1,1-Trichloroethane	ND		ug/kg	25	--
Bromodichloromethane	ND		ug/kg	25	--
trans-1,3-Dichloropropene	ND		ug/kg	50	--
cis-1,3-Dichloropropene	ND		ug/kg	25	--
1,3-Dichloropropene, Total	ND		ug/kg	25	--
1,1-Dichloropropene	ND		ug/kg	25	--
Bromoform	ND		ug/kg	200	--
1,1,2,2-Tetrachloroethane	ND		ug/kg	25	--
Benzene	ND		ug/kg	25	--
Toluene	ND		ug/kg	50	--
Ethylbenzene	ND		ug/kg	50	--
Chloromethane	ND		ug/kg	200	--
Bromomethane	ND		ug/kg	100	--
Vinyl chloride	ND		ug/kg	50	--
Chloroethane	ND		ug/kg	100	--
1,1-Dichloroethene	ND		ug/kg	50	--
trans-1,2-Dichloroethene	ND		ug/kg	75	--
Trichloroethene	ND		ug/kg	25	--

Project Name: MCCABE ST.

Lab Number: L1829544

Project Number: SE18-1375

Report Date: 08/10/18

### Method Blank Analysis Batch Quality Control

Analytical Method: 97,8260C  
 Analytical Date: 08/08/18 20:30  
 Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 02 Batch: WG1144620-5					
1,2-Dichlorobenzene	ND		ug/kg	100	--
1,3-Dichlorobenzene	ND		ug/kg	100	--
1,4-Dichlorobenzene	ND		ug/kg	100	--
Methyl tert butyl ether	ND		ug/kg	100	--
p/m-Xylene	ND		ug/kg	100	--
o-Xylene	ND		ug/kg	50	--
Xylenes, Total	ND		ug/kg	50	--
cis-1,2-Dichloroethene	ND		ug/kg	50	--
1,2-Dichloroethene, Total	ND		ug/kg	50	--
Dibromomethane	ND		ug/kg	100	--
1,2,3-Trichloropropane	ND		ug/kg	100	--
Styrene	ND		ug/kg	50	--
Dichlorodifluoromethane	ND		ug/kg	500	--
Acetone	ND		ug/kg	500	--
Carbon disulfide	ND		ug/kg	500	--
Methyl ethyl ketone	ND		ug/kg	500	--
Methyl isobutyl ketone	ND		ug/kg	500	--
2-Hexanone	ND		ug/kg	500	--
Bromochloromethane	ND		ug/kg	100	--
Tetrahydrofuran	ND		ug/kg	200	--
2,2-Dichloropropane	ND		ug/kg	100	--
1,2-Dibromoethane	ND		ug/kg	50	--
1,3-Dichloropropane	ND		ug/kg	100	--
1,1,1,2-Tetrachloroethane	ND		ug/kg	25	--
Bromobenzene	ND		ug/kg	100	--
n-Butylbenzene	ND		ug/kg	50	--
sec-Butylbenzene	ND		ug/kg	50	--
tert-Butylbenzene	ND		ug/kg	100	--
o-Chlorotoluene	ND		ug/kg	100	--

Project Name: MCCABE ST.

Lab Number: L1829544

Project Number: SE18-1375

Report Date: 08/10/18

### Method Blank Analysis Batch Quality Control

Analytical Method: 97,8260C  
 Analytical Date: 08/08/18 20:30  
 Analyst: AD

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by 8260/5035 - Westborough Lab for sample(s): 02 Batch: WG1144620-5					
p-Chlorotoluene	ND		ug/kg	100	--
1,2-Dibromo-3-chloropropane	ND		ug/kg	150	--
Hexachlorobutadiene	ND		ug/kg	200	--
Isopropylbenzene	ND		ug/kg	50	--
p-Isopropyltoluene	ND		ug/kg	50	--
Naphthalene	ND		ug/kg	200	--
n-Propylbenzene	ND		ug/kg	50	--
1,2,3-Trichlorobenzene	ND		ug/kg	100	--
1,2,4-Trichlorobenzene	ND		ug/kg	100	--
1,3,5-Trimethylbenzene	ND		ug/kg	100	--
1,2,4-Trimethylbenzene	ND		ug/kg	100	--
Diethyl ether	ND		ug/kg	100	--
Diisopropyl Ether	ND		ug/kg	100	--
Ethyl-Tert-Butyl-Ether	ND		ug/kg	100	--
Tertiary-Amyl Methyl Ether	ND		ug/kg	100	--
1,4-Dioxane	ND		ug/kg	5000	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	97		70-130

# **Lab Control Sample Analysis** Batch Quality Control

Project Name: MCCABE ST.

Project Number: SE18-1375

Lab Number: L1829544

Report Date: 08/10/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02 Batch: WG1144620-3 WG1144620-4								
Methylene chloride	86		82		70-130	5		20
1,1-Dichloroethane	96		92		70-130	4		20
Chloroform	100		95		70-130	5		20
Carbon tetrachloride	100		94		70-130	6		20
1,2-Dichloropropane	100		98		70-130	2		20
Dibromochloromethane	98		96		70-130	2		20
1,1,2-Trichloroethane	105		101		70-130	4		20
Tetrachloroethene	98		95		70-130	3		20
Chlorobenzene	95		93		70-130	2		20
Trichlorofluoromethane	104		98		70-130	6		20
1,2-Dichloroethane	103		100		70-130	3		20
1,1,1-Trichloroethane	99		95		70-130	4		20
Bromodichloromethane	102		98		70-130	4		20
trans-1,3-Dichloropropene	93		90		70-130	3		20
cis-1,3-Dichloropropene	103		99		70-130	4		20
1,1-Dichloropropene	104		98		70-130	6		20
Bromoform	98		94		70-130	4		20
1,1,2,2-Tetrachloroethane	106		104		70-130	2		20
Benzene	97		93		70-130	4		20
Toluene	94		92		70-130	2		20
Ethylbenzene	97		93		70-130	4		20
Chloromethane	88		84		70-130	5		20
Bromomethane	87		83		70-130	5		20

# **Lab Control Sample Analysis** **Batch Quality Control**

Project Name: MCCABE ST.

Project Number: SE18-1375

Lab Number: L1829544

Report Date: 08/10/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02 Batch: WG1144620-3 WG1144620-4								
Vinyl chloride	97		91		70-130	6		20
Chloroethane	101		94		70-130	7		20
1,1-Dichloroethene	93		88		70-130	6		20
trans-1,2-Dichloroethene	92		88		70-130	4		20
Trichloroethene	99		96		70-130	3		20
1,2-Dichlorobenzene	98		95		70-130	3		20
1,3-Dichlorobenzene	99		94		70-130	5		20
1,4-Dichlorobenzene	99		94		70-130	5		20
Methyl tert butyl ether	96		93		70-130	3		20
p/m-Xylene	98		94		70-130	4		20
o-Xylene	98		96		70-130	2		20
cis-1,2-Dichloroethene	95		92		70-130	3		20
Dibromomethane	103		99		70-130	4		20
1,2,3-Trichloropropane	108		104		70-130	4		20
Styrene	100		98		70-130	2		20
Dichlorodifluoromethane	85		80		70-130	6		20
Acetone	108		97		70-130	11		20
Carbon disulfide	87		83		70-130	5		20
Methyl ethyl ketone	119		115		70-130	3		20
Methyl isobutyl ketone	100		93		70-130	7		20
2-Hexanone	96		96		70-130	0		20
Bromochloromethane	98		95		70-130	3		20
Tetrahydrofuran	104		117		70-130	12		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: MCCABE ST.

Project Number: SE18-1375

Lab Number: L1829544

Report Date: 08/10/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02 Batch: WG1144620-3 WG1144620-4								
2,2-Dichloropropane	102		96		70-130	6		20
1,2-Dibromoethane	102		99		70-130	3		20
1,3-Dichloropropane	102		100		70-130	2		20
1,1,1,2-Tetrachloroethane	100		97		70-130	3		20
Bromobenzene	99		93		70-130	6		20
n-Butylbenzene	105		99		70-130	6		20
sec-Butylbenzene	102		97		70-130	5		20
tert-Butylbenzene	100		95		70-130	5		20
o-Chlorotoluene	107		95		70-130	12		20
p-Chlorotoluene	102		94		70-130	8		20
1,2-Dibromo-3-chloropropane	92		91		70-130	1		20
Hexachlorobutadiene	95		93		70-130	2		20
Isopropylbenzene	100		95		70-130	5		20
p-Isopropyltoluene	100		96		70-130	4		20
Naphthalene	96		93		70-130	3		20
n-Propylbenzene	102		97		70-130	5		20
1,2,3-Trichlorobenzene	96		93		70-130	3		20
1,2,4-Trichlorobenzene	98		95		70-130	3		20
1,3,5-Trimethylbenzene	99		94		70-130	5		20
1,2,4-Trimethylbenzene	98		94		70-130	4		20
Diethyl ether	94		89		70-130	5		20
Diisopropyl Ether	98		94		70-130	4		20
Ethyl-Tert-Butyl-Ether	98		94		70-130	4		20



## Lab Control Sample Analysis

### Batch Quality Control

Project Name: MCCABE ST.

Lab Number: L1829544

Project Number: SE18-1375

Report Date: 08/10/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by 8260/5035 - Westborough Lab Associated sample(s): 02 Batch: WG1144620-3 WG1144620-4								
Tertiary-Amyl Methyl Ether	99		96		70-130	3		20
1,4-Dioxane	125		117		70-130	7		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	104		102		70-130
Toluene-d8	99		99		70-130
4-Bromofluorobenzene	102		100		70-130
Dibromofluoromethane	100		99		70-130

# SEMIVOLATILES

**Project Name:** MCCABE ST.**Lab Number:** L1829544**Project Number:** SE18-1375**Report Date:** 08/10/18**SAMPLE RESULTS**

Lab ID: L1829544-01 D

Date Collected: 07/31/18 11:45

Client ID: SS-1

Date Received: 07/31/18

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Extraction Method: EPA 3546

Analytical Method: 97,8270D

Extraction Date: 08/08/18 08:58

Analytical Date: 08/09/18 18:41

Analyst: EK

Percent Solids: 89%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	ND		ug/kg	740	--	5
1,2,4-Trichlorobenzene	ND		ug/kg	920	--	5
Hexachlorobenzene	ND		ug/kg	550	--	5
Bis(2-chloroethyl)ether	ND		ug/kg	830	--	5
2-Chloronaphthalene	ND		ug/kg	920	--	5
1,2-Dichlorobenzene	ND		ug/kg	920	--	5
1,3-Dichlorobenzene	ND		ug/kg	920	--	5
1,4-Dichlorobenzene	ND		ug/kg	920	--	5
3,3'-Dichlorobenzidine	ND		ug/kg	920	--	5
2,4-Dinitrotoluene	ND		ug/kg	920	--	5
2,6-Dinitrotoluene	ND		ug/kg	920	--	5
Azobenzene	ND		ug/kg	920	--	5
Fluoranthene	4000		ug/kg	550	--	5
4-Bromophenyl phenyl ether	ND		ug/kg	920	--	5
Bis(2-chloroisopropyl)ether	ND		ug/kg	1100	--	5
Bis(2-chloroethoxy)methane	ND		ug/kg	1000	--	5
Hexachlorobutadiene	ND		ug/kg	920	--	5
Hexachloroethane	ND		ug/kg	740	--	5
Isophorone	ND		ug/kg	830	--	5
Naphthalene	ND		ug/kg	920	--	5
Nitrobenzene	ND		ug/kg	830	--	5
Bis(2-ethylhexyl)phthalate	ND		ug/kg	920	--	5
Butyl benzyl phthalate	ND		ug/kg	920	--	5
Di-n-butylphthalate	ND		ug/kg	920	--	5
Di-n-octylphthalate	ND		ug/kg	920	--	5
Diethyl phthalate	ND		ug/kg	920	--	5
Dimethyl phthalate	ND		ug/kg	920	--	5
Benzo(a)anthracene	2800		ug/kg	550	--	5

Project Name: MCCABE ST.

Lab Number: L1829544

Project Number: SE18-1375

Report Date: 08/10/18

## SAMPLE RESULTS

Lab ID: L1829544-01 D

Date Collected: 07/31/18 11:45

Client ID: SS-1

Date Received: 07/31/18

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(a)pyrene	2300		ug/kg	740	--	5
Benzo(b)fluoranthene	2900		ug/kg	550	--	5
Benzo(k)fluoranthene	730		ug/kg	550	--	5
Chrysene	3500		ug/kg	550	--	5
Acenaphthylene	2500		ug/kg	740	--	5
Anthracene	1800		ug/kg	550	--	5
Benzo(ghi)perylene	1500		ug/kg	740	--	5
Fluorene	ND		ug/kg	920	--	5
Phenanthrene	3000		ug/kg	550	--	5
Dibenzo(a,h)anthracene	ND		ug/kg	550	--	5
Indeno(1,2,3-cd)pyrene	1400		ug/kg	740	--	5
Pyrene	5600		ug/kg	550	--	5
Aniline	ND		ug/kg	1100	--	5
4-Chloroaniline	ND		ug/kg	920	--	5
Dibenzofuran	ND		ug/kg	920	--	5
2-Methylnaphthalene	ND		ug/kg	1100	--	5
Acetophenone	ND		ug/kg	920	--	5
2,4,6-Trichlorophenol	ND		ug/kg	550	--	5
2-Chlorophenol	ND		ug/kg	920	--	5
2,4-Dichlorophenol	ND		ug/kg	830	--	5
2,4-Dimethylphenol	ND		ug/kg	920	--	5
2-Nitrophenol	ND		ug/kg	2000	--	5
4-Nitrophenol	ND		ug/kg	1300	--	5
2,4-Dinitrophenol	ND		ug/kg	4400	--	5
Pentachlorophenol	ND		ug/kg	1800	--	5
Phenol	ND		ug/kg	920	--	5
2-Methylphenol	ND		ug/kg	920	--	5
3-Methylphenol/4-Methylphenol	ND		ug/kg	1300	--	5
2,4,5-Trichlorophenol	ND		ug/kg	920	--	5

**Project Name:** MCCABE ST.**Lab Number:** L1829544**Project Number:** SE18-1375**Report Date:** 08/10/18**SAMPLE RESULTS**

Lab ID: L1829544-01 D

Date Collected: 07/31/18 11:45

Client ID: SS-1

Date Received: 07/31/18

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	67		30-130
Phenol-d6	73		30-130
Nitrobenzene-d5	75		30-130
2-Fluorobiphenyl	79		30-130
2,4,6-Tribromophenol	86		30-130
4-Terphenyl-d14	80		30-130

**Project Name:** MCCABE ST.**Lab Number:** L1829544**Project Number:** SE18-1375**Report Date:** 08/10/18**SAMPLE RESULTS**

Lab ID: L1829544-02 D

Date Collected: 07/31/18 12:00

Client ID: SS-2

Date Received: 07/31/18

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Extraction Method: EPA 3546

Analytical Method: 97,8270D

Extraction Date: 08/08/18 08:58

Analytical Date: 08/10/18 04:23

Analyst: ALS

Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Acenaphthene	7700		ug/kg	4800	--	30
1,2,4-Trichlorobenzene	ND		ug/kg	6000	--	30
Hexachlorobenzene	ND		ug/kg	3600	--	30
Bis(2-chloroethyl)ether	ND		ug/kg	5400	--	30
2-Chloronaphthalene	ND		ug/kg	6000	--	30
1,2-Dichlorobenzene	ND		ug/kg	6000	--	30
1,3-Dichlorobenzene	ND		ug/kg	6000	--	30
1,4-Dichlorobenzene	ND		ug/kg	6000	--	30
3,3'-Dichlorobenzidine	ND		ug/kg	6000	--	30
2,4-Dinitrotoluene	ND		ug/kg	6000	--	30
2,6-Dinitrotoluene	ND		ug/kg	6000	--	30
Azobenzene	ND		ug/kg	6000	--	30
Fluoranthene	45000		ug/kg	3600	--	30
4-Bromophenyl phenyl ether	ND		ug/kg	6000	--	30
Bis(2-chloroisopropyl)ether	ND		ug/kg	7200	--	30
Bis(2-chloroethoxy)methane	ND		ug/kg	6400	--	30
Hexachlorobutadiene	ND		ug/kg	6000	--	30
Hexachloroethane	ND		ug/kg	4800	--	30
Isophorone	ND		ug/kg	5400	--	30
Naphthalene	28000		ug/kg	6000	--	30
Nitrobenzene	ND		ug/kg	5400	--	30
Bis(2-ethylhexyl)phthalate	ND		ug/kg	6000	--	30
Butyl benzyl phthalate	ND		ug/kg	6000	--	30
Di-n-butylphthalate	ND		ug/kg	6000	--	30
Di-n-octylphthalate	ND		ug/kg	6000	--	30
Diethyl phthalate	ND		ug/kg	6000	--	30
Dimethyl phthalate	ND		ug/kg	6000	--	30
Benzo(a)anthracene	46000		ug/kg	3600	--	30

**Project Name:** MCCABE ST.**Lab Number:** L1829544**Project Number:** SE18-1375**Report Date:** 08/10/18**SAMPLE RESULTS**

Lab ID: L1829544-02 D

Date Collected: 07/31/18 12:00

Client ID: SS-2

Date Received: 07/31/18

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
Benzo(a)pyrene	42000		ug/kg	4800	--	30
Benzo(b)fluoranthene	42000		ug/kg	3600	--	30
Benzo(k)fluoranthene	10000		ug/kg	3600	--	30
Chrysene	56000		ug/kg	3600	--	30
Acenaphthylene	64000		ug/kg	4800	--	30
Anthracene	47000		ug/kg	3600	--	30
Benzo(ghi)perylene	22000		ug/kg	4800	--	30
Fluorene	20000		ug/kg	6000	--	30
Phenanthrene	49000		ug/kg	3600	--	30
Dibenzo(a,h)anthracene	8900		ug/kg	3600	--	30
Indeno(1,2,3-cd)pyrene	21000		ug/kg	4800	--	30
Pyrene	89000		ug/kg	3600	--	30
Aniline	ND		ug/kg	7200	--	30
4-Chloroaniline	ND		ug/kg	6000	--	30
Dibenzofuran	ND		ug/kg	6000	--	30
2-Methylnaphthalene	33000		ug/kg	7200	--	30
Acetophenone	ND		ug/kg	6000	--	30
2,4,6-Trichlorophenol	ND		ug/kg	3600	--	30
2-Chlorophenol	ND		ug/kg	6000	--	30
2,4-Dichlorophenol	ND		ug/kg	5400	--	30
2,4-Dimethylphenol	ND		ug/kg	6000	--	30
2-Nitrophenol	ND		ug/kg	13000	--	30
4-Nitrophenol	ND		ug/kg	8400	--	30
2,4-Dinitrophenol	ND		ug/kg	29000	--	30
Pentachlorophenol	ND		ug/kg	12000	--	30
Phenol	ND		ug/kg	6000	--	30
2-Methylphenol	ND		ug/kg	6000	--	30
3-Methylphenol/4-Methylphenol	ND		ug/kg	8600	--	30
2,4,5-Trichlorophenol	ND		ug/kg	6000	--	30

**Project Name:** MCCABE ST.**Lab Number:** L1829544**Project Number:** SE18-1375**Report Date:** 08/10/18**SAMPLE RESULTS**

Lab ID: L1829544-02 D

Date Collected: 07/31/18 12:00

Client ID: SS-2

Date Received: 07/31/18

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	0	Q	30-130
Phenol-d6	0	Q	30-130
Nitrobenzene-d5	0	Q	30-130
2-Fluorobiphenyl	0	Q	30-130
2,4,6-Tribromophenol	0	Q	30-130
4-Terphenyl-d14	0	Q	30-130



Project Name: MCCABE ST.

Lab Number: L1829544

Project Number: SE18-1375

Report Date: 08/10/18

### Method Blank Analysis Batch Quality Control

Analytical Method: 97,8270D  
 Analytical Date: 08/09/18 14:29  
 Analyst: EK

Extraction Method: EPA 3546  
 Extraction Date: 08/08/18 05:26

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-02 Batch: WG1143977-1					
Acenaphthene	ND		ug/kg	130	--
1,2,4-Trichlorobenzene	ND		ug/kg	160	--
Hexachlorobenzene	ND		ug/kg	99	--
Bis(2-chloroethyl)ether	ND		ug/kg	150	--
2-Chloronaphthalene	ND		ug/kg	160	--
1,2-Dichlorobenzene	ND		ug/kg	160	--
1,3-Dichlorobenzene	ND		ug/kg	160	--
1,4-Dichlorobenzene	ND		ug/kg	160	--
3,3'-Dichlorobenzidine	ND		ug/kg	160	--
2,4-Dinitrotoluene	ND		ug/kg	160	--
2,6-Dinitrotoluene	ND		ug/kg	160	--
Azobenzene	ND		ug/kg	160	--
Fluoranthene	ND		ug/kg	99	--
4-Bromophenyl phenyl ether	ND		ug/kg	160	--
Bis(2-chloroisopropyl)ether	ND		ug/kg	200	--
Bis(2-chloroethoxy)methane	ND		ug/kg	180	--
Hexachlorobutadiene	ND		ug/kg	160	--
Hexachloroethane	ND		ug/kg	130	--
Isophorone	ND		ug/kg	150	--
Naphthalene	ND		ug/kg	160	--
Nitrobenzene	ND		ug/kg	150	--
Bis(2-ethylhexyl)phthalate	ND		ug/kg	160	--
Butyl benzyl phthalate	ND		ug/kg	160	--
Di-n-butylphthalate	ND		ug/kg	160	--
Di-n-octylphthalate	ND		ug/kg	160	--
Diethyl phthalate	ND		ug/kg	160	--
Dimethyl phthalate	ND		ug/kg	160	--
Benzo(a)anthracene	ND		ug/kg	99	--
Benzo(a)pyrene	ND		ug/kg	130	--

Project Name: MCCABE ST.

Lab Number: L1829544

Project Number: SE18-1375

Report Date: 08/10/18

### Method Blank Analysis Batch Quality Control

Analytical Method: 97,8270D  
 Analytical Date: 08/09/18 14:29  
 Analyst: EK

Extraction Method: EPA 3546  
 Extraction Date: 08/08/18 05:26

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-02 Batch: WG1143977-1					
Benzo(b)fluoranthene	ND		ug/kg	99	--
Benzo(k)fluoranthene	ND		ug/kg	99	--
Chrysene	ND		ug/kg	99	--
Acenaphthylene	ND		ug/kg	130	--
Anthracene	ND		ug/kg	99	--
Benzo(ghi)perylene	ND		ug/kg	130	--
Fluorene	ND		ug/kg	160	--
Phenanthrene	ND		ug/kg	99	--
Dibenzo(a,h)anthracene	ND		ug/kg	99	--
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	--
Pyrene	ND		ug/kg	99	--
Aniline	ND		ug/kg	200	--
4-Chloroaniline	ND		ug/kg	160	--
Dibenzofuran	ND		ug/kg	160	--
2-Methylnaphthalene	ND		ug/kg	200	--
Acetophenone	ND		ug/kg	160	--
2,4,6-Trichlorophenol	ND		ug/kg	99	--
2-Chlorophenol	ND		ug/kg	160	--
2,4-Dichlorophenol	ND		ug/kg	150	--
2,4-Dimethylphenol	ND		ug/kg	160	--
2-Nitrophenol	ND		ug/kg	360	--
4-Nitrophenol	ND		ug/kg	230	--
2,4-Dinitrophenol	ND		ug/kg	790	--
Pentachlorophenol	ND		ug/kg	330	--
Phenol	ND		ug/kg	160	--
2-Methylphenol	ND		ug/kg	160	--
3-Methylphenol/4-Methylphenol	ND		ug/kg	240	--
2,4,5-Trichlorophenol	ND		ug/kg	160	--

Project Name: MCCABE ST.

Lab Number: L1829544

Project Number: SE18-1375

Report Date: 08/10/18

### Method Blank Analysis Batch Quality Control

Analytical Method: 97,8270D  
 Analytical Date: 08/09/18 14:29  
 Analyst: EK

Extraction Method: EPA 3546  
 Extraction Date: 08/08/18 05:26

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01-02 Batch: WG1143977-1					

#### Tentatively Identified Compounds

No Tentatively Identified Compounds      ND      ug/kg

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	80		30-130
Phenol-d6	85		30-130
Nitrobenzene-d5	81		30-130
2-Fluorobiphenyl	90		30-130
2,4,6-Tribromophenol	85		30-130
4-Terphenyl-d14	107		30-130

# **Lab Control Sample Analysis** Batch Quality Control

Project Name: MCCABE ST.

Project Number: SE18-1375

Lab Number: L1829544

Report Date: 08/10/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-02 Batch: WG1143977-2 WG1143977-3								
Acenaphthene	129		95		40-140	30		30
1,2,4-Trichlorobenzene	126		96		40-140	27		30
Hexachlorobenzene	137		104		40-140	27		30
Bis(2-chloroethyl)ether	120		92		40-140	26		30
2-Chloronaphthalene	126		93		40-140	30		30
1,2-Dichlorobenzene	126		94		40-140	29		30
1,3-Dichlorobenzene	120		90		40-140	29		30
1,4-Dichlorobenzene	123		92		40-140	29		30
3,3'-Dichlorobenzidine	100		77		40-140	26		30
2,4-Dinitrotoluene	135		100		40-140	30		30
2,6-Dinitrotoluene	131		98		40-140	29		30
Azobenzene	134		100		40-140	29		30
Fluoranthene	133		99		40-140	29		30
4-Bromophenyl phenyl ether	134		103		40-140	26		30
Bis(2-chloroisopropyl)ether	121		93		40-140	26		30
Bis(2-chloroethoxy)methane	122		92		40-140	28		30
Hexachlorobutadiene	129		95		40-140	30		30
Hexachloroethane	124		93		40-140	29		30
Isophorone	120		92		40-140	26		30
Naphthalene	125		93		40-140	29		30
Nitrobenzene	126		94		40-140	29		30
Bis(2-ethylhexyl)phthalate	124		92		40-140	30		30
Butyl benzyl phthalate	132		100		40-140	28		30

# **Lab Control Sample Analysis** **Batch Quality Control**

Project Name: MCCABE ST.

Project Number: SE18-1375

Lab Number: L1829544

Report Date: 08/10/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-02 Batch: WG1143977-2 WG1143977-3								
Di-n-butylphthalate	127		95		40-140	29		30
Di-n-octylphthalate	126		93		40-140	30		30
Diethyl phthalate	128		97		40-140	28		30
Dimethyl phthalate	127		95		40-140	29		30
Benzo(a)anthracene	128		95		40-140	30		30
Benzo(a)pyrene	130		95		40-140	31	Q	30
Benzo(b)fluoranthene	133		97		40-140	31	Q	30
Benzo(k)fluoranthene	125		91		40-140	31	Q	30
Chrysene	124		93		40-140	29		30
Acenaphthylene	131		98		40-140	29		30
Anthracene	129		96		40-140	29		30
Benzo(ghi)perylene	131		97		40-140	30		30
Fluorene	130		96		40-140	30		30
Phenanthrene	128		95		40-140	30		30
Dibenzo(a,h)anthracene	130		96		40-140	30		30
Indeno(1,2,3-cd)pyrene	136		100		40-140	31	Q	30
Pyrene	135		99		40-140	31	Q	30
Aniline	92		73		40-140	23		30
4-Chloroaniline	122		94		40-140	26		30
Dibenzofuran	129		96		40-140	29		30
2-Methylnaphthalene	134		99		40-140	30		30
Acetophenone	127		97		40-140	27		30
2,4,6-Trichlorophenol	129		96		30-130	29		30

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: MCCABE ST.

Project Number: SE18-1375

Lab Number: L1829544

Report Date: 08/10/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01-02 Batch: WG1143977-2 WG1143977-3								
2-Chlorophenol	124		94		30-130	28		30
2,4-Dichlorophenol	129		97		30-130	28		30
2,4-Dimethylphenol	126		96		30-130	27		30
2-Nitrophenol	124		93		30-130	29		30
4-Nitrophenol	108		77		30-130	34	Q	30
2,4-Dinitrophenol	71		59		30-130	18		30
Pentachlorophenol	100		76		30-130	27		30
Phenol	115		85		30-130	30		30
2-Methylphenol	128		96		30-130	29		30
3-Methylphenol/4-Methylphenol	133	Q	102		30-130	26		30
2,4,5-Trichlorophenol	119		97		30-130	20		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	112		84		30-130
Phenol-d6	113		86		30-130
Nitrobenzene-d5	115		88		30-130
2-Fluorobiphenyl	120		87		30-130
2,4,6-Tribromophenol	128		94		30-130
4-Terphenyl-d14	132	Q	98		30-130

# **PETROLEUM HYDROCARBONS**

**Project Name:** MCCABE ST.**Lab Number:** L1829544**Project Number:** SE18-1375**Report Date:** 08/10/18**SAMPLE RESULTS**

Lab ID: L1829544-01 D

Date Collected: 07/31/18 11:45

Client ID: SS-1

Date Received: 07/31/18

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Extraction Method: EPA 3546

Analytical Method: 1,8015D(M)

Extraction Date: 08/06/18 19:01

Analytical Date: 08/08/18 17:15

Analyst: MEO

Percent Solids: 89%

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

TPH	2320000		ug/kg	372000	--	10
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	80		40-140



**Project Name:** MCCABE ST.**Lab Number:** L1829544**Project Number:** SE18-1375**Report Date:** 08/10/18**SAMPLE RESULTS**

Lab ID: L1829544-02 D

Date Collected: 07/31/18 12:00

Client ID: SS-2

Date Received: 07/31/18

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Extraction Method: EPA 3546

Analytical Method: 1,8015D(M)

Extraction Date: 08/06/18 19:01

Analytical Date: 08/08/18 17:48

Analyst: MEO

Percent Solids: 83%

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

TPH	9210000		ug/kg	754000	--	20
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	87		40-140

**Project Name:** MCCABE ST.**Lab Number:** L1829544**Project Number:** SE18-1375**Report Date:** 08/10/18**Method Blank Analysis**  
**Batch Quality Control****Analytical Method:** 1,8015D(M)  
**Analytical Date:** 08/06/18 15:41  
**Analyst:** DG**Extraction Method:** EPA 3546  
**Extraction Date:** 08/06/18 01:20

Parameter	Result	Qualifier	Units	RL	MDL
Petroleum Hydrocarbon Quantitation - Westborough Lab for sample(s): 01-02 Batch: WG1143153-1					
TPH	ND		ug/kg	31600	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
o-Terphenyl	77		40-140

# **Lab Control Sample Analysis** Batch Quality Control

Project Name: MCCABE ST.

Project Number: SE18-1375

Lab Number: L1829544

Report Date: 08/10/18

Parameter	<i>LCS</i> <i>%Recovery</i>	<i>Qual</i>	<i>LCSD</i> <i>%Recovery</i>	<i>Qual</i>	<i>%Recovery</i> <i>Limits</i>	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> <i>Limits</i>
Petroleum Hydrocarbon Quantitation - Westborough Lab Associated sample(s): 01-02 Batch: WG1143153-2								
TPH	81		-		40-140	-		40

<i>Surrogate</i>	<i>LCS</i> <i>%Recovery</i>	<i>Qual</i>	<i>LCSD</i> <i>%Recovery</i>	<i>Qual</i>	<i>Acceptance</i> <i>Criteria</i>
o-Terphenyl	79				40-140

# PCBS

**Project Name:** MCCABE ST.  
**Project Number:** SE18-1375

**Lab Number:** L1829544  
**Report Date:** 08/10/18

**SAMPLE RESULTS**

**Lab ID:** L1829544-01  
**Client ID:** SS-1  
**Sample Location:** Not Specified

**Date Collected:** 07/31/18 11:45  
**Date Received:** 07/31/18  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Soil  
**Analytical Method:** 97,8082A  
**Analytical Date:** 08/09/18 22:51  
**Analyst:** KB  
**Percent Solids:** 89%

**Extraction Method:** EPA 3546  
**Extraction Date:** 08/08/18 08:05  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 08/09/18  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 08/09/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	37.2	--	1	A
Aroclor 1221	ND		ug/kg	37.2	--	1	A
Aroclor 1232	ND		ug/kg	37.2	--	1	A
Aroclor 1242	ND		ug/kg	37.2	--	1	A
Aroclor 1248	ND		ug/kg	37.2	--	1	A
Aroclor 1254	ND		ug/kg	37.2	--	1	A
Aroclor 1260	60.7		ug/kg	37.2	--	1	A
Aroclor 1262	ND		ug/kg	37.2	--	1	A
Aroclor 1268	ND		ug/kg	37.2	--	1	B
PCBs, Total	60.7		ug/kg	37.2	--	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	55		30-150	A
Decachlorobiphenyl	69		30-150	A
2,4,5,6-Tetrachloro-m-xylene	58		30-150	B
Decachlorobiphenyl	82		30-150	B

**Project Name:** MCCABE ST.**Lab Number:** L1829544**Project Number:** SE18-1375**Report Date:** 08/10/18**SAMPLE RESULTS**

Lab ID: L1829544-02

Date Collected: 07/31/18 12:00

Client ID: SS-2

Date Received: 07/31/18

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Extraction Method: EPA 3546

Analytical Method: 97,8082A

Extraction Date: 08/08/18 08:05

Analytical Date: 08/10/18 12:37

Cleanup Method: EPA 3665A

Analyst: KB

Cleanup Date: 08/09/18

Percent Solids: 83%

Cleanup Method: EPA 3660B

Cleanup Date: 08/09/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Polychlorinated Biphenyls - Westborough Lab							
Aroclor 1016	ND		ug/kg	39.8	--	1	A
Aroclor 1221	ND		ug/kg	39.8	--	1	A
Aroclor 1232	ND		ug/kg	39.8	--	1	A
Aroclor 1242	ND		ug/kg	39.8	--	1	A
Aroclor 1248	ND		ug/kg	39.8	--	1	A
Aroclor 1254	ND		ug/kg	39.8	--	1	A
Aroclor 1260	ND		ug/kg	39.8	--	1	A
Aroclor 1262	ND		ug/kg	39.8	--	1	A
Aroclor 1268	ND		ug/kg	39.8	--	1	A
PCBs, Total	ND		ug/kg	39.8	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69		30-150	A
Decachlorobiphenyl	101		30-150	A
2,4,5,6-Tetrachloro-m-xylene	3	Q	30-150	B
Decachlorobiphenyl	6	Q	30-150	B

Project Name: MCCABE ST.

Lab Number: L1829544

Project Number: SE18-1375

Report Date: 08/10/18

### Method Blank Analysis Batch Quality Control

Analytical Method: 97,8082A  
 Analytical Date: 08/08/18 21:06  
 Analyst: HT

Extraction Method: EPA 3546  
 Extraction Date: 08/08/18 08:05  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 08/08/18  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 08/08/18

Parameter	Result	Qualifier	Units	RL	MDL	Column
MCP Polychlorinated Biphenyls - Westborough Lab for sample(s): 01-02 Batch: WG1144043-1						
Aroclor 1016	ND		ug/kg	32.3	--	A
Aroclor 1221	ND		ug/kg	32.3	--	A
Aroclor 1232	ND		ug/kg	32.3	--	A
Aroclor 1242	ND		ug/kg	32.3	--	A
Aroclor 1248	ND		ug/kg	32.3	--	A
Aroclor 1254	ND		ug/kg	32.3	--	A
Aroclor 1260	ND		ug/kg	32.3	--	A
Aroclor 1262	ND		ug/kg	32.3	--	A
Aroclor 1268	ND		ug/kg	32.3	--	A
PCBs, Total	ND		ug/kg	32.3	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	79		30-150	A
Decachlorobiphenyl	74		30-150	A
2,4,5,6-Tetrachloro-m-xylene	76		30-150	B
Decachlorobiphenyl	75		30-150	B

# **Lab Control Sample Analysis** Batch Quality Control

Project Name: MCCABE ST.

Lab Number: L1829544

Project Number: SE18-1375

Report Date: 08/10/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
MCP Polychlorinated Biphenyls - Westborough Lab Associated sample(s): 01-02 Batch: WG1144043-2 WG1144043-3									
Aroclor 1016	72		76		40-140	5		30	A
Aroclor 1260	63		67		40-140	6		30	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	82		84		30-150	A
Decachlorobiphenyl	61		64		30-150	A
2,4,5,6-Tetrachloro-m-xylene	80		84		30-150	B
Decachlorobiphenyl	69		84		30-150	B



# PESTICIDES

**Project Name:** MCCABE ST.**Lab Number:** L1829544**Project Number:** SE18-1375**Report Date:** 08/10/18**SAMPLE RESULTS**

Lab ID: L1829544-01

Date Collected: 07/31/18 11:45

Client ID: SS-1

Date Received: 07/31/18

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Extraction Method: EPA 3546

Analytical Method: 97,8081B

Extraction Date: 08/08/18 08:31

Analytical Date: 08/09/18 11:16

Cleanup Method: EPA 3620B

Analyst: KEG

Cleanup Date: 08/09/18

Percent Solids: 89%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Organochlorine Pesticides - Westborough Lab							
Delta-BHC	ND		ug/kg	1.76	--	1	A
Lindane	ND		ug/kg	0.588	--	1	A
Alpha-BHC	ND		ug/kg	0.736	--	1	A
Beta-BHC	ND		ug/kg	1.76	--	1	A
Heptachlor	ND		ug/kg	0.883	--	1	A
Aldrin	ND		ug/kg	1.76	--	1	A
Heptachlor epoxide	ND		ug/kg	3.31	--	1	A
Endrin	ND		ug/kg	0.736	--	1	A
Endrin ketone	ND		ug/kg	1.76	--	1	A
Dieldrin	ND		ug/kg	1.10	--	1	A
4,4'-DDE	2.52	PI	ug/kg	1.76	--	1	B
4,4'-DDD	5.41	PI	ug/kg	1.76	--	1	B
4,4'-DDT	40.2		ug/kg	3.31	--	1	A
Endosulfan I	ND		ug/kg	1.76	--	1	A
Endosulfan II	5.46	PI	ug/kg	1.76	--	1	A
Endosulfan sulfate	ND		ug/kg	0.736	--	1	A
Methoxychlor	ND		ug/kg	3.31	--	1	A
Chlordane	ND		ug/kg	14.3	--	1	A
Hexachlorobenzene	ND		ug/kg	1.76	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	83		30-150	B
Decachlorobiphenyl	172	Q	30-150	B
2,4,5,6-Tetrachloro-m-xylene	119		30-150	A
Decachlorobiphenyl	163	Q	30-150	A

**Project Name:** MCCABE ST.**Lab Number:** L1829544**Project Number:** SE18-1375**Report Date:** 08/10/18**SAMPLE RESULTS**

Lab ID: L1829544-02 D

Date Collected: 07/31/18 12:00

Client ID: SS-2

Date Received: 07/31/18

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Extraction Method: EPA 3546

Analytical Method: 97,8081B

Extraction Date: 08/08/18 08:31

Analytical Date: 08/09/18 11:28

Cleanup Method: EPA 3620B

Analyst: KEG

Cleanup Date: 08/09/18

Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
MCP Organochlorine Pesticides - Westborough Lab							
Delta-BHC	ND		ug/kg	9.26	--	5	A
Lindane	ND		ug/kg	3.09	--	5	A
Alpha-BHC	ND		ug/kg	3.86	--	5	A
Beta-BHC	ND		ug/kg	9.26	--	5	A
Heptachlor	ND		ug/kg	4.63	--	5	A
Aldrin	ND		ug/kg	9.26	--	5	A
Heptachlor epoxide	ND		ug/kg	17.4	--	5	A
Endrin	ND		ug/kg	3.86	--	5	A
Endrin ketone	ND		ug/kg	9.26	--	5	A
Dieldrin	ND		ug/kg	5.79	--	5	A
4,4'-DDE	ND		ug/kg	9.26	--	5	A
4,4'-DDD	ND		ug/kg	9.26	--	5	A
4,4'-DDT	ND		ug/kg	17.4	--	5	A
Endosulfan I	ND		ug/kg	9.26	--	5	A
Endosulfan II	ND		ug/kg	9.26	--	5	A
Endosulfan sulfate	ND		ug/kg	3.86	--	5	A
Methoxychlor	ND		ug/kg	17.4	--	5	A
Chlordane	ND		ug/kg	75.2	--	5	A
Hexachlorobenzene	ND		ug/kg	9.26	--	5	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	40		30-150	B
Decachlorobiphenyl	531	Q	30-150	B
2,4,5,6-Tetrachloro-m-xylene	114		30-150	A
Decachlorobiphenyl	484	Q	30-150	A

Project Name: MCCABE ST.

Lab Number: L1829544

Project Number: SE18-1375

Report Date: 08/10/18

### Method Blank Analysis Batch Quality Control

Analytical Method: 97,8081B  
 Analytical Date: 08/09/18 10:38  
 Analyst: KEG

Extraction Method: EPA 3546  
 Extraction Date: 08/08/18 08:31  
 Cleanup Method: EPA 3620B  
 Cleanup Date: 08/09/18

Parameter	Result	Qualifier	Units	RL	MDL	Column
MCP Organochlorine Pesticides - Westborough Lab for sample(s): 01-02 Batch: WG1144053-1						
Delta-BHC	ND		ug/kg	1.54	--	A
Lindane	ND		ug/kg	0.512	--	A
Alpha-BHC	ND		ug/kg	0.640	--	A
Beta-BHC	ND		ug/kg	1.54	--	A
Heptachlor	ND		ug/kg	0.768	--	A
Aldrin	ND		ug/kg	1.54	--	A
Heptachlor epoxide	ND		ug/kg	2.88	--	A
Endrin	ND		ug/kg	0.640	--	A
Endrin ketone	ND		ug/kg	1.54	--	A
Dieldrin	ND		ug/kg	0.960	--	A
4,4'-DDE	ND		ug/kg	1.54	--	A
4,4'-DDD	ND		ug/kg	1.54	--	A
4,4'-DDT	ND		ug/kg	2.88	--	A
Endosulfan I	ND		ug/kg	1.54	--	A
Endosulfan II	ND		ug/kg	1.54	--	A
Endosulfan sulfate	ND		ug/kg	0.640	--	A
Methoxychlor	ND		ug/kg	2.88	--	A
Chlordane	ND		ug/kg	12.5	--	A
Hexachlorobenzene	ND		ug/kg	1.54	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	80		30-150	B
Decachlorobiphenyl	92		30-150	B
2,4,5,6-Tetrachloro-m-xylene	90		30-150	A
Decachlorobiphenyl	85		30-150	A

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: MCCABE ST.

Project Number: SE18-1375

Lab Number: L1829544

Report Date: 08/10/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
MCP Organochlorine Pesticides - Westborough Lab Associated sample(s): 01-02 Batch: WG1144053-2 WG1144053-3									
Delta-BHC	97		102		40-140	5		30	A
Lindane	89		94		40-140	5		30	A
Alpha-BHC	91		96		40-140	5		30	A
Beta-BHC	80		83		40-140	4		30	A
Heptachlor	73		76		40-140	4		30	A
Aldrin	80		85		40-140	6		30	A
Heptachlor epoxide	76		81		40-140	6		30	A
Endrin	88		91		40-140	3		30	A
Endrin ketone	74		72		40-140	3		30	A
Dieldrin	90		93		40-140	3		30	A
4,4'-DDE	82		86		40-140	5		30	A
4,4'-DDD	86		90		40-140	5		30	A
4,4'-DDT	87		91		40-140	4		30	A
Endosulfan I	81		85		40-140	5		30	A
Endosulfan II	86		89		40-140	3		30	A
Endosulfan sulfate	58		56		40-140	4		30	A
Methoxychlor	78		80		40-140	3		30	A
Hexachlorobenzene	75		79		40-140	5		30	A

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: MCCABE ST.

Project Number: SE18-1375

Lab Number: L1829544

Report Date: 08/10/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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MCP Organochlorine Pesticides - Westborough Lab Associated sample(s): 01-02 Batch: WG1144053-2 WG1144053-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	76		78		30-150	B
Decachlorobiphenyl	93		92		30-150	B
2,4,5,6-Tetrachloro-m-xylene	86		89		30-150	A
Decachlorobiphenyl	88		83		30-150	A

## METALS

Project Name: MCCABE ST.

Lab Number: L1829544

Project Number: SE18-1375

Report Date: 08/10/18

## SAMPLE RESULTS

Lab ID: L1829544-01

Date Collected: 07/31/18 11:45

Client ID: SS-1

Date Received: 07/31/18

Sample Location: Not Specified

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
MCP Total Metals - Mansfield Lab											
Antimony, Total	13.7		mg/kg	2.13	--	1	08/09/18 08:30	08/09/18 11:15	EPA 3050B	97,6010D	LC
Arsenic, Total	18.4		mg/kg	0.426	--	1	08/09/18 08:30	08/09/18 11:15	EPA 3050B	97,6010D	LC
Barium, Total	943		mg/kg	4.26	--	10	08/09/18 08:30	08/09/18 14:55	EPA 3050B	97,6010D	LC
Beryllium, Total	ND		mg/kg	0.213	--	1	08/09/18 08:30	08/09/18 11:15	EPA 3050B	97,6010D	LC
Cadmium, Total	ND		mg/kg	0.426	--	1	08/09/18 08:30	08/09/18 11:15	EPA 3050B	97,6010D	LC
Chromium, Total	3200		mg/kg	4.26	--	10	08/09/18 08:30	08/09/18 14:55	EPA 3050B	97,6010D	LC
Lead, Total	4270		mg/kg	21.3	--	10	08/09/18 08:30	08/09/18 14:55	EPA 3050B	97,6010D	LC
Nickel, Total	145		mg/kg	1.06	--	1	08/09/18 08:30	08/09/18 11:15	EPA 3050B	97,6010D	LC
Selenium, Total	12.3		mg/kg	2.13	--	1	08/09/18 08:30	08/09/18 11:15	EPA 3050B	97,6010D	LC
Silver, Total	1.00		mg/kg	0.426	--	1	08/09/18 08:30	08/09/18 11:15	EPA 3050B	97,6010D	LC
Thallium, Total	ND		mg/kg	2.13	--	1	08/09/18 08:30	08/09/18 11:15	EPA 3050B	97,6010D	LC
Vanadium, Total	854		mg/kg	0.426	--	1	08/09/18 08:30	08/09/18 11:15	EPA 3050B	97,6010D	LC
Zinc, Total	303		mg/kg	2.13	--	1	08/09/18 08:30	08/09/18 11:15	EPA 3050B	97,6010D	LC





Project Name: MCCABE ST.

Lab Number: L1829544

Project Number: SE18-1375

Report Date: 08/10/18

## SAMPLE RESULTS

Lab ID: L1829544-02

Date Collected: 07/31/18 12:00

Client ID: SS-2

Date Received: 07/31/18

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab											
Antimony, Total	9.48		mg/kg	2.34	--	1	08/09/18 08:30	08/09/18 11:20	EPA 3050B	97,6010D	LC
Arsenic, Total	23.3		mg/kg	0.469	--	1	08/09/18 08:30	08/09/18 11:20	EPA 3050B	97,6010D	LC
Barium, Total	339		mg/kg	0.469	--	1	08/09/18 08:30	08/09/18 11:20	EPA 3050B	97,6010D	LC
Beryllium, Total	ND		mg/kg	0.234	--	1	08/09/18 08:30	08/09/18 11:20	EPA 3050B	97,6010D	LC
Cadmium, Total	37.2		mg/kg	0.469	--	1	08/09/18 08:30	08/09/18 11:20	EPA 3050B	97,6010D	LC
Chromium, Total	102		mg/kg	0.469	--	1	08/09/18 08:30	08/09/18 11:20	EPA 3050B	97,6010D	LC
Lead, Total	1370		mg/kg	2.34	--	1	08/09/18 08:30	08/09/18 11:20	EPA 3050B	97,6010D	LC
Nickel, Total	79.4		mg/kg	1.17	--	1	08/09/18 08:30	08/09/18 11:20	EPA 3050B	97,6010D	LC
Selenium, Total	ND		mg/kg	2.34	--	1	08/09/18 08:30	08/09/18 11:20	EPA 3050B	97,6010D	LC
Silver, Total	1.18		mg/kg	0.469	--	1	08/09/18 08:30	08/09/18 11:20	EPA 3050B	97,6010D	LC
Thallium, Total	ND		mg/kg	2.34	--	1	08/09/18 08:30	08/09/18 11:20	EPA 3050B	97,6010D	LC
Vanadium, Total	37.3		mg/kg	0.469	--	1	08/09/18 08:30	08/09/18 11:20	EPA 3050B	97,6010D	LC
Zinc, Total	910		mg/kg	2.34	--	1	08/09/18 08:30	08/09/18 11:20	EPA 3050B	97,6010D	LC



Project Name: MCCABE ST.

Lab Number: L1829544

Project Number: SE18-1375

Report Date: 08/10/18

## Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1144477-1										
Antimony, Total	ND		mg/kg	2.00	--	1	08/09/18 08:30	08/09/18 10:34	97,6010D	LC
Arsenic, Total	ND		mg/kg	0.400	--	1	08/09/18 08:30	08/09/18 10:34	97,6010D	LC
Barium, Total	ND		mg/kg	0.400	--	1	08/09/18 08:30	08/09/18 10:34	97,6010D	LC
Beryllium, Total	ND		mg/kg	0.200	--	1	08/09/18 08:30	08/09/18 10:34	97,6010D	LC
Cadmium, Total	ND		mg/kg	0.400	--	1	08/09/18 08:30	08/09/18 10:34	97,6010D	LC
Chromium, Total	ND		mg/kg	0.400	--	1	08/09/18 08:30	08/09/18 10:34	97,6010D	LC
Lead, Total	ND		mg/kg	2.00	--	1	08/09/18 08:30	08/09/18 10:34	97,6010D	LC
Nickel, Total	ND		mg/kg	1.00	--	1	08/09/18 08:30	08/09/18 10:34	97,6010D	LC
Selenium, Total	ND		mg/kg	2.00	--	1	08/09/18 08:30	08/09/18 10:34	97,6010D	LC
Silver, Total	ND		mg/kg	0.400	--	1	08/09/18 08:30	08/09/18 10:34	97,6010D	LC
Thallium, Total	ND		mg/kg	2.00	--	1	08/09/18 08:30	08/09/18 10:34	97,6010D	LC
Vanadium, Total	ND		mg/kg	0.400	--	1	08/09/18 08:30	08/09/18 10:34	97,6010D	LC
Zinc, Total	ND		mg/kg	2.00	--	1	08/09/18 08:30	08/09/18 10:34	97,6010D	LC

### Prep Information

Digestion Method: EPA 3050B

# Lab Control Sample Analysis

## Batch Quality Control

Project Name: MCCABE ST.

Project Number: SE18-1375

Lab Number: L1829544

Report Date: 08/10/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1144477-2 WG1144477-3 SRM Lot Number: D098-540								
Antimony, Total	150		157		6-194	5		30
Arsenic, Total	94		93		83-117	1		30
Barium, Total	92		93		82-118	1		30
Beryllium, Total	87		88		83-117	1		30
Cadmium, Total	91		88		82-117	3		30
Chromium, Total	89		89		83-119	0		30
Lead, Total	86		87		82-117	1		30
Nickel, Total	90		89		82-117	1		30
Selenium, Total	95		93		78-121	2		30
Silver, Total	96		97		80-120	1		30
Thallium, Total	92		88		80-119	4		30
Vanadium, Total	88		90		79-121	2		30
Zinc, Total	88		88		81-119	0		30

# **INORGANICS & MISCELLANEOUS**

Project Name: MCCABE ST.

Project Number: SE18-1375

Lab Number: L1829544

Report Date: 08/10/18

## SAMPLE RESULTS

Lab ID: L1829544-01

Client ID: SS-1

Sample Location: Not Specified

Date Collected: 07/31/18 11:45

Date Received: 07/31/18

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	88.8		%	0.100	NA	1	-	08/07/18 08:54	121,2540G	RI



Project Name: MCCABE ST.

Project Number: SE18-1375

Lab Number: L1829544

Report Date: 08/10/18

## SAMPLE RESULTS

Lab ID: L1829544-02

Client ID: SS-2

Sample Location: Not Specified

Date Collected: 07/31/18 12:00

Date Received: 07/31/18

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	83.3		%	0.100	NA	1	-	08/07/18 08:54	121,2540G	RI



**Project Name:** MCCABE ST.  
**Project Number:** SE18-1375

**Serial\_No:**08101816:03  
**Lab Number:** L1829544  
**Report Date:** 08/10/18

**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(*)
L1829544-01A	Glass 60ml unpreserved split	A	NA		3.2	Y	Absent		MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-CD-6010T-10(180),MCP-TL-6010T-10(180),MCP-AG-6010T-10(180),MCP-SB-6010T-10(180),MCP-ZN-6010T-10(180),MCP-BE-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-V-6010T-10(180),MCP-NI-6010T-10(180),MCP-PB-6010T-10(180)
L1829544-01B	Glass 250ml/8oz unpreserved	A	NA		3.2	Y	Absent		MCP-8082-10(365),MCP-8081-10(14),MCP-8270-10(14),TS(7),TPH-DRO-D(14)
L1829544-02A	Vial MeOH preserved	A	NA		3.2	Y	Absent		MCP-8260HLW-10(14)
L1829544-02B	Vial water preserved	A	NA		3.2	Y	Absent	01-AUG-18 02:39	MCP-8260HLW-10(14)
L1829544-02C	Vial water preserved	A	NA		3.2	Y	Absent	01-AUG-18 02:39	MCP-8260HLW-10(14)
L1829544-02D	Plastic 2oz unpreserved for TS	A	NA		3.2	Y	Absent		MCP-CR-6010T-10(180),MCP-AS-6010T-10(180),MCP-CD-6010T-10(180),MCP-TL-6010T-10(180),MCP-AG-6010T-10(180),MCP-SB-6010T-10(180),MCP-ZN-6010T-10(180),MCP-BE-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-V-6010T-10(180),MCP-NI-6010T-10(180),MCP-PB-6010T-10(180)
L1829544-02E	Glass 250ml/8oz unpreserved	A	NA		3.2	Y	Absent		MCP-8082-10(365),MCP-8081-10(14),MCP-8270-10(14),TS(7),TPH-DRO-D(14)

**Project Name:** MCCABE ST.  
**Project Number:** SE18-1375

**Lab Number:** L1829544  
**Report Date:** 08/10/18

## GLOSSARY

### Acronyms

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.
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.
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.
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.

### 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.

**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.

**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.

**Report Format:** Data Usability Report





**Project Name:** MCCABE ST.  
**Project Number:** SE18-1375

**Lab Number:** L1829544  
**Report Date:** 08/10/18

#### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- 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.
- 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.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- 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.
- 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.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** MCCABE ST.  
**Project Number:** SE18-1375

**Lab Number:** L1829544  
**Report Date:** 08/10/18

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.
- 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:** m/p-xylene, o-xylene

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

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

**EPA 300:** DW: Bromide

**EPA 6860:** SCM: Perchlorate

**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation

**SM4500:** NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

### 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.

**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**

**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, **EPA 351.1, 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 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** 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:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, SM9222D.**

### Mansfield Facility:

#### Drinking Water

**EPA 200.7:** Al, Ba, Be, Cd, Cr, Cu, 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, Pb, Mn, Ni, Se, Ag, TL, Zn.

**EPA 245.1 Hg.**

**SM2340B**

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

## PAGE 1 OF 1

8 Walkup Drive  
Westboro, MA 01581  
Tel: 508-896-9220

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

Project Name: McCabe St

Project #: SE18-1375

Project Manager: Veit Seitz

ALPHA Quote #:

☒ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due:

☒ ADEX ☐ EMAIL☐ Same as Client Info      PO #:

☒ 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 MA MCP Criteria 5-1

**ANALYSIS**

VOC: ☒ 8260 ☐ 624 ☐ 524.2

SVOC: ☒ ABN ☐ PAH

METALS: ☒ MCP 13 ☐ MCP 14 ☐ RCP 15

METALS: ☐ RCRAS ☐ RCRAS ☐ RCP 13

EPH: ☐ Ranges & Targets ☐ Ranges Only

VPH: ☐ Ranges & Targets ☐ Ranges Only

TPH: ☒ PCB ☒ PEST

TPH: ☒ Quant Only ☐ Fingerprint

*Filtration*  
☐ Field  
☐ Lab to do

*Preservation*  
☐ Lab to do

TOTAL # BOTTLES

ALPHA Lab ID  
(Lab Use Only)

Sample ID

Collection

Dai

Time

Sample Matrix

Sampler Initials	Date
---------------------	------

	x	x					x	x
x	x	x					x	x

VOC Low

$$\frac{1}{4}$$

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

A = None  
B = HCl  
C = HNO<sub>3</sub>  
D = H<sub>2</sub>SO<sub>4</sub>  
E = NaOH  
F = MeOH  
G = NaHSO<sub>4</sub>  
H = Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>  
I = Ascorbic Acid  
J = NH<sub>4</sub>Cl  
K = Zn Acetate  
O = Other

Container Type

Preservative

Received By:

Date/Time

All samples submitted are subject to Alpha's Terms and Conditions.  
See reverse side.

FORM NO. 01-01 (rev. 12-Mar-2012)

**Method Blank Summary**  
**Form 4**  
**VOLATILES**

Client	: Sitec Environmental, Inc.	Lab Number	: L1829544
Project Name	: MCCABE ST.	Project Number	: SE18-1375
Lab Sample ID	: WG1144620-5	Lab File ID	: V00180808N05
Instrument ID	: VOA100		
Matrix	: SOIL	Analysis Date	: 08/08/18 20:30

Client Sample No.	Lab Sample ID	Analysis Date
WG1144620-3LCS	WG1144620-3	08/08/18 18:44
WG1144620-4LCSD	WG1144620-4	08/08/18 19:10
SS-2	L1829544-02	08/08/18 20:57

## Continuing Calibration Form 7

Client : Sitec Environmental, Inc.  
 Project Name : MCCABE ST.  
 Instrument ID : VOA100  
 Lab File ID : V00180808N01  
 Sample No : WG1144620-2  
 Channel :

Lab Number : L1829544  
 Project Number : SE18-1375  
 Calibration Date : 08/08/18 18:44  
 Init. Calib. Date(s) : 08/02/18 08/02/18  
 Init. Calib. Times : 20:03 23:32

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	61	0
Dichlorodifluoromethane	0.229	0.195	-	14.8	20	54	0
Chloromethane	0.295	0.261	-	11.5	20	56	0
Vinyl chloride	0.284	0.274	-	3.5	20	58	0
Bromomethane	0.175	0.152	-	13.1	20	60	0
Chloroethane	0.172	0.174	-	-1.2	20	61	0
Trichlorofluoromethane	0.294	0.306	-	-4.1	20	61	0
Ethyl ether	0.125	0.118	-	5.6	20	59	0
1,1-Dichloroethene	0.202	0.187	-	7.4	20	56	0
Carbon disulfide	0.71	0.62	-	12.7	20	56	0
Methylene chloride	0.266	0.229	-	13.9	20	57	0
Acetone	20	21.544	-	-7.7	20	70	0
trans-1,2-Dichloroethene	0.233	0.216	-	7.3	20	56	0
Methyl tert-butyl ether	0.567	0.544	-	4.1	20	60	0
Diisopropyl ether	0.809	0.79	-	2.3	20	60	0
1,1-Dichloroethane	0.447	0.431	-	3.6	20	59	0
Ethyl tert-butyl ether	0.686	0.673	-	1.9	20	61	0
cis-1,2-Dichloroethene	0.248	0.236	-	4.8	20	58	0
2,2-Dichloropropane	0.329	0.334	-	-1.5	20	62	0
Bromochloromethane	0.099	0.097	-	2	20	57	0
Chloroform	0.416	0.414	-	0.5	20	60	0
Carbon tetrachloride	0.276	0.276	-	0	20	59	0
Tetrahydrofuran	20	20.796	-	-4	20	65	0
Dibromofluoromethane	0.235	0.236	-	-0.4	20	62	0
1,1,1-Trichloroethane	0.324	0.321	-	0.9	20	57	0
2-Butanone	0.077	0.092*	-	-19.5	20	68	0
1,1-Dichloropropene	0.303	0.313	-	-3.3	20	59	0
Benzene	0.948	0.921	-	2.8	20	59	0
tert-Amyl methyl ether	0.575	0.569	-	1	20	61	0
1,2-Dichloroethane-d4	0.24	0.248	-	-3.3	20	65	0
1,2-Dichloroethane	0.269	0.277	-	-3	20	63	0
Trichloroethene	0.225	0.223	-	0.9	20	58	0
Dibromomethane	0.113	0.116	-	-2.7	20	61	0
1,2-Dichloropropane	0.236	0.236	-	0	20	60	0
Bromodichloromethane	0.281	0.287	-	-2.1	20	61	0
1,4-Dioxane	0.00166	0.00207*	-	-24.7*	20	72	0
cis-1,3-Dichloropropene	0.343	0.353	-	-2.9	20	60	0
Chlorobenzene-d5	1	1	-	0	20	63	0
Toluene-d8	1.421	1.408	-	0.9	20	62	0
Toluene	0.843	0.796	-	5.6	20	59	0
4-Methyl-2-pentanone	0.094	0.094*	-	0	20	64	0
Tetrachloroethene	0.32	0.313	-	2.2	20	57	0
trans-1,3-Dichloropropene	20	18.609	-	7	20	61	0
1,1,2-Trichloroethane	0.206	0.215	-	-4.4	20	63	0
Chlorodibromomethane	0.274	0.269	-	1.8	20	61	0

\* Value outside of QC limits.



## Continuing Calibration Form 7

Client : Sitec Environmental, Inc.  
 Project Name : MCCABE ST.  
 Instrument ID : VOA100  
 Lab File ID : V00180808N01  
 Sample No : WG1144620-2  
 Channel :

Lab Number : L1829544  
 Project Number : SE18-1375  
 Calibration Date : 08/08/18 18:44  
 Init. Calib. Date(s) : 08/02/18 08/02/18  
 Init. Calib. Times : 20:03 23:32

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,3-Dichloropropane	0.437	0.446	-	-2.1	20	62	0
1,2-Dibromoethane	0.221	0.224	-	-1.4	20	61	0
2-Hexanone	0.16	0.154	-	3.8	20	58	0
Chlorobenzene	0.885	0.845	-	4.5	20	60	0
Ethylbenzene	1.575	1.526	-	3.1	20	60	0
1,1,1,2-Tetrachloroethane	0.286	0.286	-	0	20	60	0
p/m Xylene	0.588	0.573	-	2.6	20	59	0
o Xylene	0.572	0.561	-	1.9	20	60	0
Styrene	0.938	0.942	-	-0.4	20	61	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	62	0
Bromoform	0.337	0.331	-	1.8	20	62	0
Isopropylbenzene	3.02	3.013	-	0.2	20	60	0
4-Bromofluorobenzene	1.036	1.057	-	-2	20	64	0
Bromobenzene	0.705	0.695	-	1.4	20	60	0
n-Propylbenzene	3.699	3.789	-	-2.4	20	62	0
1,1,2,2-Tetrachloroethane	0.612	0.653	-	-6.7	20	64	0
2-Chlorotoluene	2.221	2.37	-	-6.7	20	66	0
1,3,5-Trimethylbenzene	2.558	2.529	-	1.1	20	60	0
1,2,3-Trichloropropane	0.484	0.522	-	-7.9	20	65	0
4-Chlorotoluene	2.225	2.264	-	-1.8	20	63	0
tert-Butylbenzene	2.1	2.09	-	0.5	20	60	0
1,2,4-Trimethylbenzene	2.539	2.495	-	1.7	20	60	0
sec-Butylbenzene	3.195	3.255	-	-1.9	20	61	0
p-Isopropyltoluene	2.685	2.683	-	0.1	20	60	0
1,3-Dichlorobenzene	1.348	1.337	-	0.8	20	60	0
1,4-Dichlorobenzene	1.37	1.352	-	1.3	20	61	0
n-Butylbenzene	2.585	2.71	-	-4.8	20	63	0
1,2-Dichlorobenzene	1.219	1.193	-	2.1	20	60	0
1,2-Dibromo-3-chloropropan	20	18.372	-	8.1	20	59	0
Hexachlorobutadiene	0.477	0.454	-	4.8	20	56	0
1,2,4-Trichlorobenzene	0.868	0.854	-	1.6	20	59	0
Naphthalene	1.798	1.733	-	3.6	20	58	0
1,2,3-Trichlorobenzene	0.778	0.75	-	3.6	20	59	0

\* Value outside of QC limits.





## Performance Evaluation Mixture Report Form 15

<b>Client</b> : Sitec Environmental, Inc. <b>Project Name</b> : MCCABE ST. <b>Instrument ID</b> : PEST10 <b>PEM Standard</b> : R1099666-1 <b>Column 1</b> : RTX-5	<b>Lab Number</b> : L1829544 <b>Project Number</b> : SE18-1375 <b>Analysis Date</b> : 08/09/18 06:11  <b>Column 2</b> : RTX-CLPPesticides2
---	--

Parameter	Signal 1	Signal 2
4,4'-DDE	806168.76614	805515.8269
Endrin	181495479.54231	144349233.51288
4,4'-DDD	373538.61895	409528.53278
4,4'-DDT	316298829.43274	258810007.18806
Endrin Aldehyde	222039.81572	1119858.69569
Endrin Ketone	1231457.00729	1088239.34456

Parameter	%Breakdown 1	%Breakdown 2
Endrin	0.794	1.51
DDT	0.372	0.467





## ANALYTICAL REPORT

Lab Number:	L1832073
Client:	Sitec Environmental, Inc. 769 Plain Street Unit C Marshfield, MA 02050
ATTN:	Geoff Souza
Phone:	(781) 319-0100
Project Name:	MCCABE ST.
Project Number:	SE18-1375
Report Date:	08/21/18

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).

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320 Forbes Boulevard, Mansfield, MA 02048-1806  
508-822-9300 (Fax) 508-822-3288 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** MCCABE ST.  
**Project Number:** SE18-1375

**Lab Number:** L1832073  
**Report Date:** 08/21/18

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1832073-01	SS-1	SOIL	Not Specified	07/31/18 11:45	07/31/18

Project Name: MCCABE ST.

Lab Number: L1832073

Project Number: SE18-1375

Report Date: 08/21/18

**MADEP MCP Response Action Analytical Report Certification**

**This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.**

<b>An affirmative response to questions A through F is required for "Presumptive Certainty" status</b>		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	NO
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	NO
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES
<b>A response to questions G, H and I is required for "Presumptive Certainty" status</b>		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	NO
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES
<b>For any questions answered "No", please refer to the case narrative section on the following page(s).</b>		

**Please note that sample matrix information is located in the Sample Results section of this report.**



**Project Name:** MCCABE ST.  
**Project Number:** SE18-1375

**Lab Number:** L1832073  
**Report Date:** 08/21/18

### 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. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated 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.

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 table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

#### 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 Client Service Representative 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 Client Services at 800-624-9220 with any questions.

**Project Name:** MCCABE ST.  
**Project Number:** SE18-1375

**Lab Number:** L1832073  
**Report Date:** 08/21/18

### Case Narrative (continued)

#### MCP Related Narratives

##### Sample Receipt

In reference to question A:

The analysis of Hexavalent Chromium was not performed from a separate container that remained unopened until the alkaline digestion commenced.

In reference to question H:

A Matrix Spike was not submitted for the analysis of Hexavalent Chromium.

#### Hexavalent Chromium

LCS/LCSD SRM Lot#: ERA D096-921

In reference to question B:

At the client's request, the analytical method specified in the CAM protocol was not followed; pH and ORP were not performed.

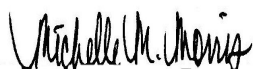
In reference to question G:

L1832073-01: The sample has an elevated detection limit due to the dilution required by the sample matrix.

The target analyte did not achieve the requested CAM reporting limit.

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:



Michelle M. Morris

Title: Technical Director/Representative

Date: 08/21/18

# **INORGANICS & MISCELLANEOUS**

Project Name: MCCABE ST.

Project Number: SE18-1375

Lab Number: L1832073

Report Date: 08/21/18

**SAMPLE RESULTS**

Lab ID: L1832073-01

Client ID: SS-1

Sample Location: Not Specified

Date Collected: 07/31/18 11:45

Date Received: 07/31/18

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>MCP General Chemistry - Westborough Lab</b>										
Chromium, Hexavalent	ND		mg/kg	4.50	--	5	08/17/18 13:41	08/20/18 10:11	97,7196A	NH
<b>General Chemistry - Westborough Lab</b>										
Solids, Total	88.8		%	0.100	NA	1	-	08/07/18 08:54	121,2540G	RI



Project Name: MCCABE ST.

Lab Number: L1832073

Project Number: SE18-1375

Report Date: 08/21/18

**Method Blank Analysis**  
**Batch Quality Control**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1147847-1										
Chromium, Hexavalent	ND		mg/kg	0.800	--	1	08/17/18 13:41	08/20/18 10:11	97,7196A	NH



## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** MCCABE ST.

**Project Number:** SE18-1375

**Lab Number:** L1832073

**Report Date:** 08/21/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1147847-2 WG1147847-3								
Chromium, Hexavalent	78		92		70-129	16		20

**Project Name:** MCCABE ST.  
**Project Number:** SE18-1375

Serial\_No:08211811:41  
**Lab Number:** L1832073  
**Report Date:** 08/21/18

**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

**Cooler Information**

<b>Cooler</b>	<b>Custody Seal</b>
A	Absent

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L1832073-01A	Glass 250ml/8oz unpreserved	A	NA		3.2	Y	Absent		MCP-HEXCR7196-10(30)

**Project Name:** MCCABE ST.  
**Project Number:** SE18-1375

**Lab Number:** L1832073  
**Report Date:** 08/21/18

## GLOSSARY

### Acronyms

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.
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.
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.
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.

### 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.

**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.

**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.

**Report Format:** Data Usability Report



**Project Name:** MCCABE ST.  
**Project Number:** SE18-1375

**Lab Number:** L1832073  
**Report Date:** 08/21/18

#### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- 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.
- 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.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- 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.
- 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.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** MCCABE ST.  
**Project Number:** SE18-1375

**Lab Number:** L1832073  
**Report Date:** 08/21/18

## REFERENCES

- 97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.
- 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.



**Alpha Analytical, Inc.**Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**Revision **11**

Published Date: 1/8/2018 4:15:49 PM

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**Certification Information**

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

**Westborough Facility****EPA 624:** m/p-xylene, o-xylene**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**EPA 300:** DW: Bromide**EPA 6860:** SCM: Perchlorate**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation**SM4500:** NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.**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.**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****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, **EPA 351.1, 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 624:** Volatile Halocarbons & Aromatics,**EPA 608:** 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:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, SM9222D.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Be, Cd, Cr, Cu, 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, Pb, Mn, Ni, Se, Ag, TL, Zn.**EPA 245.1 Hg.****SM2340B**

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



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

Client: SITE Environmental  
Address: 769 Plain St, Unit C  
Marshfield, MA 02501  
Phone: 781-319-0100  
Email: 950629@siteenv.com

Project Name: McCabe St

Project Location

Project #: SE18-1375

Project Manager: Jeff Seiz

ALPHA Output #

### Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due:

Additional Project Information:

Date Rec'd in Lab: 07-31-2013 ALPHA Job #: 1829541

## Report Information - Data Deliverables

☒ FAX ☐ EMAIL

### Billing Information

☐ Same as Client info      PO #

## Regulatory Requirements &amp; Project Information Requirements

☒ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods  
☐ Yes ☐ No Matrix Spikes 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 *MA MCP* Criteria *5-1*

[illegible][illegible]

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 = HNO<sub>3</sub>  
D = H<sub>2</sub>SO<sub>4</sub>  
E = NaOH  
F = MeOH  
G = NaHSO<sub>4</sub>  
H = Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>  
I = Ascorbic Acid  
J = NaCl  
K = Zn Acetate  
L = Other

Container Type

Preservative

Received By:

Date/Time

All samples submitted are subject to Alpha's Terms and Conditions.  
See reverse side.

FORM NO. 01-04 (rev. 12-04M-6712)

## **ATTACHMENT 2**

### **PRP AUTHORIZATION**



August 28, 2018

Massachusetts Department of Environmental Protection  
20 Riverside Drive  
Lakeville, MA 02347

**RE: 85 McCabe Street  
Dartmouth, Massachusetts  
Release Tracking No.: 4-27363**

To Whom It May Concern:

In accordance 310 CMR 40.0009(2), I am authorizing SITEC Environmental, Inc. to act as my agent in electronically filing any required Massachusetts Contingency Plan documents for the above referenced release.

Sincerely,



George Verissimo  
Terceira Construction