SITE INVESTIGATION REPORT

20 West Extension Street, Newport, Rhode Island (AP 32; L: 267)
16 Waites Wharf, Newport, Rhode Island (AP 32; L: 248)
Waites Wharf, Newport, Rhode Island (AP 32; L: 272)

Submitted to:

Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02903

On Behalf of:

20 West Extension LLC/TOMORL LLC/Waites Wharf Realty LLC
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SAGE Project No. S3432

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TABLE OF CONTENTS

FIGURES:

ATTACHMENTS:

1.0 INTRODUCTION

On behalf of the current owner and performing parties, 20 West Extension LLC, TOMORL LLC, and Waites Wharf Realty Assoc., LLC, SAGE Environmental, Inc. (SAGE) has completed this Site Investigation Report (SIR) for three (3) parcels of land identified as Lots 248, 267, and 272 on the City of Newport Tax Assessor Plat Map 32. The aforementioned lots are addressed as 20 West Extension Street, 16 Waites Wharf, and Waites Wharf in Newport, Rhode Island (collectively referred hereinafter, the "Site").

A United States Geologic Survey (USGS) Topographic Locus Map ("Newport, Rhode Island Quadrangle") depicting the Site location is included in **Figure 1**.

This SIR was completed in accordance with Section 1.8 of the RIDEM "*Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases*" (*Remediation Regulations*) DEM-DSR-01-93 dated March 31, 1993, as amended in January 2019. A completed SIR Checklist is included as **Attachment 1**.

1.1 Purpose and Background

The Site is comprised of three (3) parcels of land identified as Lots 248, 267, and 272 on the City of Newport Tax Assessor Plat Map 32. According to available information, Lot 248 appears to have been developed prior to 1883 and utilized for residential purposes until the lot was improved with the construction of the existing Site building in the 1950s which was utilized for Wooden Case Assembling and Painting. The structure is currently utilized for storage purposes. Lot 267 appears to have been developed prior to 1883 and utilized for residential purposes. The 1951 Sanborn Fire Insurance Map depicts all previous structures as razed and the Site is improved with the construction of an automotive garage towards the northern portion of the Site. No significant changes appear to have occurred until the building was razed in approximately the 1990s. Currently, the Site is vacant and utilized as a parking area. Lot 272 appears to have been developed prior to 1883 and utilized for residential purposes. The Site was subsequently redeveloped and utilized as a black smith shop, automotive repair and residential purposes. Currently, the Site is utilized as storage space.

Additionally, two (2) westerly abutting properties identified on Assessor's Plat 32 as lots 155 and 268 were developed and utilized for industrial use from the early 1900s through the 1980s. According to Sanborn Fire Insurance Maps, the property was initially developed in the 1900s and occupied by DJ Sullivan & Co. as a coal and lumber yard. According to reviewed Sanborn Fire Insurance Maps, the property then appears to have been improved by the early 1920s and utilized by Standard Oil Company from at least 1921 through at least 1971, with several aboveground storage tanks (ASTs) noted in the 1981 and 1985 aerial photographs.

Based on the historical use of the Site, industrial use of surrounding properties, and the likely use of fill material throughout the Site, SAGE conducted an initial limited subsurface investigation (LSI) of the three (3) parcels in October 2019. Results of the LSI identified select polycyclic aromatic hydrocarbons (PAHs) and lead above the applicable RIDEM Method 1 Residential Direct Exposure Criteria (R-DEC), but below the Industrial/Commercial Direct Exposure Criteria (I/C-DEC). Additionally, benzo(a)pyrene and arsenic were detected in all soil samples above both the RIDEM Method 1 R-DEC and I/C-DEC. A detailed summary of all subsurface investigation is provided in **Section 4.0** of this Report.

Based on the detected analytical exceedances in surficial soils collected from each lot, SAGE prepared and submitted a Notification of Release (NOR) on November 4, 2019 to notify RIDEM of a release to the environment in accordance with Section 1.6 of the RIDEM *Remediation Regulations*. The purpose of the subject investigation was to further evaluate previously collected laboratory analytical data and develop potential remedial alternatives for the identified exceedances. As summarized herein, the preferred remedial alternative consists of the following:

- *Implementation of institutional and/or engineered controls*: Select PAHs and metals have been identified in surficial soils throughout the Site which exceed the applicable RIDEM Method 1 DECs. Given the noted soil exceedances, one (1) of the following engineered controls would need to be implemented in addition to recording of an ELUR:
  - Encapsulation of impacted soils with at least two (2) feet of Clean Soil as defined in Section 3.12 of the RIDEM *Remediation Regulations*;
  - Encapsulation of impacted soils with the placement of a geotextile fabric with a minimum puncture strength of 120-pounds and minimum burst strength of 400 psi, overlain by a minimum of one (1) foot of aforementioned Clean Soil; or
  - Encapsulation of impacted soils with at least six (6) inches of aforementioned Clean Soil overlain by a minimum of four (4) inches of asphalt or concrete.

2.0 SITE DESCRIPTION

Information pertaining to Site features, current and historical Site usage, and occupancy and ownership were collected through a comprehensive review of available historic resources including, but not limited to, historical photographs, local/municipal, state and federal records.

2.1 Site Location and Parcel Legal Description

The Site consists of three (3) parcels of land identified by the City of Newport Tax Assessor as follows:

- Lot 248 on Assessor's Plat Map 32 addressed as 16 Waites Wharf. The approximate center of this lot is located at 41° 28' 45.7" North, 71° 18' 54.4" West. This lot is situated on the southern side of Waites Wharf;
- Lot 272 on Assessor's Plat Map 32 addressed as Waites Wharf. The approximate center of this lot is located at 41° 28' 45.7" North, 71° 18' 55.1" West. This lot is situated on the southern side of Waites Wharf;
- Lot 267 on Assessor's Plat Map 32 addressed as Waites Wharf. The approximate center of this lot is located at 41° 28' 47.7" North, 71° 18' 54.6" West. This lot is situated on the southern side of West Extension Street;

2.2 Site and Vicinity Characteristics

According to information obtained through the City of Newport Assessor's Office, Lots 248, 267 and 272 are zoned WB, for waterfront business. All surrounding properties are zoned WB, for waterfront business. A description of current abutting land uses is summarized in **Table 1**.

Table 1
Surrounding Area Land Usage
Newport, Rhode Island

Plat	Lot	Address	Usage
32	285	Spring Wharf Marine Holdings LLC	Marina
32	125	International Yacht Restoration School	Commercial/Parking
32	126	Arthur Grover	Residential
32	153	Timothy Sterns	Residential
32	319	Ronald F. Clemens III	Residential
32	269	Willian & Elizabeth Casey	Commercial
32	155	Harbour Realty LLC, c/o Thomas Abruzese	Marina/Parking/Restaurant
32	268	Harbour Realty LLC, c/o Thomas Abruzese	Parking/Restaurant/Commercial shop
32	221	Paul & Joanne S Koch	Residential Condominiums
32	249	Tunc Trees LLC	Parking
32	283	81 Daybreak LLC	Residential

2.3 Site Improvements

- Lot 248: This lot is improved with a single one-story stone and masonry constructed structure with a slab-on-grade foundation and occupies an approximate gross area of 5,960-square feet. The structure was reportedly constructed in approximately 1900;
- Lot 272: No structures are present on this lot; and
- Lot 267: This lot is improved with a single one-story concrete and cinder block constructed structure with a partial slab-on-grade foundation and bare earthen floor. The structure occupies an approximate gross are of 6,668-square feet and was constructed in approximately 1968.

2.3.1 Utilities

- Lot 248: According to information obtained through the City of Newport Assessor's Office, the structure is not heated and is not connected to the municipal sewer or water departments. As such, it does not appear any utilities are presently used for this Site structure. The structure is currently vacant;
- Lot 272: No structures exist on this lot. As such, no utilities are presently utilized; and
- Lot 267: The structure is heated *via* natural gas and is connected to both municipal sewer and water.

All surrounding properties are serviced by the City of Newport municipal water system.

2.4 Present Site Usage

Lot 248: The structure on this lot is currently vacant;
Lot 272: This lot is current utilized for parking; and
Lot 267: This structure is currently utilized for storage purposes.

2.5 Environmental Setting

2.5.1 Topography

The Site is located on the "Newport, Rhode Island" USGS Locus Map, a copy of which has been provided as **Figure 1**. According to the USGS Map, the Site is situated approximately at sea level. In general, Site topography appears to be generally flat.

Bedrock at the Site consists of graded beds of feldspathic siltstone and sandstone, carbonate conglomerate and ash-flow lapilli tuff. During subsurface investigations, heavily weathered ledge which appeared to consist of shale was encountered at a depth ranging between 10 and 12-feet BSG.

2.5.2 Hydrology

2.5.2.1 Surface Water

No surface water is located on the Site or on abutting properties. The nearest surface water body is located approximately 435-feet west of the Site and is identified as the Atlantic Ocean. According to the RIDEM Environmental Resource Map, this surface water body is classified as SA, which are waters designated for shellfish harvesting for direct human consumption, primary and secondary contact recreational activities, and fish and wildlife habitat. They shall be suitable for aqua-cultural uses, navigation, and industrial cooling. These waters shall have good aesthetic value.

According to the Federal Emergency Management Agency (FEMA) Flood Mapping Service, the Site is located on Flood Insurance Rate Map (FIRM) 44005C0177J, effective on 09/04/2013. The Site is located within Zone AE, which is defined as a high-risk flood zone with a 1% annual chance of flooding, where base elevations have been determined.

2.5.2.2 Hydrogeology

According to the RIDEM Office of Water Resources *Groundwater Quality Rules*, the Site is located within an area of groundwater designated as GB, which is defined as groundwater that is presumed not suitable for use as a drinking water supply without prior treatment.

During Site investigations completed by SAGE, groundwater was found to be present at a depth of approximately 4 – 6 feet BSG.

2.5.2.3 Resource Areas and other Areas of Critical Environmental Concern

The Site is not located within any resource areas or protected open spaces. A map depicting Groundwater Classification and Priority Resources is provided as **Figure 3**.

According to information obtained through the RIDEM Online Environmental Resource Map, the Site is not located within an Environmental Justice Area.

2.5.2.4 Presence/Effects of Natural & Man-Made Barriers to and Conduits for Contaminant Migration

The contaminants of concern likely originate from urban fill used historically during filling in and grading of the Site and surrounding areas and impacts are confined to soils. No conduits for the contamination are present at the Site.

3.0 SITE HISTORY

Historical research pertaining to the Site and surrounding area was conducted through the following agencies:

- The City of Newport Tax Assessor's Office;
- The Newport City Clerk;
- The City of Newport Public Works Department;
- Sanborn Fire Insurance Maps, obtained through the Environmental Record Search (ERS);
- Historical aerial photographs, obtained through the Rhode Island Geographical Information System (RIGIS).

Relevant information obtained during historical reviews is summarized in the following sections.

3.1 Historical Site Use

- **Lot 248**: According to available information, Lot 248 appears to have been developed prior to 1883 and utilized for residential purposes. The 1951 Sanborn Fire Insurance Map depicts Lot 248 improved with the construction of the existing Site building which is utilized for Wooden Case Assembling and Painting. Subsequent Sanborn Maps depict Lot 248 as utilized for storage until present day;
- **Lot 267**: Lot 267 appears to have been developed prior to 1883 and utilized for residential purposes. The 1951 Sanborn Fire Insurance Map depicts all previous structures as razed and the Site is improved with the construction of an automotive garage towards the northern portion of the Site. No significant changes appear to have occurred until the building was razed in approximately the 1990s. Currently, the Site is vacant and utilized as a parking area;
- **Lot 272**: Lot 272 appears to have been developed prior to 1883 and utilized for residential purposes. The Site was subsequently redeveloped and utilized as a black smith shop, automotive repair and residential purposes. Currently, the Site is utilized as storage space.

3.1.1 Historical Site Ownership

Historical Site ownership was reviewed through Chain-of-Title cards maintained by the Newport Tax Assessor (City of Newport, Rhode Island, 2019) and is summarized in **Table 2**, below. A copy of the title cards has been provided in **Attachment 2**.

Table 2
Owner Chronology
Assessor's Plat 32, Lot 248

Lot	Grantee	Date of Transfer	Book/Page
248	TOMORL LLC	02/17/2006	1721/14
	DAVID RAY	NOT LISTED	251/174
267	20 WEST EXTENSION LLC	06/28/2016	2597/293
	WELAND SMITH LLC	04/18/2008	1932/54
	HEIRS OF THOMAS CRAWFORD	NOT LISTED	344/84
272	WAITES WHARF REALTY ASSOC LLC C/O THOMAS ABRUZESE	07/14/1999	877/1

3.1.2 Sanborn Fire Insurance Maps

Historical Sanborn Fire Insurance Maps of the Site and surrounding area were reviewed through previously conducted Environmental Site Assessments. A copy of the reviewed maps is provided as **Attachment 3**. The maps are summarized below in **Table 3**.

Table 3
Sanborn Fire Insurance Map Summary
(AP 32, Lots 248, 267 272)
Newport, Rhode Island

Year	Site Description
1884	Lot 248, 267 and 272 appear to be developed with several residential structures.
1891	Lot 248, 267 and 272 appear to be developed with several residential structures.
1896	Lot 248, 267 and 272 appear to be developed with several residential structures.
1903	Lot 248, 267 and 272 appear to be developed with several residential structures.
1921	Lot 248, 267 and 272 appear to be developed with several residential structures.
1950	Lot 267 is developed with four (4) contiguous structures, one (1) black smith shop, one (1) automotive repair shop, one (1) automotive garage and one (1) residential dwelling. Lot 248 is developed with the existing Site structure which is labeled as "Wooden Case Assembly & Paints". Lot 272 is developed with one (1) structure towards the northern portion of the Site which is depicted as an automotive garage.
1953	Lot 267 is developed with four (4) contiguous buildings, two (2) of which are labeled "vacant" one (1) which is depicted as an automotive garage and one (1) which is depicted as a black smith. Lot 272 is developed with one (1) automotive garage located towards the northern portion of the Site. Lot 248 is developed with the existing Site building is labeled as "Storage."
1963	No significant changes are noted to the Site.
1968	Lot 267 is developed with the existing Site building and is depicted be being utilized for welding. Lot 272 is developed with an automotive garage located towards the northern portion of the Site. Lot 248 is developed with the existing Site building is be depicted as being utilized for storage.
1972	No significant changes are noted to the Site.
1990	No significant changes are noted to the Site.

3.1.3 Historical Aerial Photographs

Historical aerial photographs were viewed online using ArcGIS's Historic Aerial Mapper (https://www.arcgis.com/home/item.html?id=1dcafa7631154874bf78b408351afb9e) for the years 1939, 1951-52, 1962, 1972, 1981, 1985, 1988, 1997, 2003-2004, 2008, 2011, 2014 and 2016. A summary of the Site and surrounding property descriptions is provided in **Table 4**, below.

Table 4
Historical Aerial Photograph Summary
(AP 32, Lots 248, 267 272)
Newport, Rhode Island

Year	Site Description
1939	Due to the quality of the aerial image, Site use was unable to be assessed. Properties located east of the Site appear to be utilized for petroleum storage.
1962	Lot 248 improved with the construction of the existing Site building. Lot 267 appears to be developed with several structures. Lot 272 appears to be partially developed with one (1) structure located towards the northern property boundary.
1972	Lot 248 appears in its current configuration. Lot 267 appears to be improved with the construction of the existing Site structures. No significant changes are noted to Lot 272.
1981 - 1985	No significant changes are noted to the Site or surrounding properties.
2003-2004	Lots 248 and 267 appear in their current configuration. The automotive garage on Lot 272 appears to have been razed.
2008 – 2019	All three (3) lots appear in their current configuration.

4.0 SITE INVESTIGATION

As indicated in the January 3, 2020, Letter of Responsibility, provided as **Attachment 4**, concentrations of select semi-volatile organic compounds (SVOCs) and select metals, specifically arsenic and lead were identified in soils above the applicable RIDEM Method 1 Residential Direct Exposure Criteria (R-DEC) and Industrial/Commercial Direct Exposure Criteria (I/C-DEC). As a result of these findings, RIDEM requested the performance of a Site Investigation in accordance with Section 1.8 of the *Remediation Regulations*.

4.1 Site Investigation Objectives

The overall objective of the Site Investigation is to evaluate for potential subsurface soil and/or groundwater impacts, and if identified, to evaluate and develop an appropriate remedial solution to the identified impacts.

The following sections detail the findings on additional subsurface investigations conducted by SAGE in October 2019 and February 2020.

4.2 Subsurface Investigation (2019) – SAGE 100 Series Borings

Prior to advancing soil borings at the Site, SAGE marked the areas to be investigated and contacted DigSafe such that underground utilities could be marked prior to commencement of fieldwork. On October 1, 2019, SAGE provided direction and oversight for the advancement of six (6) soil borings (SE-101 through SE-106). In general, soil borings were distributed across each of the three (3) Site parcels:

- Borings SE-101 and 103 were advanced on lot 272;
- Boring SE-102 was advanced on lot 248; and
- Borings SE-104 through SE-106 were advanced on lot 267.

All six (6) of the advanced borings were completed as permanent groundwater monitoring wells. A plan depicting locations of the boring and monitoring well locations has been included as **Figure 2**.

While advancing the borings, continuous soil samples were collected from zero (0) to two (2) feet below surface grade (BSG) and in five-foot intervals (2' to 7' and 7' to 12') to a terminal depth of twelve (12) feet BSG, and field screened for the potential presence of volatile organic compounds in the form of total volatile organic vapor (TVOV) *via* the jar headspace method using a MiniRAE Photoionization Detector (PID) with a 10.6 eV lamp calibrated to 100 parts per million by volume (ppmV) isobutylene standard. TVOV screening values for each sample are summarized below in **Table 5**, below.

Table 5
TVOV Screening Results
(AP 32, Lots 248, 267 272)
Newport, Rhode Island

Boring ID	Lot	Depth (Feet BSG)	TVOV Result (ppmV)
SE-101	272	0-2*	ND
		2-7*	32.5
		7-12	4
SE-102	248	0-2*	ND
		2-7	ND
		7-12	ND
SE-103	272	0-2*	ND
		2-7	ND
		7-12	ND
SE-104	267	0-2*	ND
		2-7	ND
		7-12	ND
SE-105	267	0-2*	ND
		2-7	ND
		7-12	ND
SE-106	267	0-2*	ND
		2-7	ND
		7-12	ND

* Submitted for laboratory analysis

Soil lithology observations and monitoring well construction details are provided in the soil boring/monitoring well installation logs included as **Attachment 5**.

From the collected soil samples, subsurface conditions were observed, and lithology consisted predominantly of urban fill material consisting of loose, dark brown to black sand and gravel with brick, coal ash and wood present to a depth of approximately seven (7) to eight (8) feet BSG. Apparent native material consisting of moderately dense, brown to light gray fine sands and silt were encountered beginning at approximately seven (7) to eight (8) feet across all three (3) lots. Groundwater was encountered at depths ranging from approximately four (4) to six (6) feet BSG.

The results of investigatory activities are provided in the following sections.

4.3 Additional Subsurface Investigation (2020) – SAGE 200 Series Borings

At the request of the RIDEM, SAGE returned to the Site on February 28, 2020, to direct and oversee the advancement of six (6) additional soil borings (SE-201 through SE-206). In general, soil borings were evenly distributed across each of the three (3) Site parcels:

- Borings SE-201 and 201 were advanced on lot 272;
- Boring SE-203 and SE-204 was advanced on lot 248; and
- Borings SE-205 through SE-206 were advanced on lot 267.

A plan depicting locations of the boring and monitoring well locations has been included as **Figure 2**.

While advancing the borings, continuous soil samples were collected from 0 to 2' and 2' to 7' BSG. At each boring, samples were collected and field screened for TVOV *via* the jar headspace method using a MiniRAE PID with 10.6 eV lamp calibrated to 100 ppmV isobutylene standard. TVOV screening values for each sample are summarized below in **Table 6**, below.

Table 6
TVOV Screening Results
(AP 32, Lots 248, 267 272)
Newport, Rhode Island

Boring ID	Lot	Depth (Feet BSG)	TVOV Result (ppmV)
SE-201	272	0-2*	ND
		2-7*	32.5
SE-202		0-2*	ND
		2-7	ND
SE-203	248	0-2*	ND
		2-7	ND
SE-204		0-2*	ND
		2-7	ND
SE-205	267	0-2*	ND
		2-7	ND
SE-206		0-2*	ND

Boring ID	Lot	Depth (Feet BSG)	TVOV Result (ppmV)
SE-201	272	0-2*	ND
		2-7*	32.5
		2-7	ND

* Submitted for laboratory analysis

Soil lithology observations and monitoring well construction details are provided in the soil boring/monitoring well installation logs included as **Attachment 5**.

From the collected soil samples, subsurface conditions were observed, and lithology was consistent was those noted in the previously advanced soil borings (SE-101 through SE-106). Groundwater was encountered at depths ranging from approximately four (4) to six (6) feet BSG.

The results of investigatory activities are provided in the following sections.

4.4 Analytical Results

Based upon the observance of fill material and to identify potential risk to direct soil contact, SAGE submitted soil samples collected from the 0 to 2 foot BSG interval from each boring for select laboratory analysis of TPH by Environmental Protection Agency (EPA) Method 8100M, VOCs by EPA Method 8260C, RCRA 8 total metals, PAHs by EPA Method 8270D and cyanide by EPA Method 9014.

Additional soil samples collected between 2 to 7 foot BSG interval were collected from select soil borings and submitted for select laboratory analysis of lean and arsenic by EPA Method 6010C. Additionally, at select boring where elevated TVOV was observed, additional soil samples were submitted for laboratory analysis of TPH via EPA Method 8100M, VOCs via EPA Method 8260C, RCRA 8 total metals and PAHs by EPA Method 8270D

Results of the investigation have been organized by lot, and summarized below.

4.4.1 Soil Sample Collection & Laboratory Analytical Results (Lot 272)

In total, four (4) soil borings, identified as SE-101, SE-103, SE-201 and SE-202 were advanced across Lot 272. A summary of analytical detections from each boring is detailed below:

- SE-101 (0' – 2'): Laboratory analytical results identified several PAHs and lead above RIDEM Method 1 Residential Direct Exposure Criteria (R-DEC), but below the Industrial/Commercial Direct Exposure Criteria (I/C-DEC). Benzo(1)pyrene and arsenic were detected at a concentration which exceeds both the Method 1 R-DEC and I/C-DEC. All other analytes, where detected, were compliant with Method 1 R-DEC;
- SE-101 (2' – 7'): Laboratory analytical results identified several PAHs and lead above RIDEM Method 1 R-DEC, but below the I/C-DEC. Benzo(1)pyrene and arsenic were detected at a concentration which exceeds both the Method 1 R-DEC and I/C-DEC. All other analytes, where detected, were compliant with Method 1 R-DEC;
- SE-103 (0' – 2'): Laboratory analytical results identified several PAHs and lead above RIDEM Method 1 R-DEC, but below the I/C-DEC. Benzo(1)pyrene and arsenic were detected at a

concentration which exceeds both the Method 1 R-DEC and I/C-DEC. All other analytes, where detected, were compliant with Method 1 R-DEC;

- SE-201 (0' – 2'): Total cyanide was not detected at a concentration above laboratory reporting limits, which are below the applicable RIDEM Method 1 R-DEC;
- SE-201 (2' – 7'): Lead was detected at a concentration above RIDEM Method 1 R-DEC, but below the I/C-DEC. Arsenic was detected at a concentration above laboratory reporting limits, but below Method 1 R-DEC; and
- SE-202 (0' – 2'): Total cyanide was not detected at a concentration above laboratory reporting limits, which are below the applicable RIDEM Method 1 R-DEC.

Detected laboratory analytical results for Lot 272 are provided in **Table 7,** below. The laboratory analytical report, along with Chain-of-Custody documentation, is included as **Attachment 6**.

Table 7
Detected Soil Analytical Results
AP 32, Lot 272
Newport, Rhode Island

Assessor's Plan 32, Lot 272								
Sample ID/Date	**SE-101 0-2ft**	**SE-101 2-7ft**	**SE-103 0-2ft**	**SE-201 0-2ft**	**SE-201 2-7ft**	**SE-202 0-2ft**	**RIDEM Method 1 Residential Direct Exposure Criteria**	**RIDEM Method 1 Industrial/Commercial Direct Exposure Criteria**
	10/01/2019	**10/01/2019**	**10/01/2019**	**2/28/2020**	**2/28/2020**	**2/28/2020**		
Analyte	**Sample Result**	**Sample Result**	**Sample Result**	**Sample Result**	**Sample Result**	**Sample Result**		
VOCs - Low (mg/kg)								
Acetone	0.0732	ND	ND	-	-	-	7800	10000
PAHs (mg/kg)								
Anthracene	ND	ND	0.773	-	-	-	35	10000
Benzo(a)anthracene	**1.32**	**1.52**	**2.74**	-	-	-	**0.9**	7.8
Benzo(a)pyrene	**1.73**	**1.77**	**2.87**	-	-	-	**0.4**	**0.8**
Benzo(b)fluoranthene	**1.49**	**1.28**	**2.61**	-	-	-	**0.9**	7.8
Benzo(g,h,i)perylene	**1.18**	**1.13**	**1.79**	-	-	-	**0.8**	10000
Benzo(k)fluoranthene	**0.965**	**1.19**	**2.01**	-	-	-	**0.9**	78
Chrysene	**1.25**	**1.40**	**2.61**	-	-	-	**0.4**	780
Dibenzo(a,h)Anthracene	0.320	0.315	**0.583**	-	-	-	**0.4**	0.8
Fluoranthene	1.80	2.54	5.06	-	-	-	20	10000
Fluorene	ND	ND	0.782	-	-	-	28	10000
Indeno(1,2,3-cd)Pyrene	**1.06**	**1.02**	**1.72**	-	-	-	**0.9**	7.8
Naphthalene	0.460	ND	ND	-	-	-	54	10000
Phenanthrene	0.573	1.05	2.86	-	-	-	40	10000
Pyrene	1.93	2.40	3.96	-	-	-	13	10000
TPH - ETPH (mg/kg)								
Total Petroleum Hydrocarbons	42.9	77.5	385	-	-	-	500	2500
Total Metals (mg/kg)								
Arsenic	**11.1**	**8.13**	**12.5**	-	**5.69**	-	**7**	**7**
Barium	76.1	115	87.8	-	-	-	5500	10000
Chromium	5.67	7.37	11.4	-	-	-	1400	10000
Lead	**194**	**342**	**284**	-	**211**	-	**150**	500
Mercury	2.80	2.13	0.760	-	-	-	23	610
Total Cyanide (mg/kg)								
Total Cyanide	-	-	-	ND	-	ND	200	NE

Cells with this color indicate: Cases where the analyte concentration violates one or more of the limits provided. (The violated limits are colored as well.)
Cells with this color indicate: Cases where the analyte was detected but is within the limits provided.
NE: Standard not established for this substance
ND: Cases where the analyte was not detected.
- Not analyzed.

4.4.2 Soil Sample Collection & Laboratory Analytical Results (Lot 248)

In total, three (3) soil borings, identified as SE-102, SE-203 and SE-204 were advanced across Lot 248. A summary of analytical detections from each boring is detailed below:

- SE-102 (0' – 2'): Laboratory analytical results identified several PAHs and lead above RIDEM Method 1 R-DEC, but below the I/C-DEC. Benzo(1)pyrene and arsenic were detected at a concentration which exceeds both the Method 1 R-DEC and I/C-DEC. All other analytes, where detected, were compliant with Method 1 R-DEC.

- SE-203 (0' – 2'): Total cyanide was not detected at a concentration above laboratory reporting limits, which are below the applicable RIDEM Method 1 R-DEC.
- SE-203 (2' – 7'): Lead was detected at a concentration above RIDEM Method 1 R-DEC, but below the I/C-DEC. Arsenic was detected at a concentration above laboratory reporting limits, but below Method 1 R-DEC; and
- SE-204 (0' – 2'): Total cyanide was not detected at a concentration above laboratory reporting limits, which are below the applicable RIDEM Method 1 R-DEC.

Detected laboratory analytical results for Lot 248 are provided in **Table 8,** below. The laboratory analytical report, along with Chain-of-Custody documentation, is included as **Attachment 6**.

Table 8
Detected Soil Analytical Results
AP 32, Lot 248
Newport, Rhode Island

Assessor's Plan 32, Lot 248						
Sample ID/Date	**SE-102 0-2ft**	**SE-203 0-2ft**	**SE-203 2-7ft**	**SE-204 0-2ft**	**RIDEM Method 1 Residential Direct Exposure Criteria**	**RIDEM Method 1 Industrial/Commercial Direct Exposure Criteria**
	10/01/2019	**2/28/2020**	**2/28/2020**	**2/28/2020**		
Analyte	**Sample Result**	**Sample Result**	**Sample Result**	**Sample Result**		
VOCs - Low (mg/kg)						
Acetone	ND	-	-	-	7800	10000
PAHs (mg/kg)						
Anthracene	1.44	-	-	-	35	10000
Benzo(a)anthracene	**3.27**	-	-	-	**0.9**	7.8
Benzo(a)pyrene	**2.55**	-	-	-	**0.4**	**0.8**
Benzo(b)fluoranthene	**2.20**	-	-	-	**0.9**	7.8
Benzo(g,h,i)perylene	**1.34**	-	-	-	**0.8**	10000
Benzo(k)fluoranthene	**2.12**	-	-	-	**0.9**	78
Chrysene	**2.91**	-	-	-	**0.4**	780
Dibenzo(a,h)Anthracene	**0.531**	-	-	-	**0.4**	0.8
Fluoranthene	6.32	-	-	-	20	10000
Fluorene	ND	-	-	-	28	10000
Indeno(1,2,3-cd)Pyrene	**1.33**	-	-	-	**0.9**	7.8
Naphthalene	ND	-	-	-	54	10000
Phenanthrene	3.73	-	-	-	40	10000
Pyrene	4.50	-	-	-	13	10000
TPH - ETPH (mg/kg)						
Total Petroleum Hydrocarbons	437	-	-	-	500	2500
Total Metals (mg/kg)						
Arsenic	**8.62**	-	**4.01**	-	**7**	**7**
Barium	78.7	-	-	-	5500	10000
Chromium	11.6	-	-	-	1400	10000
Lead	**246**	-	**224**	-	**150**	500
Mercury	0.351	-	-	-	23	610
Total Cyanide (mg/kg)						
Total Cyanide	-	ND	-	ND	200	NE

Cells with this color indicate: Cases where the analyte concentration violates one or more of the limits provided. (The violated limits are colored as well.)
Cells with this color indicate: Cases where the analyte was detected but is within the limits provided.
NE: Standard not established for this substance
ND: Cases where the analyte was not detected.
- Not analyzed.

4.4.3 Soil Sample Collection & Laboratory Analytical Results (Lot 267)

In total, five (5) soil borings, identified as SE-104, SE-105, SE-106, SE-205 and SE-206 were advanced across Lot 248. A summary of analytical detections from each boring is detailed below:

- SE-104 (0' – 2'): Laboratory analytical results identified several PAHs, lead and select VOCs including 1,2-Dibromo-3-Chloropropane and vinyl chloride above RIDEM Method 1 R-DEC, but below the I/C-DEC. 1,2-Dibromoethane and arsenic were detected at a concentration which exceeds both the Method 1 R-DEC and I/C-DEC. All other analytes, where detected, were compliant with Method 1 R-DEC;
- SE-105 (0' – 2'): Laboratory analytical results identified select PAHs above RIDEM Method 1 R-DEC, but below the I/C-DEC. Lead and arsenic were detected at a concentration which exceeds both the Method 1 R-DEC and I/C-DEC. All other analytes, where detected, were compliant with Method 1 R-DEC;
- SE-106 (0' – 2'): Laboratory analytical results identified several PAHs above RIDEM Method 1 R-DEC, but below the I/C-DEC. Lead and arsenic were detected at a concentration which exceeds both the Method 1 R-DEC and I/C-DEC. All other analytes, where detected, were compliant with Method 1 R-DEC;
- SE-205 (0' – 2'): Lead arsenic were detected at concentrations above laboratory reporting limits but below applicable Method 1 R-DEC. Total cyanide was not detected at a concentration above laboratory reporting limits, which are below the applicable Method 1 R-DEC; and
- SE-206 (2' – 7'): Total cyanide was not detected at a concentration above laboratory reporting limits, which are below the applicable Method 1 R-DEC.

Detected laboratory analytical results for Lot 267 are provided in **Table 9,** below. The laboratory analytical report, along with Chain-of-Custody documentation, is included as **Attachment 6**.

Table 9
Detected Soil Analytical Results
AP 32, Lot 267
Newport, Rhode Island

Assessor's Plan 32, Lot 267								
Sample ID/Date	SE-104 0-2ft	SE-105 0-2ft	SE-106 0-2ft	SE-205 0-2ft	SE-205 2-7ft	SE-206 0-2ft	RIDEM Method 1 Residential Direct Exposure Criteria	RIDEM Method 1 Industrial/Commercial Direct Exposure Criteria
	10/01/2019	10/01/2019	10/01/2019	10/01/2019	10/01/2019	10/01/2019		
Analyte	Sample Result	Sample Result	Sample Result	Sample Result	Sample Result	Sample Result		
VOCs - Low (mg/kg)								
Acetone	0.0583	ND	ND	-	-	-	7800	10000
VOCs (mg/kg)								
1,2-Dibromo-3-Chloropropane	**0.953**	ND	ND	-	-	-	**0.5**	4.1
1,2-Dibromoethane	**0.191**	ND	ND	-	-	-	**0.01**	**0.07**
Acetone	0.740	ND	ND	-	-	-	7800	10000
Methylene Chloride	0.227	ND	ND	-	-	-	45	760
Naphthalene	0.0457	ND	ND	-	-	-	54	10000
Tetrachloroethene	0.421	ND	ND	-	-	-	12	110
Trichloroethene	1.33	ND	ND	-	-	-	13	520
Vinyl Chloride	**0.191**	ND	ND	-	-	-	**0.02**	3
PAHs (mg/kg)								
2-Methylnaphthalene	ND	ND	0.962	-	-	-	123	10000
Acenaphthene	ND	ND	3.18	-	-	-	43	10000
Acenaphthylene	ND	ND	0.367	-	-	-	23	10000
Anthracene	ND	ND	6.49	-	-	-	35	10000
Benzo(a)anthracene	ND	0.519	**16.4**	-	-	-	**0.9**	**7.8**
Benzo(a)pyrene	0.305	**0.603**	**12.4**	-	-	-	**0.4**	**0.8**
Benzo(b)fluoranthene	ND	0.527	**13.3**	-	-	-	**0.9**	**7.8**
Benzo(g,h,i)perylene	ND	0.432	**5.87**	-	-	-	**0.8**	10000
Benzo(k)fluoranthene	ND	0.458	**9.75**	-	-	-	**0.9**	78
Chrysene	0.303	**0.608**	**15.4**	-	-	-	**0.4**	780
Dibenzo(a,h)Anthracene	ND	ND	**3.07**	-	-	-	**0.4**	**0.8**
Fluoranthene	0.721	1.00	**35.1**	-	-	-	**20**	10000
Fluorene	ND	ND	3.23	-	-	-	28	10000
Indeno(1,2,3-cd)Pyrene	ND	ND	**5.68**	-	-	-	**0.9**	7.8
Naphthalene	ND	ND	1.45	-	-	-	54	10000
Phenanthrene	0.630	0.511	31.1	-	-	-	40	10000
Pyrene	0.733	1.00	**27.9**	-	-	-	**13**	10000
TPH - ETPH (mg/kg)								
Total Petroleum Hydrocarbons	126	107	459	-	-	-	500	2500
Total Metals (mg/kg)								
Arsenic	**11.7**	**9.67**	**23.1**	-	**5.03**	-	**7**	**7**
Barium	168	225	189	-	-	-	5500	10000
Cadmium	0.74	1.02	0.65	-	-	-	39	1000
Chromium	11.2	18.0	13.5	-	-	-	1400	10000
Lead	**483**	**763**	**502**		**57.1**	-	**150**	**500**
Mercury	1.46	1.21	0.756	-	-	-	23	610
Total Cyanide (mg/kg)								
Total Cyanide	-	-	-	ND	-	ND	200	NE

Cells with this color indicate: Cases where the analyte concentration violates one or more of the limits provided. (The violated limits are colored as well.)
Cells with this color indicate: Cases where the analyte was detected but is within the limits provided.
NE: Standard not established for this substance
ND: Cases where the analyte was not detected.
- Not analyzed.

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4.4.4 Groundwater Sample Collection & Laboratory Analytical Results

On October 4, 2019, SAGE returned to the Site to complete a round of groundwater sampling from the six (6) installed monitoring wells. The monitoring well locations are identified in **Figure 2**.

Prior to sample collection, SAGE gauged each well utilizing an oil/water interface probe to determine depth to groundwater and to assess or potential presence non-aqueous phase liquid (NAPL). NAPL was not detected during gauging of the wells.

Next, each well was purged utilizing a low-flow peristaltic pump a minimum of three (3) static well volumes per a modified version of the EPA Region 1 Standard Operating Procedure titled "Low Stress (low-flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells" Revision 4, September 19, 2017. Once purged, groundwater samples were collected from each monitoring well, placed in a cooler on ice, and transported under chain-of-custody protocol to a State-certified laboratory for VOCs analysis.

As depicted in **Table 10,** which summarizes groundwater analytical detections for Lots 248, 272, 267, no detections detected above the applicable RIDEM Method 1 GB Groundwater Objectives (GWOs) in any of the monitoring wells.

Copies of the groundwater laboratory analytical reports for all lots have been included as **Attachment 7**.

Table 10
Detected Groundwater Analytical Results
AP 32, Lots 248, 272, 267
Newport, Rhode Island

Sample ID/Date / Analyte	SE-101 MW 10/04/2019		SE-102 MW 10/04/2019		SE-103 MW 10/04/2019		SE-104 MW 10/04/2019		SE-105 MW 10/04/2019		SE-106 MW 10/04/2019		RIDEM Method 1 GB Groundwater Objectives
	Sample Result	Reporting Limit	Sample Result	Reporting Limit	Sample Result	Reporting Limit	Sample Result	Reporting Limit	Sample Result	Reporting Limit	Sample Result	Reporting Limit	
VOCs (mg/L)													
Isopropylbenzene	0.0047	-	0.001	U	0.001	U	0.001	U	0.001	U	0.001	U	NE
Naphthalene	0.0018	-	0.001	U	0.001	U	0.001	U	0.001	U	0.001	U	NE
n-Propylbenzene	0.0028	-	0.001	U	0.001	U	0.001	U	0.001	U	0.001	U	NE
sec-Butylbenzene	0.0033	-	0.001	U	0.001	U	0.001	U	0.001	U	0.001	U	NE
Trichloroethene	0.001	U	0.001	U	0.001	U	0.0026	-	0.001	U	0.001	U	0.54

Qualifier	Description
U:	Undetected
NE:	Standard not established for this substance
Cells with this color indicate:	Cases where the analyte was detected but is within the limits provided.
Cells with this color indicate:	Cases where the analyte concentration violates one or more of the limits provided. (The violated limits are colored as well.)

4.5 Groundwater Elevation Survey

On October 4, 2019, a relative groundwater elevation survey was performed to determine the approximate groundwater flow direction. Using an arbitrary benchmark of 100 feet, each well was surveyed to establish relative elevations. Based on the elevation survey, groundwater at the Site appears to flow in a general southerly direction.

Groundwater contours are depicted in **Figure 2**. A summary of the groundwater gauging and elevation survey has been provided in **Table 11**.

Table 11
Groundwater Gauging Results
Waites Wharf
Newport, Rhode Island

Well #	Lot	Well Dia. (inches)	MP Elevation (feet)	Depth To Product (feet)	Depth to Water (feet)	Equivalent Head Elev. (feet)
SE-101(MW)	272	1	99.61	—	6.12	93.49
SE-102(MW)	248	1	99.83	—	4.28	95.70
SE-103(MW)	272	1	99.22	—	6.29	94.48
SE-104(MW)	267	1	100	—	4.21	95.78
SE-105(MW)	267	1	101.06	—	4.09	96.97
SE-106(MW)	267	1	101.42	—	3.52	97.80

— = No separate-phase petroleum identified

4.6 Quality Assurance/Control Evaluation

During the course of this Investigation, field and laboratory analytical components were routinely assessed to ensure reliability and consistency of the data collected.

Equipment was decontaminated between sample collections with a 1:20 Alconox-water mixture. Soil samples were collected in precleaned, analyte-specific glassware provided by the laboratory, labeled with sample identification information, and stored in a cooler on ice during field activities. Upon completion of field activities, samples were transported to the laboratory under chain-of-custody protocol.

The laboratory provided a Case Narrative, included in the attached laboratory analytical reports, that indicates that the samples were appropriately cooled and preserved, within appropriate containers, and received by the laboratory with the completed chain-of-custody documentation. The analyses performed were within the laboratory's specific quality control requirements and allowances.

Based on this review, SAGE finds that sample collection, handling and preservation techniques utilized in the field are consistent with standard industry practice, and that the laboratory analytical reports for soil are valid and representative of Site conditions.

4.7 Summary of Findings & Nature and Extent of Impact

4.7.1 Findings

The following summarizes key findings of previous environmental assessments of the Site and historical information that was made available to SAGE during the course of this Investigation.

- On October 1, 2019, SAGE provided oversight for the advancement of six (6) soil borings (SE-101 through SE-106). In general, soil borings were evenly distributed across each of the three (3) investigated lots. Borings SE-101 and 103 were advanced on lot 272, boring SE-102 was advanced on lot 248 and borings SE-104 through SE-106 were advanced on lot 267. All six (6) of the advanced borings were completed as permanent groundwater monitoring wells.
- Surficial soil samples were collected from 0 to 2 feet BSG from all of the six (6) of the borings and laboratory analyzed for TPH via EPA Method 8100M, VOCs by EPA Method 8260C, RCRA 8 total metals and PAHs by EPA Method 8270D. Additionally, soil sample SE-101 (2 to 7 feet BSG) was submitted for similar analyses due to visual observations noted in-field.
- Analytical detections for Lots 248, 267 and 272 identified select PAHs and metals, specifically lead and arsenic in excess of the applicable RIDEM Method 1 DECs. Based on in-field observations, analytical detections appear to be associated with use of urban fill as a grading agent during Site development. Fill material was noted in soil borings from approximately surface grade to a depth of at least 12-feet BSG, where highly weathered shale ledge was encountered. Fill material was noted in all soil borings and consisted of a mixture of sand, wood, coal ash and brick.
- No compounds were identified in groundwater samples at concentrations which exceed the applicable RIDEM GB GWOs in any of the six (6) groundwater monitoring wells.
- The identified contamination appears to be limited to Site soils and does not appear to have impacted any man-made structures;
- No odors, stained soil or evidence of stressed vegetation was noted during the Site investigation;
- No excavated or stockpiled materials are currently located at the Site; and
- The contamination does not fall outside of the jurisdiction of the Remediation Regulations.

5.0 CONCEPTUAL SITE MODEL (CSM)

As previously noted, analytical detections for Lots 248, 267 and 272 identified select PAHs and metals, specifically lead and arsenic in excess of the applicable RIDEM Method 1 DECs. Based on in-field observations, analytical detections appear to be associated with use of urban fill as a grading agent during Site development. Fill material was noted in soil borings from approximately surface grade, to a depth of at least 12-feet BSG, where highly weathered shale ledge was encountered. Fill material was noted in all soil borings and consisted of a mixture of sand, wood, coal ash and brick and appears to be Site-wide.

6.0 REMEDIAL ALTERNATIVES ANALYSIS

A Remedial Alternatives Analysis (RAA) was conducted to identify potential alternatives for the remediation of impacted materials to reduce the principal threats posed by these materials. Each alternative is evaluated against the four (4) criteria identified in Section 1.8.4 of RIDEM's *Remediation Regulations.* Based on these criteria, a preferred alternative is selected.

6.1 Development of Remedial Alternatives

In compliance with Section 1.8.4 of the *Remediation Regulations*, three (3) potential remedial alternatives for Site soils are identified and evaluated with respect to the four (4) evaluation criteria specified in Section 1.8.4:

- Compliance with Section 8 (Risk Management) of the *Remediation Regulations;*
- Technical feasibility of the alternative;
- Compliance with state or local laws or other public concerns; and
- Ability of the performing party to perform the alternative.

The three (3) remedial alternatives evaluated are as follows:

1. No Action;
2. Impacted Media Removal without Institutional Controls; and
3. Implementation of institutional and/or engineered controls.

The sections below describe each other the evaluated remedial alternatives.

6.2 Alternative 1: No Action

6.2.1 Description of Alternative

This alternative is comprised of no action. The Site would be left in its present state to attenuate naturally, where possible. No engineering controls, other than the ones presently on Site, would be applied. No institutional controls would be implemented.

6.2.2 Compliance with Section 1.8 of the Remediation Regulations

This alternative would not comply with Section 1.8 of the *Remediation Regulations* in that it would not limit access to soils with known concentrations of lead, arsenic and PAHs in excess of RIDEM Method 1 R-DEC. As such, some amount of remediation must be conducted in order to attempt to either decrease concentrations to below applicable regulatory limits or limit direct access to the reported concentrations.

6.2.3 Technical Feasibility

Implementation of this alternative is technically feasible since its implementation involves no action and the contaminants of concern will naturally attenuate over time.

6.2.4 Compliance with State and Local Laws and Other Public Concerns

This alternative would not comply with state laws, specifically the *Remediation Regulations,* for reasons discussed above relating to Section 1.8 of the *Remediation Regulations.* No specific local law or public concerns are known to be violated by this alternative.

6.2.5 Ability to Perform

The performing party is able to perform this alternative since its implementation involves no action.

6.3 Alternative 2: Impacted Media Removal without Institutional Controls

6.3.1 Description of Alternative

This alternative is comprised of the excavation and off-Site disposal at a licensed facility of impacted soils, with confirmatory sampling and ultimately backfilling with Clean Soil as defined in Section 1.4 of the RIDEM *Remediation Regulations.* This alternative assumes that all impacted soils will be removed to eliminate the need for institutional or engineered controls.

6.3.2 Compliance with Section 1.8 of the Remediation Regulations

This alternative would provide compliance with Section 1.8 of the Remediation.

6.3.3 Technical Feasibility

Implementation of this alternative may not be considered technically or financially feasible due to Site features. Impacted soils were noted to an approximate depth of 10 – 12’ BSG, where heavily weathered ledge consisting of shale was encountered.

6.3.4 Compliance with State and Local Laws and Other Public Concerns

This alternative would comply with state laws, including the *Remediation Regulations.* No specific local law or public concerns are known to be violated by this alternative.

6.3.5 Ability to Perform

The performing party is able to perform this alternative.

6.4 Alternative 3: Implementation of institutional and/or engineered controls

6.4.1 Description of Alternative

This alternative is comprised of the implementation of institutional and/or engineered controls to restrict future exposure to and migration of Site contaminants. Given that surficial soil impacts have been identified in excess of the RIDEM Method 1 I/C-DEC for lead, arsenic and select PAHs, at least one (1) of the following engineered controls would need to be implemented in addition to recording of an Environmental Land Use Restriction (ELUR):

- Encapsulation of impacted soils with at least two (2) feet of Clean Soil as defined in Section 3.12 of the RIDEM *Remediation Regulations*;
- Encapsulation of impacted soils with the placement of a geotextile fabric with a minimum puncture strength of 120-pounds and minimum burst strength of 400 psi, overlain by a minimum of one (1) foot of aforementioned Clean Soil; or
- Encapsulation of impacted soils with at least six (6) inches of aforementioned Clean Soil overlain by a minimum of four (4) inches of asphalt or concrete.

Additionally, a Soils Management Plan (SMP) would be prepared to address risks and management of any necessary soil disturbances that may occur in the future. Upon completion of remedial actions and demonstrated compliance, filing and recording of a RIDEM-approved ELUR and SMP to restrict future Site use and activities.

6.4.2 Compliance with Section 1.8 of the Remediation Regulations

This alternative would provide compliance with Section 1.8 of the Remediation.

6.4.3 Technical Feasibility

Implementation of this alternative is technically feasible.

6.4.4 Compliance with State and Local Laws and Other Public Concerns

This alternative would comply with state laws, including the *Remediation Regulations.* No specific local law or public concerns are known to be violated by this alternative.

6.4.5 Ability to Perform

The performing party is able to perform this alternative.

7.0 CERTIFICATION

The above Site Investigation Report (SIR) / Remedial Alternatives Analysis has been prepared on behalf of 468 West Fountain Street, LLC. and reviewed by the undersigned. To the best of my knowledge and belief, the information contained herein is accurate and complete.

Daniel Boynes

Daniel S. Boynes, Project Manager

Jacob H. Butterworth

Jacob H. Butterworth, MS, LSP, Vice President

The above Site Investigation Report (SIR) / Remedial Alternatives Analysis has been prepared at the request of Thomas Abruzese and reviewed by the undersigned. To the best of my knowledge and belief, the SIR is a complete and accurate representation of the contaminated Site.

Thomas Abruzese

3/25/2020

Date

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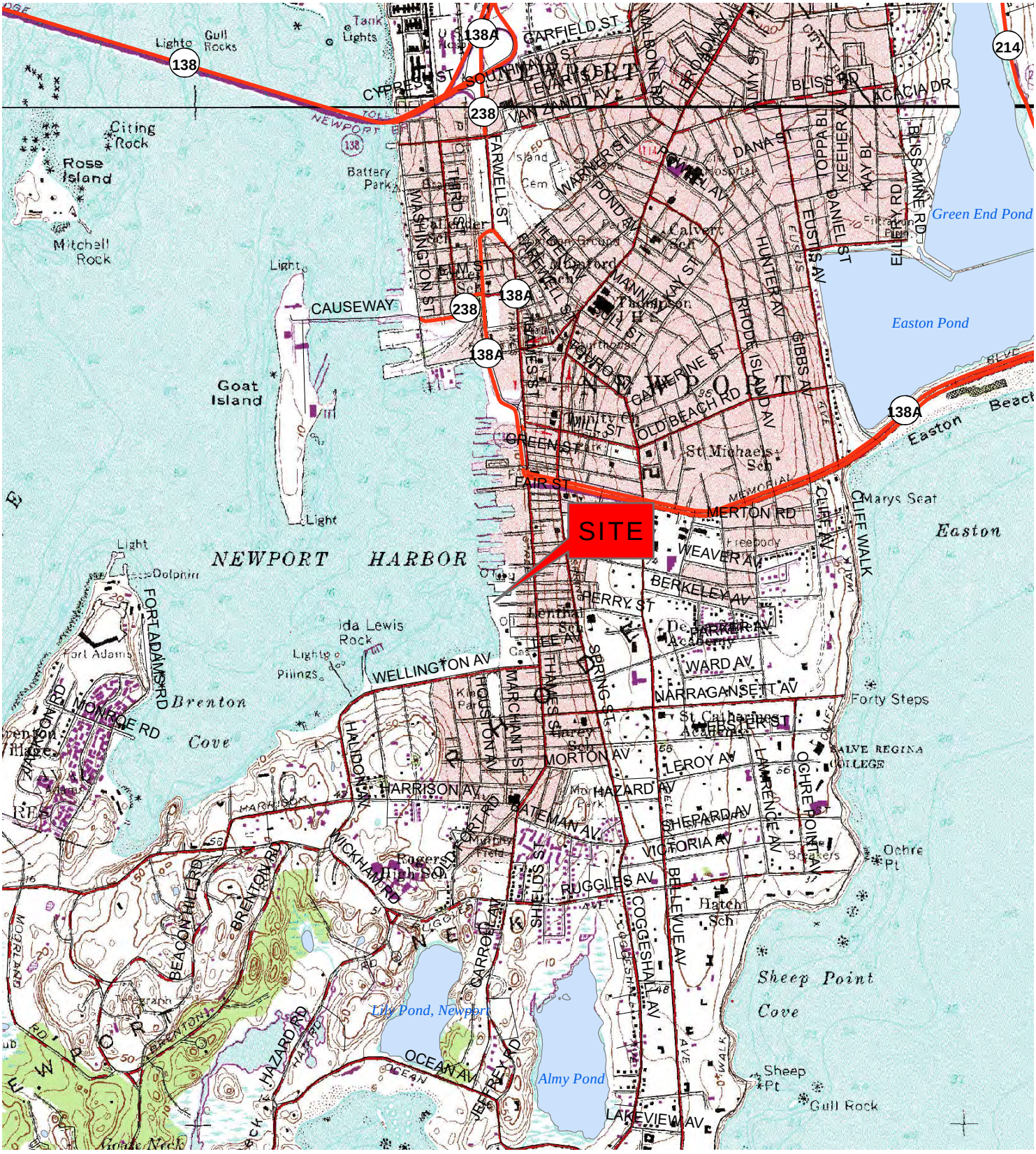
FIGURES



USGS QUADRANGLE
NEWPORT, RHODE ISLAND

Site Location

USGS Quadrangle Site Location Map

25 Waites Wharf
Newport, Rhode Island

Date: 09/26/2019
Job#: S3432
Created By: ALM

0 25 50 100 Miles

Data Provided by RIGIS

Figure 1

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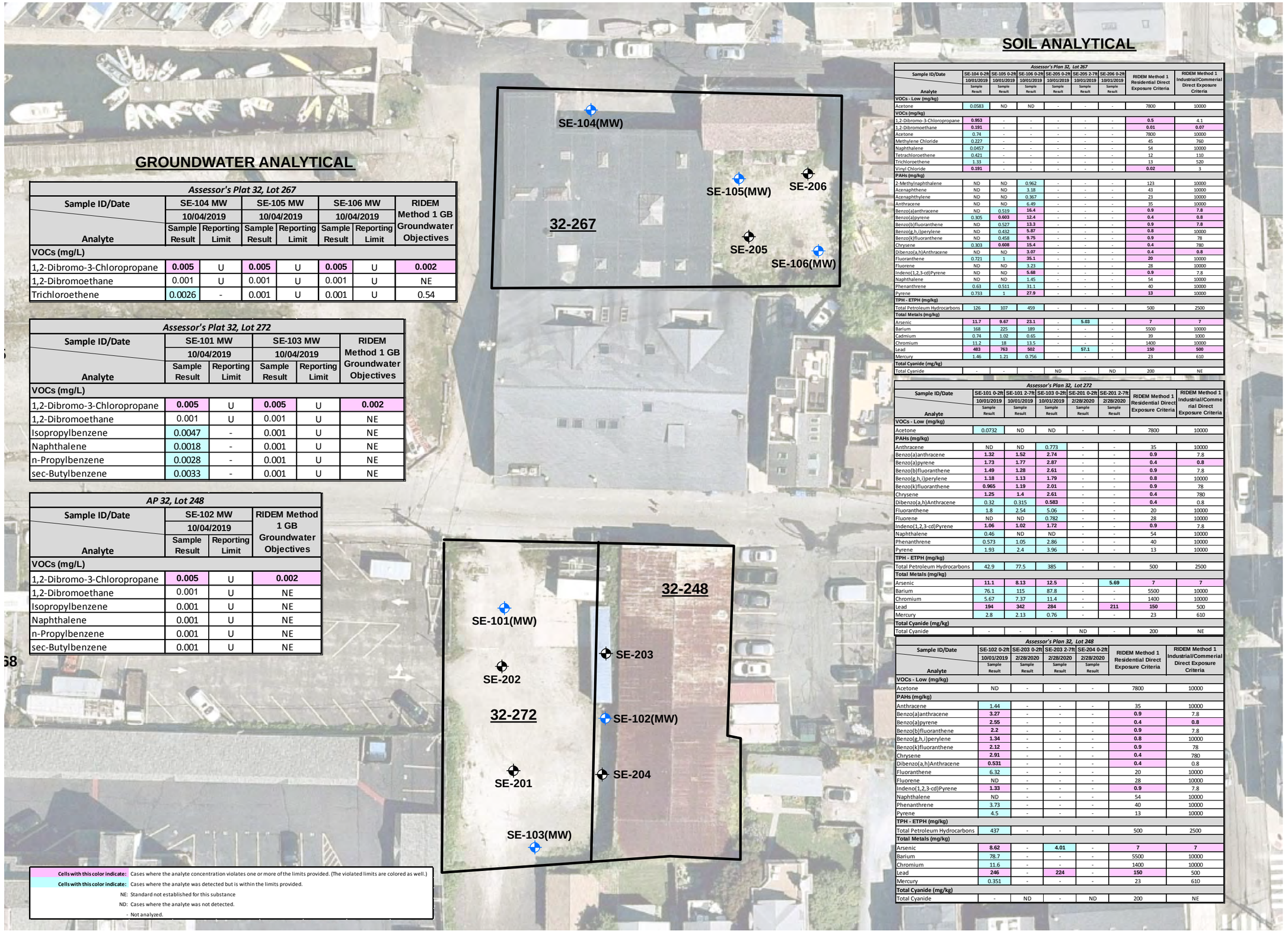


GROUNDWATER ANALYTICAL

Assessor's Plat 32, Lot 267

Sample ID/Date	SE-104 MW		SE-105 MW		SE-106 MW		RIDEM Method 1 GB Groundwater Objectives
	10/04/2019		10/04/2019		10/04/2019		
Analyte	Sample Result	Reporting Limit	Sample Result	Reporting Limit	Sample Result	Reporting Limit	
VOCs (mg/L)							
1,2-Dibromo-3-Chloropropane	**0.005**	U	**0.005**	U	**0.005**	U	**0.002**
1,2-Dibromoethane	0.001	U	0.001	U	0.001	U	NE
Trichloroethene	0.0026	-	0.001	U	0.001	U	0.54

Assessor's Plat 32, Lot 272

Sample ID/Date	SE-101 MW		SE-103 MW		RIDEM Method 1 GB Groundwater Objectives
	10/04/2019		10/04/2019		
Analyte	Sample Result	Reporting Limit	Sample Result	Reporting Limit	
VOCs (mg/L)					
1,2-Dibromo-3-Chloropropane	**0.005**	U	**0.005**	U	**0.002**
1,2-Dibromoethane	0.001	U	0.001	U	NE
Isopropylbenzene	0.0047	-	0.001	U	NE
Naphthalene	0.0018	-	0.001	U	NE
n-Propylbenzene	0.0028	-	0.001	U	NE
sec-Butylbenzene	0.0033	-	0.001	U	NE

AP 32, Lot 248

Sample ID/Date	SE-102 MW		RIDEM Method 1 GB Groundwater Objectives
	10/04/2019		
Analyte	Sample Result	Reporting Limit	
VOCs (mg/L)			
1,2-Dibromo-3-Chloropropane	**0.005**	U	**0.002**
1,2-Dibromoethane	0.001	U	NE
Isopropylbenzene	0.001	U	NE
Naphthalene	0.001	U	NE
n-Propylbenzene	0.001	U	NE
sec-Butylbenzene	0.001	U	NE

Cells with this color indicate: Cases where the analyte concentration violates one or more of the limits provided. (The violated limits are colored as well.)

Cells with this color indicate: Cases where the analyte was detected but is within the limits provided.

NE: Standard not established for this substance

ND: Cases where the analyte was not detected.

- Not analyzed.

SOIL ANALYTICAL

Assessor's Plan 32, Lot 267

Sample ID/Date	SE-104 0-2ft	SE-105 0-2ft	SE-106 0-2ft	SE-205 0-2ft	SE-205 2-7ft	SE-206 0-2ft	RIDEM Method 1 Residential Direct Exposure Criteria	RIDEM Method 1 Industrial/Commerial Direct Exposure Criteria
	10/01/2019	10/01/2019	10/01/2019	10/01/2019	10/01/2019	10/01/2019		
Analyte	Sample Result	Sample Result	Sample Result	Sample Result	Sample Result	Sample Result		
VOCs - Low (mg/kg)								
Acetone	0.0583	ND	ND	-	-	-	7800	10000
VOCs (mg/kg)								
1,2-Dibromo-3-Chloropropane	**0.953**	-	-	-	-	-	**0.5**	4.1
1,2-Dibromoethane	**0.191**	-	-	-	-	-	**0.01**	**0.07**
Acetone	0.74	-	-	-	-	-	7800	10000
Methylene Chloride	0.227	-	-	-	-	-	45	760
Naphthalene	0.0457	-	-	-	-	-	54	10000
Tetrachloroethene	0.421	-	-	-	-	-	12	110
Trichloroethene	1.33	-	-	-	-	-	13	520
Vinyl Chloride	**0.191**	-	-	-	-	-	**0.02**	3
PAHs (mg/kg)								
2-Methylnaphthalene	ND	ND	0.962	-	-	-	123	10000
Acenaphthene	ND	ND	3.18	-	-	-	43	10000
Acenaphthylene	ND	ND	0.367	-	-	-	23	10000
Anthracene	ND	ND	6.49	-	-	-	35	10000
Benzo(a)anthracene	ND	0.519	**16.4**	-	-	-	**0.9**	**7.8**
Benzo(a)pyrene	0.305	**0.603**	**12.4**	-	-	-	**0.4**	**0.8**
Benzo(b)fluoranthene	ND	0.527	**13.3**	-	-	-	**0.9**	**7.8**
Benzo(g,h,i)perylene	ND	0.432	**5.87**	-	-	-	**0.8**	10000
Benzo(k)fluoranthene	ND	0.458	**9.75**	-	-	-	**0.9**	78
Chrysene	0.303	**0.608**	**15.4**	-	-	-	**0.4**	780
Dibenzo(a,h)Anthracene	ND	ND	**3.07**	-	-	-	**0.4**	**0.8**
Fluoranthene	0.721	1	**35.1**	-	-	-	**20**	10000
Fluorene	ND	ND	3.23	-	-	-	28	10000
Indeno(1,2,3-cd)Pyrene	ND	ND	**5.68**	-	-	-	**0.9**	7.8
Naphthalene	ND	ND	1.45	-	-	-	54	10000
Phenanthrene	0.63	0.511	31.1	-	-	-	40	10000
Pyrene	0.733	1	**27.9**	-	-	-	**13**	10000
TPH - ETPH (mg/kg)								
Total Petroleum Hydrocarbons	126	107	459	-	-	-	500	2500
Total Metals (mg/kg)								
Arsenic	**11.7**	**9.67**	**23.1**	-	**5.03**	-	**7**	**7**
Barium	168	225	189	-	-	-	5500	10000
Cadmium	0.74	1.02	0.65	-	-	-	39	1000
Chromium	11.2	18	13.5	-	-	-	1400	10000
Lead	**483**	**763**	**502**		**57.1**	-	**150**	**500**
Mercury	1.46	1.21	0.756	-	-	-	23	610
Total Cyanide (mg/kg)								
Total Cyanide	-	-	-	ND	-	ND	200	NE

Assessor's Plan 32, Lot 272

Sample ID/Date	SE-101 0-2ft	SE-101 2-7ft	SE-103 0-2ft	SE-201 0-2ft	SE-201 2-7ft	RIDEM Method 1 Residential Direct Exposure Criteria	RIDEM Method 1 Industrial/Commerial Direct Exposure Criteria
	10/01/2019	10/01/2019	10/01/2019	2/28/2020	2/28/2020		
Analyte	Sample Result	Sample Result	Sample Result	Sample Result	Sample Result		
VOCs - Low (mg/kg)							
Acetone	0.0732	ND	ND	-	-	7800	10000
PAHs (mg/kg)							
Anthracene	ND	ND	0.773	-	-	35	10000
Benzo(a)anthracene	**1.32**	**1.52**	**2.74**	-	-	**0.9**	7.8
Benzo(a)pyrene	**1.73**	**1.77**	**2.87**	-	-	**0.4**	**0.8**
Benzo(b)fluoranthene	**1.49**	**1.28**	**2.61**	-	-	**0.9**	7.8
Benzo(g,h,i)perylene	**1.18**	**1.13**	**1.79**	-	-	**0.8**	10000
Benzo(k)fluoranthene	**0.965**	**1.19**	**2.01**	-	-	**0.9**	78
Chrysene	**1.25**	**1.4**	**2.61**	-	-	**0.4**	780
Dibenzo(a,h)Anthracene	0.32	0.315	**0.583**	-	-	**0.4**	0.8
Fluoranthene	1.8	2.54	5.06	-	-	20	10000
Fluorene	ND	ND	0.782	-	-	28	10000
Indeno(1,2,3-cd)Pyrene	**1.06**	**1.02**	**1.72**	-	-	**0.9**	7.8
Naphthalene	0.46	ND	ND	-	-	54	10000
Phenanthrene	0.573	1.05	2.86	-	-	40	10000
Pyrene	1.93	2.4	3.96	-	-	13	10000
TPH - ETPH (mg/kg)							
Total Petroleum Hydrocarbons	42.9	77.5	385	-	-	500	2500
Total Metals (mg/kg)							
Arsenic	**11.1**	**8.13**	**12.5**	-	**5.69**	**7**	**7**
Barium	76.1	115	87.8	-	-	5500	10000
Chromium	5.67	7.37	11.4	-	-	1400	10000
Lead	**194**	**342**	**284**	-	**211**	**150**	500
Mercury	2.8	2.13	0.76	-	-	23	610
Total Cyanide (mg/kg)							
Total Cyanide	-	-	-	ND	-	200	NE

Assessor's Plan 32, Lot 248

Sample ID/Date	SE-102 0-2ft	SE-203 0-2ft	SE-203 2-7ft	SE-204 0-2ft	RIDEM Method 1 Residential Direct Exposure Criteria	RIDEM Method 1 Industrial/Commerial Direct Exposure Criteria
	10/01/2019	2/28/2020	2/28/2020	2/28/2020		
Analyte	Sample Result	Sample Result	Sample Result	Sample Result		
VOCs - Low (mg/kg)						
Acetone	ND	-	-	-	7800	10000
PAHs (mg/kg)						
Anthracene	1.44	-	-	-	35	10000
Benzo(a)anthracene	**3.27**	-	-	-	**0.9**	7.8
Benzo(a)pyrene	**2.55**	-	-	-	**0.4**	**0.8**
Benzo(b)fluoranthene	**2.2**	-	-	-	**0.9**	7.8
Benzo(g,h,i)perylene	**1.34**	-	-	-	**0.8**	10000
Benzo(k)fluoranthene	**2.12**	-	-	-	**0.9**	78
Chrysene	**2.91**	-	-	-	**0.4**	780
Dibenzo(a,h)Anthracene	**0.531**	-	-	-	**0.4**	0.8
Fluoranthene	6.32	-	-	-	20	10000
Fluorene	ND	-	-	-	28	10000
Indeno(1,2,3-cd)Pyrene	**1.33**	-	-	-	**0.9**	7.8
Naphthalene	ND	-	-	-	54	10000
Phenanthrene	3.73	-	-	-	40	10000
Pyrene	4.5	-	-	-	13	10000
TPH - ETPH (mg/kg)						
Total Petroleum Hydrocarbons	437	-	-	-	500	2500
Total Metals (mg/kg)						
Arsenic	**8.62**	-	**4.01**	-	**7**	**7**
Barium	78.7	-	-	-	5500	10000
Chromium	11.6	-	-	-	1400	10000
Lead	**246**	-	**224**	-	**150**	500
Mercury	0.351	-	-	-	23	610
Total Cyanide (mg/kg)						
Total Cyanide	-	ND	-	ND	200	NE

Site Location

Legend

- Approximate Property Boundary
- Monitoring Well Locations
- Soil Boring Locations

N

0 5 10 20 Feet

Data Provided by RIGIS
Orthoimagery provided by nearmap

Site Investigation Report Site Plan

Waites Wharf
Newport, Rhode Island

Date: 03/10/2020
Job#: S3432
Created By: ALM

Figure 2

SAGE ENVIRONMENTAL

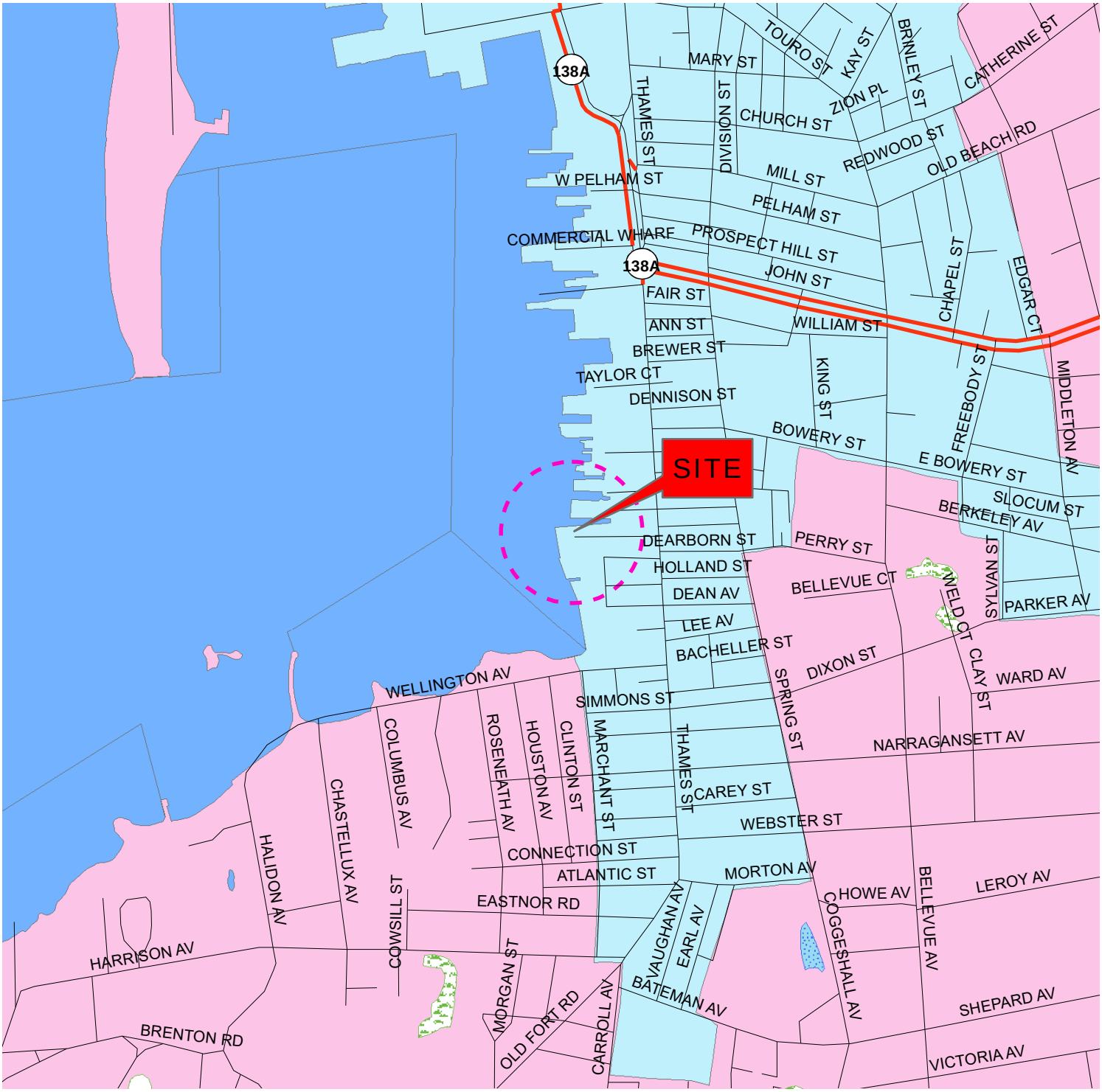


Figure 3

Noncommunity Wells
Public Wells
500' Buffer
500' radius
Noncommunity Wellhead Protection Areas
Community Wellhead Protection Areas

Groundwater Classification

GA
GAA
GB
GC
Wildlife Management Areas
Rare Species Habitat
Natural Heritage

Wetlands

Emergent Wetland: Emergent Fen or
Emergent Wetland: Marsh/Wet Meadow
Estuarine Emergent Wetland
Estuarine Scrub-Shrub Wetland
Forested Wetland: Coniferous
Forested Wetland: Dead
Forested Wetland: Deciduous
Scrub-Shrub Swamp
Scrub-Shrub Wetland: Shrub Fen

Not to Scale

Groundwater Classification & Priority Resources Map

25 Waites Wharf
Newport, Rhode Island

DATE:	10/01/2019	JOB #:	S3432
CREATED BY:	ALM	FILENAME:	wetlandspec.mxd

Site Location

0 25 50 75 100 Miles

SAGE ENVIRONMENTAL

ATTACHMENT 1

APPENDIX "I"

Section 7 of the "Remediation Regulations"
Site Investigation Report (SIR) Checklist

(The following information shall be completed and submitted with the SIR)

Contact Name: Daniel Boynes
Contact Address: 172 Armistice Blvd., Pawtucket, RI
Contact Telephone: 401-723-9900

Site Name: Waites Wharf
Site Address: Waites Wharf (AP 32, L: 272), 16 Waites Wharf (AP 32, Lot 248), 20 West Extension (AP 32, Lot 267)

OFFICE USE ONLY
SITE INVESTIGATION REPORT (SIR) SITE:
PROJECT CODE:
SIR SUBMITTAL DATE:
CHECKLIST SUBMITTAL DATE:

DIRECTIONS: *The box to the left of each item listed below is for the administrative review of the SIR submission and is for **RIDEM USE ONLY**. Under each item listed below, cross-reference the specific sections and pages in the SIR that provide detailed information that addresses each stated requirement. Failure to include cross-references shall delay review and approval. If an item is not applicable, simply state that it is not applicable and provide an explanation in the SIR.*

- ☐ 7.03.A. List specific objectives of the SIR related to characterization of the Release, impacts of the Release and remedy. Section 1.0: Introduction

- ☐ 7.03.B. Include information reported in the Notification Of Release. A copy of the Release notification form should be included in the SIR. Include information relating to short-term response, if applicable. Section 1.1: Purpose & Background; Attachment 8
- ☐ 7.03.C. Include documentation of any past incidents, releases, or investigations. Section 1.1: Purpose & Background; 4.0 Site Investigation
- ☐ 7.03.D. Include list of prior property Owners and Operators including past uses of the property, sequencing of property transfers and time periods of occupancy. Include supporting documentation.
  - ☐ Historical Sanborn Maps Section 3.1.2: Sanborn Fire Insurance Maps; Attachment 3
  - ☐ Historical Aerial Photos Section 3.1.3: Historical Aerial Photographs

- ☐ 7.03.E. Include previously existing environmental information which characterizes the Contaminated-Site and all information that led to the discovery of the Contaminated-Site. Section 1.1: Purpose & Background; 4.0 Site Investigation
- ☐ 7.03.F. Include current uses and zoning of the Contaminated-Site, including brief statements of operations, processes employed, waste generated, Hazardous Materials handled, and any residential activities on the site, if applicable. (This section should be linked to the specific objectives section demonstrating how the compounds of concern in the investigation are those that are used or may have been used on the site or are those that may have impacted the site from an off-site source.) Section 2.2: Site & Vicinity Characteristics
- ☐ 7.03.G. Include a locus map showing the location of the site using US Geological Survey 7.5-min

quadrangle map or a copy of a section of that USGS map. Figure 1

- ☐ 7.03.H. Include a site plan, to scale, showing: Figure 2
  - ☐ Buildings
  - ☐ Activities
  - ☐ Structures
  - ☐ North Arrow
  - ☐ Drinking Water Wells
  - ☐ Monitoring Wells
  - ☐ UIC Systems, septic tanks, USTs (former and current), piping and other underground structures
  - ☐ Groundwater Flow Direction
  - ☐ Outdoor Hazardous Materials storage and handling areas
  - ☐ Extent of paved areas
  - ☐ Location of environmental samples taken with analytical results, including soil borings, test pits, and groundwater monitoring wells, highlighting any exceedences with the corresponding sample depth and medium listed
  - ☐ Waste management and disposal areas
  - ☐ Lot Lines
  - ☐ Property Lines
- ☐ 7.03.I. Include a general characterization of the property surrounding the area including, but not limited to: Figure 2 & 3
  - ☐ Location and distance to any surface water bodies within 500 ft of the site
  - ☐ Location and distance to any Environmentally Sensitive Areas within 500 ft of the site
  - ☐ Actual sources of potable water for all properties immediately abutting the site
  - ☐ Location and distance to all public water supplies, which have been active within the previous 2 years and within one mile of the site
  - ☐ Determination as to whether the Release impacts any off-site area utilized for residential or industrial/commercial property or both
  - ☐ Determination of the underlying groundwater classification and, if the classification is GB, the

distance to the nearest GA area

- ☐ 7.03.J. Include classifications of surface and ground water at and surrounding the site that could be impacted by a Release. Figure 3

- ☐ 7.03.K. Include a description of the contamination from the Release, including:

  - ☐ Free liquids on the surface Section 4.0 Site Investigation
  - ☐ LNAPL and DNAPL Section 4.4.4 Groundwater Sample Collection & Laboratory Analysis
  - ☐ Concentrations of Hazardous Substances which can be shown to present an actual or potential threat to human health and any concentrations in excess of any of the remedial objectives; (reference Section 12 for requirements related to arsenic in soil).
  - ☐ Impact to Environmentally Sensitive Areas Section 4.7.1: Findings
  - ☐ Contamination of man-made structures Section 4.7.1: Findings
  - ☐ Odors or stained soil Section 4.7.1: Findings
  - ☐ Stressed vegetation Section 4.7.1: Findings
  - ☐ Presence of excavated or stockpiled material and an estimate of its total volume Section 4.7.1: Findings
  - ☐ Environmental sampling locations, procedures and copies of the results of any analytical testing at the site Section 4.0: Site Investigation
  - ☐ List of Hazardous Substances at the site N/A
  - ☐ Indicate if the site has previously been or is currently under the jurisdiction or any program within the Department or Environmental Protection Agency N/A
  - ☐ Discuss if the contamination falls outside of the jurisdiction of the Remediation Regulations, including but not limited to USTs, UICs, and wetlands. Section 4.7.1: Findings

- ☐ 7.03.L. Include the concentration gradients of Hazardous Substances throughout the site for each medium impacted by the Release. N/A

- ☐ 7.03.M. Include the methodology and results of any investigation conducted to determine background concentrations of Hazardous Substances identified at the Contaminated-Site (see Section 12 for Special Requirements for Managing Arsenic in Soil). N/A

- ☐ 7.03.N. Include a listing and evaluation of the site specific hydrogeological properties which could influence the migration of Hazardous Substances throughout and away from the site, including but not limited to, where appropriate:

  - ☐ Depth to groundwater and elevation of groundwater above mean sea level
    Section 4.4.4: Groundwater Sample Collection & Laboratory Analysis
  - ☐ Presence and effects of both the natural and man-made barriers to and conduits for contaminant

migration
Section 2.5.2.4 Presence/Effects of Natural & Man-Made Barriers to and Conduits for Contaminant Migration

- ☐ Characterization of bedrock and depth of bedrock below ground surface, if available
  Section 2.5.1 Topography
- ☐ Groundwater contours, flow rates and gradients throughout the site, and location of groundwater monitoring wells depicted on a site figure drawn to scale. (a minimum of three (3) groundwater wells is required) Figure 2

☐ 7.03.O. Include a characterization of the topography, surface water and run-off flow patterns, including the flooding potential, of the site.
Section 2.5.1 Topography

☐ 7.03.P. Include the potential for Hazardous Substances from the site to volatilize and any and all potential impacts of the volatilization to structures within the site. Indoor air and/or soil gas analysis is required if appropriate.
N/A - No VOC impacts identified

☐ 7.03.Q. Include the potential for entrainment of Hazardous Substances from the site by wind or erosion actions.
Section 4.7.1: Findings

☐ 7.03.R. Include detailed protocols for all fate and transport models used in the Site Investigation.
Section 4.7: Summary of Findings & Nature and Extent of Impact

☐ 7.03.S. Include a complete list of all samples taken, the location of all samples, parameters tested for and analytical methods used during the Site Investigation. **Be sure to include the sample locations and analytical results on a site figure** as required in Rule 7.03.H. Please note that a representative number of soil samples taken should be analyzed for Priority Pollutant Metals, Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), Total Petroleum Hydrocarbons (TPH), and Polychlorinated Biphenyls (PCBs). All analytical results shall be summarized in a tabular format. Include justification for all sample locations, depths, and parameters analyzed.
Section 4.0, Tables 5, 6, 7, 8, 9 & 10. Attachments 6-7

☐ 7.03.T. Include construction plans and development procedures for all monitoring wells. Well construction shall be consistent with the requirements of Appendix 1 of the Groundwater Quality Rules. Include boring logs for monitoring wells and soil borings in an appendix of the SIR.
Attachment 5

☐ 7.03.U. Include procedures for the handling, storage and disposal of wastes derived from and during the investigation.
NA

☐ 7.03.V. Include a quality assurance and quality control evaluation summary report for sample handling and analytical procedures, including, but not limited to, chain-of-custody procedures and sample preservation techniques.
Section 4.6: Quality Assurance/Control Evaluation

☐ 7.03.W. Include any other site-specific factor, that the Director believes, is necessary to make an accurate decision as to the appropriate Remedial Action to be taken at the site.
N/A

☐ Include Remedial Alternatives. The Site Investigation Report **shall** contain a minimum of **2** remedial alternatives other than no action/natural attenuation alternative, unless this requirement is waived by the Department. It should be clear which of these alternatives is most preferable. All alternatives shall be supported by relevant data contained in the Site Investigation Report and consistent with the current and reasonably foreseeable land usage, and documentation of the following:
Section 6.0: REMEDIAL ALTERNATIVES ANALYSIS

- ☐ Compliance with Section 8 (RISK MANGEMENT);
- ☐ Technical feasibility of the preferred remedial alternative;

- ☐ Compliance with Federal, State and local laws or other public concerns; and

- ☐ The ability of the Performing Party to perform the preferred remedial alternative

☐ 7.05 **Certification Requirements:** The Site Investigation Report and all associated progress reports shall include the following statements signed by an authorized representative of the party specified:
Section 7.0: CERTIFICATION

- ☐ A statement signed by an authorized representative of the Person who prepared the Site Investigation Report certifying the completeness and accuracy of the information contained in that report to the best of their knowledge; and

- ☐ A statement signed by the Performing Party responsible for the submittal of the Site Investigation Report certifying that the report is a complete and accurate representation of the site and the Release and contains all known facts surrounding the Release to the best of their knowledge

☐ **Progress Reports:** If the Site Investigation is not complete, include a schedule for the submission of periodic progress reports on the status of the investigation and interim reports on any milestones achieved in the project
N/A

☐ **Public Involvement and Notice:** Be prepared to implement public notice requirements per Section 7.07 and 7.09 of the Remediation Regulations when the Department deems the Site Investigation Report to be complete.
Attachment 9: Pre-SIR Public Notice Letter

- ☐ Indicate if the site falls within an Environmental Justice (EJ) area and, if applicable, include all EJ public notice documentation issued, and the list of recipients. N/A

ATTACHMENT 2

WAITES WHF

Location	WAITES WHF	**Map/Lot/Unit**	32/ 272/ / /
Acct#	R06182	**Owner**	WAITES WHARF REALTY ASSO LLC
Assessment	$835,900	**PID**	6158
Building Count	1		

Current Value

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2018	$0	$835,900	$835,900

Owner of Record

Owner	WAITES WHARF REALTY ASSO LLC	**Sale Price**	$0
Co-Owner	C/O THOMAS ABRUZESE	**Certificate**	
Address	39 AGAR ST YONKERS, NY 10701	**Book & Page**	877/ 1
		Sale Date	07/14/1999

Ownership History

Ownership History				
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Sale Date**
WAITES WHARF REALTY ASSO LLC	$0		877/ 1	07/14/1999

Building Information

Building 1 : Section 1

Year Built:
Living Area: 0
Replacement Cost: $0
Building Percent Good:
Replacement Cost Less Depreciation: $0

Building Attributes	
Field	**Description**
Style	Vacant Land
Model	
Grade:	

Stories:	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure:	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Total Bthrms:	
Total Half Baths:	
Total Xtra Fixtrs:	
Total Rooms:	
Bath Style:	
Kitchen Style:	

Building Photo

(http://images.vgsi.com/photos/NewportRIPhotos//default.jpg)

Building Layout

(http://images.vgsi.com/photos/NewportRIPhotos//Sketches/615

Building Sub-Areas (sq ft)	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	3900
Description	DEVEL LAND
Zone	WB
Neighborhood	W
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	0.07
Frontage	0
Depth	0
Assessed Value	$835,900

Outbuildings

Outbuildings	Legend
No Data for Outbuildings	

Valuation History

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2019	$0	$835,900	$835,900
2019	$0	$835,900	$835,900

20 W EXTENSION ST

Location 20 W EXTENSION ST
Map/Lot/Unit 32/ 267/ / /
Acct# R06177
Owner 20 WEST EXTENSION LLC
Assessment $1,131,000
PID 6153
Building Count 1

Current Value

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2018	$38,200	$1,092,800	$1,131,000

Owner of Record

Owner 20 WEST EXTENSION LLC
Co-Owner
Address 39 AGAR ST
YONKERS, NY 10701

Sale Price $1,100,000
Certificate
Book & Page 2597/ 293
Sale Date 06/28/2016
Instrument 00

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
20 WEST EXTENSION LLC	$1,100,000		2597/ 293	00	06/28/2016
WELAND SMITH LLC	$1,075,000		1932/ 54	00	04/18/2008
CRAWFORD THOMAS-HEIRS OF &	$0		344/ 84		

Building Information

Building 1 : Section 1

Year Built: 1968
Living Area: 6,668
Replacement Cost: $234,479
Building Percent Good: 16
Replacement Cost Less Depreciation: $37,500

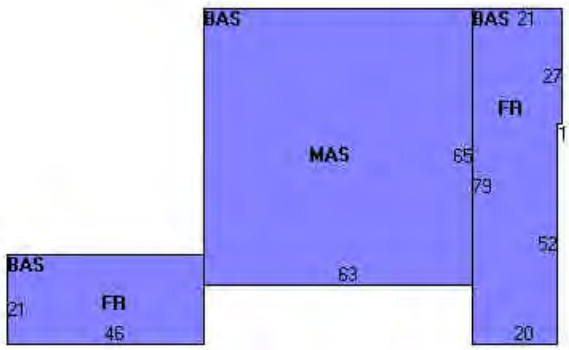
Building Attributes	
Field	**Description**
STYLE	Garage

MODEL	Svc Gar/Gas St
Grade	Below Average
Stories:	1
Occupancy	1
Exterior Wall 1	Concr/Cinder
Exterior Wall 2	Asphalt
Roof Structure	Flat
Roof Cover	Rolled Compos
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Concr-Finished
Interior Floor 2	
Heating Fuel	Gas
Heating Type	Hot Water
AC Type	None
Bldg Use	LARGE BUS MDL-95
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	3333
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	LIGHT
Ceiling/Wall	NONE
Rooms/Prtns	AVERAGE
Wall Height	14
% Comn Wall	0

Building Photo

(http://images.vgsi.com/photos/NewportRIPhotos//\00\01\24/19

Building Layout



(http://images.vgsi.com/photos/NewportRIPhotos//Sketches/615

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	6,668	6,668
		6,668	6,668

Extra Features

Extra Features				Legend
Code	**Description**	**Size**	**Value**	**Bldg #**
MEZ2	FINISHED	144 S.F.	$700	1

Land

Land Use

Use Code	333S
Description	LARGE BUS MDL-95
Zone	WB

Land Line Valuation

Size (Acres)	0.26
Frontage	0
Depth	0

Neighborhood	W	**Assessed Value**	$1,092,800
Alt Land Appr Category	No		

Outbuildings

Outbuildings	Legend
No Data for Outbuildings	

Valuation History

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2019	$38,200	$1,092,800	$1,131,000
2019	$38,200	$1,092,800	$1,131,000

16 WAITES WHF

Location	16 WAITES WHF	**Map/Lot/Unit**	32/ 248/ / /
Acct#	R06161	**Owner**	TOMORL LLC
Assessment	$1,034,600	**PID**	6137
Building Count	1		

Current Value

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2018	$101,300	$933,300	$1,034,600

Owner of Record

Owner	TOMORL LLC	**Sale Price**	$750,000
Co-Owner		**Certificate**	
Address	1 BANNISTERS WHARF NEWPORT, RI 02840	**Book & Page**	1721/ 14
		Sale Date	02/17/2006
		Instrument	00

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
TOMORL LLC	$750,000		1721/ 14	00	02/17/2006
RAY DAVID W	$0		251/ 174		

Building Information

Building 1 : Section 1

Year Built:	1900
Living Area:	5,960
Replacement Cost:	$334,671
Building Percent Good:	30
Replacement Cost Less Depreciation:	$100,400

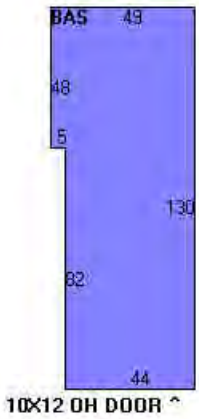
Building Attributes	
Field	**Description**
STYLE	Garage
MODEL	Ind/Comm

Grade	Below Average
Stories:	1
Occupancy	1
Exterior Wall 1	Stone/Masonry
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Metal/Tin
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Concr-Finished
Interior Floor 2	
Heating Fuel	None
Heating Type	None
AC Type	None
Bldg Use	LARGE BUS MDL-96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	333I
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	NONE
Ceiling/Wall	NONE
Rooms/Prtns	LIGHT
Wall Height	12
% Comn Wall	0

Building Photo

(http://images.vgsi.com/photos/NewportRIPhotos//\00\01\28/21

Building Layout



(http://images.vgsi.com/photos/NewportRIPhotos//Sketches/613

Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	5,960	5,960
		5,960	5,960

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	333I
Description	LARGE BUS MDL-96
Zone	WB

Land Line Valuation

Size (Acres)	0.14
Frontage	0
Depth	0

Neighborhood	W	**Assessed Value**	$933,300
Alt Land Appr	No		
Category			

Outbuildings

Outbuildings				Legend
Code	**Description**	**Size**	**Value**	**Bldg #**
FN6	W/O TOP RL-4'	228 L.F.	$900	1

Valuation History

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2019	$101,300	$933,300	$1,034,600
2019	$101,300	$933,300	$1,034,600

ATTACHMENT 3

25 Waites Wharf

25 Waites Wharf

Newport, RI 02840

Inquiry Number: 5029908.5

August 23, 2017

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

08/23/17

Site Name:

25 Waites Wharf
25 Waites Wharf
Newport, RI 02840
EDR Inquiry # 5029908.5

Client Name:

Sage Environmental, Inc.
172 Armistice Boulevard
Pawtucket, RI 02860
Contact: Carrie Middleton

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Sage Environmental, Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # C276-4113-B9DC

PO # NA

Project S2935

Maps Provided:

1990	1896
1972	1891
1968	1884
1963	
1953	
1950	
1921	
1903	

Sanborn® Library search results

Certification #: C276-4113-B9DC

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

Limited Permission To Make Copies

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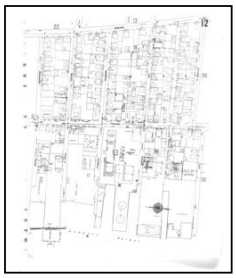
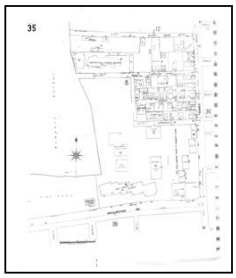
Sanborn Sheet Key

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

1990 Source Sheets

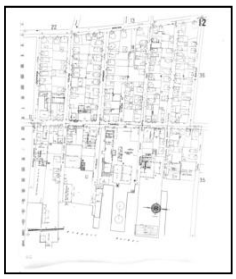


Volume 1, Sheet 12
1990

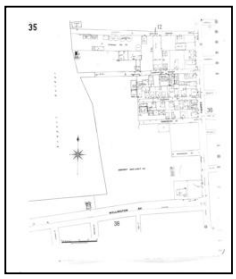


Volume 1, Sheet 35
1990

1972 Source Sheets



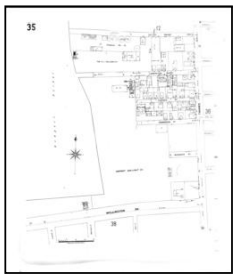
Volume 1, Sheet 12
1972



Volume 1, Sheet 35
1972

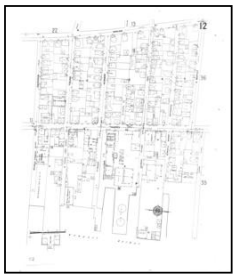
1968 Source Sheets

Volume 1, Sheet 12
1968



Volume 1, Sheet 35
1968

1963 Source Sheets



Volume 1, Sheet 12
1963

Volume 1, Sheet 35
1963

Sanborn Sheet Key

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

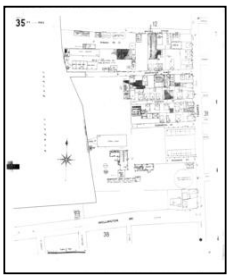
1953 Source Sheets

Volume 1, Sheet 12
1953

Volume 1, Sheet 35
1953

1950 Source Sheets

Volume 1, Sheet 12
1950



Volume 1, Sheet 35
1950

1921 Source Sheets

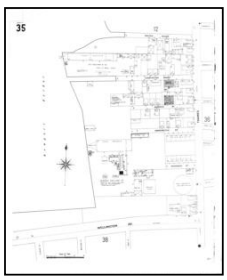
Volume 1, Sheet xxxx
1921

Volume 1, Sheet 11
1921

Volume 1, Sheet 17
1921

Volume 1, Sheet xxxx
1921

1903 Source Sheets



Volume 1, Sheet 35
1903

Volume 1, Sheet 12
1903

Volume 1, Sheet 54
1903

Sanborn Sheet Key

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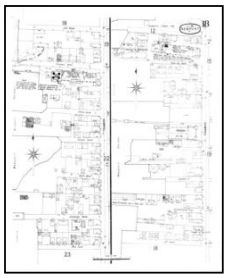
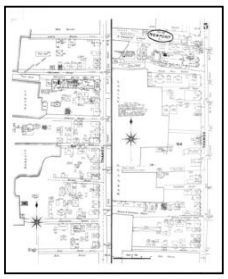
1896 Source Sheets



Volume 1, Sheet 18
1896

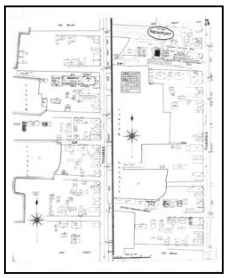
Volume 1, Sheet 23
1896

1891 Source Sheets

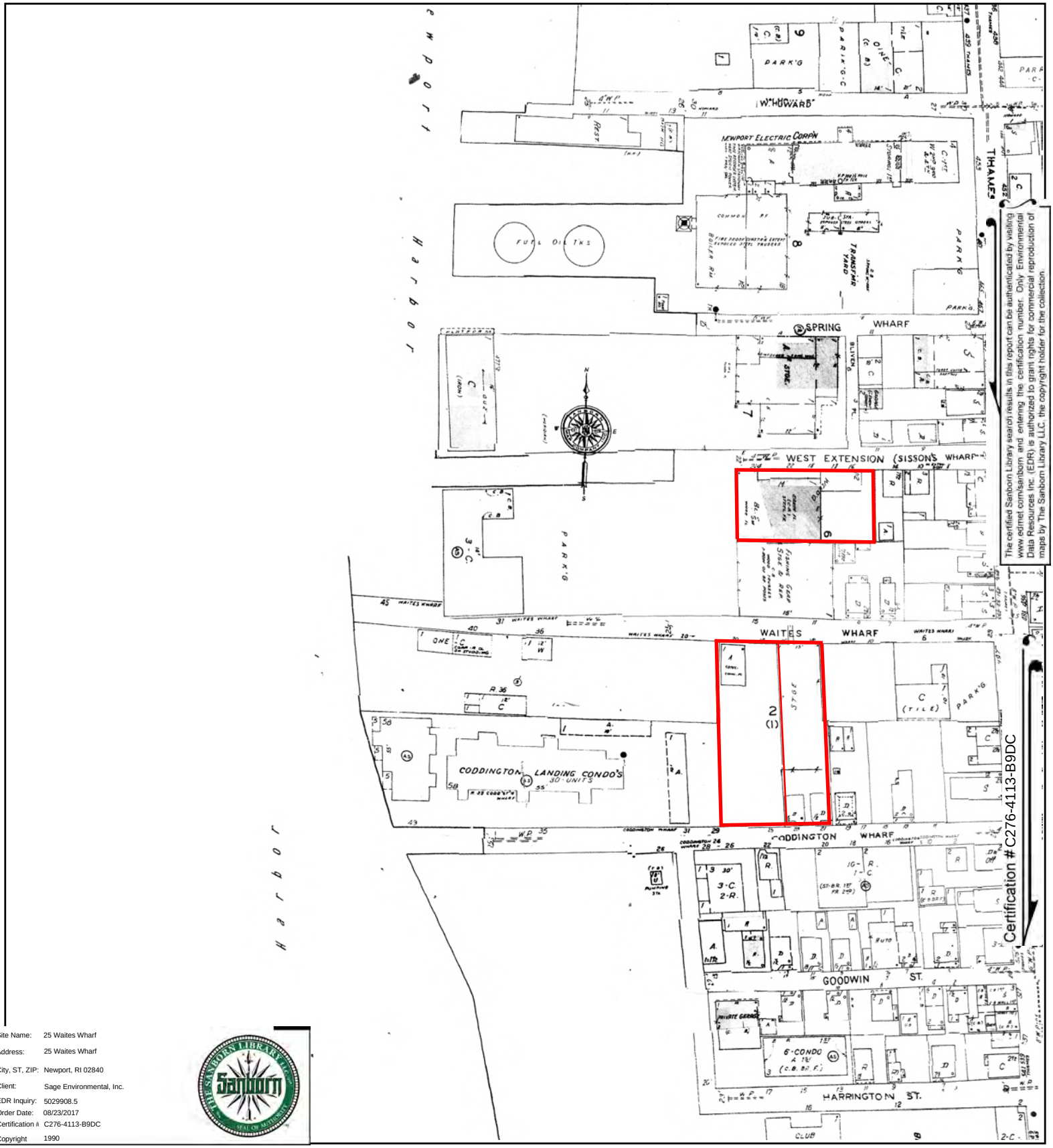


Volume 1, Sheet 5
1891

1884 Source Sheets

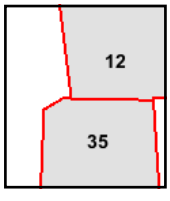


Volume 1, Sheet 5
1884



Site Name: 25 Waites Wharf
Address: 25 Waites Wharf
City, ST, ZIP: Newport, RI 02840
Client: Sage Environmental, Inc.
EDR Inquiry: 5029908.5
Order Date: 08/23/2017
Certification #: C276-4113-B9DC
Copyright: 1990

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.



Volume 1, Sheet 35
Volume 1, Sheet 12

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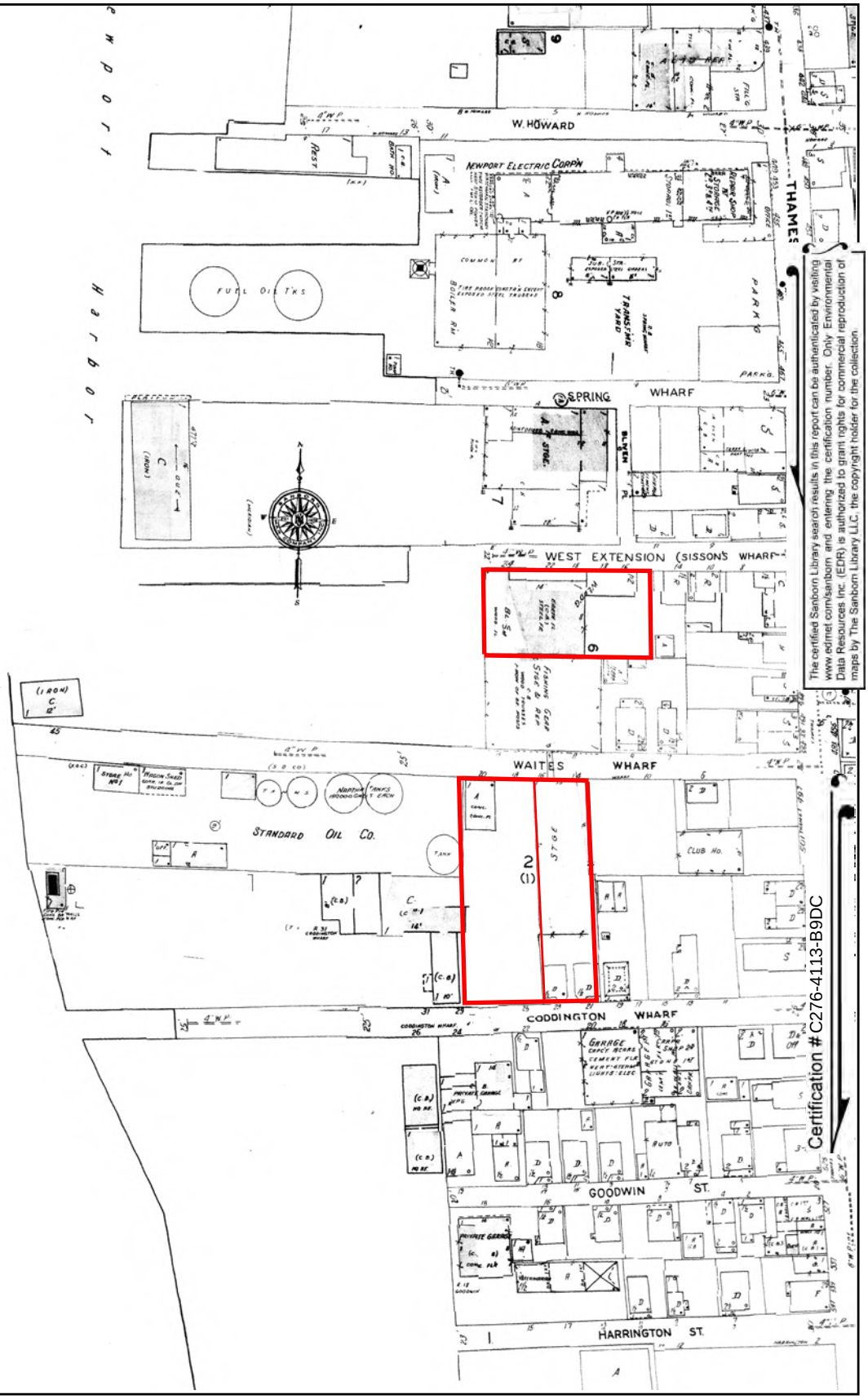

Certification #C276-4113-B9DC

Site Name:	25 Waites Wharf
Address:	25 Waites Wharf
City, ST, ZIP:	Newport, RI 02840
Client:	Sage Environmental, Inc.
EDR Inquiry:	5029908.5
Order Date:	08/23/2017
Certification #:	C276-4113-B9DC
Copyright	1972

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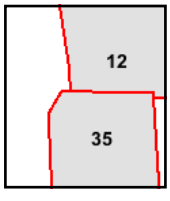
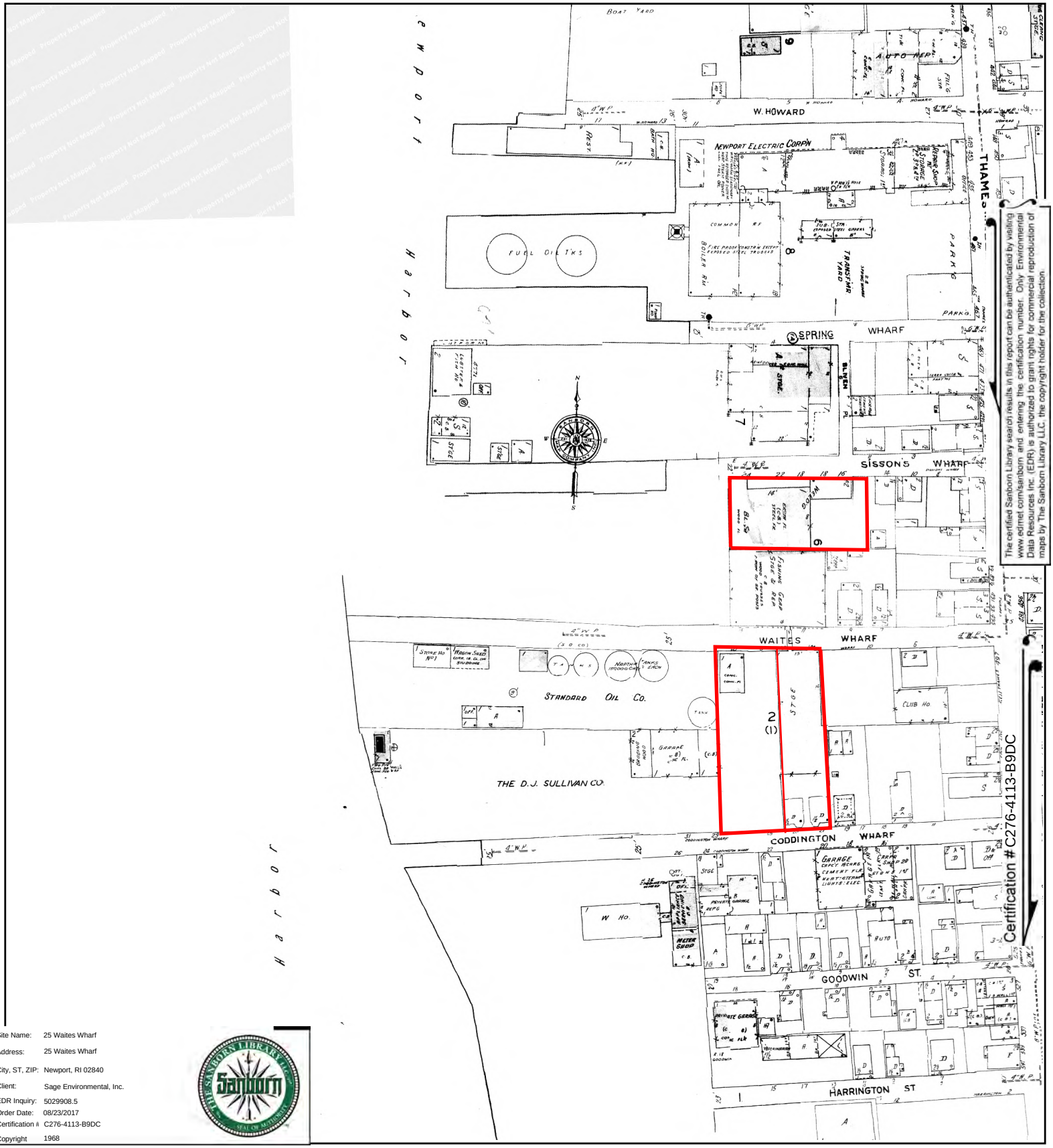


Volume 1, Sheet 35
Volume 1, Sheet 12

N



Certification #C276-4113-B9DC

Site Name: 25 Waites Wharf
Address: 25 Waites Wharf
City, ST, ZIP: Newport, RI 02840
Client: Sage Environmental, Inc.
EDR Inquiry: 5029908.5
Order Date: 08/23/2017
Certification #: C276-4113-B9DC
Copyright: 1968

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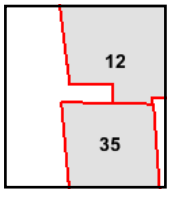

Volume 1, Sheet 35
Volume 1, Sheet 12

0 Feet 150 300 600

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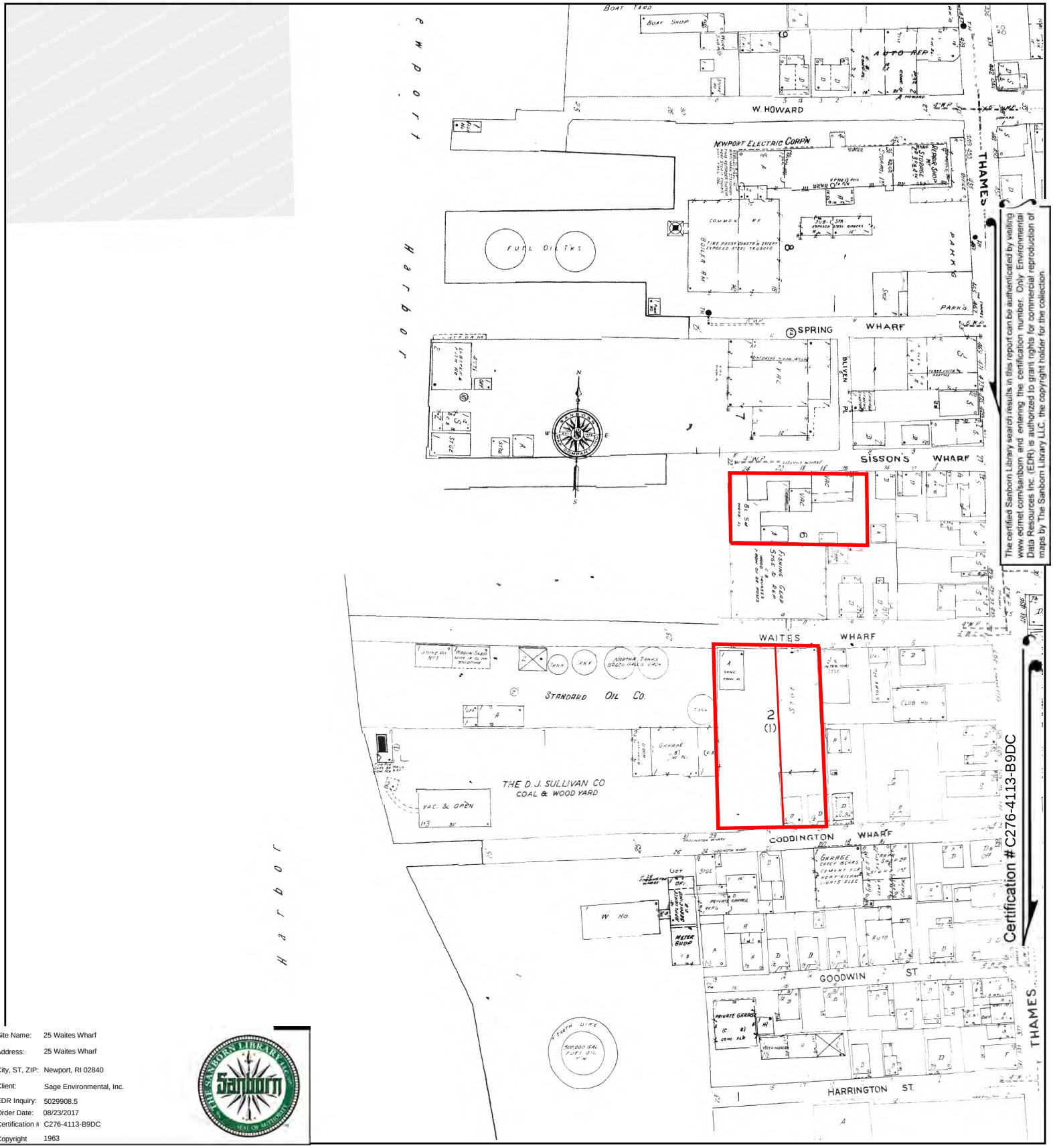

Site Name: 25 Waites Wharf
Address: 25 Waites Wharf
City, ST, ZIP: Newport, RI 02840
Client: Sage Environmental, Inc.
EDR Inquiry: 5029908.5
Order Date: 08/23/2017
Certification #: C276-4113-B9DC
Copyright: 1963

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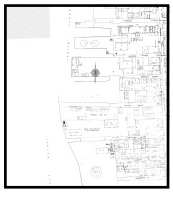

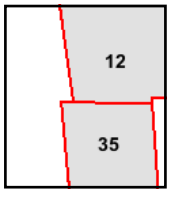

Volume 1, Sheet 35
Volume 1, Sheet 12

0 Feet 150 300 600

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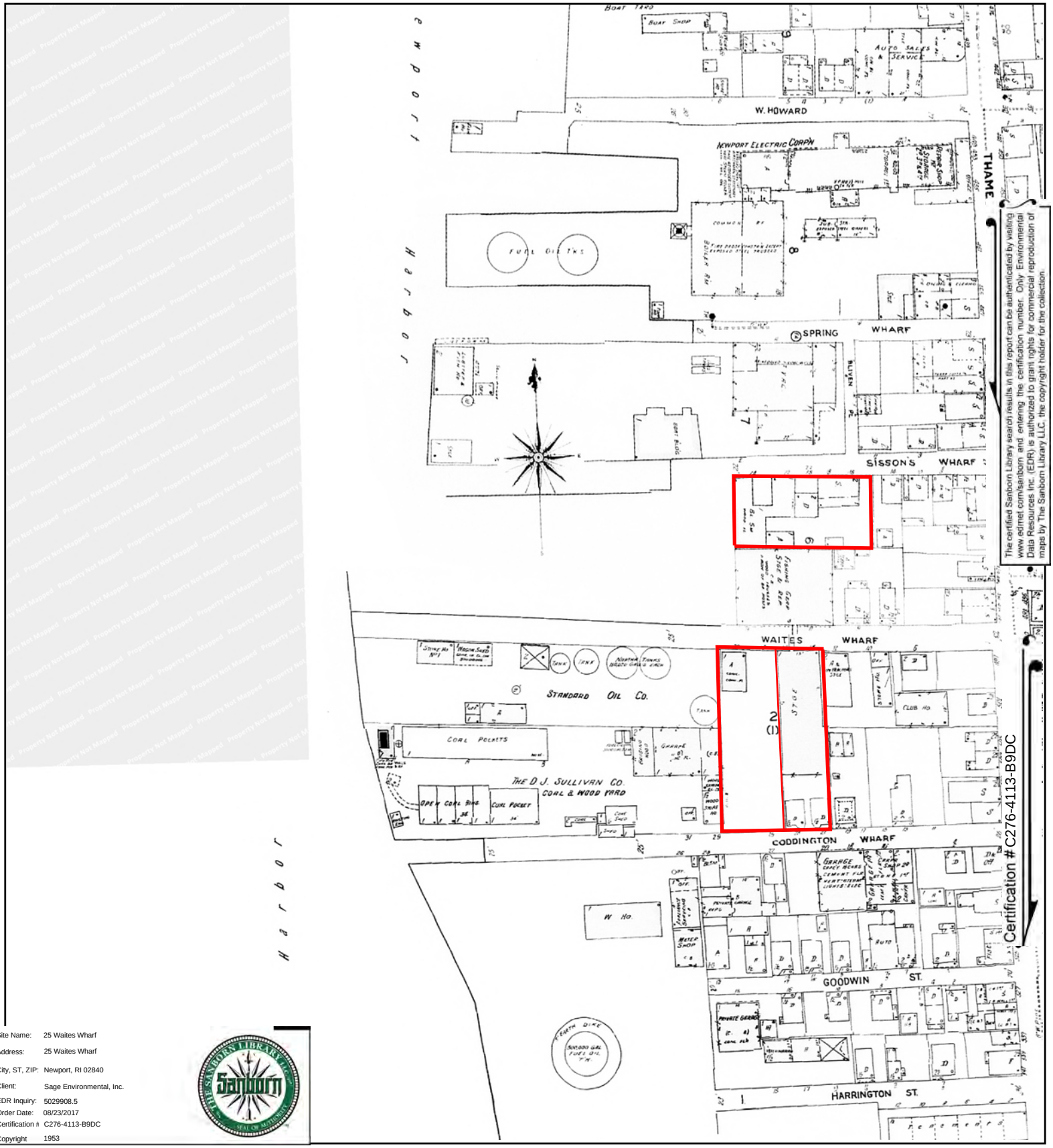

Site Name: 25 Waites Wharf
Address: 25 Waites Wharf
City, ST, ZIP: Newport, RI 02840
Client: Sage Environmental, Inc.
EDR Inquiry: 5029908.5
Order Date: 08/23/2017
Certification #: C276-4113-B9DC
Copyright 1953

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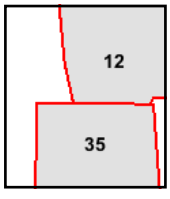

Volume 1, Sheet 35
Volume 1, Sheet 12

0 Feet 150 300 600

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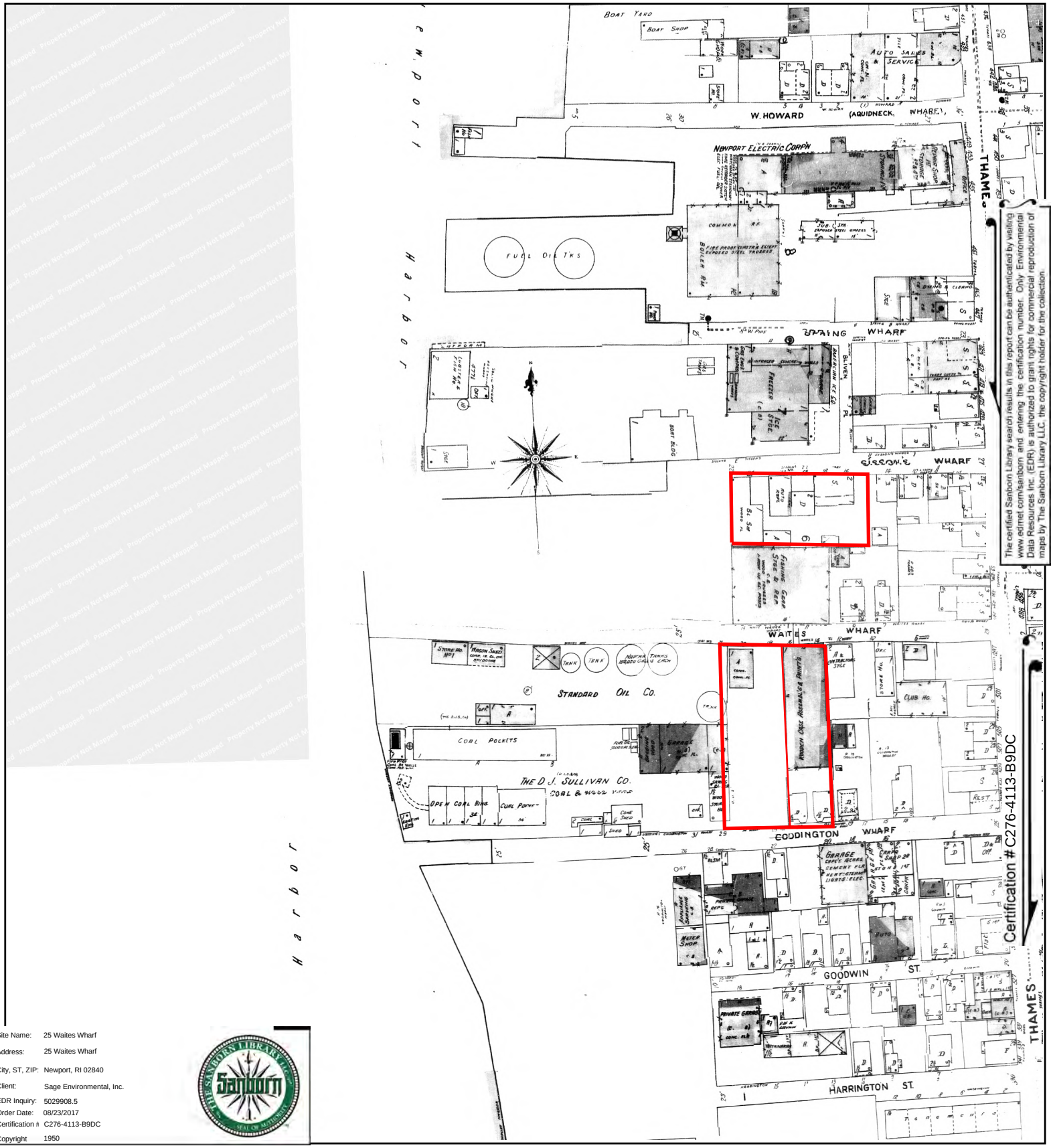

Certification # C276-4113-B9DC

Site Name:	25 Waites Wharf
Address:	25 Waites Wharf
City, ST, ZIP:	Newport, RI 02840
Client:	Sage Environmental, Inc.
EDR Inquiry:	5029908.5
Order Date:	08/23/2017
Certification #	C276-4113-B9DC
Copyright	1950

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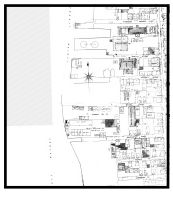

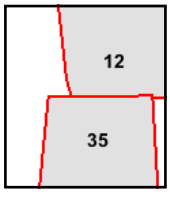

Volume 1, Sheet 35
Volume 1, Sheet 12

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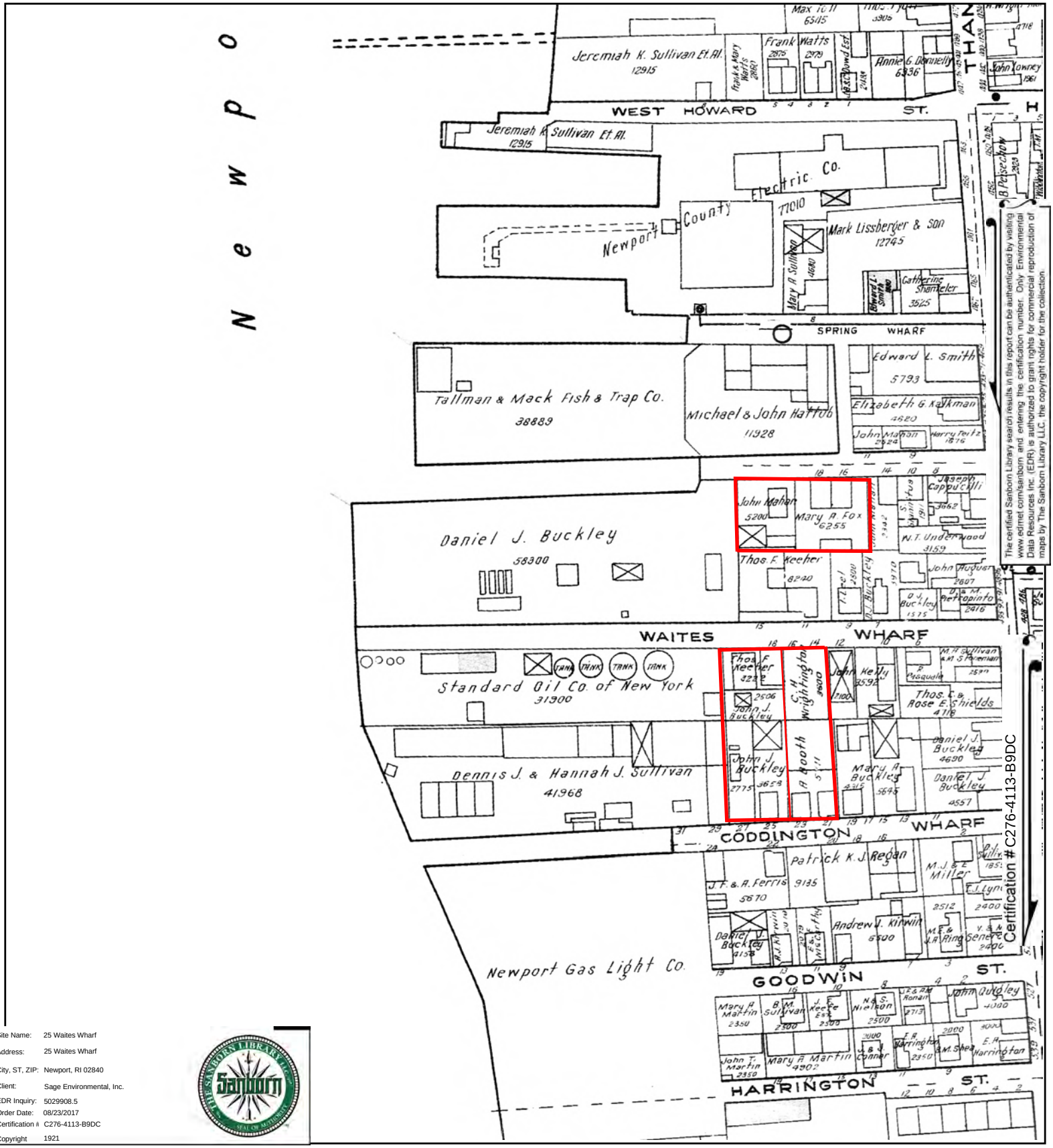

Site Name:	25 Waites Wharf
Address:	25 Waites Wharf
City, ST, ZIP:	Newport, RI 02840
Client:	Sage Environmental, Inc.
EDR Inquiry:	5029908.5
Order Date:	08/23/2017
Certification #:	C276-4113-B9DC
Copyright	1921

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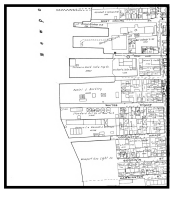

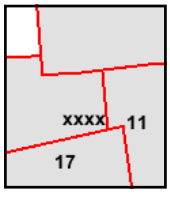

Volume 1, Sheet xxxx
Volume 1, Sheet 17
Volume 1, Sheet 11
Volume 1, Sheet xxxx

0 Feet 150 300 600

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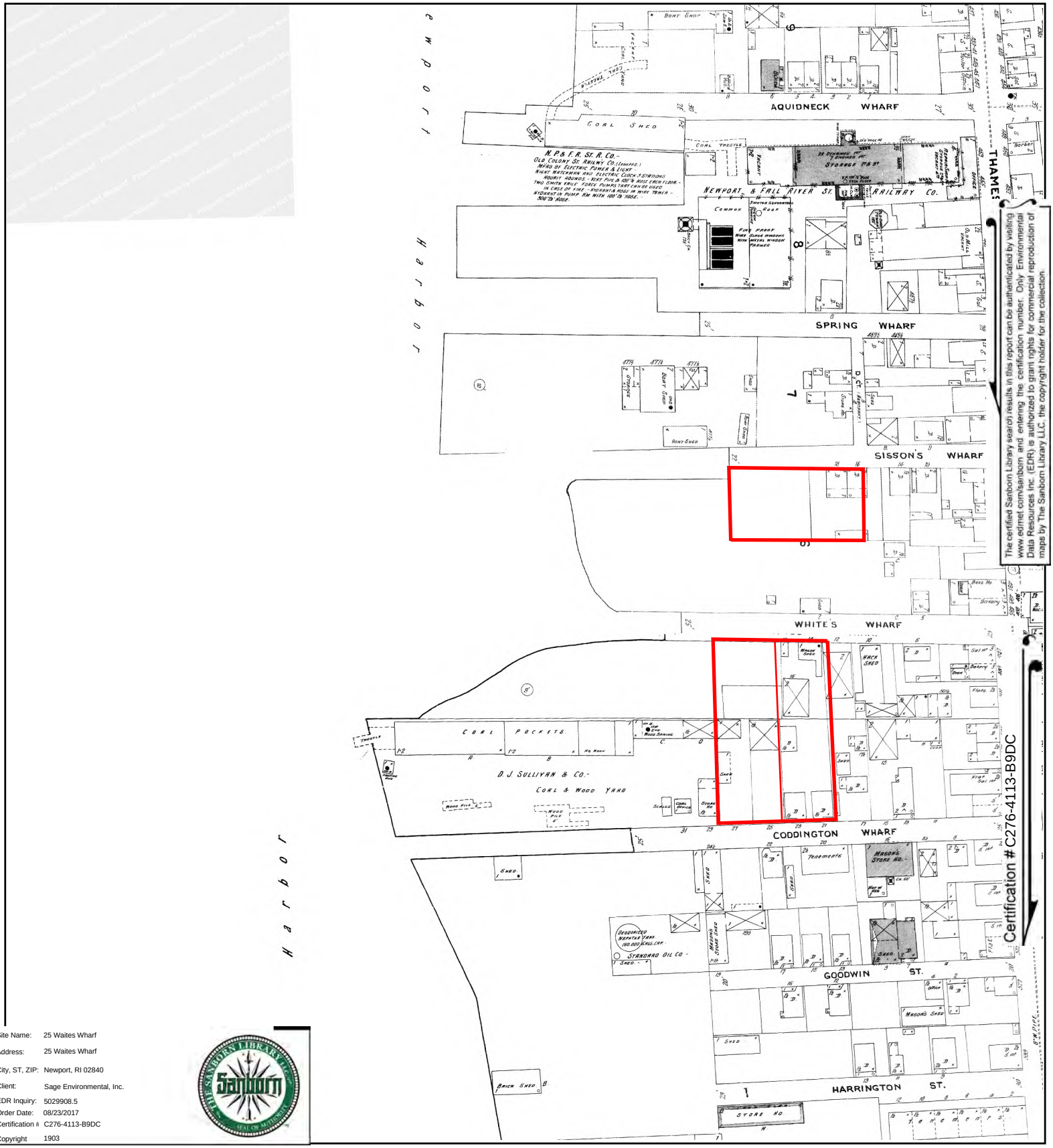

Site Name:	25 Waites Wharf
Address:	25 Waites Wharf
City, ST, ZIP:	Newport, RI 02840
Client:	Sage Environmental, Inc.
EDR Inquiry:	5029908.5
Order Date:	08/23/2017
Certification #	C276-4113-B9DC
Copyright	1903

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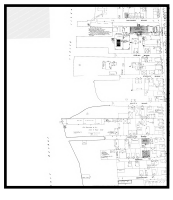

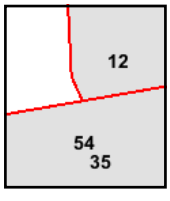

Volume 1, Sheet 54
Volume 1, Sheet 12
Volume 1, Sheet 35

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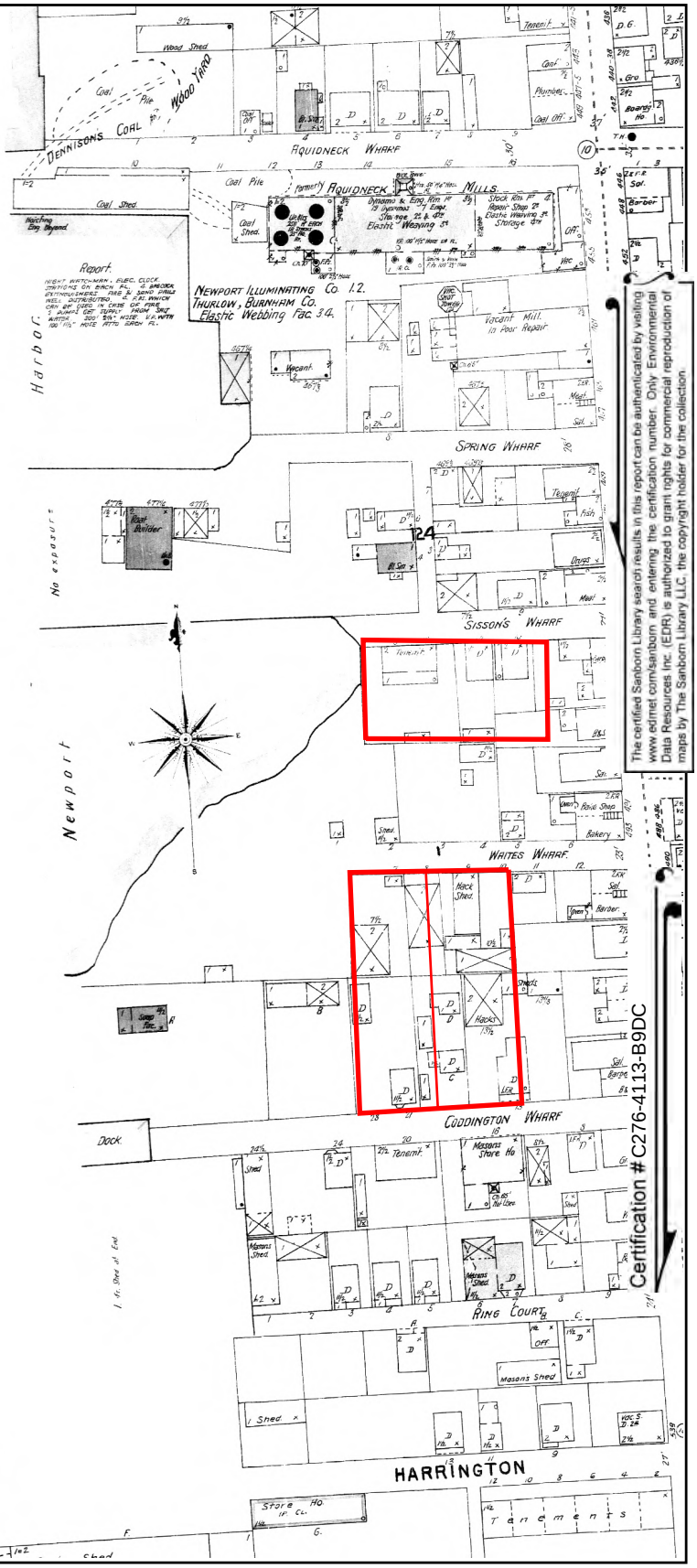

Site Name: 25 Waites Wharf
Address: 25 Waites Wharf
City, ST, ZIP: Newport, RI 02840
Client: Sage Environmental, Inc.
EDR Inquiry: 5029908.5
Order Date: 08/23/2017
Certification #: C276-4113-B9DC
Copyright 1896

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

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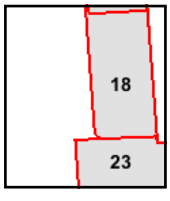

Volume 1, Sheet 23
Volume 1, Sheet 18

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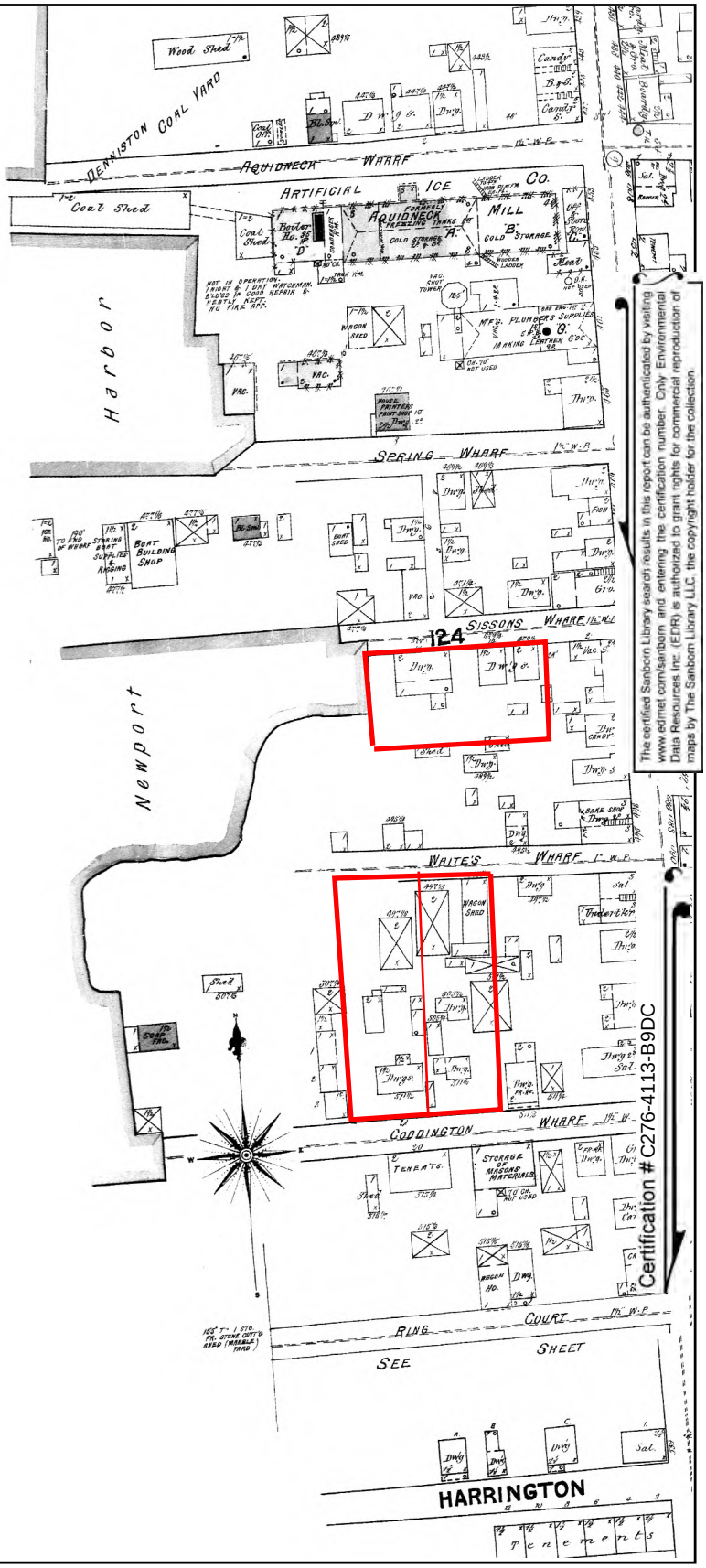
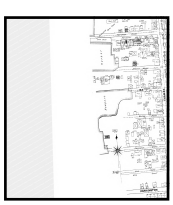
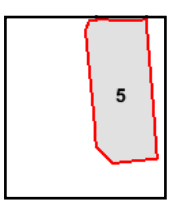


Site Name: 25 Waites Wharf
Address: 25 Waites Wharf
City, ST, ZIP: Newport, RI 02840
Client: Sage Environmental, Inc.
EDR Inquiry: 5029908.5
Order Date: 08/23/2017
Certification #: C276-4113-B9DC
Copyright: 1891

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.





Volume 1, Sheet 5

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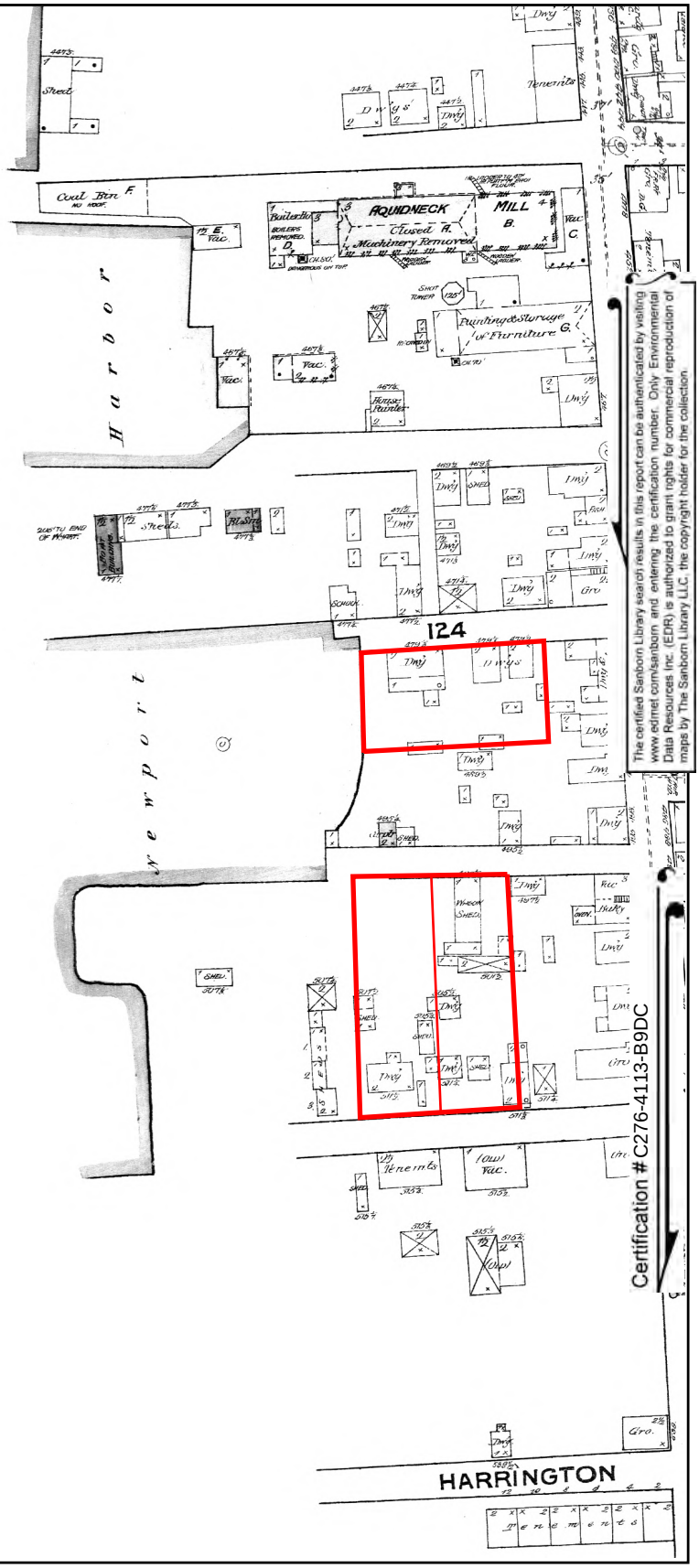
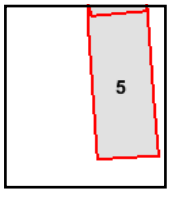


Site Name:	25 Waites Wharf
Address:	25 Waites Wharf
City, ST, ZIP:	Newport, RI 02840
Client:	Sage Environmental, Inc.
EDR Inquiry:	5029908.5
Order Date:	08/23/2017
Certification #	C276-4113-B9DC
Copyright	1884

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.



Volume 1, Sheet 5

0 Feet 150 300 600

N

ATTACHMENT 4

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

LETTER OF RESPONSIBILITY January 3, 2020
File No. SR-22-1631B

CERTIFIED MAIL

Thomas A. Abruzese
20 West Extension LLC, TOMORL LLC, and Waites Wharf Realty Assoc., LLC
39 Agar Street
Yonkers, NY 10701

RE: Waites Wharf 2
20 West Extension Street (Lot 267 - 20 West Extension LLC)
16 Waites Wharf (Lot 248 - TOMORL LLC)
Waites Wharf (Lot 272 - Waites Wharf Realty Assoc., LLC)
Newport, Rhode Island
Plat Map 32 / Lots 267, 248 and 272 Respectively

Dear Mr. Abruzese:

On January 8, 2019, the Rhode Island Department of Environmental Management's (the Department) Office of Waste Management (OWM) re-codified 250-RICR-140-30-1, the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (the Remediation Regulations) consistent with the RI Administrative Procedures Act. The purpose of these regulations is to create an integrated program requiring reporting, investigation and remediation of contaminated sites in order to eliminate and/or control threats to human health and the environment in an efficient manner. A Letter of Responsibility (LOR) is a preliminary document used by the Department to codify and define the relationship between the Department and a Performing Party.

Please be advised of the following facts:

1. The above referenced property is located at 20 West Extension Street, 16 Waites Wharf, and Waites Wharf, Newport, Rhode Island (the Site). The Site is further identified by the City of Newport Tax Assessor's Office as Plat Map 32 / Lots 267, 248 and 272.

2. The Department is in receipt of the following documents:

   a. Release Notification, 20 West Extension Street in Newport, Rhode Island (AP 32; L: 267), 16 Waites Wharf in Newport, Rhode Island (AP 32; L: 248), Waites Wharf in Newport, Rhode Island (AP 32; L: 272), received by the Department on November 5, 2019, and prepared by Sage Environmental, Inc. (Sage); and

   b. Electronic Mail, Re: Waites Wharf Follow-Up, received by the Department on December 20, 2019, and prepared by Sage.

3. The above referenced documents identify concentrations of select polycyclic aromatic hydrocarbons (PAHs), select volatile organic compounds (VOCs), lead and arsenic in Site soils that exceed the Department's Method 1 Direct Exposure Criteria, as referenced in the Remediation Regulations.

4. Based on the presence and nature of these Hazardous Substances the Department concurs that a Release of Hazardous Materials has occurred as defined by Sections 1.4(A)(33), 1.4(A)(34), and 1.4(A)(63) of the Remediation Regulations.

5. 20 West Extension LLC, TOMORL LLC, and Waites Wharf Realty Assoc., LLC are identified as the current owners of the Site by the City of Newport Tax Assessor's office and as such are Responsible Parties as defined by Section 1.4(A)(70) of the Remediation Regulations.

As a result of the information known and the conditions observed at the site, the Department requests that 20 West Extension LLC, TOMORL LLC, and Waites Wharf Realty Assoc., LLC comply with the following:

1. If necessary, prior to the implementation of any additional site investigation field activities and in accordance with Section 1.8.7(A)(1) of the Remediation Regulations, 20 West Extension LLC, TOMORL LLC, and Waites Wharf Realty Assoc., LLC must notify all abutting property owners, tenants, easement holders, and the municipality that an investigation is about to occur. The notice should briefly indicate the purpose of the investigation, the work to be performed, and the approximate scheduled dates of activities. Please submit a draft notification to the Department via E-mail for review and approval prior to distribution. A boilerplate notification to be distributed can be found online at: http://www.dem.ri.gov/programs/wastemanagement/site-remediation/index.php.

   The Department will require a copy of the public notice letter and a list of all recipients. Failure to comply with the aforementioned items may result in enforcement actions as specified in Rhode Island General Laws 23-19.1-17 and 23-19.1-18.

2. Conduct further investigation of the Site soil and groundwater, if warranted, in accordance with Section 1.8 of the Remediation Regulations.

3. Upon completion of the additional site investigation submit a Site Investigation Report (SIR) in accordance with Section 1.8 of the Remediation Regulations within ninety (90) days from the date of this letter. Given that some limited environmental investigation has already been performed at the Site, you may incorporate portions of the information already gathered and work already performed to address the items covered in Section 1.8. The SIR should include at least two remedial alternatives other than no action/natural attenuation and include future plans for the re-use or redevelopment (if applicable) of the property.

4. Submit an SIR checklist in accordance with Section 1.8.8 of the Remediation Regulations. The SIR checklist was created as a supplemental tool to expedite the review and approval process by cross-referencing the specific sections and pages within the SIR that provide the detailed

information that addresses each stated requirement within Section 1.20 of the Remediation Regulations.

5. Upon approval by the Department of the SIR, be prepared to bring the Site into compliance with the Remediation Regulations.

Please be advised that 20 West Extension LLC, TOMORL LLC, and Waites Wharf Realty Assoc., LLC, as the Responsible Parties, are responsible for the proper investigation and remediation of hazardous substances at this site. Also be advised that any remedial alternative that proposes to leave contaminated media on-site at levels which exceed the Department's Residential Direct Exposure Criteria, applicable Leachability Criteria, or applicable Groundwater Criteria will, at a minimum, necessitate the recording of an institutional control in the form of an Environmental Land Usage Restriction (ELUR) on the deed for the site, and will likely require implementation of additional engineered controls to restrict human exposure.

Please notify this office within seven days of the receipt of this letter of your plans to address these items. All correspondences should be sent to the attention of:

Joseph T. Martella II
RIDEM / Office of Waste Management
235 Promenade Street
Providence, RI 02908

If you have any questions regarding this letter or would like the opportunity to meet with Department personnel, please contact me by telephone at (401) 222-2797, ext. 7109, or by E-mail at joseph.martella@dem.ri.gov.

Sincerely,

Joseph T. Martella II
Environmental Engineer III
Office of Waste Management

Cc: Kelly J. Owens, RIDEM/OWM
Nicholas Pisani, RIDEM/OWR/Stormwater
Neal Personeus, RIDM/OWR/WQC
David S. Reis, RI CRMC
Patricia Reynolds, Newport Director of Planning & Economic Development
Jacob H. Butterworth, Sage

ATTACHMENT 5

SOIL BORING/MONITORING WELL LOG: SE-101(MW)

WELL NAME: SE-101(MW)

PROJECT NUMBER: S3432

PROJECT ADDRESS: 25 Waites Wharf, Newport, RI

SCREENING EQUIPMENT: PID

SAMPLE METHOD: 5' MACROCORE

DRILLING DATE: 10/1/2019

DRILL METHOD: GEOPROBE w. AIR HAMMER

BORING TOTAL DEPTH: 12'

MW DIAMETER: 1"

DRILLED BY: SAGE ENVIROTECH

LOGGED BY: Dan Boynes

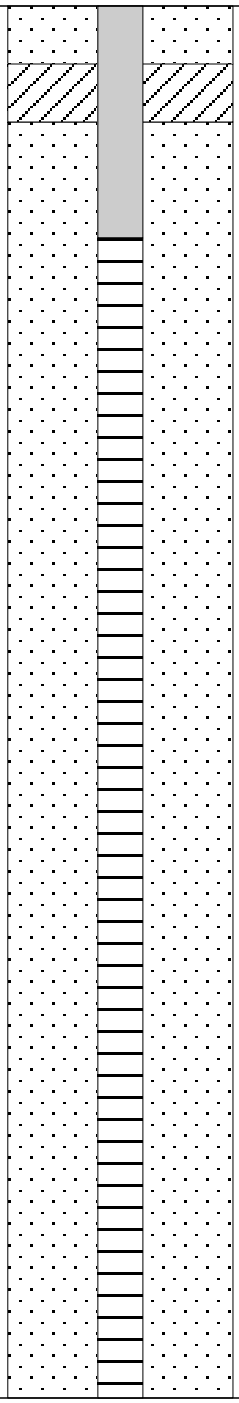
LENGTH OF RISER: 2'

LENGTH OF SCREEN: 10'

DEPTH (FEET BSG)	SAMPLE INTERVAL	PID (PPMV)	% RECOVERY	LITHOLOGY GRAPHIC LOG	MATERIAL DESCRIPTION
0 - 2	0'-2'	ND	100		Loose, black, moist SAND and gravel fill with coal ash, brick, wood, and weathered shale.
2 - 7	2'-7'	32.5	60		Loose, black and dark grey, wet SAND fill with coal ash, brick, wood, and little silt.
7 - 12	7'-12'	4	80		Loose, grey to dark brown, wet SAND with silt fill (coal ash and wood). 8.5'-12' Medium dense, grey, moist, fine SAND and silt (appears native)

DTW (FEET BSG) ▼ at 6

WELL CONSTRUCTION



COMMENTS:

THIS BORE LOG IS INTENDED FOR ENVIRONMENTAL NOT GEOTECHNICAL PURPOSES.

SOIL BORING/MONITORING WELL LOG: SE-102(MW)

WELL NAME: SE-102(MW)

PROJECT NUMBER: S3432

PROJECT ADDRESS: 25 Waites Wharf, Newport, RI

SCREENING EQUIPMENT: PID

SAMPLE METHOD: 5' MACROCORE

DRILLING DATE: 10/1/2019

DRILL METHOD: GEOPROBE w. AIR HAMMER

BORING TOTAL DEPTH: 12'

MW DIAMETER: 1"

DRILLED BY: SAGE ENVIROTECH

LOGGED BY: Dan Boynes

LENGTH OF RISER: 2'

LENGTH OF SCREEN: 10'

DEPTH (FEET BSG)	SAMPLE INTERVAL	PID (PPMV)	% RECOVERY	LITHOLOGY GRAPHIC LOG	MATERIAL DESCRIPTION	DTW (FEET BSG)	WELL CONSTRUCTION
0 – 2	0'-2'	ND	100		Loose, black and dark grey, moist SAND, silt, and gravel fill with brick, wood, and coal ash.		
2 – 7	2'-7'	ND	75		Loose, brown to grey, wet SAND fill with wood and rock fragments. 4.5'-7' Medium dense, grey, wet fine SAND with some silt, trace clay, and organics (roots).	▼	
7 – 12	7'-12'	ND	100		Medium dense, grey, moist, fine SAND with silt and trace clay.		

Legend
- Bentonite
- Casing
- Filter Pack
- Screen

COMMENTS:

THIS BORE LOG IS INTENDED FOR ENVIRONMENTAL NOT GEOTECHNICAL PURPOSES.

SOIL BORING/MONITORING WELL LOG: SE-103(MW)

WELL NAME: SE-103(MW)

PROJECT NUMBER: S3432

PROJECT ADDRESS: 25 Waites Wharf, Newport, RI

SCREENING EQUIPMENT: PID

SAMPLE METHOD: 5' MACROCORE

DRILLING DATE: 10/1/2019

DRILL METHOD: GEOPROBE w. AIR HAMMER

BORING TOTAL DEPTH: 12'

MW DIAMETER: 1"

DRILLED BY: SAGE ENVIROTECH

LOGGED BY: Dan Boynes

LENGTH OF RISER: 2'

LENGTH OF SCREEN: 10'

DEPTH (FEET BSG)	SAMPLE INTERVAL	PID (PPMV)	% RECOVERY	LITHOLOGY GRAPHIC LOG	MATERIAL DESCRIPTION
0 - 2	0'-2'	ND	100		Loose, black and dark grey, moist SAND and gravel fill (wood, ash, brick).
2 - 7	2'-7'	ND	60		Medium dense, brown, wet, fine to medium SAND with wood fragments. 4'-7' Medium dense, dark brown, wet, fine SAND with silt, trace clay, and roots.
7 - 12	7'-12'	ND	60		Medium dense, grey, moist, fine SAND and silt with trace clay and little highly weathered shale.

DTW (FEET BSG) ▼ at 6

WELL CONSTRUCTION

Legend
- Bentonite
- Casing
- Filter Pack
- Screen

COMMENTS:

THIS BORE LOG IS INTENDED FOR ENVIRONMENTAL NOT GEOTECHNICAL PURPOSES.

SOIL BORING/MONITORING WELL LOG: SE-104(MW)

WELL NAME: SE-104(MW)

PROJECT NUMBER: S3432

PROJECT ADDRESS: 25 Waites Wharf, Newport, RI

SCREENING EQUIPMENT: PID

SAMPLE METHOD: 5' MACROCORE

DRILLING DATE: 10/1/2019

DRILL METHOD: GEOPROBE w. AIR HAMMER

BORING TOTAL DEPTH: 12'

MW DIAMETER: 1"

DRILLED BY: SAGE ENVIROTECH

LOGGED BY: Dan Boynes

LENGTH OF RISER: 2'

LENGTH OF SCREEN: 10'

DEPTH (FEET BSG)	SAMPLE INTERVAL	PID (PPMV)	% RECOVERY	LITHOLOGY GRAPHIC LOG	MATERIAL DESCRIPTION
0 - 2	0'-2'	ND	100		Loose, dark brown and grey SAND and gravel fill with brick, coal ash, and rock fragments.
2 - 7	2'-7'	ND	50		Loose, brown, moist, SAND and gravel fill with brick, coal ash, and silt. 4.5'-7' Loose, black, wet SAND fill with coal ash and brick.
7 - 12	7'-12'	ND	60		Loose, black, wet SAND and silt fill with coal ash and brick. 8.5'-12' Medium dense, grey to borwn, moist, fine SAND with some silt and trace SAND (appears native).

DTW (FEET BSG) ▼

WELL CONSTRUCTION

Legend
- Bentonite
- Casing
- Filter Pack
- Screen

COMMENTS:

THIS BORE LOG IS INTENDED FOR ENVIRONMENTAL NOT GEOTECHNICAL PURPOSES.

SOIL BORING/MONITORING WELL LOG: SE-105(MW)

SAGE ENVIRONMENTAL

WELL NAME: SE-105(MW)

PROJECT NUMBER: S3432

PROJECT ADDRESS: 25 Waites Wharf, Newport, RI

SCREENING EQUIPMENT: PID

SAMPLE METHOD: 5' MACROCORE

DRILLING DATE: 10/1/2019

DRILL METHOD: GEOPROBE w. AIR HAMMER

BORING TOTAL DEPTH: 12'

MW DIAMETER: 1"

DRILLED BY: SAGE ENVIROTECH

LOGGED BY: Dan Boynes

LENGTH OF RISER: 2'

LENGTH OF SCREEN: 10'

DEPTH (FEET BSG)	SAMPLE INTERVAL	PID (PPMV)	% RECOVERY	LITHOLOGY GRAPHIC LOG	MATERIAL DESCRIPTION
0 - 2	0'-2'	ND	100		Loose, dark brown to black, moist SAND and gravel fill with brick, wood, and coal ash.
2 - 7	2'-7'	ND	50		Loose, dark grey to black, wet SAND and gravel fill with brick, wood, and coal ash. 4.5'-7' Medium dense, grey, wet, fine SAND with little silt and wood.
7 - 12	7'-12'	ND	50		Medium dense, dark grey, wet, fine SAND and silt with little clay and heavily weathered shale.

DTW (FEET BSG) ▼

WELL CONSTRUCTION

Legend
- Bentonite
- Casing
- Filter Pack
- Screen

COMMENTS:

THIS BORE LOG IS INTENDED FOR ENVIRONMENTAL NOT GEOTECHNICAL PURPOSES.

SOIL BORING/MONITORING WELL LOG: SE-106(MW)

SAGE ENVIRONMENTAL

WELL NAME: SE-106(MW)

PROJECT NUMBER: S3432

PROJECT ADDRESS: 25 Waites Wharf, Newport, RI

SCREENING EQUIPMENT: PID

SAMPLE METHOD: 5' MACROCORE

DRILLING DATE: 10/1/2019

DRILL METHOD: GEOPROBE w. AIR HAMMER

BORING TOTAL DEPTH: 12'

MW DIAMETER: 1"

DRILLED BY: SAGE ENVIROTECH

LOGGED BY: Dan Boynes

LENGTH OF RISER: 2'

LENGTH OF SCREEN: 10'

DEPTH (FEET BSG)	SAMPLE INTERVAL	PID (PPMV)	% RECOVERY	LITHOLOGY GRAPHIC LOG	MATERIAL DESCRIPTION
0 – 2	0'-2'	ND	100		Loose, dark brown and black, moist SAND and gravel fill with coal ash, wood, and brick.
2 – 7	2'-7'	ND	100		Loose, dark brown to grey, wet, fine SAND and silt with trace clay (appears native).
7 – 12	7'-12'	ND	75		Medium dense, grey, wet SILT and some fine SAND, little clay.

DTW (FEET BSG) ▼ at 6

WELL CONSTRUCTION

Legend
- Bentonite
- Casing
- Filter Pack
- Screen

COMMENTS:

THIS BORE LOG IS INTENDED FOR ENVIRONMENTAL NOT GEOTECHNICAL PURPOSES.

SOIL BORING/MONITORING WELL LOG: SE-201

WELL NAME: SE-201

PROJECT NUMBER: S3432

PROJECT ADDRESS: 16 Waites Wharf, Newport, RI

SCREENING EQUIPMENT: PID

SAMPLE METHOD: 5' MACROCORE

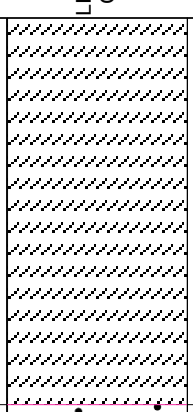
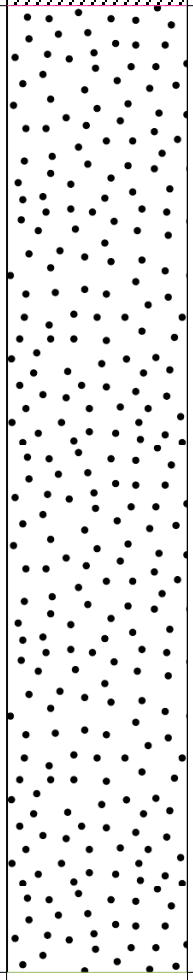
DRILLING DATE: 2/28/2020

DRILL METHOD: GEOPROBE w. AIR HAMMER

BORING TOTAL DEPTH: 7'

DRILLED BY: SAGE ENVIROTECH

LOGGED BY: DB

DEPTH (FEET BSG)	SAMPLE INTERVAL	PID (PPMV)	% RECOVERY	LITHOLOGY GRAPHIC LOG	MATERIAL DESCRIPTION	DTW (FEET BSG)	WELL CONSTRUCTION
0 – 2	0-2	ND	100		Fine SAND and silt, gravel fill, brick and wood noted.		NO WELL
2 – 7	2-7	ND	80		Fine to medium SAND and gravel fill with fractured rock and silt noted. Marine silt noted. Saturated at ~6.5'.	7' ▼	

COMMENTS:

THIS BORE LOG IS INTENDED FOR ENVIRONMENTAL NOT GEOTECHNICAL PURPOSES.

SOIL BORING/MONITORING WELL LOG: SE-202

WELL NAME: SE-202

PROJECT NUMBER: S3432

PROJECT ADDRESS: 16 Waites Wharf, Newport, RI

SCREENING EQUIPMENT: PID

SAMPLE METHOD: 5' MACROCORE

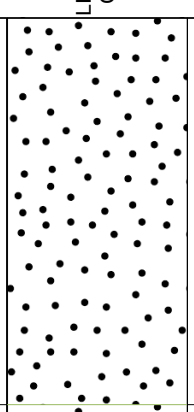
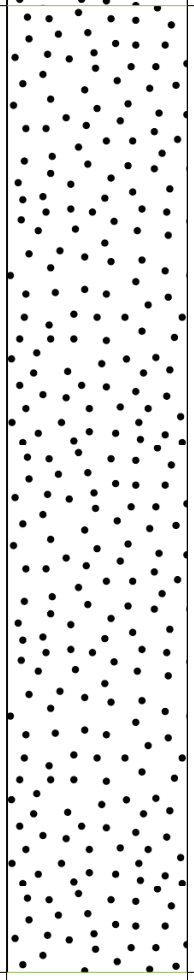
DRILLING DATE: 2/28/2020

DRILL METHOD: GEOPROBE w. AIR HAMMER

BORING TOTAL DEPTH: 7'

DRILLED BY: SAGE ENVIROTECH

LOGGED BY: DB

DEPTH (FEET BSG)	SAMPLE INTERVAL	PID (PPMV)	% RECOVERY	LITHOLOGY GRAPHIC LOG	MATERIAL DESCRIPTION	DTW (FEET BSG)	WELL CONSTRUCTION
0 – 2	0-2	ND	100		Fine to medium SAND and gravel fill with little silt, brick, and fractured rock.		NO WELL
2 – 7	2-7	ND	80		Fine to medium SAND and gravel fill with some silt, brick, and wood to ~6'. Black, moderately dense, marine SILT noted from 6-7'. Saturated at 6'.	7' ▼	

COMMENTS:

THIS BORE LOG IS INTENDED FOR ENVIRONMENTAL NOT GEOTECHNICAL PURPOSES.

SOIL BORING/MONITORING WELL LOG: SE-203

WELL NAME: SE-203

PROJECT NUMBER: S3432

PROJECT ADDRESS: 16 Waites Wharf, Newport, RI

SCREENING EQUIPMENT: PID

SAMPLE METHOD: 5' MACROCORE

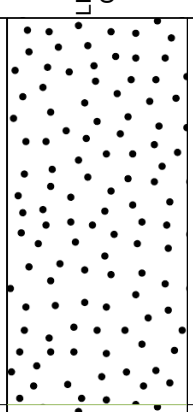
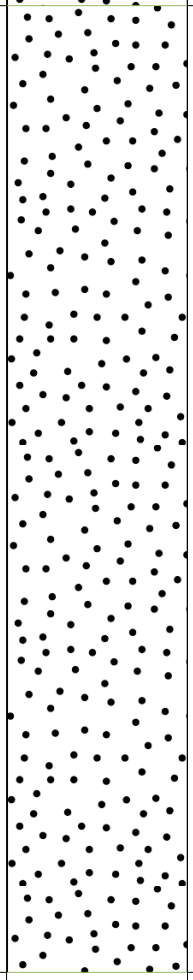
DRILLING DATE: 2/28/2020

DRILL METHOD: GEOPROBE w. AIR HAMMER

BORING TOTAL DEPTH: 7'

DRILLED BY: SAGE ENVIROTECH

LOGGED BY: DB

DEPTH (FEET BSG)	SAMPLE INTERVAL	PID (PPMV)	% RECOVERY	LITHOLOGY GRAPHIC LOG	MATERIAL DESCRIPTION	DTW (FEET BSG)	WELL CONSTRUCTION
0 – 2	0-2	ND	100		Loose, brown, moist, fine to medium SAND and gravel fill (brick, fractured rock, coal ash).		NO WELL
2 – 7	2-7	ND	75		Loose, dark brown, moist, fine to medium SAND and gravel fill to ~5-6'. Moderately dense, dark brown to black SILT and fine sand, saturated.	7' ▼	

COMMENTS:

THIS BORE LOG IS INTENDED FOR ENVIRONMENTAL NOT GEOTECHNICAL PURPOSES.

SOIL BORING/MONITORING WELL LOG: SE-204

WELL NAME: SE-204

PROJECT NUMBER: S3432

PROJECT ADDRESS: 16 Waites Wharf, Newport, RI

SCREENING EQUIPMENT: PID

SAMPLE METHOD: 5' MACROCORE

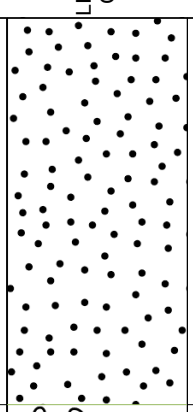
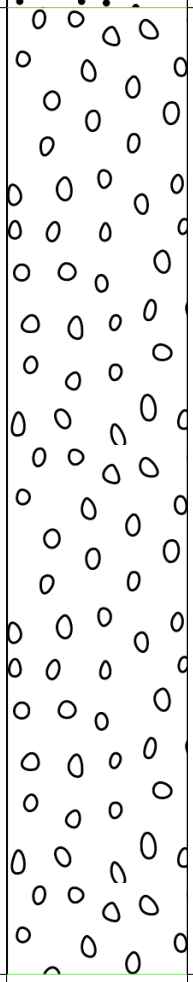
DRILLING DATE: 2/28/2020

DRILL METHOD: GEOPROBE w. AIR HAMMER

BORING TOTAL DEPTH: 7'

DRILLED BY: SAGE ENVIROTECH

LOGGED BY: DB

DEPTH (FEET BSG)	SAMPLE INTERVAL	PID (PPMV)	% RECOVERY	LITHOLOGY GRAPHIC LOG	MATERIAL DESCRIPTION	DTW (FEET BSG)	WELL CONSTRUCTION
0 – 2	0-2	ND	90		Loose, moist, brown, fine to medium SAND and gravel fill with brick, coal ash, and fractured rock.		NO WELL
2 – 7	2-7	ND	75		Loose, moist, dark brown SAND and gravel fill to ~5-6. Moderately dense, wet, dark brown to black SILT and fine sand.	7' ▼	

COMMENTS:

THIS BORE LOG IS INTENDED FOR ENVIRONMENTAL NOT GEOTECHNICAL PURPOSES.

SOIL BORING/MONITORING WELL LOG: SE-205

WELL NAME: SE-205

PROJECT NUMBER: S3432

PROJECT ADDRESS: 16 Waites Wharf, Newport, RI

SCREENING EQUIPMENT: PID

SAMPLE METHOD: 5' MACROCORE

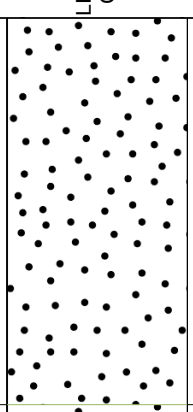
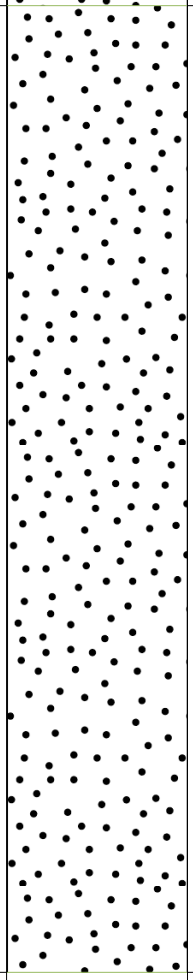
DRILLING DATE: 2/28/2020

DRILL METHOD: GEOPROBE w. AIR HAMMER

BORING TOTAL DEPTH: 7'

DRILLED BY: SAGE ENVIROTECH

LOGGED BY: DB

DEPTH (FEET BSG)	SAMPLE INTERVAL	PID (PPMV)	% RECOVERY	LITHOLOGY GRAPHIC LOG	MATERIAL DESCRIPTION	DTW (FEET BSG)	WELL CONSTRUCTION
0 – 2	0-2	ND	100		Loose, brown, moist, fine to medium SAND and gravel fill (brick, fractured rock).		NO WELL
2 – 7	2-7	ND	90		Loose, dark brown, moist, fine to medium SAND and gravel fill to ~5-6'. Moderately dense, dark brown, wet SILT and fine sand.	6' ▼	

COMMENTS:

THIS BORE LOG IS INTENDED FOR ENVIRONMENTAL NOT GEOTECHNICAL PURPOSES.

SOIL BORING/MONITORING WELL LOG: SE-206

WELL NAME: SE-206

PROJECT NUMBER: S3432

PROJECT ADDRESS: 16 Waites Wharf, Newport, RI

SCREENING EQUIPMENT: PID

SAMPLE METHOD: 5' MACROCORE

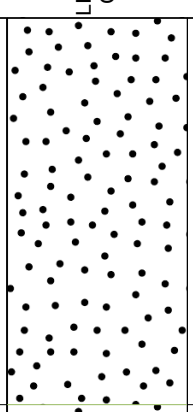
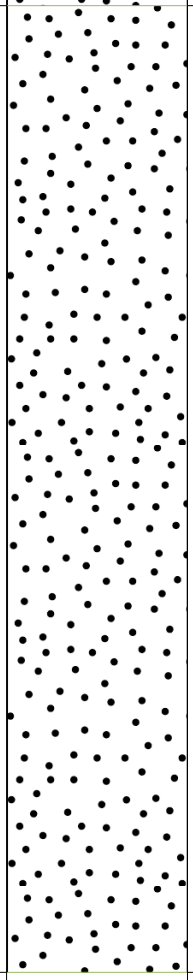
DRILLING DATE: 2/28/2020

DRILL METHOD: GEOPROBE w. AIR HAMMER

BORING TOTAL DEPTH: 7'

DRILLED BY: SAGE ENVIROTECH

LOGGED BY: DB

DEPTH (FEET BSG)	SAMPLE INTERVAL	PID (PPMV)	% RECOVERY	LITHOLOGY GRAPHIC LOG	MATERIAL DESCRIPTION	DTW (FEET BSG)	WELL CONSTRUCTION
0 – 2	0-2	ND	80		Loose, brown, moist, fine to medium SAND and gravel fill (brick, fractured rock).		NO WELL
2 – 7	2-7	ND	75		Loose, dark brown, moist, fine to medium SAND and gravel fill to ~5-6'. Moderately dense, dark brown, wet SILT and fine sand.	6' ▼	

COMMENTS:

THIS BORE LOG IS INTENDED FOR ENVIRONMENTAL NOT GEOTECHNICAL PURPOSES.

ATTACHMENT 6

CERTIFICATE OF ANALYSIS

Dan Boynes
Sage Environmental, inc.
172 Armistice Boulevard
Pawtucket, RI 02860

RE: Waites Wharf Newport (S2935)
ESS Laboratory Work Order Number: 19J0111

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 5:16 pm, Oct 10, 2019

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0111

SAMPLE RECEIPT

The following samples were received on October 03, 2019 for the analyses specified on the enclosed Chain of Custody Record.

The DI water vials for sample 19J0111-01 were received cracked and therefore, could not be used for the low-level VOA analysis. A low-level sample was prepared in the laboratory. Both the DI water and Methanol analyses were performed for this sample and reported in the report.

Lab Number	Sample Name	Matrix	Analysis
19J0111-01	SE-104 0-2ft	Soil	6010C, 7471B, 8100M, 8260B, 8260B Low, 8270D PAH
19J0111-02	SE-105 0-2ft	Soil	6010C, 7471B, 8100M, 8260B Low, 8270D PAH
19J0111-03	SE-106 0-2ft	Soil	6010C, 7471B, 8100M, 8260B Low, 8270D PAH

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0111

PROJECT NARRATIVE

8270D Polynuclear Aromatic Hydrocarbons

C9J0075-TUN1	**Benzidine tailing factor >2.**
C9J0170-CCV1	**Continuing Calibration %Diff/Drift is above control limit (CD+).**
	p-Terphenyl-d14 (22% @ 20%)
C9J0170-TUN1	**Benzidine tailing factor >2.**
C9J0170-TUN1	**Pentachlorophenol tailing factor > 2.**

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0111

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-104 0-2ft
Date Sampled: 10/01/19 12:30
Percent Solids: 81

ESS Laboratory Work Order: 19J0111
ESS Laboratory Sample ID: 19J0111-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**11.7** (2.05)		6010C		1	BJV	10/08/19 0:28	3.02	100	CJ90455
Barium	**168** (2.05)		6010C		1	BJV	10/08/19 0:28	3.02	100	CJ90455
Cadmium	**0.74** (0.41)		6010C		1	BJV	10/08/19 0:28	3.02	100	CJ90455
Chromium	**11.2** (0.82)		6010C		1	BJV	10/08/19 0:28	3.02	100	CJ90455
Lead	**483** (4.11)		6010C		1	BJV	10/08/19 0:28	3.02	100	CJ90455
Mercury	**1.46** (0.664)		7471B		20	MKS	10/08/19 12:45	0.74	40	CJ90456
Selenium	ND (4.11)		6010C		1	BJV	10/08/19 0:28	3.02	100	CJ90455
Silver	ND (0.41)		6010C		1	BJV	10/08/19 0:28	3.02	100	CJ90455

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-104 0-2ft
Date Sampled: 10/01/19 12:30
Percent Solids: 81
Initial Volume: 7
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19J0111
ESS Laboratory Sample ID: 19J0111-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
1,1,1-Trichloroethane	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
1,1,2,2-Tetrachloroethane	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
1,1,2-Trichloroethane	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
1,1-Dichloroethane	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
1,1-Dichloroethene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
1,1-Dichloropropene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
1,2,3-Trichlorobenzene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
1,2,3-Trichloropropane	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
1,2,4-Trichlorobenzene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
1,2,4-Trimethylbenzene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
1,2-Dibromo-3-Chloropropane	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
1,2-Dibromoethane	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
1,2-Dichlorobenzene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
1,2-Dichloroethane	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
1,2-Dichloropropane	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
1,3,5-Trimethylbenzene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
1,3-Dichlorobenzene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
1,3-Dichloropropane	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
1,4-Dichlorobenzene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
1,4-Dioxane	ND (0.0886)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
1-Chlorohexane	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
2,2-Dichloropropane	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
2-Butanone	ND (0.0443)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
2-Chlorotoluene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
2-Hexanone	ND (0.0443)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
4-Chlorotoluene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
4-Isopropyltoluene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
4-Methyl-2-Pentanone	ND (0.0443)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Acetone	**0.0583** (0.0443)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Benzene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Bromobenzene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-104 0-2ft
Date Sampled: 10/01/19 12:30
Percent Solids: 81
Initial Volume: 7
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19J0111
ESS Laboratory Sample ID: 19J0111-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Bromodichloromethane	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Bromoform	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Bromomethane	ND (0.0089)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Carbon Disulfide	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Carbon Tetrachloride	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Chlorobenzene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Chloroethane	ND (0.0089)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Chloroform	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Chloromethane	ND (0.0089)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
cis-1,2-Dichloroethene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
cis-1,3-Dichloropropene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Dibromochloromethane	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Dibromomethane	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Dichlorodifluoromethane	ND (0.0089)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Diethyl Ether	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Di-isopropyl ether	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Ethyl tertiary-butyl ether	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Ethylbenzene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Hexachlorobutadiene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Isopropylbenzene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Methyl tert-Butyl Ether	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Methylene Chloride	ND (0.0221)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Naphthalene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
n-Butylbenzene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
n-Propylbenzene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
sec-Butylbenzene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Styrene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
tert-Butylbenzene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Tertiary-amyl methyl ether	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Tetrachloroethene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Tetrahydrofuran	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-104 0-2ft
Date Sampled: 10/01/19 12:30
Percent Solids: 81
Initial Volume: 7
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19J0111
ESS Laboratory Sample ID: 19J0111-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
trans-1,2-Dichloroethene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
trans-1,3-Dichloropropene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Trichloroethene	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Trichlorofluoromethane	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Vinyl Acetate	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Vinyl Chloride	ND (0.0089)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Xylene O	ND (0.0044)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Xylene P,M	ND (0.0089)		8260B Low		1	10/04/19 12:40	C9J0097	CJ90401
Xylenes (Total)	ND (0.00886)		8260B Low		1	10/04/19 12:40		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*122 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*86 %*		*70-130*
Surrogate: Dibromofluoromethane	*115 %*		*70-130*
Surrogate: Toluene-d8	*106 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-104 0-2ft
Date Sampled: 10/01/19 12:30
Percent Solids: 81
Initial Volume: 26.1
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 19J0111
ESS Laboratory Sample ID: 19J0111-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.191)	0.0191	8260B		1	10/07/19 12:16	C9J0138	CJ90743
1,1,1-Trichloroethane	ND (0.191)	0.0381	8260B		1	10/07/19 12:16	C9J0138	CJ90743
1,1,2,2-Tetrachloroethane	ND (0.191)	0.0191	8260B		1	10/07/19 12:16	C9J0138	CJ90743
1,1,2-Trichloroethane	ND (0.191)	0.0381	8260B		1	10/07/19 12:16	C9J0138	CJ90743
1,1-Dichloroethane	ND (0.191)	0.0381	8260B		1	10/07/19 12:16	C9J0138	CJ90743
1,1-Dichloroethene	ND (0.191)	0.0572	8260B		1	10/07/19 12:16	C9J0138	CJ90743
1,1-Dichloropropene	ND (0.191)	0.0381	8260B		1	10/07/19 12:16	C9J0138	CJ90743
1,2,3-Trichlorobenzene	ND (0.191)	0.0381	8260B		1	10/07/19 12:16	C9J0138	CJ90743
1,2,3-Trichloropropane	ND (0.191)	0.0572	8260B		1	10/07/19 12:16	C9J0138	CJ90743
1,2,4-Trichlorobenzene	ND (0.191)	0.0381	8260B		1	10/07/19 12:16	C9J0138	CJ90743
1,2,4-Trimethylbenzene	ND (0.191)	0.0191	8260B		1	10/07/19 12:16	C9J0138	CJ90743
1,2-Dibromo-3-Chloropropane	ND (0.953)	0.191	8260B		1	10/07/19 12:16	C9J0138	CJ90743
1,2-Dibromoethane	ND (0.191)	0.0381	8260B		1	10/07/19 12:16	C9J0138	CJ90743
1,2-Dichlorobenzene	ND (0.191)	0.0191	8260B		1	10/07/19 12:16	C9J0138	CJ90743
1,2-Dichloroethane	ND (0.191)	0.0381	8260B		1	10/07/19 12:16	C9J0138	CJ90743
1,2-Dichloropropane	ND (0.191)	0.0381	8260B		1	10/07/19 12:16	C9J0138	CJ90743
1,3,5-Trimethylbenzene	ND (0.191)	0.0191	8260B		1	10/07/19 12:16	C9J0138	CJ90743
1,3-Dichlorobenzene	ND (0.191)	0.0381	8260B		1	10/07/19 12:16	C9J0138	CJ90743
1,3-Dichloropropane	ND (0.191)	0.0191	8260B		1	10/07/19 12:16	C9J0138	CJ90743
1,4-Dichlorobenzene	ND (0.191)	0.0191	8260B		1	10/07/19 12:16	C9J0138	CJ90743
1,4-Dioxane - Screen	ND (38.1)	36.2	8260B		1	10/07/19 12:16	C9J0138	CJ90743
1-Chlorohexane	ND (0.191)	0.0762	8260B		1	10/07/19 12:16	C9J0138	CJ90743
2,2-Dichloropropane	ND (0.191)	0.0572	8260B		1	10/07/19 12:16	C9J0138	CJ90743
2-Butanone	ND (0.953)	0.648	8260B		1	10/07/19 12:16	C9J0138	CJ90743
2-Chlorotoluene	ND (0.191)	0.0191	8260B		1	10/07/19 12:16	C9J0138	CJ90743
2-Hexanone	ND (0.953)	0.286	8260B		1	10/07/19 12:16	C9J0138	CJ90743
4-Chlorotoluene	ND (0.191)	0.0191	8260B		1	10/07/19 12:16	C9J0138	CJ90743
4-Isopropyltoluene	ND (0.191)	0.0191	8260B		1	10/07/19 12:16	C9J0138	CJ90743
4-Methyl-2-Pentanone	ND (0.953)	0.305	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Acetone	**J 0.740** (0.953)	0.515	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Benzene	ND (0.191)	0.0191	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Bromobenzene	ND (0.191)	0.0381	8260B		1	10/07/19 12:16	C9J0138	CJ90743

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-104 0-2ft
Date Sampled: 10/01/19 12:30
Percent Solids: 81
Initial Volume: 26.1
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 19J0111
ESS Laboratory Sample ID: 19J0111-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.191)	0.0572	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Bromodichloromethane	ND (0.191)	0.0191	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Bromoform	ND (0.191)	0.0381	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Bromomethane	ND (0.191)	0.0762	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Carbon Disulfide	ND (0.191)	0.0191	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Carbon Tetrachloride	ND (0.191)	0.0191	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Chlorobenzene	ND (0.191)	0.0191	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Chloroethane	ND (0.191)	0.0762	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Chloroform	ND (0.191)	0.0381	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Chloromethane	ND (0.191)	0.0191	8260B		1	10/07/19 12:16	C9J0138	CJ90743
cis-1,2-Dichloroethene	ND (0.191)	0.0381	8260B		1	10/07/19 12:16	C9J0138	CJ90743
cis-1,3-Dichloropropene	ND (0.191)	0.0572	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Dibromochloromethane	ND (0.191)	0.0381	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Dibromomethane	ND (0.191)	0.0572	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Dichlorodifluoromethane	ND (0.191)	0.0572	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Diethyl Ether	ND (0.191)	0.0572	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Di-isopropyl ether	ND (0.191)	0.0381	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Ethyl tertiary-butyl ether	ND (0.191)	0.0191	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Ethylbenzene	ND (0.191)	0.0191	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Hexachlorobutadiene	ND (0.191)	0.0381	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Isopropylbenzene	ND (0.191)	0.0191	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Methyl tert-Butyl Ether	ND (0.191)	0.0572	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Methylene Chloride	**J 0.227** (0.381)	0.0381	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Naphthalene	**J 0.0457** (0.191)	0.0381	8260B		1	10/07/19 12:16	C9J0138	CJ90743
n-Butylbenzene	ND (0.191)	0.0191	8260B		1	10/07/19 12:16	C9J0138	CJ90743
n-Propylbenzene	ND (0.191)	0.0381	8260B		1	10/07/19 12:16	C9J0138	CJ90743
sec-Butylbenzene	ND (0.191)	0.0191	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Styrene	ND (0.191)	0.0191	8260B		1	10/07/19 12:16	C9J0138	CJ90743
tert-Butylbenzene	ND (0.191)	0.0191	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Tertiary-amyl methyl ether	ND (0.191)	0.0381	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Tetrachloroethene	**0.421** (0.191)	0.0381	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Tetrahydrofuran	ND (0.953)	0.305	8260B		1	10/07/19 12:16	C9J0138	CJ90743

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-104 0-2ft
Date Sampled: 10/01/19 12:30
Percent Solids: 81
Initial Volume: 26.1
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 19J0111
ESS Laboratory Sample ID: 19J0111-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.191)	0.0191	8260B		1	10/07/19 12:16	C9J0138	CJ90743
trans-1,2-Dichloroethene	ND (0.191)	0.0572	8260B		1	10/07/19 12:16	C9J0138	CJ90743
trans-1,3-Dichloropropene	ND (0.191)	0.0381	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Trichloroethene	**1.33** (0.191)	0.0381	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Trichlorofluoromethane	ND (0.191)	0.0762	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Vinyl Acetate	ND (0.191)	0.0953	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Vinyl Chloride	ND (0.191)	0.0381	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Xylene O	ND (0.191)	0.0191	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Xylene P,M	ND (0.381)	0.0381	8260B		1	10/07/19 12:16	C9J0138	CJ90743
Xylenes (Total)	ND (0.381)		8260B		1	10/07/19 12:16		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*117 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*123 %*		*70-130*
Surrogate: Dibromofluoromethane	*115 %*		*70-130*
Surrogate: Toluene-d8	*121 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-104 0-2ft
Date Sampled: 10/01/19 12:30
Percent Solids: 81
Initial Volume: 19.6
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 19J0111
ESS Laboratory Sample ID: 19J0111-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: CAD
Prepared: 10/3/19 19:51

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**126** (47.5)		8100M		1	10/05/19 15:16	C9J0040	CJ90334

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*69 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-104 0-2ft
Date Sampled: 10/01/19 12:30
Percent Solids: 81
Initial Volume: 14.9
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 19J0111
ESS Laboratory Sample ID: 19J0111-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 10/3/19 19:45

8270D Polynuclear Aromatic Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
2-Methylnaphthalene	ND (0.416)		8270D PAH		1	10/09/19 16:55	C9J0170	CJ90322
Acenaphthene	ND (0.416)		8270D PAH		1	10/09/19 16:55	C9J0170	CJ90322
Acenaphthylene	ND (0.416)		8270D PAH		1	10/09/19 16:55	C9J0170	CJ90322
Anthracene	ND (0.416)		8270D PAH		1	10/09/19 16:55	C9J0170	CJ90322
Benzo(a)anthracene	ND (0.416)		8270D PAH		1	10/09/19 16:55	C9J0170	CJ90322
Benzo(a)pyrene	**0.305** (0.209)		8270D PAH		1	10/09/19 16:55	C9J0170	CJ90322
Benzo(b)fluoranthene	ND (0.416)		8270D PAH		1	10/09/19 16:55	C9J0170	CJ90322
Benzo(g,h,i)perylene	ND (0.416)		8270D PAH		1	10/09/19 16:55	C9J0170	CJ90322
Benzo(k)fluoranthene	ND (0.416)		8270D PAH		1	10/09/19 16:55	C9J0170	CJ90322
Chrysene	**0.303** (0.209)		8270D PAH		1	10/09/19 16:55	C9J0170	CJ90322
Dibenzo(a,h)Anthracene	ND (0.209)		8270D PAH		1	10/09/19 16:55	C9J0170	CJ90322
Fluoranthene	**0.721** (0.416)		8270D PAH		1	10/09/19 16:55	C9J0170	CJ90322
Fluorene	ND (0.416)		8270D PAH		1	10/09/19 16:55	C9J0170	CJ90322
Indeno(1,2,3-cd)Pyrene	ND (0.416)		8270D PAH		1	10/09/19 16:55	C9J0170	CJ90322
Naphthalene	ND (0.416)		8270D PAH		1	10/09/19 16:55	C9J0170	CJ90322
Phenanthrene	**0.630** (0.416)		8270D PAH		1	10/09/19 16:55	C9J0170	CJ90322
Pyrene	**0.733** (0.416)		8270D PAH		1	10/09/19 16:55	C9J0170	CJ90322

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*71 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*68 %*		*30-130*
Surrogate: Nitrobenzene-d5	*69 %*		*30-130*
Surrogate: p-Terphenyl-d14	*76 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-105 0-2ft
Date Sampled: 10/01/19 13:30
Percent Solids: 82

ESS Laboratory Work Order: 19J0111
ESS Laboratory Sample ID: 19J0111-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**9.67** (2.41)		6010C		1	BJV	10/08/19 0:32	2.52	100	CJ90455
Barium	**225** (2.41)		6010C		1	BJV	10/08/19 0:32	2.52	100	CJ90455
Cadmium	**1.02** (0.48)		6010C		1	BJV	10/08/19 0:32	2.52	100	CJ90455
Chromium	**18.0** (0.96)		6010C		1	BJV	10/08/19 0:32	2.52	100	CJ90455
Lead	**763** (4.82)		6010C		1	BJV	10/08/19 0:32	2.52	100	CJ90455
Mercury	**1.21** (0.559)		7471B		20	MKS	10/08/19 12:48	0.86	40	CJ90456
Selenium	ND (4.82)		6010C		1	BJV	10/08/19 0:32	2.52	100	CJ90455
Silver	ND (0.48)		6010C		1	BJV	10/08/19 0:32	2.52	100	CJ90455

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-105 0-2ft
Date Sampled: 10/01/19 13:30
Percent Solids: 82
Initial Volume: 7.3
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19J0111
ESS Laboratory Sample ID: 19J0111-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
1,1,1-Trichloroethane	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
1,1,2,2-Tetrachloroethane	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
1,1,2-Trichloroethane	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
1,1-Dichloroethane	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
1,1-Dichloroethene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
1,1-Dichloropropene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
1,2,3-Trichlorobenzene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
1,2,3-Trichloropropane	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
1,2,4-Trichlorobenzene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
1,2,4-Trimethylbenzene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
1,2-Dibromo-3-Chloropropane	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
1,2-Dibromoethane	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
1,2-Dichlorobenzene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
1,2-Dichloroethane	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
1,2-Dichloropropane	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
1,3,5-Trimethylbenzene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
1,3-Dichlorobenzene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
1,3-Dichloropropane	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
1,4-Dichlorobenzene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
1,4-Dioxane	ND (0.0832)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
1-Chlorohexane	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
2,2-Dichloropropane	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
2-Butanone	ND (0.0416)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
2-Chlorotoluene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
2-Hexanone	ND (0.0416)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
4-Chlorotoluene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
4-Isopropyltoluene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
4-Methyl-2-Pentanone	ND (0.0416)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Acetone	ND (0.0416)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Benzene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Bromobenzene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-105 0-2ft
Date Sampled: 10/01/19 13:30
Percent Solids: 82
Initial Volume: 7.3
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19J0111
ESS Laboratory Sample ID: 19J0111-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Bromodichloromethane	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Bromoform	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Bromomethane	ND (0.0083)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Carbon Disulfide	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Carbon Tetrachloride	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Chlorobenzene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Chloroethane	ND (0.0083)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Chloroform	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Chloromethane	ND (0.0083)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
cis-1,2-Dichloroethene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
cis-1,3-Dichloropropene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Dibromochloromethane	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Dibromomethane	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Dichlorodifluoromethane	ND (0.0083)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Diethyl Ether	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Di-isopropyl ether	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Ethyl tertiary-butyl ether	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Ethylbenzene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Hexachlorobutadiene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Isopropylbenzene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Methyl tert-Butyl Ether	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Methylene Chloride	ND (0.0208)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Naphthalene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
n-Butylbenzene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
n-Propylbenzene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
sec-Butylbenzene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Styrene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
tert-Butylbenzene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Tertiary-amyl methyl ether	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Tetrachloroethene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Tetrahydrofuran	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-105 0-2ft
Date Sampled: 10/01/19 13:30
Percent Solids: 82
Initial Volume: 7.3
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19J0111
ESS Laboratory Sample ID: 19J0111-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
trans-1,2-Dichloroethene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
trans-1,3-Dichloropropene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Trichloroethene	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Trichlorofluoromethane	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Vinyl Acetate	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Vinyl Chloride	ND (0.0083)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Xylene O	ND (0.0042)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Xylene P,M	ND (0.0083)		8260B Low		1	10/04/19 13:05	C9J0097	CJ90401
Xylenes (Total)	ND (0.00832)		8260B Low		1	10/04/19 13:05		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*128 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*97 %*		*70-130*
Surrogate: Dibromofluoromethane	*114 %*		*70-130*
Surrogate: Toluene-d8	*98 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-105 0-2ft
Date Sampled: 10/01/19 13:30
Percent Solids: 82
Initial Volume: 20.1
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 19J0111
ESS Laboratory Sample ID: 19J0111-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: CAD
Prepared: 10/4/19 11:45

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**107** (45.3)		8100M		1	10/05/19 15:47	C9J0040	CJ90411

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*78 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-105 0-2ft
Date Sampled: 10/01/19 13:30
Percent Solids: 82
Initial Volume: 14.6
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 19J0111
ESS Laboratory Sample ID: 19J0111-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 10/3/19 19:45

8270D Polynuclear Aromatic Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
2-Methylnaphthalene	ND (0.415)		8270D PAH		1	10/09/19 17:25	C9J0170	CJ90322
Acenaphthene	ND (0.415)		8270D PAH		1	10/09/19 17:25	C9J0170	CJ90322
Acenaphthylene	ND (0.415)		8270D PAH		1	10/09/19 17:25	C9J0170	CJ90322
Anthracene	ND (0.415)		8270D PAH		1	10/09/19 17:25	C9J0170	CJ90322
Benzo(a)anthracene	**0.519** (0.415)		8270D PAH		1	10/09/19 17:25	C9J0170	CJ90322
Benzo(a)pyrene	**0.603** (0.208)		8270D PAH		1	10/09/19 17:25	C9J0170	CJ90322
Benzo(b)fluoranthene	**0.527** (0.415)		8270D PAH		1	10/09/19 17:25	C9J0170	CJ90322
Benzo(g,h,i)perylene	**0.432** (0.415)		8270D PAH		1	10/09/19 17:25	C9J0170	CJ90322
Benzo(k)fluoranthene	**0.458** (0.415)		8270D PAH		1	10/09/19 17:25	C9J0170	CJ90322
Chrysene	**0.608** (0.208)		8270D PAH		1	10/09/19 17:25	C9J0170	CJ90322
Dibenzo(a,h)Anthracene	ND (0.208)		8270D PAH		1	10/09/19 17:25	C9J0170	CJ90322
Fluoranthene	**1.00** (0.415)		8270D PAH		1	10/09/19 17:25	C9J0170	CJ90322
Fluorene	ND (0.415)		8270D PAH		1	10/09/19 17:25	C9J0170	CJ90322
Indeno(1,2,3-cd)Pyrene	ND (0.415)		8270D PAH		1	10/09/19 17:25	C9J0170	CJ90322
Naphthalene	ND (0.415)		8270D PAH		1	10/09/19 17:25	C9J0170	CJ90322
Phenanthrene	**0.511** (0.415)		8270D PAH		1	10/09/19 17:25	C9J0170	CJ90322
Pyrene	**1.00** (0.415)		8270D PAH		1	10/09/19 17:25	C9J0170	CJ90322

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*66 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*64 %*		*30-130*
Surrogate: Nitrobenzene-d5	*67 %*		*30-130*
Surrogate: p-Terphenyl-d14	*64 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-106 0-2ft
Date Sampled: 10/01/19 14:30
Percent Solids: 88

ESS Laboratory Work Order: 19J0111
ESS Laboratory Sample ID: 19J0111-03
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**23.1** (2.28)		6010C		1	BJV	10/08/19 0:36	2.5	100	CJ90455
Barium	**189** (2.28)		6010C		1	BJV	10/08/19 0:36	2.5	100	CJ90455
Cadmium	**0.65** (0.46)		6010C		1	BJV	10/08/19 0:36	2.5	100	CJ90455
Chromium	**13.5** (0.91)		6010C		1	BJV	10/08/19 0:36	2.5	100	CJ90455
Lead	**502** (4.56)		6010C		1	BJV	10/08/19 0:36	2.5	100	CJ90455
Mercury	**0.756** (0.279)		7471B		10	MKS	10/08/19 12:50	0.81	40	CJ90456
Selenium	ND (4.56)		6010C		1	BJV	10/08/19 0:36	2.5	100	CJ90455
Silver	ND (0.46)		6010C		1	BJV	10/08/19 0:36	2.5	100	CJ90455

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-106 0-2ft
Date Sampled: 10/01/19 14:30
Percent Solids: 88
Initial Volume: 5.7
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19J0111
ESS Laboratory Sample ID: 19J0111-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
1,1,1-Trichloroethane	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
1,1,2,2-Tetrachloroethane	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
1,1,2-Trichloroethane	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
1,1-Dichloroethane	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
1,1-Dichloroethene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
1,1-Dichloropropene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
1,2,3-Trichlorobenzene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
1,2,3-Trichloropropane	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
1,2,4-Trichlorobenzene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
1,2,4-Trimethylbenzene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
1,2-Dibromoethane	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
1,2-Dichlorobenzene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
1,2-Dichloroethane	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
1,2-Dichloropropane	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
1,3,5-Trimethylbenzene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
1,3-Dichlorobenzene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
1,3-Dichloropropane	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
1,4-Dichlorobenzene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
1,4-Dioxane	ND (0.100)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
1-Chlorohexane	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
2,2-Dichloropropane	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
2-Butanone	ND (0.0500)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
2-Chlorotoluene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
2-Hexanone	ND (0.0500)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
4-Chlorotoluene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
4-Isopropyltoluene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
4-Methyl-2-Pentanone	ND (0.0500)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Acetone	ND (0.0500)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Benzene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Bromobenzene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-106 0-2ft
Date Sampled: 10/01/19 14:30
Percent Solids: 88
Initial Volume: 5.7
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19J0111
ESS Laboratory Sample ID: 19J0111-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Bromodichloromethane	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Bromoform	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Bromomethane	ND (0.0100)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Carbon Disulfide	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Carbon Tetrachloride	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Chlorobenzene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Chloroethane	ND (0.0100)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Chloroform	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Chloromethane	ND (0.0100)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
cis-1,2-Dichloroethene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
cis-1,3-Dichloropropene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Dibromochloromethane	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Dibromomethane	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Dichlorodifluoromethane	ND (0.0100)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Diethyl Ether	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Di-isopropyl ether	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Ethyl tertiary-butyl ether	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Ethylbenzene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Hexachlorobutadiene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Isopropylbenzene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Methyl tert-Butyl Ether	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Methylene Chloride	ND (0.0250)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Naphthalene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
n-Butylbenzene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
n-Propylbenzene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
sec-Butylbenzene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Styrene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
tert-Butylbenzene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Tertiary-amyl methyl ether	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Tetrachloroethene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Tetrahydrofuran	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-106 0-2ft
Date Sampled: 10/01/19 14:30
Percent Solids: 88
Initial Volume: 5.7
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19J0111
ESS Laboratory Sample ID: 19J0111-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
trans-1,2-Dichloroethene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
trans-1,3-Dichloropropene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Trichloroethene	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Trichlorofluoromethane	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Vinyl Acetate	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Vinyl Chloride	ND (0.0100)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Xylene O	ND (0.0050)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Xylene P,M	ND (0.0100)		8260B Low		1	10/04/19 13:31	C9J0097	CJ90401
Xylenes (Total)	ND (0.0100)		8260B Low		1	10/04/19 13:31		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*129 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*96 %*		*70-130*
Surrogate: Dibromofluoromethane	*115 %*		*70-130*
Surrogate: Toluene-d8	*98 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-106 0-2ft
Date Sampled: 10/01/19 14:30
Percent Solids: 88
Initial Volume: 20.7
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 19J0111
ESS Laboratory Sample ID: 19J0111-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: CAD
Prepared: 10/4/19 11:45

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**459** (41.3)		8100M		1	10/05/19 16:19	C9J0040	CJ90411

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*98 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-106 0-2ft
Date Sampled: 10/01/19 14:30
Percent Solids: 88
Initial Volume: 15.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 19J0111
ESS Laboratory Sample ID: 19J0111-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 10/3/19 19:45

8270D Polynuclear Aromatic Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
2-Methylnaphthalene	**0.962** (0.367)		8270D PAH		1	10/09/19 17:53	C9J0170	CJ90322
Acenaphthene	**3.18** (0.367)		8270D PAH		1	10/09/19 17:53	C9J0170	CJ90322
Acenaphthylene	ND (0.367)		8270D PAH		1	10/09/19 17:53	C9J0170	CJ90322
Anthracene	**6.49** (0.367)		8270D PAH		1	10/09/19 17:53	C9J0170	CJ90322
Benzo(a)anthracene	**16.4** (3.67)		8270D PAH		10	10/10/19 2:34	C9J0170	CJ90322
Benzo(a)pyrene	**12.4** (1.84)		8270D PAH		10	10/10/19 2:34	C9J0170	CJ90322
Benzo(b)fluoranthene	**13.3** (3.67)		8270D PAH		10	10/10/19 2:34	C9J0170	CJ90322
Benzo(g,h,i)perylene	**5.87** (0.367)		8270D PAH		1	10/09/19 17:53	C9J0170	CJ90322
Benzo(k)fluoranthene	**9.75** (3.67)		8270D PAH		10	10/10/19 2:34	C9J0170	CJ90322
Chrysene	**15.4** (1.84)		8270D PAH		10	10/10/19 2:34	C9J0170	CJ90322
Dibenzo(a,h)Anthracene	**3.07** (0.184)		8270D PAH		1	10/09/19 17:53	C9J0170	CJ90322
Fluoranthene	**35.1** (3.67)		8270D PAH		10	10/10/19 2:34	C9J0170	CJ90322
Fluorene	**3.23** (0.367)		8270D PAH		1	10/09/19 17:53	C9J0170	CJ90322
Indeno(1,2,3-cd)Pyrene	**5.68** (0.367)		8270D PAH		1	10/09/19 17:53	C9J0170	CJ90322
Naphthalene	**1.45** (0.367)		8270D PAH		1	10/09/19 17:53	C9J0170	CJ90322
Phenanthrene	**31.1** (3.67)		8270D PAH		10	10/10/19 2:34	C9J0170	CJ90322
Pyrene	**27.9** (3.67)		8270D PAH		10	10/10/19 2:34	C9J0170	CJ90322

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichlorobenzene-d4	*63 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*62 %*		*30-130*
Surrogate: Nitrobenzene-d5	*62 %*		*30-130*
Surrogate: p-Terphenyl-d14	*62 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0111

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals										
Batch CJ90455 - 3050B										
Blank										
Arsenic	ND	2.50	mg/kg wet							
Barium	ND	2.50	mg/kg wet							
Cadmium	ND	0.50	mg/kg wet							
Chromium	ND	1.00	mg/kg wet							
Lead	ND	5.00	mg/kg wet							
Selenium	ND	5.00	mg/kg wet							
Silver	ND	0.50	mg/kg wet							
LCS										
Arsenic	125	9.62	mg/kg wet	128.0		98	80-120			
Barium	589	9.62	mg/kg wet	536.0		110	80-120			
Cadmium	90.6	1.92	mg/kg wet	99.00		91	80-120			
Chromium	115	3.85	mg/kg wet	116.0		99	80-120			
Lead	290	19.2	mg/kg wet	277.0		105	80-120			
Selenium	236	19.2	mg/kg wet	242.0		97	80-120			
Silver	63.4	1.92	mg/kg wet	64.30		99	80-120			
LCS Dup										
Arsenic	118	7.94	mg/kg wet	128.0		92	80-120	5	20	
Barium	519	7.94	mg/kg wet	536.0		97	80-120	13	20	
Cadmium	86.5	1.59	mg/kg wet	99.00		87	80-120	5	20	
Chromium	107	3.17	mg/kg wet	116.0		92	80-120	7	20	
Lead	265	15.9	mg/kg wet	277.0		96	80-120	9	20	
Selenium	225	15.9	mg/kg wet	242.0		93	80-120	5	20	
Silver	60.3	1.59	mg/kg wet	64.30		94	80-120	5	20	
Batch CJ90456 - 7471B										
Blank										
Mercury	ND	0.033	mg/kg wet							
LCS										
Mercury	3.33	0.347	mg/kg wet	3.120		107	80-120			
LCS Dup										
Mercury	3.33	0.309	mg/kg wet	3.120		107	80-120	0.1	20	
5035/8260B Volatile Organic Compounds / Low Level										
Batch CJ90401 - 5035										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,2-Trichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethene	ND	0.0050	mg/kg wet							
1,1-Dichloropropene	ND	0.0050	mg/kg wet							
1,2,3-Trichlorobenzene	ND	0.0050	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0111

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CJ90401 - 5035										
1,2,3-Trichloropropane	ND	0.0050	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,4-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/kg wet							
1,2-Dibromoethane	ND	0.0050	mg/kg wet							
1,2-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,2-Dichloroethane	ND	0.0050	mg/kg wet							
1,2-Dichloropropane	ND	0.0050	mg/kg wet							
1,3,5-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,3-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,3-Dichloropropane	ND	0.0050	mg/kg wet							
1,4-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,4-Dioxane	ND	0.100	mg/kg wet							
1-Chlorohexane	ND	0.0050	mg/kg wet							
2,2-Dichloropropane	ND	0.0050	mg/kg wet							
2-Butanone	ND	0.0500	mg/kg wet							
2-Chlorotoluene	ND	0.0050	mg/kg wet							
2-Hexanone	ND	0.0500	mg/kg wet							
4-Chlorotoluene	ND	0.0050	mg/kg wet							
4-Isopropyltoluene	ND	0.0050	mg/kg wet							
4-Methyl-2-Pentanone	ND	0.0500	mg/kg wet							
Acetone	ND	0.0500	mg/kg wet							
Benzene	ND	0.0050	mg/kg wet							
Bromobenzene	ND	0.0050	mg/kg wet							
Bromochloromethane	ND	0.0050	mg/kg wet							
Bromodichloromethane	ND	0.0050	mg/kg wet							
Bromoform	ND	0.0050	mg/kg wet							
Bromomethane	ND	0.0100	mg/kg wet							
Carbon Disulfide	ND	0.0050	mg/kg wet							
Carbon Tetrachloride	ND	0.0050	mg/kg wet							
Chlorobenzene	ND	0.0050	mg/kg wet							
Chloroethane	ND	0.0100	mg/kg wet							
Chloroform	ND	0.0050	mg/kg wet							
Chloromethane	ND	0.0100	mg/kg wet							
cis-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
cis-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Dibromochloromethane	ND	0.0050	mg/kg wet							
Dibromomethane	ND	0.0050	mg/kg wet							
Dichlorodifluoromethane	ND	0.0100	mg/kg wet							
Diethyl Ether	ND	0.0050	mg/kg wet							
Di-isopropyl ether	ND	0.0050	mg/kg wet							
Ethyl tertiary-butyl ether	ND	0.0050	mg/kg wet							
Ethylbenzene	ND	0.0050	mg/kg wet							
Hexachlorobutadiene	ND	0.0050	mg/kg wet							
Isopropylbenzene	ND	0.0050	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0111

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CJ90401 - 5035										
Methyl tert-Butyl Ether	ND	0.0050	mg/kg wet							
Methylene Chloride	ND	0.0250	mg/kg wet							
Naphthalene	ND	0.0050	mg/kg wet							
n-Butylbenzene	ND	0.0050	mg/kg wet							
n-Propylbenzene	ND	0.0050	mg/kg wet							
sec-Butylbenzene	ND	0.0050	mg/kg wet							
Styrene	ND	0.0050	mg/kg wet							
tert-Butylbenzene	ND	0.0050	mg/kg wet							
Tertiary-amyl methyl ether	ND	0.0050	mg/kg wet							
Tetrachloroethene	ND	0.0050	mg/kg wet							
Tetrahydrofuran	ND	0.0050	mg/kg wet							
Toluene	ND	0.0050	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Trichloroethene	ND	0.0050	mg/kg wet							
Trichlorofluoromethane	ND	0.0050	mg/kg wet							
Vinyl Acetate	ND	0.0050	mg/kg wet							
Vinyl Chloride	ND	0.0100	mg/kg wet							
Xylene O	ND	0.0050	mg/kg wet							
Xylene P,M	ND	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0569*		mg/kg wet	*0.05000*		*114*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0474*		mg/kg wet	*0.05000*		*95*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0531*		mg/kg wet	*0.05000*		*106*	*70-130*			
Surrogate: Toluene-d8	*0.0499*		mg/kg wet	*0.05000*		*100*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	0.0521	0.0050	mg/kg wet	0.05000		104	70-130			
1,1,1-Trichloroethane	0.0551	0.0050	mg/kg wet	0.05000		110	70-130			
1,1,2,2-Tetrachloroethane	0.0472	0.0050	mg/kg wet	0.05000		94	70-130			
1,1,2-Trichloroethane	0.0536	0.0050	mg/kg wet	0.05000		107	70-130			
1,1-Dichloroethane	0.0567	0.0050	mg/kg wet	0.05000		113	70-130			
1,1-Dichloroethene	0.0572	0.0050	mg/kg wet	0.05000		114	70-130			
1,1-Dichloropropene	0.0559	0.0050	mg/kg wet	0.05000		112	70-130			
1,2,3-Trichlorobenzene	0.0477	0.0050	mg/kg wet	0.05000		95	70-130			
1,2,3-Trichloropropane	0.0462	0.0050	mg/kg wet	0.05000		92	70-130			
1,2,4-Trichlorobenzene	0.0478	0.0050	mg/kg wet	0.05000		96	70-130			
1,2,4-Trimethylbenzene	0.0514	0.0050	mg/kg wet	0.05000		103	70-130			
1,2-Dibromo-3-Chloropropane	0.0433	0.0050	mg/kg wet	0.05000		87	70-130			
1,2-Dibromoethane	0.0502	0.0050	mg/kg wet	0.05000		100	70-130			
1,2-Dichlorobenzene	0.0475	0.0050	mg/kg wet	0.05000		95	70-130			
1,2-Dichloroethane	0.0556	0.0050	mg/kg wet	0.05000		111	70-130			
1,2-Dichloropropane	0.0542	0.0050	mg/kg wet	0.05000		108	70-130			
1,3,5-Trimethylbenzene	0.0500	0.0050	mg/kg wet	0.05000		100	70-130			
1,3-Dichlorobenzene	0.0487	0.0050	mg/kg wet	0.05000		97	70-130			
1,3-Dichloropropane	0.0524	0.0050	mg/kg wet	0.05000		105	70-130			
1,4-Dichlorobenzene	0.0474	0.0050	mg/kg wet	0.05000		95	70-130			

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0111

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CJ90401 - 5035										
1,4-Dioxane	0.984	0.100	mg/kg wet	1.000		98	70-130			
1-Chlorohexane	0.0487	0.0050	mg/kg wet	0.05000		97	70-130			
2,2-Dichloropropane	0.0543	0.0050	mg/kg wet	0.05000		109	70-130			
2-Butanone	0.277	0.0500	mg/kg wet	0.2500		111	70-130			
2-Chlorotoluene	0.0491	0.0050	mg/kg wet	0.05000		98	70-130			
2-Hexanone	0.246	0.0500	mg/kg wet	0.2500		98	70-130			
4-Chlorotoluene	0.0472	0.0050	mg/kg wet	0.05000		94	70-130			
4-Isopropyltoluene	0.0488	0.0050	mg/kg wet	0.05000		98	70-130			
4-Methyl-2-Pentanone	0.261	0.0500	mg/kg wet	0.2500		105	70-130			
Acetone	0.269	0.0500	mg/kg wet	0.2500		108	70-130			
Benzene	0.0542	0.0050	mg/kg wet	0.05000		108	70-130			
Bromobenzene	0.0480	0.0050	mg/kg wet	0.05000		96	70-130			
Bromochloromethane	0.0534	0.0050	mg/kg wet	0.05000		107	70-130			
Bromodichloromethane	0.0569	0.0050	mg/kg wet	0.05000		114	70-130			
Bromoform	0.0449	0.0050	mg/kg wet	0.05000		90	70-130			
Bromomethane	0.0430	0.0100	mg/kg wet	0.05000		86	70-130			
Carbon Disulfide	0.0526	0.0050	mg/kg wet	0.05000		105	70-130			
Carbon Tetrachloride	0.0594	0.0050	mg/kg wet	0.05000		119	70-130			
Chlorobenzene	0.0490	0.0050	mg/kg wet	0.05000		98	70-130			
Chloroethane	0.0496	0.0100	mg/kg wet	0.05000		99	70-130			
Chloroform	0.0562	0.0050	mg/kg wet	0.05000		112	70-130			
Chloromethane	0.0463	0.0100	mg/kg wet	0.05000		93	70-130			
cis-1,2-Dichloroethene	0.0549	0.0050	mg/kg wet	0.05000		110	70-130			
cis-1,3-Dichloropropene	0.0546	0.0050	mg/kg wet	0.05000		109	70-130			
Dibromochloromethane	0.0470	0.0050	mg/kg wet	0.05000		94	70-130			
Dibromomethane	0.0554	0.0050	mg/kg wet	0.05000		111	70-130			
Dichlorodifluoromethane	0.0420	0.0100	mg/kg wet	0.05000		84	70-130			
Diethyl Ether	0.0513	0.0050	mg/kg wet	0.05000		103	70-130			
Di-isopropyl ether	0.0525	0.0050	mg/kg wet	0.05000		105	70-130			
Ethyl tertiary-butyl ether	0.0480	0.0050	mg/kg wet	0.05000		96	70-130			
Ethylbenzene	0.0507	0.0050	mg/kg wet	0.05000		101	70-130			
Hexachlorobutadiene	0.0477	0.0050	mg/kg wet	0.05000		95	70-130			
Isopropylbenzene	0.0490	0.0050	mg/kg wet	0.05000		98	70-130			
Methyl tert-Butyl Ether	0.0473	0.0050	mg/kg wet	0.05000		95	70-130			
Methylene Chloride	0.0511	0.0250	mg/kg wet	0.05000		102	70-130			
Naphthalene	0.0461	0.0050	mg/kg wet	0.05000		92	70-130			
n-Butylbenzene	0.0513	0.0050	mg/kg wet	0.05000		103	70-130			
n-Propylbenzene	0.0497	0.0050	mg/kg wet	0.05000		99	70-130			
sec-Butylbenzene	0.0479	0.0050	mg/kg wet	0.05000		96	70-130			
Styrene	0.0505	0.0050	mg/kg wet	0.05000		101	70-130			
tert-Butylbenzene	0.0489	0.0050	mg/kg wet	0.05000		98	70-130			
Tertiary-amyl methyl ether	0.0489	0.0050	mg/kg wet	0.05000		98	70-130			
Tetrachloroethene	0.0490	0.0050	mg/kg wet	0.05000		98	70-130			
Tetrahydrofuran	0.0457	0.0050	mg/kg wet	0.05000		91	70-130			
Toluene	0.0535	0.0050	mg/kg wet	0.05000		107	70-130			

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0111

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CJ90401 - 5035										
trans-1,2-Dichloroethene	0.0537	0.0050	mg/kg wet	0.05000		107	70-130			
trans-1,3-Dichloropropene	0.0493	0.0050	mg/kg wet	0.05000		99	70-130			
Trichloroethene	0.0537	0.0050	mg/kg wet	0.05000		107	70-130			
Trichlorofluoromethane	0.0557	0.0050	mg/kg wet	0.05000		111	70-130			
Vinyl Acetate	0.0569	0.0050	mg/kg wet	0.05000		114	70-130			
Vinyl Chloride	0.0493	0.0100	mg/kg wet	0.05000		99	70-130			
Xylene O	0.0497	0.0050	mg/kg wet	0.05000		99	70-130			
Xylene P,M	0.0971	0.0100	mg/kg wet	0.1000		97	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0573*		mg/kg wet	*0.05000*		*115*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0509*		mg/kg wet	*0.05000*		*102*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0564*		mg/kg wet	*0.05000*		*113*	*70-130*			
Surrogate: Toluene-d8	*0.0487*		mg/kg wet	*0.05000*		*97*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	0.0577	0.0050	mg/kg wet	0.05000		115	70-130	10	25	
1,1,1-Trichloroethane	0.0582	0.0050	mg/kg wet	0.05000		116	70-130	6	25	
1,1,2,2-Tetrachloroethane	0.0502	0.0050	mg/kg wet	0.05000		100	70-130	6	25	
1,1,2-Trichloroethane	0.0578	0.0050	mg/kg wet	0.05000		116	70-130	7	25	
1,1-Dichloroethane	0.0595	0.0050	mg/kg wet	0.05000		119	70-130	5	25	
1,1-Dichloroethene	0.0612	0.0050	mg/kg wet	0.05000		122	70-130	7	25	
1,1-Dichloropropene	0.0593	0.0050	mg/kg wet	0.05000		119	70-130	6	25	
1,2,3-Trichlorobenzene	0.0531	0.0050	mg/kg wet	0.05000		106	70-130	11	25	
1,2,3-Trichloropropane	0.0495	0.0050	mg/kg wet	0.05000		99	70-130	7	25	
1,2,4-Trichlorobenzene	0.0531	0.0050	mg/kg wet	0.05000		106	70-130	11	25	
1,2,4-Trimethylbenzene	0.0558	0.0050	mg/kg wet	0.05000		112	70-130	8	25	
1,2-Dibromo-3-Chloropropane	0.0496	0.0050	mg/kg wet	0.05000		99	70-130	14	25	
1,2-Dibromoethane	0.0554	0.0050	mg/kg wet	0.05000		111	70-130	10	25	
1,2-Dichlorobenzene	0.0518	0.0050	mg/kg wet	0.05000		104	70-130	9	25	
1,2-Dichloroethane	0.0584	0.0050	mg/kg wet	0.05000		117	70-130	5	25	
1,2-Dichloropropane	0.0579	0.0050	mg/kg wet	0.05000		116	70-130	7	25	
1,3,5-Trimethylbenzene	0.0543	0.0050	mg/kg wet	0.05000		109	70-130	8	25	
1,3-Dichlorobenzene	0.0534	0.0050	mg/kg wet	0.05000		107	70-130	9	25	
1,3-Dichloropropane	0.0570	0.0050	mg/kg wet	0.05000		114	70-130	8	25	
1,4-Dichlorobenzene	0.0505	0.0050	mg/kg wet	0.05000		101	70-130	6	25	
1,4-Dioxane	1.08	0.100	mg/kg wet	1.000		108	70-130	9	20	
1-Chlorohexane	0.0546	0.0050	mg/kg wet	0.05000		109	70-130	11	25	
2,2-Dichloropropane	0.0577	0.0050	mg/kg wet	0.05000		115	70-130	6	25	
2-Butanone	0.293	0.0500	mg/kg wet	0.2500		117	70-130	5	25	
2-Chlorotoluene	0.0529	0.0050	mg/kg wet	0.05000		106	70-130	7	25	
2-Hexanone	0.268	0.0500	mg/kg wet	0.2500		107	70-130	9	25	
4-Chlorotoluene	0.0538	0.0050	mg/kg wet	0.05000		108	70-130	13	25	
4-Isopropyltoluene	0.0531	0.0050	mg/kg wet	0.05000		106	70-130	9	25	
4-Methyl-2-Pentanone	0.281	0.0500	mg/kg wet	0.2500		112	70-130	7	25	
Acetone	0.295	0.0500	mg/kg wet	0.2500		118	70-130	9	25	
Benzene	0.0576	0.0050	mg/kg wet	0.05000		115	70-130	6	25	
Bromobenzene	0.0528	0.0050	mg/kg wet	0.05000		106	70-130	10	25	

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0111

Quality Control Data

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch CJ90401 - 5035										
Bromochloromethane	0.0570	0.0050	mg/kg wet	0.05000		114	70-130	7	25	
Bromodichloromethane	0.0601	0.0050	mg/kg wet	0.05000		120	70-130	5	25	
Bromoform	0.0490	0.0050	mg/kg wet	0.05000		98	70-130	9	25	
Bromomethane	0.0463	0.0100	mg/kg wet	0.05000		93	70-130	7	25	
Carbon Disulfide	0.0555	0.0050	mg/kg wet	0.05000		111	70-130	5	25	
Carbon Tetrachloride	0.0625	0.0050	mg/kg wet	0.05000		125	70-130	5	25	
Chlorobenzene	0.0536	0.0050	mg/kg wet	0.05000		107	70-130	9	25	
Chloroethane	0.0520	0.0100	mg/kg wet	0.05000		104	70-130	5	25	
Chloroform	0.0589	0.0050	mg/kg wet	0.05000		118	70-130	5	25	
Chloromethane	0.0484	0.0100	mg/kg wet	0.05000		97	70-130	5	25	
cis-1,2-Dichloroethene	0.0582	0.0050	mg/kg wet	0.05000		116	70-130	6	25	
cis-1,3-Dichloropropene	0.0589	0.0050	mg/kg wet	0.05000		118	70-130	7	25	
Dibromochloromethane	0.0510	0.0050	mg/kg wet	0.05000		102	70-130	8	25	
Dibromomethane	0.0589	0.0050	mg/kg wet	0.05000		118	70-130	6	25	
Dichlorodifluoromethane	0.0437	0.0100	mg/kg wet	0.05000		87	70-130	4	25	
Diethyl Ether	0.0559	0.0050	mg/kg wet	0.05000		112	70-130	9	25	
Di-isopropyl ether	0.0562	0.0050	mg/kg wet	0.05000		112	70-130	7	25	
Ethyl tertiary-butyl ether	0.0516	0.0050	mg/kg wet	0.05000		103	70-130	7	25	
Ethylbenzene	0.0559	0.0050	mg/kg wet	0.05000		112	70-130	10	25	
Hexachlorobutadiene	0.0525	0.0050	mg/kg wet	0.05000		105	70-130	10	25	
Isopropylbenzene	0.0530	0.0050	mg/kg wet	0.05000		106	70-130	8	25	
Methyl tert-Butyl Ether	0.0507	0.0050	mg/kg wet	0.05000		101	70-130	7	25	
Methylene Chloride	0.0539	0.0250	mg/kg wet	0.05000		108	70-130	5	25	
Naphthalene	0.0518	0.0050	mg/kg wet	0.05000		104	70-130	12	25	
n-Butylbenzene	0.0558	0.0050	mg/kg wet	0.05000		112	70-130	8	25	
n-Propylbenzene	0.0538	0.0050	mg/kg wet	0.05000		108	70-130	8	25	
sec-Butylbenzene	0.0524	0.0050	mg/kg wet	0.05000		105	70-130	9	25	
Styrene	0.0557	0.0050	mg/kg wet	0.05000		111	70-130	10	25	
tert-Butylbenzene	0.0532	0.0050	mg/kg wet	0.05000		106	70-130	8	25	
Tertiary-amyl methyl ether	0.0529	0.0050	mg/kg wet	0.05000		106	70-130	8	25	
Tetrachloroethene	0.0539	0.0050	mg/kg wet	0.05000		108	70-130	9	25	
Tetrahydrofuran	0.0484	0.0050	mg/kg wet	0.05000		97	70-130	6	25	
Toluene	0.0565	0.0050	mg/kg wet	0.05000		113	70-130	5	25	
trans-1,2-Dichloroethene	0.0577	0.0050	mg/kg wet	0.05000		115	70-130	7	25	
trans-1,3-Dichloropropene	0.0524	0.0050	mg/kg wet	0.05000		105	70-130	6	25	
Trichloroethene	0.0572	0.0050	mg/kg wet	0.05000		114	70-130	6	25	
Trichlorofluoromethane	0.0581	0.0050	mg/kg wet	0.05000		116	70-130	4	25	
Vinyl Acetate	0.0622	0.0050	mg/kg wet	0.05000		124	70-130	9	25	
Vinyl Chloride	0.0516	0.0100	mg/kg wet	0.05000		103	70-130	5	25	
Xylene O	0.0543	0.0050	mg/kg wet	0.05000		109	70-130	9	25	
Xylene P,M	0.106	0.0100	mg/kg wet	0.1000		106	70-130	9	25	
Surrogate: 1,2-Dichloroethane-d4	*0.0555*		mg/kg wet	*0.05000*		*111*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0514*		mg/kg wet	*0.05000*		*103*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0555*		mg/kg wet	*0.05000*		*111*	*70-130*			
Surrogate: Toluene-d8	*0.0494*		mg/kg wet	*0.05000*		*99*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0111

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch CJ90743 - 5035										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.200	mg/kg wet							
1,1,1-Trichloroethane	ND	0.200	mg/kg wet							
1,1,2,2-Tetrachloroethane	ND	0.200	mg/kg wet							
1,1,2-Trichloroethane	ND	0.200	mg/kg wet							
1,1-Dichloroethane	ND	0.200	mg/kg wet							
1,1-Dichloroethene	ND	0.200	mg/kg wet							
1,1-Dichloropropene	ND	0.200	mg/kg wet							
1,2,3-Trichlorobenzene	ND	0.200	mg/kg wet							
1,2,3-Trichloropropane	ND	0.200	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.200	mg/kg wet							
1,2,4-Trimethylbenzene	ND	0.200	mg/kg wet							
1,2-Dibromo-3-Chloropropane	ND	1.00	mg/kg wet							
1,2-Dibromoethane	ND	0.200	mg/kg wet							
1,2-Dichlorobenzene	ND	0.200	mg/kg wet							
1,2-Dichloroethane	ND	0.200	mg/kg wet							
1,2-Dichloropropane	ND	0.200	mg/kg wet							
1,3,5-Trimethylbenzene	ND	0.200	mg/kg wet							
1,3-Dichlorobenzene	ND	0.200	mg/kg wet							
1,3-Dichloropropane	ND	0.200	mg/kg wet							
1,4-Dichlorobenzene	ND	0.200	mg/kg wet							
1,4-Dioxane - Screen	ND	40.0	mg/kg wet							
1-Chlorohexane	ND	0.200	mg/kg wet							
2,2-Dichloropropane	ND	0.200	mg/kg wet							
2-Butanone	ND	1.00	mg/kg wet							
2-Chlorotoluene	ND	0.200	mg/kg wet							
2-Hexanone	ND	1.00	mg/kg wet							
4-Chlorotoluene	ND	0.200	mg/kg wet							
4-Isopropyltoluene	ND	0.200	mg/kg wet							
4-Methyl-2-Pentanone	ND	1.00	mg/kg wet							
Acetone	ND	1.00	mg/kg wet							
Benzene	ND	0.200	mg/kg wet							
Bromobenzene	ND	0.200	mg/kg wet							
Bromochloromethane	ND	0.200	mg/kg wet							
Bromodichloromethane	ND	0.200	mg/kg wet							
Bromoform	ND	0.200	mg/kg wet							
Bromomethane	ND	0.200	mg/kg wet							
Carbon Disulfide	ND	0.200	mg/kg wet							
Carbon Tetrachloride	ND	0.200	mg/kg wet							
Chlorobenzene	ND	0.200	mg/kg wet							
Chloroethane	ND	0.200	mg/kg wet							
Chloroform	ND	0.200	mg/kg wet							
Chloromethane	ND	0.200	mg/kg wet							
cis-1,2-Dichloroethene	ND	0.200	mg/kg wet							
cis-1,3-Dichloropropene	ND	0.200	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0111

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch CJ90743 - 5035										
Dibromochloromethane	ND	0.200	mg/kg wet							
Dibromomethane	ND	0.200	mg/kg wet							
Dichlorodifluoromethane	ND	0.200	mg/kg wet							
Diethyl Ether	ND	0.200	mg/kg wet							
Di-isopropyl ether	ND	0.200	mg/kg wet							
Ethyl tertiary-butyl ether	ND	0.200	mg/kg wet							
Ethylbenzene	ND	0.200	mg/kg wet							
Hexachlorobutadiene	ND	0.200	mg/kg wet							
Isopropylbenzene	ND	0.200	mg/kg wet							
Methyl tert-Butyl Ether	ND	0.200	mg/kg wet							
Methylene Chloride	0.0740	0.400	mg/kg wet							J
Naphthalene	0.0460	0.200	mg/kg wet							J
n-Butylbenzene	ND	0.200	mg/kg wet							
n-Propylbenzene	ND	0.200	mg/kg wet							
sec-Butylbenzene	ND	0.200	mg/kg wet							
Styrene	ND	0.200	mg/kg wet							
tert-Butylbenzene	ND	0.200	mg/kg wet							
Tertiary-amyl methyl ether	ND	0.200	mg/kg wet							
Tetrachloroethene	ND	0.200	mg/kg wet							
Tetrahydrofuran	ND	1.00	mg/kg wet							
Toluene	ND	0.200	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.200	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.200	mg/kg wet							
Trichloroethene	ND	0.200	mg/kg wet							
Trichlorofluoromethane	ND	0.200	mg/kg wet							
Vinyl Acetate	ND	0.200	mg/kg wet							
Vinyl Chloride	ND	0.200	mg/kg wet							
Xylene O	ND	0.200	mg/kg wet							
Xylene P,M	ND	0.400	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*5.40*		mg/kg wet	*5.000*		*108*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*5.49*		mg/kg wet	*5.000*		*110*	*70-130*			
Surrogate: Dibromofluoromethane	*5.10*		mg/kg wet	*5.000*		*102*	*70-130*			
Surrogate: Toluene-d8	*5.18*		mg/kg wet	*5.000*		*104*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	1.83	0.200	mg/kg wet	2.000		92	70-130			
1,1,1-Trichloroethane	2.11	0.200	mg/kg wet	2.000		105	70-130			
1,1,2,2-Tetrachloroethane	2.19	0.200	mg/kg wet	2.000		109	70-130			
1,1,2-Trichloroethane	2.04	0.200	mg/kg wet	2.000		102	70-130			
1,1-Dichloroethane	2.40	0.200	mg/kg wet	2.000		120	70-130			
1,1-Dichloroethene	2.33	0.200	mg/kg wet	2.000		116	70-130			
1,1-Dichloropropene	2.28	0.200	mg/kg wet	2.000		114	70-130			
1,2,3-Trichlorobenzene	2.29	0.200	mg/kg wet	2.000		114	70-130			
1,2,3-Trichloropropane	1.77	0.200	mg/kg wet	2.000		89	70-130			
1,2,4-Trichlorobenzene	2.32	0.200	mg/kg wet	2.000		116	70-130			
1,2,4-Trimethylbenzene	2.35	0.200	mg/kg wet	2.000		118	70-130			

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0111

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch CJ90743 - 5035										
1,2-Dibromo-3-Chloropropane	2.13	1.00	mg/kg wet	2.000		106	70-130			
1,2-Dibromoethane	2.06	0.200	mg/kg wet	2.000		103	70-130			
1,2-Dichlorobenzene	2.29	0.200	mg/kg wet	2.000		114	70-130			
1,2-Dichloroethane	2.13	0.200	mg/kg wet	2.000		106	70-130			
1,2-Dichloropropane	2.26	0.200	mg/kg wet	2.000		113	70-130			
1,3,5-Trimethylbenzene	2.22	0.200	mg/kg wet	2.000		111	70-130			
1,3-Dichlorobenzene	2.10	0.200	mg/kg wet	2.000		105	70-130			
1,3-Dichloropropane	2.26	0.200	mg/kg wet	2.000		113	70-130			
1,4-Dichlorobenzene	2.06	0.200	mg/kg wet	2.000		103	70-130			
1,4-Dioxane - Screen	62.1	40.0	mg/kg wet	40.00		155	44-241			
1-Chlorohexane	2.08	0.200	mg/kg wet	2.000		104	70-130			
2,2-Dichloropropane	2.23	0.200	mg/kg wet	2.000		112	70-130			
2-Butanone	10.9	1.00	mg/kg wet	10.00		109	70-130			
2-Chlorotoluene	2.27	0.200	mg/kg wet	2.000		113	70-130			
2-Hexanone	10.5	1.00	mg/kg wet	10.00		105	70-130			
4-Chlorotoluene	2.19	0.200	mg/kg wet	2.000		109	70-130			
4-Isopropyltoluene	2.22	0.200	mg/kg wet	2.000		111	70-130			
4-Methyl-2-Pentanone	10.7	1.00	mg/kg wet	10.00		107	70-130			
Acetone	11.3	1.00	mg/kg wet	10.00		113	70-130			
Benzene	2.26	0.200	mg/kg wet	2.000		113	70-130			
Bromobenzene	2.19	0.200	mg/kg wet	2.000		109	70-130			
Bromochloromethane	2.00	0.200	mg/kg wet	2.000		100	70-130			
Bromodichloromethane	1.78	0.200	mg/kg wet	2.000		89	70-130			
Bromoform	2.00	0.200	mg/kg wet	2.000		100	70-130			
Bromomethane	1.94	0.200	mg/kg wet	2.000		97	70-130			
Carbon Disulfide	2.09	0.200	mg/kg wet	2.000		104	70-130			
Carbon Tetrachloride	2.05	0.200	mg/kg wet	2.000		102	70-130			
Chlorobenzene	2.03	0.200	mg/kg wet	2.000		102	70-130			
Chloroethane	2.04	0.200	mg/kg wet	2.000		102	70-130			
Chloroform	2.21	0.200	mg/kg wet	2.000		111	70-130			
Chloromethane	1.93	0.200	mg/kg wet	2.000		96	70-130			
cis-1,2-Dichloroethene	2.24	0.200	mg/kg wet	2.000		112	70-130			
cis-1,3-Dichloropropene	2.38	0.200	mg/kg wet	2.000		119	70-130			
Dibromochloromethane	2.08	0.200	mg/kg wet	2.000		104	70-130			
Dibromomethane	2.07	0.200	mg/kg wet	2.000		104	70-130			
Dichlorodifluoromethane	1.64	0.200	mg/kg wet	2.000		82	70-130			
Diethyl Ether	2.21	0.200	mg/kg wet	2.000		111	70-130			
Di-isopropyl ether	2.30	0.200	mg/kg wet	2.000		115	70-130			
Ethyl tertiary-butyl ether	2.11	0.200	mg/kg wet	2.000		106	70-130			
Ethylbenzene	2.23	0.200	mg/kg wet	2.000		112	70-130			
Hexachlorobutadiene	2.26	0.200	mg/kg wet	2.000		113	70-130			
Isopropylbenzene	2.18	0.200	mg/kg wet	2.000		109	70-130			
Methyl tert-Butyl Ether	2.03	0.200	mg/kg wet	2.000		102	70-130			
Methylene Chloride	2.25	0.400	mg/kg wet	2.000		113	70-130			
Naphthalene	2.14	0.200	mg/kg wet	2.000		107	70-130			

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0111

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch CJ90743 - 5035										
n-Butylbenzene	2.28	0.200	mg/kg wet	2.000		114	70-130			
n-Propylbenzene	2.31	0.200	mg/kg wet	2.000		116	70-130			
sec-Butylbenzene	2.22	0.200	mg/kg wet	2.000		111	70-130			
Styrene	2.01	0.200	mg/kg wet	2.000		101	70-130			
tert-Butylbenzene	2.13	0.200	mg/kg wet	2.000		107	70-130			
Tertiary-amyl methyl ether	2.21	0.200	mg/kg wet	2.000		110	70-130			
Tetrachloroethene	1.55	0.200	mg/kg wet	2.000		77	70-130			
Tetrahydrofuran	2.11	1.00	mg/kg wet	2.000		106	70-130			
Toluene	2.24	0.200	mg/kg wet	2.000		112	70-130			
trans-1,2-Dichloroethene	2.19	0.200	mg/kg wet	2.000		110	70-130			
trans-1,3-Dichloropropene	2.15	0.200	mg/kg wet	2.000		107	70-130			
Trichloroethene	2.05	0.200	mg/kg wet	2.000		102	70-130			
Trichlorofluoromethane	2.20	0.200	mg/kg wet	2.000		110	70-130			
Vinyl Acetate	2.54	0.200	mg/kg wet	2.000		127	70-130			
Vinyl Chloride	2.04	0.200	mg/kg wet	2.000		102	70-130			
Xylene O	2.16	0.200	mg/kg wet	2.000		108	70-130			
Xylene P,M	4.33	0.400	mg/kg wet	4.000		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	*4.95*		mg/kg wet	*5.000*		*99*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*4.98*		mg/kg wet	*5.000*		*100*	*70-130*			
Surrogate: Dibromofluoromethane	*4.71*		mg/kg wet	*5.000*		*94*	*70-130*			
Surrogate: Toluene-d8	*4.94*		mg/kg wet	*5.000*		*99*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	1.90	0.200	mg/kg wet	2.000		95	70-130	4	25	
1,1,1-Trichloroethane	2.08	0.200	mg/kg wet	2.000		104	70-130	1	25	
1,1,2,2-Tetrachloroethane	2.07	0.200	mg/kg wet	2.000		103	70-130	6	25	
1,1,2-Trichloroethane	2.18	0.200	mg/kg wet	2.000		109	70-130	7	25	
1,1-Dichloroethane	2.37	0.200	mg/kg wet	2.000		119	70-130	1	25	
1,1-Dichloroethene	2.25	0.200	mg/kg wet	2.000		112	70-130	3	25	
1,1-Dichloropropene	2.21	0.200	mg/kg wet	2.000		111	70-130	3	25	
1,2,3-Trichlorobenzene	2.26	0.200	mg/kg wet	2.000		113	70-130	1	25	
1,2,3-Trichloropropane	1.78	0.200	mg/kg wet	2.000		89	70-130	0.7	25	
1,2,4-Trichlorobenzene	2.23	0.200	mg/kg wet	2.000		111	70-130	4	25	
1,2,4-Trimethylbenzene	2.33	0.200	mg/kg wet	2.000		116	70-130	1	25	
1,2-Dibromo-3-Chloropropane	2.25	1.00	mg/kg wet	2.000		113	70-130	6	25	
1,2-Dibromoethane	2.12	0.200	mg/kg wet	2.000		106	70-130	3	25	
1,2-Dichlorobenzene	2.18	0.200	mg/kg wet	2.000		109	70-130	5	25	
1,2-Dichloroethane	2.13	0.200	mg/kg wet	2.000		106	70-130	0.2	25	
1,2-Dichloropropane	2.12	0.200	mg/kg wet	2.000		106	70-130	6	25	
1,3,5-Trimethylbenzene	2.29	0.200	mg/kg wet	2.000		114	70-130	3	25	
1,3-Dichlorobenzene	2.10	0.200	mg/kg wet	2.000		105	70-130	0.2	25	
1,3-Dichloropropane	2.50	0.200	mg/kg wet	2.000		125	70-130	10	25	
1,4-Dichlorobenzene	2.14	0.200	mg/kg wet	2.000		107	70-130	4	25	
1,4-Dioxane - Screen	52.5	40.0	mg/kg wet	40.00		131	44-241	17	200	
1-Chlorohexane	2.24	0.200	mg/kg wet	2.000		112	70-130	8	25	
2,2-Dichloropropane	2.22	0.200	mg/kg wet	2.000		111	70-130	0.4	25	

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0111

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch CJ90743 - 5035										
2-Butanone	10.6	1.00	mg/kg wet	10.00		106	70-130	2	25	
2-Chlorotoluene	2.36	0.200	mg/kg wet	2.000		118	70-130	4	25	
2-Hexanone	10.4	1.00	mg/kg wet	10.00		104	70-130	0.9	25	
4-Chlorotoluene	2.29	0.200	mg/kg wet	2.000		114	70-130	5	25	
4-Isopropyltoluene	2.15	0.200	mg/kg wet	2.000		108	70-130	3	25	
4-Methyl-2-Pentanone	10.3	1.00	mg/kg wet	10.00		103	70-130	4	25	
Acetone	10.6	1.00	mg/kg wet	10.00		106	70-130	6	25	
Benzene	2.34	0.200	mg/kg wet	2.000		117	70-130	3	25	
Bromobenzene	2.32	0.200	mg/kg wet	2.000		116	70-130	6	25	
Bromochloromethane	2.04	0.200	mg/kg wet	2.000		102	70-130	2	25	
Bromodichloromethane	1.81	0.200	mg/kg wet	2.000		90	70-130	2	25	
Bromoform	2.01	0.200	mg/kg wet	2.000		100	70-130	0.4	25	
Bromomethane	1.92	0.200	mg/kg wet	2.000		96	70-130	0.8	25	
Carbon Disulfide	2.16	0.200	mg/kg wet	2.000		108	70-130	3	25	
Carbon Tetrachloride	1.86	0.200	mg/kg wet	2.000		93	70-130	10	25	
Chlorobenzene	2.25	0.200	mg/kg wet	2.000		112	70-130	10	25	
Chloroethane	2.17	0.200	mg/kg wet	2.000		108	70-130	6	25	
Chloroform	2.19	0.200	mg/kg wet	2.000		110	70-130	1	25	
Chloromethane	1.82	0.200	mg/kg wet	2.000		91	70-130	6	25	
cis-1,2-Dichloroethene	2.17	0.200	mg/kg wet	2.000		108	70-130	3	25	
cis-1,3-Dichloropropene	2.19	0.200	mg/kg wet	2.000		109	70-130	8	25	
Dibromochloromethane	2.12	0.200	mg/kg wet	2.000		106	70-130	2	25	
Dibromomethane	2.03	0.200	mg/kg wet	2.000		102	70-130	2	25	
Dichlorodifluoromethane	1.60	0.200	mg/kg wet	2.000		80	70-130	2	25	
Diethyl Ether	2.23	0.200	mg/kg wet	2.000		112	70-130	0.8	25	
Di-isopropyl ether	2.28	0.200	mg/kg wet	2.000		114	70-130	0.8	25	
Ethyl tertiary-butyl ether	2.08	0.200	mg/kg wet	2.000		104	70-130	1	25	
Ethylbenzene	2.34	0.200	mg/kg wet	2.000		117	70-130	5	25	
Hexachlorobutadiene	2.35	0.200	mg/kg wet	2.000		118	70-130	4	25	
Isopropylbenzene	2.33	0.200	mg/kg wet	2.000		117	70-130	7	25	
Methyl tert-Butyl Ether	1.97	0.200	mg/kg wet	2.000		98	70-130	3	25	
Methylene Chloride	2.14	0.400	mg/kg wet	2.000		107	70-130	5	25	
Naphthalene	2.09	0.200	mg/kg wet	2.000		105	70-130	2	25	
n-Butylbenzene	2.37	0.200	mg/kg wet	2.000		118	70-130	4	25	
n-Propylbenzene	2.34	0.200	mg/kg wet	2.000		117	70-130	1	25	
sec-Butylbenzene	2.19	0.200	mg/kg wet	2.000		110	70-130	1	25	
Styrene	2.13	0.200	mg/kg wet	2.000		107	70-130	6	25	
tert-Butylbenzene	2.15	0.200	mg/kg wet	2.000		107	70-130	0.7	25	
Tertiary-amyl methyl ether	2.14	0.200	mg/kg wet	2.000		107	70-130	3	25	
Tetrachloroethene	1.65	0.200	mg/kg wet	2.000		83	70-130	7	25	
Tetrahydrofuran	1.85	1.00	mg/kg wet	2.000		93	70-130	13	25	
Toluene	2.25	0.200	mg/kg wet	2.000		112	70-130	0.4	25	
trans-1,2-Dichloroethene	2.20	0.200	mg/kg wet	2.000		110	70-130	0.3	25	
trans-1,3-Dichloropropene	2.24	0.200	mg/kg wet	2.000		112	70-130	4	25	
Trichloroethene	1.99	0.200	mg/kg wet	2.000		100	70-130	3	25	

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0111

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch CJ90743 - 5035										
Trichlorofluoromethane	2.18	0.200	mg/kg wet	2.000		109	70-130	1	25	
Vinyl Acetate	2.27	0.200	mg/kg wet	2.000		114	70-130	11	25	
Vinyl Chloride	2.05	0.200	mg/kg wet	2.000		102	70-130	0.3	25	
Xylene O	2.32	0.200	mg/kg wet	2.000		116	70-130	7	25	
Xylene P,M	4.54	0.400	mg/kg wet	4.000		113	70-130	5	25	
Surrogate: 1,2-Dichloroethane-d4	*4.86*		mg/kg wet	*5.000*		*97*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*5.17*		mg/kg wet	*5.000*		*103*	*70-130*			
Surrogate: Dibromofluoromethane	*4.87*		mg/kg wet	*5.000*		*97*	*70-130*			
Surrogate: Toluene-d8	*5.14*		mg/kg wet	*5.000*		*103*	*70-130*			
8100M Total Petroleum Hydrocarbons										
Batch CJ90334 - 3546										
Blank										
Decane (C10)	ND	0.2	mg/kg wet							
Docosane (C22)	ND	0.2	mg/kg wet							
Dodecane (C12)	ND	0.2	mg/kg wet							
Eicosane (C20)	ND	0.2	mg/kg wet							
Hexacosane (C26)	ND	0.2	mg/kg wet							
Hexadecane (C16)	ND	0.2	mg/kg wet							
Nonadecane (C19)	ND	0.2	mg/kg wet							
Nonane (C9)	ND	0.2	mg/kg wet							
Octacosane (C28)	ND	0.2	mg/kg wet							
Octadecane (C18)	ND	0.2	mg/kg wet							
Tetracosane (C24)	ND	0.2	mg/kg wet							
Tetradecane (C14)	ND	0.2	mg/kg wet							
Total Petroleum Hydrocarbons	ND	37.5	mg/kg wet							
Triacontane (C30)	ND	0.2	mg/kg wet							
Surrogate: O-Terphenyl	*4.31*		mg/kg wet	*5.000*		*86*	*40-140*			
LCS										
Decane (C10)	2.0	0.2	mg/kg wet	2.500		80	40-140			
Docosane (C22)	2.3	0.2	mg/kg wet	2.500		91	40-140			
Dodecane (C12)	2.0	0.2	mg/kg wet	2.500		80	40-140			
Eicosane (C20)	2.2	0.2	mg/kg wet	2.500		90	40-140			
Hexacosane (C26)	2.2	0.2	mg/kg wet	2.500		89	40-140			
Hexadecane (C16)	2.2	0.2	mg/kg wet	2.500		87	40-140			
Nonadecane (C19)	2.4	0.2	mg/kg wet	2.500		96	40-140			
Nonane (C9)	1.8	0.2	mg/kg wet	2.500		72	30-140			
Octacosane (C28)	2.2	0.2	mg/kg wet	2.500		88	40-140			
Octadecane (C18)	2.2	0.2	mg/kg wet	2.500		89	40-140			
Tetracosane (C24)	2.3	0.2	mg/kg wet	2.500		90	40-140			
Tetradecane (C14)	2.1	0.2	mg/kg wet	2.500		85	40-140			
Total Petroleum Hydrocarbons	30.0	37.5	mg/kg wet	35.00		86	40-140			
Triacontane (C30)	2.1	0.2	mg/kg wet	2.500		85	40-140			

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0111

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8100M Total Petroleum Hydrocarbons										
Batch CJ90334 - 3546										
Surrogate: O-Terphenyl	*4.51*		mg/kg wet	*5.000*		*90*	*40-140*			
LCS Dup										
Decane (C10)	1.9	0.2	mg/kg wet	2.500		75	40-140	7	25	
Docosane (C22)	2.2	0.2	mg/kg wet	2.500		90	40-140	1	25	
Dodecane (C12)	1.9	0.2	mg/kg wet	2.500		78	40-140	2	25	
Eicosane (C20)	2.2	0.2	mg/kg wet	2.500		88	40-140	2	25	
Hexacosane (C26)	2.2	0.2	mg/kg wet	2.500		88	40-140	1	25	
Hexadecane (C16)	2.1	0.2	mg/kg wet	2.500		83	40-140	4	25	
Nonadecane (C19)	2.3	0.2	mg/kg wet	2.500		94	40-140	3	25	
Nonane (C9)	1.7	0.2	mg/kg wet	2.500		68	30-140	7	25	
Octacosane (C28)	2.2	0.2	mg/kg wet	2.500		87	40-140	0.3	25	
Octadecane (C18)	2.1	0.2	mg/kg wet	2.500		86	40-140	4	25	
Tetracosane (C24)	2.2	0.2	mg/kg wet	2.500		89	40-140	1	25	
Tetradecane (C14)	2.0	0.2	mg/kg wet	2.500		81	40-140	5	25	
Total Petroleum Hydrocarbons	29.3	37.5	mg/kg wet	35.00		84	40-140	3	25	
Triacontane (C30)	2.1	0.2	mg/kg wet	2.500		84	40-140	0.9	25	
Surrogate: O-Terphenyl	*4.29*		mg/kg wet	*5.000*		*86*	*40-140*			
Batch CJ90411 - 3546										
Blank										
Decane (C10)	ND	0.2	mg/kg wet							
Docosane (C22)	ND	0.2	mg/kg wet							
Dodecane (C12)	ND	0.2	mg/kg wet							
Eicosane (C20)	ND	0.2	mg/kg wet							
Hexacosane (C26)	ND	0.2	mg/kg wet							
Hexadecane (C16)	ND	0.2	mg/kg wet							
Nonadecane (C19)	ND	0.2	mg/kg wet							
Nonane (C9)	ND	0.2	mg/kg wet							
Octacosane (C28)	ND	0.2	mg/kg wet							
Octadecane (C18)	ND	0.2	mg/kg wet							
Tetracosane (C24)	ND	0.2	mg/kg wet							
Tetradecane (C14)	ND	0.2	mg/kg wet							
Total Petroleum Hydrocarbons	ND	37.5	mg/kg wet							
Triacontane (C30)	ND	0.2	mg/kg wet							
Surrogate: O-Terphenyl	*4.37*		mg/kg wet	*5.000*		*87*	*40-140*			
LCS										
Decane (C10)	1.7	0.2	mg/kg wet	2.500		68	40-140			
Docosane (C22)	2.3	0.2	mg/kg wet	2.500		92	40-140			
Dodecane (C12)	1.7	0.2	mg/kg wet	2.500		70	40-140			
Eicosane (C20)	2.3	0.2	mg/kg wet	2.500		91	40-140			
Hexacosane (C26)	2.3	0.2	mg/kg wet	2.500		90	40-140			
Hexadecane (C16)	2.1	0.2	mg/kg wet	2.500		83	40-140			
Nonadecane (C19)	2.4	0.2	mg/kg wet	2.500		97	40-140			

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0111

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8100M Total Petroleum Hydrocarbons										
Batch CJ90411 - 3546										
Nonane (C9)	1.5	0.2	mg/kg wet	2.500		59	30-140			
Octacosane (C28)	2.2	0.2	mg/kg wet	2.500		90	40-140			
Octadecane (C18)	2.2	0.2	mg/kg wet	2.500		88	40-140			
Tetracosane (C24)	2.3	0.2	mg/kg wet	2.500		92	40-140			
Tetradecane (C14)	2.0	0.2	mg/kg wet	2.500		79	40-140			
Total Petroleum Hydrocarbons	29.1	37.5	mg/kg wet	35.00		83	40-140			
Triacontane (C30)	2.2	0.2	mg/kg wet	2.500		87	40-140			
Surrogate: O-Terphenyl	*4.53*		mg/kg wet	*5.000*		*91*	*40-140*			
LCS Dup										
Decane (C10)	1.9	0.2	mg/kg wet	2.500		76	40-140	12	25	
Docosane (C22)	2.3	0.2	mg/kg wet	2.500		91	40-140	1	25	
Dodecane (C12)	2.0	0.2	mg/kg wet	2.500		80	40-140	14	25	
Eicosane (C20)	2.2	0.2	mg/kg wet	2.500		90	40-140	0.8	25	
Hexacosane (C26)	2.2	0.2	mg/kg wet	2.500		88	40-140	3	25	
Hexadecane (C16)	2.2	0.2	mg/kg wet	2.500		88	40-140	6	25	
Nonadecane (C19)	2.4	0.2	mg/kg wet	2.500		96	40-140	1	25	
Nonane (C9)	1.7	0.2	mg/kg wet	2.500		67	30-140	12	25	
Octacosane (C28)	2.2	0.2	mg/kg wet	2.500		86	40-140	4	25	
Octadecane (C18)	2.2	0.2	mg/kg wet	2.500		89	40-140	1	25	
Tetracosane (C24)	2.2	0.2	mg/kg wet	2.500		90	40-140	2	25	
Tetradecane (C14)	2.2	0.2	mg/kg wet	2.500		86	40-140	9	25	
Total Petroleum Hydrocarbons	29.7	37.5	mg/kg wet	35.00		85	40-140	2	25	
Triacontane (C30)	2.1	0.2	mg/kg wet	2.500		83	40-140	4	25	
Surrogate: O-Terphenyl	*4.51*		mg/kg wet	*5.000*		*90*	*40-140*			
8270D Polynuclear Aromatic Hydrocarbons										
Batch CJ90322 - 3546										
Blank										
2-Methylnaphthalene	ND	0.333	mg/kg wet							
Acenaphthene	ND	0.333	mg/kg wet							
Acenaphthylene	ND	0.333	mg/kg wet							
Anthracene	ND	0.333	mg/kg wet							
Benzo(a)anthracene	ND	0.333	mg/kg wet							
Benzo(a)pyrene	ND	0.167	mg/kg wet							
Benzo(b)fluoranthene	ND	0.333	mg/kg wet							
Benzo(g,h,i)perylene	ND	0.333	mg/kg wet							
Benzo(k)fluoranthene	ND	0.333	mg/kg wet							
Chrysene	ND	0.167	mg/kg wet							
Dibenzo(a,h)Anthracene	ND	0.167	mg/kg wet							
Fluoranthene	ND	0.333	mg/kg wet							
Fluorene	ND	0.333	mg/kg wet							
Indeno(1,2,3-cd)Pyrene	ND	0.333	mg/kg wet							
Naphthalene	ND	0.167	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0111

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Polynuclear Aromatic Hydrocarbons										
Batch CJ90322 - 3546										
Phenanthrene	ND	0.333	mg/kg wet							
Pyrene	ND	0.333	mg/kg wet							
Surrogate: 1,2-Dichlorobenzene-d4	*2.16*		mg/kg wet	*3.333*		*65*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*2.09*		mg/kg wet	*3.333*		*63*	*30-130*			
Surrogate: Nitrobenzene-d5	*2.19*		mg/kg wet	*3.333*		*66*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.97*		mg/kg wet	*3.333*		*89*	*30-130*			
LCS										
2-Methylnaphthalene	1.83	0.333	mg/kg wet	3.333		55	40-140			
Acenaphthene	1.96	0.333	mg/kg wet	3.333		59	40-140			
Acenaphthylene	2.06	0.333	mg/kg wet	3.333		62	40-140			
Anthracene	2.51	0.333	mg/kg wet	3.333		75	40-140			
Benzo(a)anthracene	2.77	0.333	mg/kg wet	3.333		83	40-140			
Benzo(a)pyrene	2.39	0.167	mg/kg wet	3.333		72	40-140			
Benzo(b)fluoranthene	2.52	0.333	mg/kg wet	3.333		76	40-140			
Benzo(g,h,i)perylene	2.76	0.333	mg/kg wet	3.333		83	40-140			
Benzo(k)fluoranthene	2.40	0.333	mg/kg wet	3.333		72	40-140			
Chrysene	2.71	0.167	mg/kg wet	3.333		81	40-140			
Dibenzo(a,h)Anthracene	2.77	0.167	mg/kg wet	3.333		83	40-140			
Fluoranthene	2.75	0.333	mg/kg wet	3.333		82	40-140			
Fluorene	2.26	0.333	mg/kg wet	3.333		68	40-140			
Indeno(1,2,3-cd)Pyrene	2.70	0.333	mg/kg wet	3.333		81	40-140			
Naphthalene	1.75	0.333	mg/kg wet	3.333		53	40-140			
Phenanthrene	2.27	0.333	mg/kg wet	3.333		68	40-140			
Pyrene	2.59	0.333	mg/kg wet	3.333		78	40-140			
Surrogate: 1,2-Dichlorobenzene-d4	*1.76*		mg/kg wet	*3.333*		*53*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*1.91*		mg/kg wet	*3.333*		*57*	*30-130*			
Surrogate: Nitrobenzene-d5	*1.81*		mg/kg wet	*3.333*		*54*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.75*		mg/kg wet	*3.333*		*83*	*30-130*			
LCS Dup										
2-Methylnaphthalene	1.95	0.333	mg/kg wet	3.333		58	40-140	6	30	
Acenaphthene	2.09	0.333	mg/kg wet	3.333		63	40-140	7	30	
Acenaphthylene	2.20	0.333	mg/kg wet	3.333		66	40-140	6	30	
Anthracene	2.69	0.333	mg/kg wet	3.333		81	40-140	7	30	
Benzo(a)anthracene	2.94	0.333	mg/kg wet	3.333		88	40-140	6	30	
Benzo(a)pyrene	2.55	0.167	mg/kg wet	3.333		77	40-140	7	30	
Benzo(b)fluoranthene	2.73	0.333	mg/kg wet	3.333		82	40-140	8	30	
Benzo(g,h,i)perylene	2.92	0.333	mg/kg wet	3.333		87	40-140	6	30	
Benzo(k)fluoranthene	2.43	0.333	mg/kg wet	3.333		73	40-140	1	30	
Chrysene	2.83	0.167	mg/kg wet	3.333		85	40-140	4	30	
Dibenzo(a,h)Anthracene	2.96	0.167	mg/kg wet	3.333		89	40-140	7	30	
Fluoranthene	2.95	0.333	mg/kg wet	3.333		88	40-140	7	30	
Fluorene	2.39	0.333	mg/kg wet	3.333		72	40-140	5	30	
Indeno(1,2,3-cd)Pyrene	2.88	0.333	mg/kg wet	3.333		87	40-140	7	30	
Naphthalene	1.82	0.333	mg/kg wet	3.333		55	40-140	4	30	
Phenanthrene	2.43	0.333	mg/kg wet	3.333		73	40-140	7	30	

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0111

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Polynuclear Aromatic Hydrocarbons										
Batch CJ90322 - 3546										
Pyrene	2.69	0.333	mg/kg wet	3.333		81	40-140	4	30	
Surrogate: 1,2-Dichlorobenzene-d4	*1.75*		mg/kg wet	*3.333*		*52*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*1.94*		mg/kg wet	*3.333*		*58*	*30-130*			
Surrogate: Nitrobenzene-d5	*1.81*		mg/kg wet	*3.333*		*54*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.74*		mg/kg wet	*3.333*		*82*	*30-130*			

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
ESS Laboratory Work Order: 19J0111

Notes and Definitions

U	Analyte included in the analysis, but not detected
PT	Pentachlorophenol tailing factor > 2.
J	Reported between MDL and MRL
D	Diluted.
CD+	Continuing Calibration %Diff/Drift is above control limit (CD+).
BT	Benzidine tailing factor >2.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0111

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Sage Environmental, Inc. - ML/ML

Shipped/Delivered Via: ESS Courier

ESS Project ID: 19J0111
Date Received: 10/3/2019
Project Due Date: 10/10/2019
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 0.9 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? (Yes) / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? (Yes) / No / NA

13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: _____ Time: _____ By: _____
    b. Low Level VOA vials frozen: Date: 10/3/2019 Time: 1422 By: client RL (sample 1)

Sample Receiving Notes:

DI vials for sample 1 rec'd broken - new vials assembled in SR by ML → 10/3/19 1432

LL rec'd frozen

14. Was there a need to contact Project Manager? ~~Yes~~ / (No)
    a. Was there a need to contact the client? (Yes) / No
    Who was contacted? DAN BUMES Date: 10/3/19 Time: 1420 By: MM

Will preserve LL in House → Report Both Methanol & Low level (Normal) per Client.

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	394839	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
01	394842	Yes	NA	Yes	VOA Vial - Methanol	MeOH	
01	394847	Yes	NA	Yes	VOA Vial - Other	Other	
01	394848	Yes	NA	Yes	VOA Vial - Other	Other	
02	394838	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
02	394841	Yes	NA	Yes	VOA Vial - Methanol	MeOH	
02	394845	Yes	NA	Yes	VOA Vial - Other	Other	
02	394846	Yes	NA	Yes	VOA Vial - Other	Other	
03	394837	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
03	394840	Yes	NA	Yes	VOA Vial - Methanol	MeOH	
03	394843	Yes	NA	Yes	VOA Vial - Other	Other	
03	394844	Yes	NA	Yes	VOA Vial - Other	Other	

2nd Review

Were all containers scanned into storage/lab? Initials JC (Yes) / No
Are barcode labels on correct containers? Yes / No / (NA)
Are all Flashpoint stickers attached/container ID # circled? Yes / No / (NA)
Are all Hex Chrome stickers attached? Yes / No / (NA)
Are all QC stickers attached? Yes / No / (NA)
Are VOA stickers attached if bubbles noted? Yes / No / (NA)

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Sage Environmental, Inc. - ML/ML

ESS Project ID: 19J0111

Date Received: 10/3/2019

Completed By: _____ Date & Time: 10/3/19 1424

Reviewed By: _____ Date & Time: 10/3/19 1428

Delivered By: _____ 10/3/19 1428

ESS Laboratory
Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab # 19J0111

Turn Time	5	Days
Regulatory State	RI	
Reporting Limits	RIDEM R-DEC, GB-LC	

Is this project for any of the following?: ○ CT RCP ○ MA MCP ○ RGP

Electonic Deliverables: ☐ Data Checker ☒ Excel ☐ Other (Please Specify →)

Company Name	Project #	Project Name
SAGE ENVIRONMENTAL	S2935	WAITES WHARF, NEWPORT

Contact Person	Address
DAN BOYNES	172 ARMISTICE BLVD.

City	State	Zip Code	PO #
PAWTUCKET	RI	02860	

Telephone Number	FAX Number	Email Address
401-723-9900		dboynes@sage-enviro.com

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	Analysis: VOCs	TPH	PAHs	RCRA 8
DB	10/1/19		G	S	SE-103 (0'—2')				
DB		9:45			SE-101 (2'—7')				
DB		10:00							
DB									
1	10/1/19	12:30	G	S	SE-104 (0'—2')	*	*	*	*
2		13:30			SE-105 (0'—2')				
3		14:30			SE-106 (0'—2')				

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial — AG, V

Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 10, 7

Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1, 10, 10

Number of Containers per Sample: 4

Laboratory Use Only

Cooler Present: ✓ ○ Drop Off ⊗ Pickup

Seals Intact:

Cooler Temperature: 0.9 °C

Sampled by: DAN BOYNES

Comments: Please specify "Other" preservative and containers types in this space

Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
10/3/19 9:21	10/3/19 9:01	10/3/19 9:58	10/3/19 13:58
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)

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CERTIFICATE OF ANALYSIS

Dan Boynes
Sage Environmental, inc.
172 Armistice Boulevard
Pawtucket, RI 02860

RE: Waites Wharf Newport (S2935)
ESS Laboratory Work Order Number: 19J0112

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 5:18 pm, Oct 10, 2019

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0112

SAMPLE RECEIPT

The following samples were received on October 03, 2019 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
19J0112-01	SE-101 0-2ft	Soil	6010C, 7471B, 8100M, 8260B Low, 8270D PAH
19J0112-02	SE-101 2-7ft	Soil	6010C, 7471B, 8100M, 8260B Low, 8270D PAH
19J0112-03	SE-102 0-2ft	Soil	6010C, 7471B, 8100M, 8260B Low, 8270D PAH
19J0112-04	SE-103 0-2ft	Soil	6010C, 7471B, 8100M, 8260B Low, 8270D PAH

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0112

PROJECT NARRATIVE

5035/8260B Volatile Organic Compounds / Low Level

19J0112-04	**Surrogate recovery(ies) above upper control limit (S+).**
	1,2-Dichloroethane-d4 (131% @ 70-130%)
CJ90733-BS1	**Blank Spike recovery is below lower control limit (B-).**
	Dichlorodifluoromethane (67% @ 70-130%)
CJ90733-BSD1	**Blank Spike recovery is above upper control limit (B+).**
	Acetone (137% @ 70-130%)
CJ90733-BSD1	**Relative percent difference for duplicate is outside of criteria (D+).**
	Acetone (30% @ 25%)

8270D Polynuclear Aromatic Hydrocarbons

C9J0075-TUN1	**Benzidine tailing factor >2.**
C9J0119-TUN1	**Benzidine tailing factor >2.**
C9J0119-TUN1	**Pentachlorophenol tailing factor > 2.**
C9J0170-CCV1	**Continuing Calibration %Diff/Drift is above control limit (CD+).**
	p-Terphenyl-d14 (22% @ 20%)
C9J0170-TUN1	**Benzidine tailing factor >2.**
C9J0170-TUN1	**Pentachlorophenol tailing factor > 2.**

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0112

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-101 0-2ft
Date Sampled: 10/01/19 09:00
Percent Solids: 90

ESS Laboratory Work Order: 19J0112
ESS Laboratory Sample ID: 19J0112-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**11.1** (1.85)		6010C		1	BJV	10/08/19 6:43	3.01	100	CJ90501
Barium	**76.1** (1.85)		6010C		1	BJV	10/08/19 6:43	3.01	100	CJ90501
Cadmium	ND (0.37)		6010C		1	BJV	10/08/19 6:43	3.01	100	CJ90501
Chromium	**5.67** (0.74)		6010C		1	BJV	10/08/19 6:43	3.01	100	CJ90501
Lead	**194** (3.70)		6010C		1	BJV	10/08/19 6:43	3.01	100	CJ90501
Mercury	**2.80** (0.681)		7471B		25	MKS	10/08/19 13:04	0.81	40	CJ90502
Selenium	ND (3.70)		6010C		1	BJV	10/08/19 6:43	3.01	100	CJ90501
Silver	ND (0.37)		6010C		1	BJV	10/08/19 6:43	3.01	100	CJ90501

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-101 0-2ft
Date Sampled: 10/01/19 09:00
Percent Solids: 90
Initial Volume: 5.5
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19J0112
ESS Laboratory Sample ID: 19J0112-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
1,1,1-Trichloroethane	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
1,1,2,2-Tetrachloroethane	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
1,1,2-Trichloroethane	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
1,1-Dichloroethane	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
1,1-Dichloroethene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
1,1-Dichloropropene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
1,2,3-Trichlorobenzene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
1,2,3-Trichloropropane	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
1,2,4-Trichlorobenzene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
1,2,4-Trimethylbenzene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
1,2-Dibromo-3-Chloropropane	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
1,2-Dibromoethane	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
1,2-Dichlorobenzene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
1,2-Dichloroethane	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
1,2-Dichloropropane	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
1,3,5-Trimethylbenzene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
1,3-Dichlorobenzene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
1,3-Dichloropropane	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
1,4-Dichlorobenzene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
1,4-Dioxane	ND (0.101)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
1-Chlorohexane	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
2,2-Dichloropropane	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
2-Butanone	ND (0.0507)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
2-Chlorotoluene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
2-Hexanone	ND (0.0507)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
4-Chlorotoluene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
4-Isopropyltoluene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
4-Methyl-2-Pentanone	ND (0.0507)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Acetone	**0.0732** (0.0507)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Benzene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Bromobenzene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-101 0-2ft
Date Sampled: 10/01/19 09:00
Percent Solids: 90
Initial Volume: 5.5
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19J0112
ESS Laboratory Sample ID: 19J0112-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Bromodichloromethane	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Bromoform	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Bromomethane	ND (0.0101)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Carbon Disulfide	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Carbon Tetrachloride	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Chlorobenzene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Chloroethane	ND (0.0101)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Chloroform	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Chloromethane	ND (0.0101)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
cis-1,2-Dichloroethene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
cis-1,3-Dichloropropene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Dibromochloromethane	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Dibromomethane	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Dichlorodifluoromethane	ND (0.0101)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Diethyl Ether	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Di-isopropyl ether	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Ethyl tertiary-butyl ether	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Ethylbenzene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Hexachlorobutadiene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Isopropylbenzene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Methyl tert-Butyl Ether	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Methylene Chloride	ND (0.0253)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Naphthalene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
n-Butylbenzene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
n-Propylbenzene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
sec-Butylbenzene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Styrene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
tert-Butylbenzene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Tertiary-amyl methyl ether	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Tetrachloroethene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Tetrahydrofuran	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-101 0-2ft
Date Sampled: 10/01/19 09:00
Percent Solids: 90
Initial Volume: 5.5
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19J0112
ESS Laboratory Sample ID: 19J0112-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
trans-1,2-Dichloroethene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
trans-1,3-Dichloropropene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Trichloroethene	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Trichlorofluoromethane	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Vinyl Acetate	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Vinyl Chloride	ND (0.0101)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Xylene O	ND (0.0051)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Xylene P,M	ND (0.0101)		8260B Low		1	10/07/19 14:55	C9J0134	CJ90733
Xylenes (Total)	ND (0.0101)		8260B Low		1	10/07/19 14:55		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*114 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*96 %*		*70-130*
Surrogate: Dibromofluoromethane	*104 %*		*70-130*
Surrogate: Toluene-d8	*97 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-101 0-2ft
Date Sampled: 10/01/19 09:00
Percent Solids: 90
Initial Volume: 20.3
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 19J0112
ESS Laboratory Sample ID: 19J0112-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: CAD
Prepared: 10/4/19 11:45

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**42.9** (41.2)		8100M		1	10/05/19 16:51	C9J0040	CJ90411

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*80 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-101 0-2ft
Date Sampled: 10/01/19 09:00
Percent Solids: 90
Initial Volume: 15.1
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 19J0112
ESS Laboratory Sample ID: 19J0112-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 10/3/19 19:45

8270D Polynuclear Aromatic Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
2-Methylnaphthalene	ND (0.369)		8270D PAH		1	10/09/19 18:22	C9J0170	CJ90322
Acenaphthene	ND (0.369)		8270D PAH		1	10/09/19 18:22	C9J0170	CJ90322
Acenaphthylene	ND (0.369)		8270D PAH		1	10/09/19 18:22	C9J0170	CJ90322
Anthracene	ND (0.369)		8270D PAH		1	10/09/19 18:22	C9J0170	CJ90322
Benzo(a)anthracene	**1.32** (0.369)		8270D PAH		1	10/09/19 18:22	C9J0170	CJ90322
Benzo(a)pyrene	**1.73** (0.185)		8270D PAH		1	10/09/19 18:22	C9J0170	CJ90322
Benzo(b)fluoranthene	**1.49** (0.369)		8270D PAH		1	10/09/19 18:22	C9J0170	CJ90322
Benzo(g,h,i)perylene	**1.18** (0.369)		8270D PAH		1	10/09/19 18:22	C9J0170	CJ90322
Benzo(k)fluoranthene	**0.965** (0.369)		8270D PAH		1	10/09/19 18:22	C9J0170	CJ90322
Chrysene	**1.25** (0.185)		8270D PAH		1	10/09/19 18:22	C9J0170	CJ90322
Dibenzo(a,h)Anthracene	**0.320** (0.185)		8270D PAH		1	10/09/19 18:22	C9J0170	CJ90322
Fluoranthene	**1.80** (0.369)		8270D PAH		1	10/09/19 18:22	C9J0170	CJ90322
Fluorene	ND (0.369)		8270D PAH		1	10/09/19 18:22	C9J0170	CJ90322
Indeno(1,2,3-cd)Pyrene	**1.06** (0.369)		8270D PAH		1	10/09/19 18:22	C9J0170	CJ90322
Naphthalene	**0.460** (0.369)		8270D PAH		1	10/09/19 18:22	C9J0170	CJ90322
Phenanthrene	**0.573** (0.369)		8270D PAH		1	10/09/19 18:22	C9J0170	CJ90322
Pyrene	**1.93** (0.369)		8270D PAH		1	10/09/19 18:22	C9J0170	CJ90322

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*69 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*68 %*		*30-130*
Surrogate: Nitrobenzene-d5	*68 %*		*30-130*
Surrogate: p-Terphenyl-d14	*65 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-101 2-7ft
Date Sampled: 10/01/19 09:15
Percent Solids: 74

ESS Laboratory Work Order: 19J0112
ESS Laboratory Sample ID: 19J0112-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**8.13** (2.60)		6010C		1	BJV	10/08/19 6:49	2.61	100	CJ90501
Barium	**115** (2.60)		6010C		1	BJV	10/08/19 6:49	2.61	100	CJ90501
Cadmium	ND (0.52)		6010C		1	BJV	10/08/19 6:49	2.61	100	CJ90501
Chromium	**7.37** (1.04)		6010C		1	BJV	10/08/19 6:49	2.61	100	CJ90501
Lead	**342** (5.19)		6010C		1	BJV	10/08/19 6:49	2.61	100	CJ90501
Mercury	**2.13** (0.678)		7471B		25	MKS	10/08/19 13:14	0.99	40	CJ90502
Selenium	ND (5.19)		6010C		1	BJV	10/08/19 6:49	2.61	100	CJ90501
Silver	ND (1.04)		6010C		2	KJK	10/08/19 21:17	2.61	100	CJ90501

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-101 2-7ft
Date Sampled: 10/01/19 09:15
Percent Solids: 74
Initial Volume: 6.3
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19J0112
ESS Laboratory Sample ID: 19J0112-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
1,1,1-Trichloroethane	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
1,1,2,2-Tetrachloroethane	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
1,1,2-Trichloroethane	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
1,1-Dichloroethane	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
1,1-Dichloroethene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
1,1-Dichloropropene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
1,2,3-Trichlorobenzene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
1,2,3-Trichloropropane	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
1,2,4-Trichlorobenzene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
1,2,4-Trimethylbenzene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
1,2-Dibromo-3-Chloropropane	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
1,2-Dibromoethane	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
1,2-Dichlorobenzene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
1,2-Dichloroethane	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
1,2-Dichloropropane	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
1,3,5-Trimethylbenzene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
1,3-Dichlorobenzene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
1,3-Dichloropropane	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
1,4-Dichlorobenzene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
1,4-Dioxane	ND (0.108)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
1-Chlorohexane	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
2,2-Dichloropropane	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
2-Butanone	ND (0.0538)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
2-Chlorotoluene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
2-Hexanone	ND (0.0538)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
4-Chlorotoluene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
4-Isopropyltoluene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
4-Methyl-2-Pentanone	ND (0.0538)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Acetone	ND (0.0538)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Benzene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Bromobenzene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-101 2-7ft
Date Sampled: 10/01/19 09:15
Percent Solids: 74
Initial Volume: 6.3
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19J0112
ESS Laboratory Sample ID: 19J0112-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Bromodichloromethane	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Bromoform	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Bromomethane	ND (0.0108)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Carbon Disulfide	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Carbon Tetrachloride	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Chlorobenzene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Chloroethane	ND (0.0108)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Chloroform	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Chloromethane	ND (0.0108)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
cis-1,2-Dichloroethene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
cis-1,3-Dichloropropene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Dibromochloromethane	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Dibromomethane	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Dichlorodifluoromethane	ND (0.0108)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Diethyl Ether	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Di-isopropyl ether	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Ethyl tertiary-butyl ether	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Ethylbenzene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Hexachlorobutadiene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Isopropylbenzene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Methyl tert-Butyl Ether	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Methylene Chloride	ND (0.0269)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Naphthalene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
n-Butylbenzene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
n-Propylbenzene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
sec-Butylbenzene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Styrene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
tert-Butylbenzene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Tertiary-amyl methyl ether	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Tetrachloroethene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Tetrahydrofuran	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-101 2-7ft
Date Sampled: 10/01/19 09:15
Percent Solids: 74
Initial Volume: 6.3
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19J0112
ESS Laboratory Sample ID: 19J0112-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
trans-1,2-Dichloroethene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
trans-1,3-Dichloropropene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Trichloroethene	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Trichlorofluoromethane	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Vinyl Acetate	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Vinyl Chloride	ND (0.0108)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Xylene O	ND (0.0054)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Xylene P,M	ND (0.0108)		8260B Low		1	10/07/19 15:21	C9J0134	CJ90733
Xylenes (Total)	ND (0.0108)		8260B Low		1	10/07/19 15:21		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*117 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*97 %*		*70-130*
Surrogate: Dibromofluoromethane	*107 %*		*70-130*
Surrogate: Toluene-d8	*99 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-101 2-7ft
Date Sampled: 10/01/19 09:15
Percent Solids: 74
Initial Volume: 19.2
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 19J0112
ESS Laboratory Sample ID: 19J0112-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: CAD
Prepared: 10/4/19 11:45

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**77.5** (53.0)		8100M		1	10/05/19 17:22	C9J0040	CJ90411

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*84 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-101 2-7ft
Date Sampled: 10/01/19 09:15
Percent Solids: 74
Initial Volume: 14.4
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 19J0112
ESS Laboratory Sample ID: 19J0112-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 10/3/19 19:45

8270D Polynuclear Aromatic Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
2-Methylnaphthalene	ND (0.470)		8270D PAH		1	10/09/19 18:51	C9J0170	CJ90322
Acenaphthene	ND (0.470)		8270D PAH		1	10/09/19 18:51	C9J0170	CJ90322
Acenaphthylene	ND (0.470)		8270D PAH		1	10/09/19 18:51	C9J0170	CJ90322
Anthracene	ND (0.470)		8270D PAH		1	10/09/19 18:51	C9J0170	CJ90322
Benzo(a)anthracene	**1.52** (0.470)		8270D PAH		1	10/09/19 18:51	C9J0170	CJ90322
Benzo(a)pyrene	**1.77** (0.236)		8270D PAH		1	10/09/19 18:51	C9J0170	CJ90322
Benzo(b)fluoranthene	**1.28** (0.470)		8270D PAH		1	10/09/19 18:51	C9J0170	CJ90322
Benzo(g,h,i)perylene	**1.13** (0.470)		8270D PAH		1	10/09/19 18:51	C9J0170	CJ90322
Benzo(k)fluoranthene	**1.19** (0.470)		8270D PAH		1	10/09/19 18:51	C9J0170	CJ90322
Chrysene	**1.40** (0.236)		8270D PAH		1	10/09/19 18:51	C9J0170	CJ90322
Dibenzo(a,h)Anthracene	**0.315** (0.236)		8270D PAH		1	10/09/19 18:51	C9J0170	CJ90322
Fluoranthene	**2.54** (0.470)		8270D PAH		1	10/09/19 18:51	C9J0170	CJ90322
Fluorene	ND (0.470)		8270D PAH		1	10/09/19 18:51	C9J0170	CJ90322
Indeno(1,2,3-cd)Pyrene	**1.02** (0.470)		8270D PAH		1	10/09/19 18:51	C9J0170	CJ90322
Naphthalene	ND (0.470)		8270D PAH		1	10/09/19 18:51	C9J0170	CJ90322
Phenanthrene	**1.05** (0.470)		8270D PAH		1	10/09/19 18:51	C9J0170	CJ90322
Pyrene	**2.40** (0.470)		8270D PAH		1	10/09/19 18:51	C9J0170	CJ90322

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*62 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*52 %*		*30-130*
Surrogate: Nitrobenzene-d5	*62 %*		*30-130*
Surrogate: p-Terphenyl-d14	*50 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-102 0-2ft
Date Sampled: 10/01/19 10:00
Percent Solids: 77

ESS Laboratory Work Order: 19J0112
ESS Laboratory Sample ID: 19J0112-03
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**8.62** (2.42)		6010C		1	BJV	10/08/19 6:54	2.67	100	CJ90501
Barium	**78.7** (2.42)		6010C		1	BJV	10/08/19 6:54	2.67	100	CJ90501
Cadmium	ND (0.48)		6010C		1	BJV	10/08/19 6:54	2.67	100	CJ90501
Chromium	**11.6** (0.97)		6010C		1	BJV	10/08/19 6:54	2.67	100	CJ90501
Lead	**246** (4.84)		6010C		1	BJV	10/08/19 6:54	2.67	100	CJ90501
Mercury	**0.351** (0.030)		7471B		1	MKS	10/08/19 11:32	0.85	40	CJ90502
Selenium	ND (4.84)		6010C		1	BJV	10/08/19 6:54	2.67	100	CJ90501
Silver	ND (0.48)		6010C		1	BJV	10/08/19 6:54	2.67	100	CJ90501

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-102 0-2ft
Date Sampled: 10/01/19 10:00
Percent Solids: 77
Initial Volume: 6.5
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19J0112
ESS Laboratory Sample ID: 19J0112-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
1,1,1-Trichloroethane	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
1,1,2,2-Tetrachloroethane	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
1,1,2-Trichloroethane	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
1,1-Dichloroethane	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
1,1-Dichloroethene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
1,1-Dichloropropene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
1,2,3-Trichlorobenzene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
1,2,3-Trichloropropane	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
1,2,4-Trichlorobenzene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
1,2,4-Trimethylbenzene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
1,2-Dibromoethane	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
1,2-Dichlorobenzene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
1,2-Dichloroethane	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
1,2-Dichloropropane	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
1,3,5-Trimethylbenzene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
1,3-Dichlorobenzene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
1,3-Dichloropropane	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
1,4-Dichlorobenzene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
1,4-Dioxane	ND (0.0994)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
1-Chlorohexane	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
2,2-Dichloropropane	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
2-Butanone	ND (0.0497)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
2-Chlorotoluene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
2-Hexanone	ND (0.0497)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
4-Chlorotoluene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
4-Isopropyltoluene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
4-Methyl-2-Pentanone	ND (0.0497)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Acetone	ND (0.0497)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Benzene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Bromobenzene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-102 0-2ft
Date Sampled: 10/01/19 10:00
Percent Solids: 77
Initial Volume: 6.5
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19J0112
ESS Laboratory Sample ID: 19J0112-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Bromodichloromethane	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Bromoform	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Bromomethane	ND (0.0099)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Carbon Disulfide	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Carbon Tetrachloride	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Chlorobenzene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Chloroethane	ND (0.0099)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Chloroform	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Chloromethane	ND (0.0099)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
cis-1,2-Dichloroethene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
cis-1,3-Dichloropropene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Dibromochloromethane	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Dibromomethane	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Dichlorodifluoromethane	ND (0.0099)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Diethyl Ether	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Di-isopropyl ether	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Ethyl tertiary-butyl ether	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Ethylbenzene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Hexachlorobutadiene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Isopropylbenzene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Methyl tert-Butyl Ether	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Methylene Chloride	ND (0.0249)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Naphthalene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
n-Butylbenzene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
n-Propylbenzene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
sec-Butylbenzene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Styrene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
tert-Butylbenzene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Tertiary-amyl methyl ether	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Tetrachloroethene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Tetrahydrofuran	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-102 0-2ft
Date Sampled: 10/01/19 10:00
Percent Solids: 77
Initial Volume: 6.5
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19J0112
ESS Laboratory Sample ID: 19J0112-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
trans-1,2-Dichloroethene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
trans-1,3-Dichloropropene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Trichloroethene	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Trichlorofluoromethane	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Vinyl Acetate	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Vinyl Chloride	ND (0.0099)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Xylene O	ND (0.0050)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Xylene P,M	ND (0.0099)		8260B Low		1	10/04/19 16:57	C9J0097	CJ90401
Xylenes (Total)	ND (0.00994)		8260B Low		1	10/04/19 16:57		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*129 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*94 %*		*70-130*
Surrogate: Dibromofluoromethane	*114 %*		*70-130*
Surrogate: Toluene-d8	*99 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-102 0-2ft
Date Sampled: 10/01/19 10:00
Percent Solids: 77
Initial Volume: 19.1
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 19J0112
ESS Laboratory Sample ID: 19J0112-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: CAD
Prepared: 10/4/19 11:45

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**437** (254)		8100M		5	10/05/19 21:35	C9J0040	CJ90411

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*87 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-102 0-2ft
Date Sampled: 10/01/19 10:00
Percent Solids: 77
Initial Volume: 15.1
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 19J0112
ESS Laboratory Sample ID: 19J0112-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 10/3/19 19:45

8270D Polynuclear Aromatic Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
2-Methylnaphthalene	ND (0.855)		8270D PAH		2	10/09/19 16:27	C9J0170	CJ90322
Acenaphthene	ND (0.855)		8270D PAH		2	10/09/19 16:27	C9J0170	CJ90322
Acenaphthylene	ND (0.855)		8270D PAH		2	10/09/19 16:27	C9J0170	CJ90322
Anthracene	**1.44** (0.855)		8270D PAH		2	10/09/19 16:27	C9J0170	CJ90322
Benzo(a)anthracene	**3.27** (0.855)		8270D PAH		2	10/09/19 16:27	C9J0170	CJ90322
Benzo(a)pyrene	**2.55** (0.429)		8270D PAH		2	10/09/19 16:27	C9J0170	CJ90322
Benzo(b)fluoranthene	**2.20** (0.855)		8270D PAH		2	10/09/19 16:27	C9J0170	CJ90322
Benzo(g,h,i)perylene	**1.34** (0.855)		8270D PAH		2	10/09/19 16:27	C9J0170	CJ90322
Benzo(k)fluoranthene	**2.12** (0.855)		8270D PAH		2	10/09/19 16:27	C9J0170	CJ90322
Chrysene	**2.91** (0.429)		8270D PAH		2	10/09/19 16:27	C9J0170	CJ90322
Dibenzo(a,h)Anthracene	**0.531** (0.429)		8270D PAH		2	10/09/19 16:27	C9J0170	CJ90322
Fluoranthene	**6.32** (0.855)		8270D PAH		2	10/09/19 16:27	C9J0170	CJ90322
Fluorene	ND (0.855)		8270D PAH		2	10/09/19 16:27	C9J0170	CJ90322
Indeno(1,2,3-cd)Pyrene	**1.33** (0.855)		8270D PAH		2	10/09/19 16:27	C9J0170	CJ90322
Naphthalene	ND (0.429)		8270D PAH		2	10/09/19 16:27	C9J0170	CJ90322
Phenanthrene	**3.73** (0.855)		8270D PAH		2	10/09/19 16:27	C9J0170	CJ90322
Pyrene	**4.50** (0.855)		8270D PAH		2	10/09/19 16:27	C9J0170	CJ90322

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*61 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*55 %*		*30-130*
Surrogate: Nitrobenzene-d5	*58 %*		*30-130*
Surrogate: p-Terphenyl-d14	*56 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-103 0-2ft
Date Sampled: 10/01/19 11:00
Percent Solids: 84

ESS Laboratory Work Order: 19J0112
ESS Laboratory Sample ID: 19J0112-04
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**12.5** (2.59)		6010C		1	BJV	10/08/19 7:10	2.31	100	CJ90501
Barium	**87.8** (2.59)		6010C		1	BJV	10/08/19 7:10	2.31	100	CJ90501
Cadmium	ND (0.52)		6010C		1	BJV	10/08/19 7:10	2.31	100	CJ90501
Chromium	**11.4** (1.04)		6010C		1	BJV	10/08/19 7:10	2.31	100	CJ90501
Lead	**284** (5.18)		6010C		1	BJV	10/08/19 7:10	2.31	100	CJ90501
Mercury	**0.760** (0.244)		7471B		10	MKS	10/08/19 13:16	0.97	40	CJ90502
Selenium	ND (5.18)		6010C		1	BJV	10/08/19 7:10	2.31	100	CJ90501
Silver	ND (0.52)		6010C		1	BJV	10/08/19 7:10	2.31	100	CJ90501

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-103 0-2ft
Date Sampled: 10/01/19 11:00
Percent Solids: 84
Initial Volume: 5.8
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19J0112
ESS Laboratory Sample ID: 19J0112-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
1,1,1-Trichloroethane	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
1,1,2,2-Tetrachloroethane	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
1,1,2-Trichloroethane	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
1,1-Dichloroethane	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
1,1-Dichloroethene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
1,1-Dichloropropene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
1,2,3-Trichlorobenzene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
1,2,3-Trichloropropane	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
1,2,4-Trichlorobenzene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
1,2,4-Trimethylbenzene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
1,2-Dibromo-3-Chloropropane	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
1,2-Dibromoethane	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
1,2-Dichlorobenzene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
1,2-Dichloroethane	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
1,2-Dichloropropane	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
1,3,5-Trimethylbenzene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
1,3-Dichlorobenzene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
1,3-Dichloropropane	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
1,4-Dichlorobenzene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
1,4-Dioxane	ND (0.103)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
1-Chlorohexane	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
2,2-Dichloropropane	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
2-Butanone	ND (0.0516)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
2-Chlorotoluene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
2-Hexanone	ND (0.0516)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
4-Chlorotoluene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
4-Isopropyltoluene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
4-Methyl-2-Pentanone	ND (0.0516)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Acetone	ND (0.0516)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Benzene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Bromobenzene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-103 0-2ft
Date Sampled: 10/01/19 11:00
Percent Solids: 84
Initial Volume: 5.8
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19J0112
ESS Laboratory Sample ID: 19J0112-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Bromodichloromethane	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Bromoform	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Bromomethane	ND (0.0103)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Carbon Disulfide	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Carbon Tetrachloride	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Chlorobenzene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Chloroethane	ND (0.0103)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Chloroform	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Chloromethane	ND (0.0103)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
cis-1,2-Dichloroethene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
cis-1,3-Dichloropropene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Dibromochloromethane	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Dibromomethane	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Dichlorodifluoromethane	ND (0.0103)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Diethyl Ether	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Di-isopropyl ether	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Ethyl tertiary-butyl ether	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Ethylbenzene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Hexachlorobutadiene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Isopropylbenzene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Methyl tert-Butyl Ether	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Methylene Chloride	ND (0.0258)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Naphthalene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
n-Butylbenzene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
n-Propylbenzene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
sec-Butylbenzene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Styrene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
tert-Butylbenzene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Tertiary-amyl methyl ether	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Tetrachloroethene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Tetrahydrofuran	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-103 0-2ft
Date Sampled: 10/01/19 11:00
Percent Solids: 84
Initial Volume: 5.8
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 19J0112
ESS Laboratory Sample ID: 19J0112-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
trans-1,2-Dichloroethene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
trans-1,3-Dichloropropene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Trichloroethene	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Trichlorofluoromethane	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Vinyl Acetate	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Vinyl Chloride	ND (0.0103)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Xylene O	ND (0.0052)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Xylene P,M	ND (0.0103)		8260B Low		1	10/04/19 17:22	C9J0097	CJ90401
Xylenes (Total)	ND (0.0103)		8260B Low		1	10/04/19 17:22		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*131 %*	*S+*	*70-130*
Surrogate: 4-Bromofluorobenzene	*87 %*		*70-130*
Surrogate: Dibromofluoromethane	*116 %*		*70-130*
Surrogate: Toluene-d8	*103 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-103 0-2ft
Date Sampled: 10/01/19 11:00
Percent Solids: 84
Initial Volume: 20.4
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 19J0112
ESS Laboratory Sample ID: 19J0112-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: CAD
Prepared: 10/4/19 11:45

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**385** (44.0)		8100M		1	10/05/19 17:54	C9J0040	CJ90411

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*87 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-103 0-2ft
Date Sampled: 10/01/19 11:00
Percent Solids: 84
Initial Volume: 14.3
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 19J0112
ESS Laboratory Sample ID: 19J0112-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 10/7/19 11:35

8270D Polynuclear Aromatic Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
2-Methylnaphthalene	ND (0.418)		8270D PAH		1	10/09/19 19:20	C9J0170	CJ90709
Acenaphthene	ND (0.418)		8270D PAH		1	10/09/19 19:20	C9J0170	CJ90709
Acenaphthylene	ND (0.418)		8270D PAH		1	10/09/19 19:20	C9J0170	CJ90709
Anthracene	**0.773** (0.418)		8270D PAH		1	10/09/19 19:20	C9J0170	CJ90709
Benzo(a)anthracene	**2.74** (0.418)		8270D PAH		1	10/09/19 19:20	C9J0170	CJ90709
Benzo(a)pyrene	**2.87** (0.210)		8270D PAH		1	10/09/19 19:20	C9J0170	CJ90709
Benzo(b)fluoranthene	**2.61** (0.418)		8270D PAH		1	10/09/19 19:20	C9J0170	CJ90709
Benzo(g,h,i)perylene	**1.79** (0.418)		8270D PAH		1	10/09/19 19:20	C9J0170	CJ90709
Benzo(k)fluoranthene	**2.01** (0.418)		8270D PAH		1	10/09/19 19:20	C9J0170	CJ90709
Chrysene	**2.61** (0.210)		8270D PAH		1	10/09/19 19:20	C9J0170	CJ90709
Dibenzo(a,h)Anthracene	**0.583** (0.210)		8270D PAH		1	10/09/19 19:20	C9J0170	CJ90709
Fluoranthene	**5.06** (0.418)		8270D PAH		1	10/09/19 19:20	C9J0170	CJ90709
Fluorene	**0.782** (0.418)		8270D PAH		1	10/09/19 19:20	C9J0170	CJ90709
Indeno(1,2,3-cd)Pyrene	**1.72** (0.418)		8270D PAH		1	10/09/19 19:20	C9J0170	CJ90709
Naphthalene	ND (0.418)		8270D PAH		1	10/09/19 19:20	C9J0170	CJ90709
Phenanthrene	**2.86** (0.418)		8270D PAH		1	10/09/19 19:20	C9J0170	CJ90709
Pyrene	**3.96** (0.418)		8270D PAH		1	10/09/19 19:20	C9J0170	CJ90709

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*40 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*43 %*		*30-130*
Surrogate: Nitrobenzene-d5	*38 %*		*30-130*
Surrogate: p-Terphenyl-d14	*52 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0112

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals										
Batch CJ90501 - 3050B										
Blank										
Arsenic	ND	2.50	mg/kg wet							
Barium	ND	2.50	mg/kg wet							
Cadmium	ND	0.50	mg/kg wet							
Chromium	ND	1.00	mg/kg wet							
Lead	ND	5.00	mg/kg wet							
Selenium	ND	5.00	mg/kg wet							
Silver	ND	0.50	mg/kg wet							
LCS										
Arsenic	125	8.06	mg/kg wet	128.0		98	80-120			
Barium	531	8.06	mg/kg wet	536.0		99	80-120			
Cadmium	89.4	1.61	mg/kg wet	99.00		90	80-120			
Chromium	114	3.23	mg/kg wet	116.0		98	80-120			
Lead	272	16.1	mg/kg wet	277.0		98	80-120			
Selenium	236	16.1	mg/kg wet	242.0		97	80-120			
Silver	62.7	1.61	mg/kg wet	64.30		98	80-120			
LCS Dup										
Arsenic	122	9.62	mg/kg wet	128.0		95	80-120	3	20	
Barium	614	9.62	mg/kg wet	536.0		115	80-120	15	20	
Cadmium	85.0	1.92	mg/kg wet	99.00		86	80-120	5	20	
Chromium	108	3.85	mg/kg wet	116.0		93	80-120	5	20	
Lead	285	19.2	mg/kg wet	277.0		103	80-120	5	20	
Selenium	227	19.2	mg/kg wet	242.0		94	80-120	4	20	
Silver	59.3	1.92	mg/kg wet	64.30		92	80-120	6	20	
Batch CJ90502 - 7471B										
Blank										
Mercury	ND	0.033	mg/kg wet							
LCS										
Mercury	2.80	0.239	mg/kg wet	3.120		90	80-120			
LCS Dup										
Mercury	2.81	0.228	mg/kg wet	3.120		90	80-120	0.2	20	
5035/8260B Volatile Organic Compounds / Low Level										
Batch CJ90401 - 5035										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,2-Trichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethene	ND	0.0050	mg/kg wet							
1,1-Dichloropropene	ND	0.0050	mg/kg wet							
1,2,3-Trichlorobenzene	ND	0.0050	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0112

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CJ90401 - 5035										
1,2,3-Trichloropropane	ND	0.0050	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,4-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/kg wet							
1,2-Dibromoethane	ND	0.0050	mg/kg wet							
1,2-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,2-Dichloroethane	ND	0.0050	mg/kg wet							
1,2-Dichloropropane	ND	0.0050	mg/kg wet							
1,3,5-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,3-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,3-Dichloropropane	ND	0.0050	mg/kg wet							
1,4-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,4-Dioxane	ND	0.100	mg/kg wet							
1-Chlorohexane	ND	0.0050	mg/kg wet							
2,2-Dichloropropane	ND	0.0050	mg/kg wet							
2-Butanone	ND	0.0500	mg/kg wet							
2-Chlorotoluene	ND	0.0050	mg/kg wet							
2-Hexanone	ND	0.0500	mg/kg wet							
4-Chlorotoluene	ND	0.0050	mg/kg wet							
4-Isopropyltoluene	ND	0.0050	mg/kg wet							
4-Methyl-2-Pentanone	ND	0.0500	mg/kg wet							
Acetone	ND	0.0500	mg/kg wet							
Benzene	ND	0.0050	mg/kg wet							
Bromobenzene	ND	0.0050	mg/kg wet							
Bromochloromethane	ND	0.0050	mg/kg wet							
Bromodichloromethane	ND	0.0050	mg/kg wet							
Bromoform	ND	0.0050	mg/kg wet							
Bromomethane	ND	0.0100	mg/kg wet							
Carbon Disulfide	ND	0.0050	mg/kg wet							
Carbon Tetrachloride	ND	0.0050	mg/kg wet							
Chlorobenzene	ND	0.0050	mg/kg wet							
Chloroethane	ND	0.0100	mg/kg wet							
Chloroform	ND	0.0050	mg/kg wet							
Chloromethane	ND	0.0100	mg/kg wet							
cis-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
cis-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Dibromochloromethane	ND	0.0050	mg/kg wet							
Dibromomethane	ND	0.0050	mg/kg wet							
Dichlorodifluoromethane	ND	0.0100	mg/kg wet							
Diethyl Ether	ND	0.0050	mg/kg wet							
Di-isopropyl ether	ND	0.0050	mg/kg wet							
Ethyl tertiary-butyl ether	ND	0.0050	mg/kg wet							
Ethylbenzene	ND	0.0050	mg/kg wet							
Hexachlorobutadiene	ND	0.0050	mg/kg wet							
Isopropylbenzene	ND	0.0050	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0112

Quality Control Data

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch CJ90401 - 5035										
Methyl tert-Butyl Ether	ND	0.0050	mg/kg wet							
Methylene Chloride	ND	0.0250	mg/kg wet							
Naphthalene	ND	0.0050	mg/kg wet							
n-Butylbenzene	ND	0.0050	mg/kg wet							
n-Propylbenzene	ND	0.0050	mg/kg wet							
sec-Butylbenzene	ND	0.0050	mg/kg wet							
Styrene	ND	0.0050	mg/kg wet							
tert-Butylbenzene	ND	0.0050	mg/kg wet							
Tertiary-amyl methyl ether	ND	0.0050	mg/kg wet							
Tetrachloroethene	ND	0.0050	mg/kg wet							
Tetrahydrofuran	ND	0.0050	mg/kg wet							
Toluene	ND	0.0050	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Trichloroethene	ND	0.0050	mg/kg wet							
Trichlorofluoromethane	ND	0.0050	mg/kg wet							
Vinyl Acetate	ND	0.0050	mg/kg wet							
Vinyl Chloride	ND	0.0100	mg/kg wet							
Xylene O	ND	0.0050	mg/kg wet							
Xylene P,M	ND	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0569*		mg/kg wet	*0.05000*		*114*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0474*		mg/kg wet	*0.05000*		*95*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0531*		mg/kg wet	*0.05000*		*106*	*70-130*			
Surrogate: Toluene-d8	*0.0499*		mg/kg wet	*0.05000*		*100*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	0.0521	0.0050	mg/kg wet	0.05000		104	70-130			
1,1,1-Trichloroethane	0.0551	0.0050	mg/kg wet	0.05000		110	70-130			
1,1,2,2-Tetrachloroethane	0.0472	0.0050	mg/kg wet	0.05000		94	70-130			
1,1,2-Trichloroethane	0.0536	0.0050	mg/kg wet	0.05000		107	70-130			
1,1-Dichloroethane	0.0567	0.0050	mg/kg wet	0.05000		113	70-130			
1,1-Dichloroethene	0.0572	0.0050	mg/kg wet	0.05000		114	70-130			
1,1-Dichloropropene	0.0559	0.0050	mg/kg wet	0.05000		112	70-130			
1,2,3-Trichlorobenzene	0.0477	0.0050	mg/kg wet	0.05000		95	70-130			
1,2,3-Trichloropropane	0.0462	0.0050	mg/kg wet	0.05000		92	70-130			
1,2,4-Trichlorobenzene	0.0478	0.0050	mg/kg wet	0.05000		96	70-130			
1,2,4-Trimethylbenzene	0.0514	0.0050	mg/kg wet	0.05000		103	70-130			
1,2-Dibromo-3-Chloropropane	0.0433	0.0050	mg/kg wet	0.05000		87	70-130			
1,2-Dibromoethane	0.0502	0.0050	mg/kg wet	0.05000		100	70-130			
1,2-Dichlorobenzene	0.0475	0.0050	mg/kg wet	0.05000		95	70-130			
1,2-Dichloroethane	0.0556	0.0050	mg/kg wet	0.05000		111	70-130			
1,2-Dichloropropane	0.0542	0.0050	mg/kg wet	0.05000		108	70-130			
1,3,5-Trimethylbenzene	0.0500	0.0050	mg/kg wet	0.05000		100	70-130			
1,3-Dichlorobenzene	0.0487	0.0050	mg/kg wet	0.05000		97	70-130			
1,3-Dichloropropane	0.0524	0.0050	mg/kg wet	0.05000		105	70-130			
1,4-Dichlorobenzene	0.0474	0.0050	mg/kg wet	0.05000		95	70-130			

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0112

Quality Control Data

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch CJ90401 - 5035										
1,4-Dioxane	0.984	0.100	mg/kg wet	1.000		98	70-130			
1-Chlorohexane	0.0487	0.0050	mg/kg wet	0.05000		97	70-130			
2,2-Dichloropropane	0.0543	0.0050	mg/kg wet	0.05000		109	70-130			
2-Butanone	0.277	0.0500	mg/kg wet	0.2500		111	70-130			
2-Chlorotoluene	0.0491	0.0050	mg/kg wet	0.05000		98	70-130			
2-Hexanone	0.246	0.0500	mg/kg wet	0.2500		98	70-130			
4-Chlorotoluene	0.0472	0.0050	mg/kg wet	0.05000		94	70-130			
4-Isopropyltoluene	0.0488	0.0050	mg/kg wet	0.05000		98	70-130			
4-Methyl-2-Pentanone	0.261	0.0500	mg/kg wet	0.2500		105	70-130			
Acetone	0.269	0.0500	mg/kg wet	0.2500		108	70-130			
Benzene	0.0542	0.0050	mg/kg wet	0.05000		108	70-130			
Bromobenzene	0.0480	0.0050	mg/kg wet	0.05000		96	70-130			
Bromochloromethane	0.0534	0.0050	mg/kg wet	0.05000		107	70-130			
Bromodichloromethane	0.0569	0.0050	mg/kg wet	0.05000		114	70-130			
Bromoform	0.0449	0.0050	mg/kg wet	0.05000		90	70-130			
Bromomethane	0.0430	0.0100	mg/kg wet	0.05000		86	70-130			
Carbon Disulfide	0.0526	0.0050	mg/kg wet	0.05000		105	70-130			
Carbon Tetrachloride	0.0594	0.0050	mg/kg wet	0.05000		119	70-130			
Chlorobenzene	0.0490	0.0050	mg/kg wet	0.05000		98	70-130			
Chloroethane	0.0496	0.0100	mg/kg wet	0.05000		99	70-130			
Chloroform	0.0562	0.0050	mg/kg wet	0.05000		112	70-130			
Chloromethane	0.0463	0.0100	mg/kg wet	0.05000		93	70-130			
cis-1,2-Dichloroethene	0.0549	0.0050	mg/kg wet	0.05000		110	70-130			
cis-1,3-Dichloropropene	0.0546	0.0050	mg/kg wet	0.05000		109	70-130			
Dibromochloromethane	0.0470	0.0050	mg/kg wet	0.05000		94	70-130			
Dibromomethane	0.0554	0.0050	mg/kg wet	0.05000		111	70-130			
Dichlorodifluoromethane	0.0420	0.0100	mg/kg wet	0.05000		84	70-130			
Diethyl Ether	0.0513	0.0050	mg/kg wet	0.05000		103	70-130			
Di-isopropyl ether	0.0525	0.0050	mg/kg wet	0.05000		105	70-130			
Ethyl tertiary-butyl ether	0.0480	0.0050	mg/kg wet	0.05000		96	70-130			
Ethylbenzene	0.0507	0.0050	mg/kg wet	0.05000		101	70-130			
Hexachlorobutadiene	0.0477	0.0050	mg/kg wet	0.05000		95	70-130			
Isopropylbenzene	0.0490	0.0050	mg/kg wet	0.05000		98	70-130			
Methyl tert-Butyl Ether	0.0473	0.0050	mg/kg wet	0.05000		95	70-130			
Methylene Chloride	0.0511	0.0250	mg/kg wet	0.05000		102	70-130			
Naphthalene	0.0461	0.0050	mg/kg wet	0.05000		92	70-130			
n-Butylbenzene	0.0513	0.0050	mg/kg wet	0.05000		103	70-130			
n-Propylbenzene	0.0497	0.0050	mg/kg wet	0.05000		99	70-130			
sec-Butylbenzene	0.0479	0.0050	mg/kg wet	0.05000		96	70-130			
Styrene	0.0505	0.0050	mg/kg wet	0.05000		101	70-130			
tert-Butylbenzene	0.0489	0.0050	mg/kg wet	0.05000		98	70-130			
Tertiary-amyl methyl ether	0.0489	0.0050	mg/kg wet	0.05000		98	70-130			
Tetrachloroethene	0.0490	0.0050	mg/kg wet	0.05000		98	70-130			
Tetrahydrofuran	0.0457	0.0050	mg/kg wet	0.05000		91	70-130			
Toluene	0.0535	0.0050	mg/kg wet	0.05000		107	70-130			

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0112

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CJ90401 - 5035										
trans-1,2-Dichloroethene	0.0537	0.0050	mg/kg wet	0.05000		107	70-130			
trans-1,3-Dichloropropene	0.0493	0.0050	mg/kg wet	0.05000		99	70-130			
Trichloroethene	0.0537	0.0050	mg/kg wet	0.05000		107	70-130			
Trichlorofluoromethane	0.0557	0.0050	mg/kg wet	0.05000		111	70-130			
Vinyl Acetate	0.0569	0.0050	mg/kg wet	0.05000		114	70-130			
Vinyl Chloride	0.0493	0.0100	mg/kg wet	0.05000		99	70-130			
Xylene O	0.0497	0.0050	mg/kg wet	0.05000		99	70-130			
Xylene P,M	0.0971	0.0100	mg/kg wet	0.1000		97	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0573*		mg/kg wet	*0.05000*		*115*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0509*		mg/kg wet	*0.05000*		*102*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0564*		mg/kg wet	*0.05000*		*113*	*70-130*			
Surrogate: Toluene-d8	*0.0487*		mg/kg wet	*0.05000*		*97*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	0.0577	0.0050	mg/kg wet	0.05000		115	70-130	10	25	
1,1,1-Trichloroethane	0.0582	0.0050	mg/kg wet	0.05000		116	70-130	6	25	
1,1,2,2-Tetrachloroethane	0.0502	0.0050	mg/kg wet	0.05000		100	70-130	6	25	
1,1,2-Trichloroethane	0.0578	0.0050	mg/kg wet	0.05000		116	70-130	7	25	
1,1-Dichloroethane	0.0595	0.0050	mg/kg wet	0.05000		119	70-130	5	25	
1,1-Dichloroethene	0.0612	0.0050	mg/kg wet	0.05000		122	70-130	7	25	
1,1-Dichloropropene	0.0593	0.0050	mg/kg wet	0.05000		119	70-130	6	25	
1,2,3-Trichlorobenzene	0.0531	0.0050	mg/kg wet	0.05000		106	70-130	11	25	
1,2,3-Trichloropropane	0.0495	0.0050	mg/kg wet	0.05000		99	70-130	7	25	
1,2,4-Trichlorobenzene	0.0531	0.0050	mg/kg wet	0.05000		106	70-130	11	25	
1,2,4-Trimethylbenzene	0.0558	0.0050	mg/kg wet	0.05000		112	70-130	8	25	
1,2-Dibromo-3-Chloropropane	0.0496	0.0050	mg/kg wet	0.05000		99	70-130	14	25	
1,2-Dibromoethane	0.0554	0.0050	mg/kg wet	0.05000		111	70-130	10	25	
1,2-Dichlorobenzene	0.0518	0.0050	mg/kg wet	0.05000		104	70-130	9	25	
1,2-Dichloroethane	0.0584	0.0050	mg/kg wet	0.05000		117	70-130	5	25	
1,2-Dichloropropane	0.0579	0.0050	mg/kg wet	0.05000		116	70-130	7	25	
1,3,5-Trimethylbenzene	0.0543	0.0050	mg/kg wet	0.05000		109	70-130	8	25	
1,3-Dichlorobenzene	0.0534	0.0050	mg/kg wet	0.05000		107	70-130	9	25	
1,3-Dichloropropane	0.0570	0.0050	mg/kg wet	0.05000		114	70-130	8	25	
1,4-Dichlorobenzene	0.0505	0.0050	mg/kg wet	0.05000		101	70-130	6	25	
1,4-Dioxane	1.08	0.100	mg/kg wet	1.000		108	70-130	9	20	
1-Chlorohexane	0.0546	0.0050	mg/kg wet	0.05000		109	70-130	11	25	
2,2-Dichloropropane	0.0577	0.0050	mg/kg wet	0.05000		115	70-130	6	25	
2-Butanone	0.293	0.0500	mg/kg wet	0.2500		117	70-130	5	25	
2-Chlorotoluene	0.0529	0.0050	mg/kg wet	0.05000		106	70-130	7	25	
2-Hexanone	0.268	0.0500	mg/kg wet	0.2500		107	70-130	9	25	
4-Chlorotoluene	0.0538	0.0050	mg/kg wet	0.05000		108	70-130	13	25	
4-Isopropyltoluene	0.0531	0.0050	mg/kg wet	0.05000		106	70-130	9	25	
4-Methyl-2-Pentanone	0.281	0.0500	mg/kg wet	0.2500		112	70-130	7	25	
Acetone	0.295	0.0500	mg/kg wet	0.2500		118	70-130	9	25	
Benzene	0.0576	0.0050	mg/kg wet	0.05000		115	70-130	6	25	
Bromobenzene	0.0528	0.0050	mg/kg wet	0.05000		106	70-130	10	25	

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0112

Quality Control Data

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch CJ90401 - 5035										
Bromochloromethane	0.0570	0.0050	mg/kg wet	0.05000		114	70-130	7	25	
Bromodichloromethane	0.0601	0.0050	mg/kg wet	0.05000		120	70-130	5	25	
Bromoform	0.0490	0.0050	mg/kg wet	0.05000		98	70-130	9	25	
Bromomethane	0.0463	0.0100	mg/kg wet	0.05000		93	70-130	7	25	
Carbon Disulfide	0.0555	0.0050	mg/kg wet	0.05000		111	70-130	5	25	
Carbon Tetrachloride	0.0625	0.0050	mg/kg wet	0.05000		125	70-130	5	25	
Chlorobenzene	0.0536	0.0050	mg/kg wet	0.05000		107	70-130	9	25	
Chloroethane	0.0520	0.0100	mg/kg wet	0.05000		104	70-130	5	25	
Chloroform	0.0589	0.0050	mg/kg wet	0.05000		118	70-130	5	25	
Chloromethane	0.0484	0.0100	mg/kg wet	0.05000		97	70-130	5	25	
cis-1,2-Dichloroethene	0.0582	0.0050	mg/kg wet	0.05000		116	70-130	6	25	
cis-1,3-Dichloropropene	0.0589	0.0050	mg/kg wet	0.05000		118	70-130	7	25	
Dibromochloromethane	0.0510	0.0050	mg/kg wet	0.05000		102	70-130	8	25	
Dibromomethane	0.0589	0.0050	mg/kg wet	0.05000		118	70-130	6	25	
Dichlorodifluoromethane	0.0437	0.0100	mg/kg wet	0.05000		87	70-130	4	25	
Diethyl Ether	0.0559	0.0050	mg/kg wet	0.05000		112	70-130	9	25	
Di-isopropyl ether	0.0562	0.0050	mg/kg wet	0.05000		112	70-130	7	25	
Ethyl tertiary-butyl ether	0.0516	0.0050	mg/kg wet	0.05000		103	70-130	7	25	
Ethylbenzene	0.0559	0.0050	mg/kg wet	0.05000		112	70-130	10	25	
Hexachlorobutadiene	0.0525	0.0050	mg/kg wet	0.05000		105	70-130	10	25	
Isopropylbenzene	0.0530	0.0050	mg/kg wet	0.05000		106	70-130	8	25	
Methyl tert-Butyl Ether	0.0507	0.0050	mg/kg wet	0.05000		101	70-130	7	25	
Methylene Chloride	0.0539	0.0250	mg/kg wet	0.05000		108	70-130	5	25	
Naphthalene	0.0518	0.0050	mg/kg wet	0.05000		104	70-130	12	25	
n-Butylbenzene	0.0558	0.0050	mg/kg wet	0.05000		112	70-130	8	25	
n-Propylbenzene	0.0538	0.0050	mg/kg wet	0.05000		108	70-130	8	25	
sec-Butylbenzene	0.0524	0.0050	mg/kg wet	0.05000		105	70-130	9	25	
Styrene	0.0557	0.0050	mg/kg wet	0.05000		111	70-130	10	25	
tert-Butylbenzene	0.0532	0.0050	mg/kg wet	0.05000		106	70-130	8	25	
Tertiary-amyl methyl ether	0.0529	0.0050	mg/kg wet	0.05000		106	70-130	8	25	
Tetrachloroethene	0.0539	0.0050	mg/kg wet	0.05000		108	70-130	9	25	
Tetrahydrofuran	0.0484	0.0050	mg/kg wet	0.05000		97	70-130	6	25	
Toluene	0.0565	0.0050	mg/kg wet	0.05000		113	70-130	5	25	
trans-1,2-Dichloroethene	0.0577	0.0050	mg/kg wet	0.05000		115	70-130	7	25	
trans-1,3-Dichloropropene	0.0524	0.0050	mg/kg wet	0.05000		105	70-130	6	25	
Trichloroethene	0.0572	0.0050	mg/kg wet	0.05000		114	70-130	6	25	
Trichlorofluoromethane	0.0581	0.0050	mg/kg wet	0.05000		116	70-130	4	25	
Vinyl Acetate	0.0622	0.0050	mg/kg wet	0.05000		124	70-130	9	25	
Vinyl Chloride	0.0516	0.0100	mg/kg wet	0.05000		103	70-130	5	25	
Xylene O	0.0543	0.0050	mg/kg wet	0.05000		109	70-130	9	25	
Xylene P,M	0.106	0.0100	mg/kg wet	0.1000		106	70-130	9	25	
Surrogate: 1,2-Dichloroethane-d4	*0.0555*		mg/kg wet	*0.05000*		*111*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0514*		mg/kg wet	*0.05000*		*103*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0555*		mg/kg wet	*0.05000*		*111*	*70-130*			
Surrogate: Toluene-d8	*0.0494*		mg/kg wet	*0.05000*		*99*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0112

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CJ90733 - 5035										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,2-Trichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethene	ND	0.0050	mg/kg wet							
1,1-Dichloropropene	ND	0.0050	mg/kg wet							
1,2,3-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,3-Trichloropropane	ND	0.0050	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,4-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/kg wet							
1,2-Dibromoethane	ND	0.0050	mg/kg wet							
1,2-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,2-Dichloroethane	ND	0.0050	mg/kg wet							
1,2-Dichloropropane	ND	0.0050	mg/kg wet							
1,3,5-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,3-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,3-Dichloropropane	ND	0.0050	mg/kg wet							
1,4-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,4-Dioxane	ND	0.100	mg/kg wet							
1-Chlorohexane	ND	0.0050	mg/kg wet							
2,2-Dichloropropane	ND	0.0050	mg/kg wet							
2-Butanone	ND	0.0500	mg/kg wet							
2-Chlorotoluene	ND	0.0050	mg/kg wet							
2-Hexanone	ND	0.0500	mg/kg wet							
4-Chlorotoluene	ND	0.0050	mg/kg wet							
4-Isopropyltoluene	ND	0.0050	mg/kg wet							
4-Methyl-2-Pentanone	ND	0.0500	mg/kg wet							
Acetone	ND	0.0500	mg/kg wet							
Benzene	ND	0.0050	mg/kg wet							
Bromobenzene	ND	0.0050	mg/kg wet							
Bromochloromethane	ND	0.0050	mg/kg wet							
Bromodichloromethane	ND	0.0050	mg/kg wet							
Bromoform	ND	0.0050	mg/kg wet							
Bromomethane	ND	0.0100	mg/kg wet							
Carbon Disulfide	ND	0.0050	mg/kg wet							
Carbon Tetrachloride	ND	0.0050	mg/kg wet							
Chlorobenzene	ND	0.0050	mg/kg wet							
Chloroethane	ND	0.0100	mg/kg wet							
Chloroform	ND	0.0050	mg/kg wet							
Chloromethane	ND	0.0100	mg/kg wet							
cis-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
cis-1,3-Dichloropropene	ND	0.0050	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0112

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CJ90733 - 5035										
Dibromochloromethane	ND	0.0050	mg/kg wet							
Dibromomethane	ND	0.0050	mg/kg wet							
Dichlorodifluoromethane	ND	0.0100	mg/kg wet							
Diethyl Ether	ND	0.0050	mg/kg wet							
Di-isopropyl ether	ND	0.0050	mg/kg wet							
Ethyl tertiary-butyl ether	ND	0.0050	mg/kg wet							
Ethylbenzene	ND	0.0050	mg/kg wet							
Hexachlorobutadiene	ND	0.0050	mg/kg wet							
Isopropylbenzene	ND	0.0050	mg/kg wet							
Methyl tert-Butyl Ether	ND	0.0050	mg/kg wet							
Methylene Chloride	ND	0.0250	mg/kg wet							
Naphthalene	ND	0.0050	mg/kg wet							
n-Butylbenzene	ND	0.0050	mg/kg wet							
n-Propylbenzene	ND	0.0050	mg/kg wet							
sec-Butylbenzene	ND	0.0050	mg/kg wet							
Styrene	ND	0.0050	mg/kg wet							
tert-Butylbenzene	ND	0.0050	mg/kg wet							
Tertiary-amyl methyl ether	ND	0.0050	mg/kg wet							
Tetrachloroethene	ND	0.0050	mg/kg wet							
Tetrahydrofuran	ND	0.0050	mg/kg wet							
Toluene	ND	0.0050	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Trichloroethene	ND	0.0050	mg/kg wet							
Trichlorofluoromethane	ND	0.0050	mg/kg wet							
Vinyl Acetate	ND	0.0050	mg/kg wet							
Vinyl Chloride	ND	0.0100	mg/kg wet							
Xylene O	ND	0.0050	mg/kg wet							
Xylene P,M	ND	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0542*		mg/kg wet	*0.05000*		*108*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0481*		mg/kg wet	*0.05000*		*96*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0509*		mg/kg wet	*0.05000*		*102*	*70-130*			
Surrogate: Toluene-d8	*0.0490*		mg/kg wet	*0.05000*		*98*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	0.0494	0.0050	mg/kg wet	0.05000		99	70-130			
1,1,1-Trichloroethane	0.0474	0.0050	mg/kg wet	0.05000		95	70-130			
1,1,2,2-Tetrachloroethane	0.0451	0.0050	mg/kg wet	0.05000		90	70-130			
1,1,2-Trichloroethane	0.0494	0.0050	mg/kg wet	0.05000		99	70-130			
1,1-Dichloroethane	0.0497	0.0050	mg/kg wet	0.05000		99	70-130			
1,1-Dichloroethene	0.0525	0.0050	mg/kg wet	0.05000		105	70-130			
1,1-Dichloropropene	0.0495	0.0050	mg/kg wet	0.05000		99	70-130			
1,2,3-Trichlorobenzene	0.0465	0.0050	mg/kg wet	0.05000		93	70-130			
1,2,3-Trichloropropane	0.0465	0.0050	mg/kg wet	0.05000		93	70-130			
1,2,4-Trichlorobenzene	0.0470	0.0050	mg/kg wet	0.05000		94	70-130			
1,2,4-Trimethylbenzene	0.0487	0.0050	mg/kg wet	0.05000		97	70-130			

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0112

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CJ90733 - 5035										
1,2-Dibromo-3-Chloropropane	0.0455	0.0050	mg/kg wet	0.05000		91	70-130			
1,2-Dibromoethane	0.0502	0.0050	mg/kg wet	0.05000		100	70-130			
1,2-Dichlorobenzene	0.0458	0.0050	mg/kg wet	0.05000		92	70-130			
1,2-Dichloroethane	0.0484	0.0050	mg/kg wet	0.05000		97	70-130			
1,2-Dichloropropane	0.0502	0.0050	mg/kg wet	0.05000		100	70-130			
1,3,5-Trimethylbenzene	0.0467	0.0050	mg/kg wet	0.05000		93	70-130			
1,3-Dichlorobenzene	0.0454	0.0050	mg/kg wet	0.05000		91	70-130			
1,3-Dichloropropane	0.0500	0.0050	mg/kg wet	0.05000		100	70-130			
1,4-Dichlorobenzene	0.0458	0.0050	mg/kg wet	0.05000		92	70-130			
1,4-Dioxane	0.985	0.100	mg/kg wet	1.000		98	70-130			
1-Chlorohexane	0.0486	0.0050	mg/kg wet	0.05000		97	70-130			
2,2-Dichloropropane	0.0470	0.0050	mg/kg wet	0.05000		94	70-130			
2-Butanone	0.255	0.0500	mg/kg wet	0.2500		102	70-130			
2-Chlorotoluene	0.0465	0.0050	mg/kg wet	0.05000		93	70-130			
2-Hexanone	0.250	0.0500	mg/kg wet	0.2500		100	70-130			
4-Chlorotoluene	0.0466	0.0050	mg/kg wet	0.05000		93	70-130			
4-Isopropyltoluene	0.0459	0.0050	mg/kg wet	0.05000		92	70-130			
4-Methyl-2-Pentanone	0.257	0.0500	mg/kg wet	0.2500		103	70-130			
Acetone	0.252	0.0500	mg/kg wet	0.2500		101	70-130			
Benzene	0.0490	0.0050	mg/kg wet	0.05000		98	70-130			
Bromobenzene	0.0466	0.0050	mg/kg wet	0.05000		93	70-130			
Bromochloromethane	0.0494	0.0050	mg/kg wet	0.05000		99	70-130			
Bromodichloromethane	0.0511	0.0050	mg/kg wet	0.05000		102	70-130			
Bromoform	0.0457	0.0050	mg/kg wet	0.05000		91	70-130			
Bromomethane	0.0407	0.0100	mg/kg wet	0.05000		81	70-130			
Carbon Disulfide	0.0474	0.0050	mg/kg wet	0.05000		95	70-130			
Carbon Tetrachloride	0.0505	0.0050	mg/kg wet	0.05000		101	70-130			
Chlorobenzene	0.0467	0.0050	mg/kg wet	0.05000		93	70-130			
Chloroethane	0.0435	0.0100	mg/kg wet	0.05000		87	70-130			
Chloroform	0.0490	0.0050	mg/kg wet	0.05000		98	70-130			
Chloromethane	0.0415	0.0100	mg/kg wet	0.05000		83	70-130			
cis-1,2-Dichloroethene	0.0501	0.0050	mg/kg wet	0.05000		100	70-130			
cis-1,3-Dichloropropene	0.0516	0.0050	mg/kg wet	0.05000		103	70-130			
Dibromochloromethane	0.0463	0.0050	mg/kg wet	0.05000		93	70-130			
Dibromomethane	0.0510	0.0050	mg/kg wet	0.05000		102	70-130			
Dichlorodifluoromethane	0.0333	0.0100	mg/kg wet	0.05000		67	70-130			B-
Diethyl Ether	0.0490	0.0050	mg/kg wet	0.05000		98	70-130			
Di-isopropyl ether	0.0487	0.0050	mg/kg wet	0.05000		97	70-130			
Ethyl tertiary-butyl ether	0.0450	0.0050	mg/kg wet	0.05000		90	70-130			
Ethylbenzene	0.0483	0.0050	mg/kg wet	0.05000		97	70-130			
Hexachlorobutadiene	0.0450	0.0050	mg/kg wet	0.05000		90	70-130			
Isopropylbenzene	0.0462	0.0050	mg/kg wet	0.05000		92	70-130			
Methyl tert-Butyl Ether	0.0455	0.0050	mg/kg wet	0.05000		91	70-130			
Methylene Chloride	0.0504	0.0250	mg/kg wet	0.05000		101	70-130			
Naphthalene	0.0475	0.0050	mg/kg wet	0.05000		95	70-130			

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0112

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CJ90733 - 5035										
n-Butylbenzene	0.0478	0.0050	mg/kg wet	0.05000		96	70-130			
n-Propylbenzene	0.0465	0.0050	mg/kg wet	0.05000		93	70-130			
sec-Butylbenzene	0.0450	0.0050	mg/kg wet	0.05000		90	70-130			
Styrene	0.0490	0.0050	mg/kg wet	0.05000		98	70-130			
tert-Butylbenzene	0.0462	0.0050	mg/kg wet	0.05000		92	70-130			
Tertiary-amyl methyl ether	0.0478	0.0050	mg/kg wet	0.05000		96	70-130			
Tetrachloroethene	0.0473	0.0050	mg/kg wet	0.05000		95	70-130			
Tetrahydrofuran	0.0478	0.0050	mg/kg wet	0.05000		96	70-130			
Toluene	0.0476	0.0050	mg/kg wet	0.05000		95	70-130			
trans-1,2-Dichloroethene	0.0499	0.0050	mg/kg wet	0.05000		100	70-130			
trans-1,3-Dichloropropene	0.0469	0.0050	mg/kg wet	0.05000		94	70-130			
Trichloroethene	0.0477	0.0050	mg/kg wet	0.05000		95	70-130			
Trichlorofluoromethane	0.0464	0.0050	mg/kg wet	0.05000		93	70-130			
Vinyl Acetate	0.0552	0.0050	mg/kg wet	0.05000		110	70-130			
Vinyl Chloride	0.0432	0.0100	mg/kg wet	0.05000		86	70-130			
Xylene O	0.0466	0.0050	mg/kg wet	0.05000		93	70-130			
Xylene P,M	0.0923	0.0100	mg/kg wet	0.1000		92	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0513*		mg/kg wet	*0.05000*		*103*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0506*		mg/kg wet	*0.05000*		*101*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0520*		mg/kg wet	*0.05000*		*104*	*70-130*			
Surrogate: Toluene-d8	*0.0501*		mg/kg wet	*0.05000*		*100*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	0.0548	0.0050	mg/kg wet	0.05000		110	70-130	10	25	
1,1,1-Trichloroethane	0.0537	0.0050	mg/kg wet	0.05000		107	70-130	12	25	
1,1,2,2-Tetrachloroethane	0.0504	0.0050	mg/kg wet	0.05000		101	70-130	11	25	
1,1,2-Trichloroethane	0.0540	0.0050	mg/kg wet	0.05000		108	70-130	9	25	
1,1-Dichloroethane	0.0550	0.0050	mg/kg wet	0.05000		110	70-130	10	25	
1,1-Dichloroethene	0.0602	0.0050	mg/kg wet	0.05000		120	70-130	14	25	
1,1-Dichloropropene	0.0561	0.0050	mg/kg wet	0.05000		112	70-130	13	25	
1,2,3-Trichlorobenzene	0.0504	0.0050	mg/kg wet	0.05000		101	70-130	8	25	
1,2,3-Trichloropropane	0.0510	0.0050	mg/kg wet	0.05000		102	70-130	9	25	
1,2,4-Trichlorobenzene	0.0508	0.0050	mg/kg wet	0.05000		102	70-130	8	25	
1,2,4-Trimethylbenzene	0.0538	0.0050	mg/kg wet	0.05000		108	70-130	10	25	
1,2-Dibromo-3-Chloropropane	0.0516	0.0050	mg/kg wet	0.05000		103	70-130	13	25	
1,2-Dibromoethane	0.0556	0.0050	mg/kg wet	0.05000		111	70-130	10	25	
1,2-Dichlorobenzene	0.0498	0.0050	mg/kg wet	0.05000		100	70-130	8	25	
1,2-Dichloroethane	0.0521	0.0050	mg/kg wet	0.05000		104	70-130	7	25	
1,2-Dichloropropane	0.0541	0.0050	mg/kg wet	0.05000		108	70-130	8	25	
1,3,5-Trimethylbenzene	0.0528	0.0050	mg/kg wet	0.05000		106	70-130	12	25	
1,3-Dichlorobenzene	0.0517	0.0050	mg/kg wet	0.05000		103	70-130	13	25	
1,3-Dichloropropane	0.0550	0.0050	mg/kg wet	0.05000		110	70-130	10	25	
1,4-Dichlorobenzene	0.0486	0.0050	mg/kg wet	0.05000		97	70-130	6	25	
1,4-Dioxane	1.09	0.100	mg/kg wet	1.000		109	70-130	10	20	
1-Chlorohexane	0.0559	0.0050	mg/kg wet	0.05000		112	70-130	14	25	
2,2-Dichloropropane	0.0526	0.0050	mg/kg wet	0.05000		105	70-130	11	25	

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0112

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CJ90733 - 5035										
2-Butanone	0.288	0.0500	mg/kg wet	0.2500		115	70-130	12	25	
2-Chlorotoluene	0.0515	0.0050	mg/kg wet	0.05000		103	70-130	10	25	
2-Hexanone	0.283	0.0500	mg/kg wet	0.2500		113	70-130	12	25	
4-Chlorotoluene	0.0517	0.0050	mg/kg wet	0.05000		103	70-130	11	25	
4-Isopropyltoluene	0.0514	0.0050	mg/kg wet	0.05000		103	70-130	11	25	
4-Methyl-2-Pentanone	0.285	0.0500	mg/kg wet	0.2500		114	70-130	10	25	
Acetone	0.342	0.0500	mg/kg wet	0.2500		137	70-130	30	25	B+, D+
Benzene	0.0542	0.0050	mg/kg wet	0.05000		108	70-130	10	25	
Bromobenzene	0.0513	0.0050	mg/kg wet	0.05000		103	70-130	10	25	
Bromochloromethane	0.0540	0.0050	mg/kg wet	0.05000		108	70-130	9	25	
Bromodichloromethane	0.0549	0.0050	mg/kg wet	0.05000		110	70-130	7	25	
Bromoform	0.0496	0.0050	mg/kg wet	0.05000		99	70-130	8	25	
Bromomethane	0.0439	0.0100	mg/kg wet	0.05000		88	70-130	8	25	
Carbon Disulfide	0.0539	0.0050	mg/kg wet	0.05000		108	70-130	13	25	
Carbon Tetrachloride	0.0572	0.0050	mg/kg wet	0.05000		114	70-130	12	25	
Chlorobenzene	0.0522	0.0050	mg/kg wet	0.05000		104	70-130	11	25	
Chloroethane	0.0480	0.0100	mg/kg wet	0.05000		96	70-130	10	25	
Chloroform	0.0538	0.0050	mg/kg wet	0.05000		108	70-130	9	25	
Chloromethane	0.0466	0.0100	mg/kg wet	0.05000		93	70-130	12	25	
cis-1,2-Dichloroethene	0.0547	0.0050	mg/kg wet	0.05000		109	70-130	9	25	
cis-1,3-Dichloropropene	0.0554	0.0050	mg/kg wet	0.05000		111	70-130	7	25	
Dibromochloromethane	0.0505	0.0050	mg/kg wet	0.05000		101	70-130	9	25	
Dibromomethane	0.0550	0.0050	mg/kg wet	0.05000		110	70-130	8	25	
Dichlorodifluoromethane	0.0379	0.0100	mg/kg wet	0.05000		76	70-130	13	25	
Diethyl Ether	0.0529	0.0050	mg/kg wet	0.05000		106	70-130	8	25	
Di-isopropyl ether	0.0521	0.0050	mg/kg wet	0.05000		104	70-130	7	25	
Ethyl tertiary-butyl ether	0.0476	0.0050	mg/kg wet	0.05000		95	70-130	6	25	
Ethylbenzene	0.0548	0.0050	mg/kg wet	0.05000		110	70-130	12	25	
Hexachlorobutadiene	0.0502	0.0050	mg/kg wet	0.05000		100	70-130	11	25	
Isopropylbenzene	0.0526	0.0050	mg/kg wet	0.05000		105	70-130	13	25	
Methyl tert-Butyl Ether	0.0482	0.0050	mg/kg wet	0.05000		96	70-130	6	25	
Methylene Chloride	0.0549	0.0250	mg/kg wet	0.05000		110	70-130	8	25	
Naphthalene	0.0527	0.0050	mg/kg wet	0.05000		105	70-130	10	25	
n-Butylbenzene	0.0538	0.0050	mg/kg wet	0.05000		108	70-130	12	25	
n-Propylbenzene	0.0530	0.0050	mg/kg wet	0.05000		106	70-130	13	25	
sec-Butylbenzene	0.0516	0.0050	mg/kg wet	0.05000		103	70-130	14	25	
Styrene	0.0543	0.0050	mg/kg wet	0.05000		109	70-130	10	25	
tert-Butylbenzene	0.0525	0.0050	mg/kg wet	0.05000		105	70-130	13	25	
Tertiary-amyl methyl ether	0.0501	0.0050	mg/kg wet	0.05000		100	70-130	5	25	
Tetrachloroethene	0.0546	0.0050	mg/kg wet	0.05000		109	70-130	14	25	
Tetrahydrofuran	0.0525	0.0050	mg/kg wet	0.05000		105	70-130	9	25	
Toluene	0.0524	0.0050	mg/kg wet	0.05000		105	70-130	10	25	
trans-1,2-Dichloroethene	0.0556	0.0050	mg/kg wet	0.05000		111	70-130	11	25	
trans-1,3-Dichloropropene	0.0501	0.0050	mg/kg wet	0.05000		100	70-130	7	25	
Trichloroethene	0.0533	0.0050	mg/kg wet	0.05000		107	70-130	11	25	

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0112

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch CJ90733 - 5035										
Trichlorofluoromethane	0.0526	0.0050	mg/kg wet	0.05000		105	70-130	13	25	
Vinyl Acetate	0.0603	0.0050	mg/kg wet	0.05000		121	70-130	9	25	
Vinyl Chloride	0.0492	0.0100	mg/kg wet	0.05000		98	70-130	13	25	
Xylene O	0.0526	0.0050	mg/kg wet	0.05000		105	70-130	12	25	
Xylene P,M	0.104	0.0100	mg/kg wet	0.1000		104	70-130	12	25	
Surrogate: 1,2-Dichloroethane-d4	*0.0503*		mg/kg wet	*0.05000*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0508*		mg/kg wet	*0.05000*		*102*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0512*		mg/kg wet	*0.05000*		*102*	*70-130*			
Surrogate: Toluene-d8	*0.0501*		mg/kg wet	*0.05000*		*100*	*70-130*			
8100M Total Petroleum Hydrocarbons										
Batch CJ90411 - 3546										
Blank										
Decane (C10)	ND	0.2	mg/kg wet							
Docosane (C22)	ND	0.2	mg/kg wet							
Dodecane (C12)	ND	0.2	mg/kg wet							
Eicosane (C20)	ND	0.2	mg/kg wet							
Hexacosane (C26)	ND	0.2	mg/kg wet							
Hexadecane (C16)	ND	0.2	mg/kg wet							
Nonadecane (C19)	ND	0.2	mg/kg wet							
Nonane (C9)	ND	0.2	mg/kg wet							
Octacosane (C28)	ND	0.2	mg/kg wet							
Octadecane (C18)	ND	0.2	mg/kg wet							
Tetracosane (C24)	ND	0.2	mg/kg wet							
Tetradecane (C14)	ND	0.2	mg/kg wet							
Total Petroleum Hydrocarbons	ND	37.5	mg/kg wet							
Triacontane (C30)	ND	0.2	mg/kg wet							
Surrogate: O-Terphenyl	*4.37*		mg/kg wet	*5.000*		*87*	*40-140*			
LCS										
Decane (C10)	1.7	0.2	mg/kg wet	2.500		68	40-140			
Docosane (C22)	2.3	0.2	mg/kg wet	2.500		92	40-140			
Dodecane (C12)	1.7	0.2	mg/kg wet	2.500		70	40-140			
Eicosane (C20)	2.3	0.2	mg/kg wet	2.500		91	40-140			
Hexacosane (C26)	2.3	0.2	mg/kg wet	2.500		90	40-140			
Hexadecane (C16)	2.1	0.2	mg/kg wet	2.500		83	40-140			
Nonadecane (C19)	2.4	0.2	mg/kg wet	2.500		97	40-140			
Nonane (C9)	1.5	0.2	mg/kg wet	2.500		59	30-140			
Octacosane (C28)	2.2	0.2	mg/kg wet	2.500		90	40-140			
Octadecane (C18)	2.2	0.2	mg/kg wet	2.500		88	40-140			
Tetracosane (C24)	2.3	0.2	mg/kg wet	2.500		92	40-140			
Tetradecane (C14)	2.0	0.2	mg/kg wet	2.500		79	40-140			
Total Petroleum Hydrocarbons	29.1	37.5	mg/kg wet	35.00		83	40-140			
Triacontane (C30)	2.2	0.2	mg/kg wet	2.500		87	40-140			

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0112

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8100M Total Petroleum Hydrocarbons										
Batch CJ90411 - 3546										
Surrogate: O-Terphenyl	*4.53*		mg/kg wet	*5.000*		*91*	*40-140*			
LCS Dup										
Decane (C10)	1.9	0.2	mg/kg wet	2.500		76	40-140	12	25	
Docosane (C22)	2.3	0.2	mg/kg wet	2.500		91	40-140	1	25	
Dodecane (C12)	2.0	0.2	mg/kg wet	2.500		80	40-140	14	25	
Eicosane (C20)	2.2	0.2	mg/kg wet	2.500		90	40-140	0.8	25	
Hexacosane (C26)	2.2	0.2	mg/kg wet	2.500		88	40-140	3	25	
Hexadecane (C16)	2.2	0.2	mg/kg wet	2.500		88	40-140	6	25	
Nonadecane (C19)	2.4	0.2	mg/kg wet	2.500		96	40-140	1	25	
Nonane (C9)	1.7	0.2	mg/kg wet	2.500		67	30-140	12	25	
Octacosane (C28)	2.2	0.2	mg/kg wet	2.500		86	40-140	4	25	
Octadecane (C18)	2.2	0.2	mg/kg wet	2.500		89	40-140	1	25	
Tetracosane (C24)	2.2	0.2	mg/kg wet	2.500		90	40-140	2	25	
Tetradecane (C14)	2.2	0.2	mg/kg wet	2.500		86	40-140	9	25	
Total Petroleum Hydrocarbons	29.7	37.5	mg/kg wet	35.00		85	40-140	2	25	
Triacontane (C30)	2.1	0.2	mg/kg wet	2.500		83	40-140	4	25	
Surrogate: O-Terphenyl	*4.51*		mg/kg wet	*5.000*		*90*	*40-140*			
8270D Polynuclear Aromatic Hydrocarbons										
Batch CJ90322 - 3546										
Blank										
2-Methylnaphthalene	ND	0.333	mg/kg wet							
Acenaphthene	ND	0.333	mg/kg wet							
Acenaphthylene	ND	0.333	mg/kg wet							
Anthracene	ND	0.333	mg/kg wet							
Benzo(a)anthracene	ND	0.333	mg/kg wet							
Benzo(a)pyrene	ND	0.167	mg/kg wet							
Benzo(b)fluoranthene	ND	0.333	mg/kg wet							
Benzo(g,h,i)perylene	ND	0.333	mg/kg wet							
Benzo(k)fluoranthene	ND	0.333	mg/kg wet							
Chrysene	ND	0.167	mg/kg wet							
Dibenzo(a,h)Anthracene	ND	0.167	mg/kg wet							
Fluoranthene	ND	0.333	mg/kg wet							
Fluorene	ND	0.333	mg/kg wet							
Indeno(1,2,3-cd)Pyrene	ND	0.333	mg/kg wet							
Naphthalene	ND	0.167	mg/kg wet							
Phenanthrene	ND	0.333	mg/kg wet							
Pyrene	ND	0.333	mg/kg wet							
Surrogate: 1,2-Dichlorobenzene-d4	*2.16*		mg/kg wet	*3.333*		*65*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*2.09*		mg/kg wet	*3.333*		*63*	*30-130*			
Surrogate: Nitrobenzene-d5	*2.19*		mg/kg wet	*3.333*		*66*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.97*		mg/kg wet	*3.333*		*89*	*30-130*			
LCS										

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0112

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Polynuclear Aromatic Hydrocarbons										
Batch CJ90322 - 3546										
2-Methylnaphthalene	1.83	0.333	mg/kg wet	3.333		55	40-140			
Acenaphthene	1.96	0.333	mg/kg wet	3.333		59	40-140			
Acenaphthylene	2.06	0.333	mg/kg wet	3.333		62	40-140			
Anthracene	2.51	0.333	mg/kg wet	3.333		75	40-140			
Benzo(a)anthracene	2.77	0.333	mg/kg wet	3.333		83	40-140			
Benzo(a)pyrene	2.39	0.167	mg/kg wet	3.333		72	40-140			
Benzo(b)fluoranthene	2.52	0.333	mg/kg wet	3.333		76	40-140			
Benzo(g,h,i)perylene	2.76	0.333	mg/kg wet	3.333		83	40-140			
Benzo(k)fluoranthene	2.40	0.333	mg/kg wet	3.333		72	40-140			
Chrysene	2.71	0.167	mg/kg wet	3.333		81	40-140			
Dibenzo(a,h)Anthracene	2.77	0.167	mg/kg wet	3.333		83	40-140			
Fluoranthene	2.75	0.333	mg/kg wet	3.333		82	40-140			
Fluorene	2.26	0.333	mg/kg wet	3.333		68	40-140			
Indeno(1,2,3-cd)Pyrene	2.70	0.333	mg/kg wet	3.333		81	40-140			
Naphthalene	1.75	0.333	mg/kg wet	3.333		53	40-140			
Phenanthrene	2.27	0.333	mg/kg wet	3.333		68	40-140			
Pyrene	2.59	0.333	mg/kg wet	3.333		78	40-140			
Surrogate: 1,2-Dichlorobenzene-d4	*1.76*		mg/kg wet	*3.333*		*53*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*1.91*		mg/kg wet	*3.333*		*57*	*30-130*			
Surrogate: Nitrobenzene-d5	*1.81*		mg/kg wet	*3.333*		*54*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.75*		mg/kg wet	*3.333*		*83*	*30-130*			
LCS Dup										
2-Methylnaphthalene	1.95	0.333	mg/kg wet	3.333		58	40-140	6	30	
Acenaphthene	2.09	0.333	mg/kg wet	3.333		63	40-140	7	30	
Acenaphthylene	2.20	0.333	mg/kg wet	3.333		66	40-140	6	30	
Anthracene	2.69	0.333	mg/kg wet	3.333		81	40-140	7	30	
Benzo(a)anthracene	2.94	0.333	mg/kg wet	3.333		88	40-140	6	30	
Benzo(a)pyrene	2.55	0.167	mg/kg wet	3.333		77	40-140	7	30	
Benzo(b)fluoranthene	2.73	0.333	mg/kg wet	3.333		82	40-140	8	30	
Benzo(g,h,i)perylene	2.92	0.333	mg/kg wet	3.333		87	40-140	6	30	
Benzo(k)fluoranthene	2.43	0.333	mg/kg wet	3.333		73	40-140	1	30	
Chrysene	2.83	0.167	mg/kg wet	3.333		85	40-140	4	30	
Dibenzo(a,h)Anthracene	2.96	0.167	mg/kg wet	3.333		89	40-140	7	30	
Fluoranthene	2.95	0.333	mg/kg wet	3.333		88	40-140	7	30	
Fluorene	2.39	0.333	mg/kg wet	3.333		72	40-140	5	30	
Indeno(1,2,3-cd)Pyrene	2.88	0.333	mg/kg wet	3.333		87	40-140	7	30	
Naphthalene	1.82	0.333	mg/kg wet	3.333		55	40-140	4	30	
Phenanthrene	2.43	0.333	mg/kg wet	3.333		73	40-140	7	30	
Pyrene	2.69	0.333	mg/kg wet	3.333		81	40-140	4	30	
Surrogate: 1,2-Dichlorobenzene-d4	*1.75*		mg/kg wet	*3.333*		*52*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*1.94*		mg/kg wet	*3.333*		*58*	*30-130*			
Surrogate: Nitrobenzene-d5	*1.81*		mg/kg wet	*3.333*		*54*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.74*		mg/kg wet	*3.333*		*82*	*30-130*			
Batch CJ90709 - 3546										
Blank										

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0112

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Polynuclear Aromatic Hydrocarbons										
Batch CJ90709 - 3546										
2-Methylnaphthalene	ND	0.333	mg/kg wet							
Acenaphthene	ND	0.333	mg/kg wet							
Acenaphthylene	ND	0.333	mg/kg wet							
Anthracene	ND	0.333	mg/kg wet							
Benzo(a)anthracene	ND	0.333	mg/kg wet							
Benzo(a)pyrene	ND	0.167	mg/kg wet							
Benzo(b)fluoranthene	ND	0.333	mg/kg wet							
Benzo(g,h,i)perylene	ND	0.333	mg/kg wet							
Benzo(k)fluoranthene	ND	0.333	mg/kg wet							
Chrysene	ND	0.167	mg/kg wet							
Dibenzo(a,h)Anthracene	ND	0.167	mg/kg wet							
Fluoranthene	ND	0.333	mg/kg wet							
Fluorene	ND	0.333	mg/kg wet							
Indeno(1,2,3-cd)Pyrene	ND	0.333	mg/kg wet							
Naphthalene	ND	0.333	mg/kg wet							
Phenanthrene	ND	0.333	mg/kg wet							
Pyrene	ND	0.333	mg/kg wet							
Surrogate: 1,2-Dichlorobenzene-d4	*2.10*		mg/kg wet	*4.167*		*51*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*2.05*		mg/kg wet	*4.167*		*49*	*30-130*			
Surrogate: Nitrobenzene-d5	*2.08*		mg/kg wet	*4.167*		*50*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.91*		mg/kg wet	*4.167*		*70*	*30-130*			
LCS										
2-Methylnaphthalene	1.81	0.333	mg/kg wet	3.333		54	40-140			
Acenaphthene	2.13	0.333	mg/kg wet	3.333		64	40-140			
Acenaphthylene	2.18	0.333	mg/kg wet	3.333		66	40-140			
Anthracene	2.50	0.333	mg/kg wet	3.333		75	40-140			
Benzo(a)anthracene	2.72	0.333	mg/kg wet	3.333		82	40-140			
Benzo(a)pyrene	2.42	0.167	mg/kg wet	3.333		73	40-140			
Benzo(b)fluoranthene	2.40	0.333	mg/kg wet	3.333		72	40-140			
Benzo(g,h,i)perylene	2.79	0.333	mg/kg wet	3.333		84	40-140			
Benzo(k)fluoranthene	2.67	0.333	mg/kg wet	3.333		80	40-140			
Chrysene	2.73	0.167	mg/kg wet	3.333		82	40-140			
Dibenzo(a,h)Anthracene	2.87	0.167	mg/kg wet	3.333		86	40-140			
Fluoranthene	2.68	0.333	mg/kg wet	3.333		80	40-140			
Fluorene	2.40	0.333	mg/kg wet	3.333		72	40-140			
Indeno(1,2,3-cd)Pyrene	2.78	0.333	mg/kg wet	3.333		84	40-140			
Naphthalene	1.84	0.333	mg/kg wet	3.333		55	40-140			
Phenanthrene	2.42	0.333	mg/kg wet	3.333		73	40-140			
Pyrene	2.56	0.333	mg/kg wet	3.333		77	40-140			
Surrogate: 1,2-Dichlorobenzene-d4	*1.76*		mg/kg wet	*4.167*		*42*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*1.94*		mg/kg wet	*4.167*		*47*	*30-130*			
Surrogate: Nitrobenzene-d5	*1.80*		mg/kg wet	*4.167*		*43*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.52*		mg/kg wet	*4.167*		*61*	*30-130*			
LCS Dup										
2-Methylnaphthalene	2.04	0.333	mg/kg wet	3.333		61	40-140	12	30	

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0112

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Polynuclear Aromatic Hydrocarbons										
Batch CJ90709 - 3546										
Acenaphthene	2.30	0.333	mg/kg wet	3.333		69	40-140	8	30	
Acenaphthylene	2.38	0.333	mg/kg wet	3.333		71	40-140	9	30	
Anthracene	2.50	0.333	mg/kg wet	3.333		75	40-140	0.03	30	
Benzo(a)anthracene	2.79	0.333	mg/kg wet	3.333		84	40-140	2	30	
Benzo(a)pyrene	2.61	0.167	mg/kg wet	3.333		78	40-140	8	30	
Benzo(b)fluoranthene	2.72	0.333	mg/kg wet	3.333		82	40-140	12	30	
Benzo(g,h,i)perylene	2.61	0.333	mg/kg wet	3.333		78	40-140	7	30	
Benzo(k)fluoranthene	2.54	0.333	mg/kg wet	3.333		76	40-140	5	30	
Chrysene	2.71	0.167	mg/kg wet	3.333		81	40-140	0.7	30	
Dibenzo(a,h)Anthracene	2.67	0.167	mg/kg wet	3.333		80	40-140	7	30	
Fluoranthene	2.60	0.333	mg/kg wet	3.333		78	40-140	3	30	
Fluorene	2.50	0.333	mg/kg wet	3.333		75	40-140	4	30	
Indeno(1,2,3-cd)Pyrene	2.63	0.333	mg/kg wet	3.333		79	40-140	6	30	
Naphthalene	1.91	0.333	mg/kg wet	3.333		57	40-140	3	30	
Phenanthrene	2.40	0.333	mg/kg wet	3.333		72	40-140	1	30	
Pyrene	2.60	0.333	mg/kg wet	3.333		78	40-140	1	30	
Surrogate: 1,2-Dichlorobenzene-d4	*1.69*		mg/kg wet	*4.167*		*41*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*2.09*		mg/kg wet	*4.167*		*50*	*30-130*			
Surrogate: Nitrobenzene-d5	*1.76*		mg/kg wet	*4.167*		*42*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.66*		mg/kg wet	*4.167*		*64*	*30-130*			

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
ESS Laboratory Work Order: 19J0112

Notes and Definitions

U	Analyte included in the analysis, but not detected
S+	Surrogate recovery(ies) above upper control limit (S+).
PT	Pentachlorophenol tailing factor > 2.
D+	Relative percent difference for duplicate is outside of criteria (D+).
D	Diluted.
CD+	Continuing Calibration %Diff/Drift is above control limit (CD+).
BT	Benzidine tailing factor >2.
B+	Blank Spike recovery is above upper control limit (B+).
B-	Blank Spike recovery is below lower control limit (B-).
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0112

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Sage Environmental, Inc. - ML/ML

Shipped/Delivered Via: ESS Courier

ESS Project ID: 19J0112
Date Received: 10/3/2019
Project Due Date: 10/10/2019
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 0.9 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? (Yes) / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? (Yes) / No / NA

13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By:
    b. Low Level VOA vials frozen: Date: Time: By: client

Sample Receiving Notes:

LL recvd frozen

COC = SE-103 (0-2); Cup = same; Label = SE-102 (0-2) (vial - 805)

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / (No)
    Who was contacted? Date: Time: By:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	394851	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
01	394854	Yes	NA	Yes	VOA Vial - Methanol	MeOH	
01	394859	Yes	NA	Yes	VOA Vial - Other	Other	
01	394860	Yes	NA	Yes	VOA Vial - Other	Other	
02	394850	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
02	394853	Yes	NA	Yes	VOA Vial - Methanol	MeOH	
02	394857	Yes	NA	Yes	VOA Vial - Other	Other	
02	394858	Yes	NA	Yes	VOA Vial - Other	Other	
03	394849	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
03	394852	Yes	NA	Yes	VOA Vial - Methanol	MeOH	
03	394855	Yes	NA	Yes	VOA Vial - Other	Other	
03	394856	Yes	NA	Yes	VOA Vial - Other	Other	
04	394861	Yes	NA	Yes	8 oz. Jar - Unpres	NP	
04	394863	Yes	NA	Yes	VOA Vial - Methanol	MeOH	
04	394864	Yes	NA	Yes	VOA Vial - Other	Other	
04	394865	Yes	NA	Yes	VOA Vial - Other	Other	

2nd Review
Were all containers scanned into storage/lab? Initials
Are barcode labels on correct containers? (Yes) / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / (NA)
Are all Hex Chrome stickers attached? Yes / No / (NA)

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Sage Environmental, Inc. - ML/ML

ESS Project ID: 19J0112
Date Received: 10/3/2019

Are all QC stickers attached? Yes / No (NA)
Are VOA stickers attached if bubbles noted? Yes / No (NA)

Completed By: _____ Date & Time: 10/3/19 14:04

Reviewed By: _____ Date & Time: 10/3/19 1427

Delivered By: _____ 10/3/19 1427

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab # 19T0112

Turn Time	5	Days
Regulatory State	RI	
Reporting Limits	RIDEM R-DEC, GB-LC	
Electonic Deliverables	☐ Data Checker ☒ Excel ☐ Other (Please Specify →)	

Is this project for any of the following?: ○ CT RCP ○ MA MCP ○ RGP

Company Name: SAGE ENVIRONMENTAL	Project #: S2935
Contact Person: DAN BOYNES	Project Name: WAITES WHARF, NEWPORT
Address: 172 ARMISTICE BLVD.	
City: PAWTUCKET	State: RI
Zip Code: 02860	PO #:
Telephone Number: 401-723-9900	FAX Number:
Email Address: dboynes@sage-enviro.com	

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	Analysis: VOCs	TPH	PAHs	RCRA 8
1	10/1/19	9:00	G	S	SE-101 (0'-2')	x	x	x	x
2		9:15			SE-101 (2'-7')				
3		10:00			SE-102 (0'-2')				
4		11:00			SE-103 (0'-2')				
DB					SE-104 (0'-2')				
DB					SE-105 (0'-2')				
DB					SE-106 (0'-2')				

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer J-Jar O-Other P-Poly S-Sterile V-Vial

Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other*

Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other*

	VOCs	TPH	PAHs	RCRA 8
Container Type:	AG	→	→	→
Container Volume:	10,7	→	→	→
Preservation Code:	1,6,10	→	→	→
Number of Containers per Sample:	4	→	→	→

Laboratory Use Only

Cooler Present: ✓
Seals Intact: ○ Drop Off ○ Pickup
Cooler Temperature: 0.9 °C

Sampled by: DAN BOYNES

Comments: Please specify "Other" preservative and containers types in this space

Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
Sally Mee 10/3/19 9:21	10/3/19 9:21	10/3/19 9:58	10/3/19 9:58
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)

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CERTIFICATE OF ANALYSIS

Dan Boynes
Sage Environmental, Inc.
172 Armistice Boulevard
Pawtucket, RI 02860

RE: Waites Wharf Newport (S3432)
ESS Laboratory Work Order Number: 20C0038

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 2:09 pm, Mar 09, 2020

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, Inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 20C0038

SAMPLE RECEIPT

The following samples were received on March 03, 2020 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
20C0038-01	SE-201 0-2ft	Soil	9014
20C0038-02	SE-201 2ft-7ft	Soil	6010C
20C0038-03	SE-202 0-2ft	Soil	9014
20C0038-04	SE-203 0-2ft	Soil	9014
20C0038-05	SE-203 2ft-7ft	Soil	6010C
20C0038-06	SE-204 0-2ft	Soil	9014
20C0038-07	SE-205 0-2ft	Soil	9014
20C0038-08	SE-205 2ft-7ft	Soil	6010C
20C0038-09	SE-206 0-2ft	Soil	9014

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, Inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 20C0038

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, Inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 20C0038

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, Inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-201 0-2ft
Date Sampled: 02/28/20 09:30
Percent Solids: 93

ESS Laboratory Work Order: 20C0038
ESS Laboratory Sample ID: 20C0038-01
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Total Cyanide	ND (1.04)		9014		1	EEM	03/05/20 12:45	mg/kg dry	DC00527

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, Inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-201 2ft-7ft
Date Sampled: 02/28/20 09:45
Percent Solids: 86

ESS Laboratory Work Order: 20C0038
ESS Laboratory Sample ID: 20C0038-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 7471B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**5.69** (2.18)		6010C		1	KJK	03/05/20 0:37	2.66	100	DC00443
Lead	**211** (4.37)		6010C		1	KJK	03/05/20 0:37	2.66	100	DC00443

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, Inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-202 0-2ft
Date Sampled: 02/28/20 10:00
Percent Solids: 92

ESS Laboratory Work Order: 20C0038
ESS Laboratory Sample ID: 20C0038-03
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Total Cyanide	ND (1.07)		9014		1	EEM	03/05/20 12:45	mg/kg dry	DC00527

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, Inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-203 0-2ft
Date Sampled: 02/28/20 10:30
Percent Solids: 85

ESS Laboratory Work Order: 20C0038
ESS Laboratory Sample ID: 20C0038-04
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Total Cyanide	ND (1.15)		9014		1	EEM	03/05/20 12:45	mg/kg dry	DC00527

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, Inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-203 2ft-7ft
Date Sampled: 02/28/20 10:45
Percent Solids: 83

ESS Laboratory Work Order: 20C0038
ESS Laboratory Sample ID: 20C0038-05
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 7471B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**4.01** (2.19)		6010C		1	KJK	03/05/20 0:41	2.76	100	DC00443
Lead	**224** (4.39)		6010C		1	KJK	03/05/20 0:41	2.76	100	DC00443

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, Inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-204 0-2ft
Date Sampled: 02/28/20 11:00
Percent Solids: 80

ESS Laboratory Work Order: 20C0038
ESS Laboratory Sample ID: 20C0038-06
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Total Cyanide	ND (1.22)		9014		1	EEM	03/05/20 12:45	mg/kg dry	DC00527

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, Inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-205 0-2ft
Date Sampled: 02/28/20 11:45
Percent Solids: 83

ESS Laboratory Work Order: 20C0038
ESS Laboratory Sample ID: 20C0038-07
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Total Cyanide	ND (1.18)		9014		1	EEM	03/05/20 12:45	mg/kg dry	DC00527

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, Inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-205 2ft-7ft
Date Sampled: 02/28/20 12:00
Percent Solids: 80

ESS Laboratory Work Order: 20C0038
ESS Laboratory Sample ID: 20C0038-08
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 7471B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**5.03** (2.26)		6010C		1	KJK	03/05/20 0:57	2.76	100	DC00443
Lead	**57.1** (4.52)		6010C		1	KJK	03/05/20 0:57	2.76	100	DC00443

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, Inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-206 0-2ft
Date Sampled: 02/28/20 12:15
Percent Solids: 89

ESS Laboratory Work Order: 20C0038
ESS Laboratory Sample ID: 20C0038-09
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Total Cyanide	ND (1.05)		9014		1	EEM	03/05/20 12:45	mg/kg dry	DC00527

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, Inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 20C0038

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals										
Batch DC00443 - 7471B										
Blank										
Arsenic	ND	2.50	mg/kg wet							
Lead	ND	5.00	mg/kg wet							
LCS										
Arsenic	179	8.20	mg/kg wet	202.0		89	80-120			
Lead	303	16.4	mg/kg wet	333.0		91	80-120			
LCS Dup										
Arsenic	184	7.81	mg/kg wet	202.0		91	80-120	2	20	
Lead	309	15.6	mg/kg wet	333.0		93	80-120	2	20	
Classical Chemistry										
Batch DC00527 - TCN Prep										
Blank										
Total Cyanide	ND	1.00	mg/kg wet							
LCS										
Total Cyanide	5.12	1.00	mg/kg wet	5.015		102	90-110			
Reference										
Total Cyanide	147	9.84	mg/kg wet	157.0		93	24-110			
Reference										
Total Cyanide	148	9.87	mg/kg wet	157.0		95	24-110			

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, Inc.
Client Project ID: Waites Wharf Newport ESS Laboratory Work Order: 20C0038

Notes and Definitions

U	Analyte included in the analysis, but not detected
D	Diluted.
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, Inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 20C0038

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Sage Environmental, Inc. - ML

Shipped/Delivered Via: ESS Courier

ESS Project ID: 20C0038
Date Received: 3/3/2020
Project Due Date: 3/10/2020
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 2.1 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No (NA)
10. Were any analyses received outside of hold time? Yes (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	19254	Yes	N/A	Yes	8 oz jar	NP	
2	19255	Yes	N/A	Yes	8 oz jar	NP	
3	19256	Yes	N/A	Yes	8 oz jar	NP	
4	19257	Yes	N/A	Yes	8 oz jar	NP	
5	19258	Yes	N/A	Yes	8 oz jar	NP	
6	19259	Yes	N/A	Yes	8 oz jar	NP	
7	19260	Yes	N/A	Yes	8 oz jar	NP	
8	19261	Yes	N/A	Yes	8 oz jar	NP	
9	19262	Yes	N/A	Yes	8 oz jar	NP	

2nd Review
Were all containers scanned into storage/lab? Initials
(Yes) / No
Are barcode labels on correct containers? Yes / No / NA
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Sage Environmental, Inc. - ML

ESS Project ID: 20C0038

Date Received: 3/3/2020

Completed By: _____ Date & Time: 3/3/20 1912

Reviewed By: _____ Date & Time: 3/3/20 1917

Delivered By: _____ 3/3/20 1917

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab # 20C0038

Turn Time: 5-Day Rush
Regulatory State
Is this project for any of the following?: O CT RCP O MA MCP O RGP

Reporting Limits: RIDEM R-DEC, GB-LC

Electonic Deliverables: ☑ Limit Checker ☑ Standard Excel ☐ Other (Please Specify →)

Company Name	Project #	Project Name
SAGE Environmental Inc	S3432	WAITES WHARF

Contact Person	Address
DAN BOYNES	172 Armistice Blvd

City	State	Zip Code	PO #
Pawtucket	RI	02860	

Telephone Number	FAX Number	Email Address
401-723-9900	401-723-9973	sage@sage-enviro.com

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	Analysis: CYANIDE	LEAD	ARSENIC
1	2/28/20	9:30	G	SOIL	SE-201 (0-2')	X		
2	↓	9:45	↓	↓	SE-201 (2-7')		X	X
3		10:00			SE-202 (0-2')	X		
4		10:30			SE-203 (0-2')	X		
5		10:45			SE-203 (2-7')		X	X
6		11:00			SE-204 (0-2')	X		
7		11:45			SE-205 (0-2')	X		
8		12:00			SE-205 (2-7')		X	X
9	↓	12:15	↓	↓	SE-206 (0-2')	X		

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer G - Glass O-Other P-Poly S-Sterile V-Vial — G
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 10
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 1
Number of Containers per Sample: 1

Laboratory Use Only
Cooler Present: ✓
Seals Intact: —
Cooler Temperature: Ice 7.1 °C

Sampled by : DAN BOYNES
Comments: Please specify "Other" preservative and containers types in this space

Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
3/3/20 10:31	3/3/20 10:31	3/3/20 14:39	3/3/20 1439
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)

ATTACHMENT 7

CERTIFICATE OF ANALYSIS

Dan Boynes
Sage Environmental, inc.
172 Armistice Boulevard
Pawtucket, RI 02860

RE: Waites Wharf Newport (S2935)
ESS Laboratory Work Order Number: 19J0209

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 1:28 pm, Oct 15, 2019

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0209

SAMPLE RECEIPT

The following samples were received on October 07, 2019 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
19J0209-01	SE-104 MW	Ground Water	8260B
19J0209-02	SE-105 MW	Ground Water	8260B
19J0209-03	SE-106 MW	Ground Water	8260B

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0209

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0209

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-104 MW
Date Sampled: 10/04/19 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19J0209
ESS Laboratory Sample ID: 19J0209-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
1-Chlorohexane	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
2-Butanone	ND (0.0100)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
2-Chlorotoluene	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
2-Hexanone	ND (0.0100)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
4-Chlorotoluene	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Acetone	ND (0.0100)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Benzene	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Bromobenzene	ND (0.0020)		8260B		1	10/09/19 2:00	C9J0167	CJ90864

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-104 MW
Date Sampled: 10/04/19 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19J0209
ESS Laboratory Sample ID: 19J0209-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Bromodichloromethane	ND (0.0006)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Bromoform	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Bromomethane	ND (0.0020)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Carbon Disulfide	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Chlorobenzene	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Chloroethane	ND (0.0020)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Chloroform	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Chloromethane	ND (0.0020)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Dibromochloromethane	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Dibromomethane	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Diethyl Ether	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Di-isopropyl ether	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Ethylbenzene	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Hexachloroethane	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Isopropylbenzene	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Methylene Chloride	ND (0.0020)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Naphthalene	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
n-Butylbenzene	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
n-Propylbenzene	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
sec-Butylbenzene	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Styrene	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
tert-Butylbenzene	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Tetrachloroethene	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-104 MW
Date Sampled: 10/04/19 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19J0209
ESS Laboratory Sample ID: 19J0209-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Toluene	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Trichloroethene	**0.0026** (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Vinyl Acetate	ND (0.0050)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Vinyl Chloride	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Xylene O	ND (0.0010)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Xylene P,M	ND (0.0020)		8260B		1	10/09/19 2:00	C9J0167	CJ90864
Xylenes (Total)	ND (0.00200)		8260B		1	10/09/19 2:00		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*103 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*99 %*		*70-130*
Surrogate: Dibromofluoromethane	*98 %*		*70-130*
Surrogate: Toluene-d8	*99 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-105 MW
Date Sampled: 10/04/19 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19J0209
ESS Laboratory Sample ID: 19J0209-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
1-Chlorohexane	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
2-Butanone	ND (0.0100)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
2-Chlorotoluene	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
2-Hexanone	ND (0.0100)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
4-Chlorotoluene	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Acetone	ND (0.0100)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Benzene	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Bromobenzene	ND (0.0020)		8260B		1	10/09/19 0:16	C9J0167	CJ90864

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-105 MW
Date Sampled: 10/04/19 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19J0209
ESS Laboratory Sample ID: 19J0209-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Bromodichloromethane	ND (0.0006)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Bromoform	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Bromomethane	ND (0.0020)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Carbon Disulfide	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Chlorobenzene	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Chloroethane	ND (0.0020)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Chloroform	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Chloromethane	ND (0.0020)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Dibromochloromethane	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Dibromomethane	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Diethyl Ether	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Di-isopropyl ether	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Ethylbenzene	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Hexachloroethane	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Isopropylbenzene	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Methylene Chloride	ND (0.0020)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Naphthalene	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
n-Butylbenzene	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
n-Propylbenzene	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
sec-Butylbenzene	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Styrene	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
tert-Butylbenzene	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Tetrachloroethene	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-105 MW
Date Sampled: 10/04/19 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19J0209
ESS Laboratory Sample ID: 19J0209-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Toluene	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Trichloroethene	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Vinyl Acetate	ND (0.0050)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Vinyl Chloride	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Xylene O	ND (0.0010)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Xylene P,M	ND (0.0020)		8260B		1	10/09/19 0:16	C9J0167	CJ90864
Xylenes (Total)	ND (0.00200)		8260B		1	10/09/19 0:16		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*100 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*98 %*		*70-130*
Surrogate: Dibromofluoromethane	*97 %*		*70-130*
Surrogate: Toluene-d8	*99 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-106 MW
Date Sampled: 10/04/19 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19J0209
ESS Laboratory Sample ID: 19J0209-03
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
1-Chlorohexane	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
2-Butanone	ND (0.0100)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
2-Chlorotoluene	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
2-Hexanone	ND (0.0100)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
4-Chlorotoluene	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Acetone	ND (0.0100)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Benzene	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Bromobenzene	ND (0.0020)		8260B		1	10/09/19 0:42	C9J0167	CJ90864

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-106 MW
Date Sampled: 10/04/19 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19J0209
ESS Laboratory Sample ID: 19J0209-03
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Bromodichloromethane	ND (0.0006)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Bromoform	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Bromomethane	ND (0.0020)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Carbon Disulfide	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Chlorobenzene	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Chloroethane	ND (0.0020)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Chloroform	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Chloromethane	ND (0.0020)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Dibromochloromethane	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Dibromomethane	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Diethyl Ether	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Di-isopropyl ether	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Ethylbenzene	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Hexachloroethane	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Isopropylbenzene	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Methylene Chloride	ND (0.0020)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Naphthalene	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
n-Butylbenzene	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
n-Propylbenzene	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
sec-Butylbenzene	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Styrene	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
tert-Butylbenzene	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Tetrachloroethene	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-106 MW
Date Sampled: 10/04/19 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19J0209
ESS Laboratory Sample ID: 19J0209-03
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Toluene	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Trichloroethene	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Vinyl Acetate	ND (0.0050)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Vinyl Chloride	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Xylene O	ND (0.0010)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Xylene P,M	ND (0.0020)		8260B		1	10/09/19 0:42	C9J0167	CJ90864
Xylenes (Total)	ND (0.00200)		8260B		1	10/09/19 0:42		[CALC]

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

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0209

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ90864 - 5030B										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0010	mg/L							
1,1,1-Trichloroethane	ND	0.0010	mg/L							
1,1,2,2-Tetrachloroethane	ND	0.0005	mg/L							
1,1,2-Trichloroethane	ND	0.0010	mg/L							
1,1-Dichloroethane	ND	0.0010	mg/L							
1,1-Dichloroethene	ND	0.0010	mg/L							
1,1-Dichloropropene	ND	0.0020	mg/L							
1,2,3-Trichlorobenzene	ND	0.0010	mg/L							
1,2,3-Trichloropropane	ND	0.0010	mg/L							
1,2,4-Trichlorobenzene	ND	0.0010	mg/L							
1,2,4-Trimethylbenzene	ND	0.0010	mg/L							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/L							
1,2-Dibromoethane	ND	0.0010	mg/L							
1,2-Dichlorobenzene	ND	0.0010	mg/L							
1,2-Dichloroethane	ND	0.0010	mg/L							
1,2-Dichloropropane	ND	0.0010	mg/L							
1,3,5-Trimethylbenzene	ND	0.0010	mg/L							
1,3-Dichlorobenzene	ND	0.0010	mg/L							
1,3-Dichloropropane	ND	0.0010	mg/L							
1,4-Dichlorobenzene	ND	0.0010	mg/L							
1,4-Dioxane - Screen	ND	0.500	mg/L							
1-Chlorohexane	ND	0.0010	mg/L							
2,2-Dichloropropane	ND	0.0010	mg/L							
2-Butanone	ND	0.0100	mg/L							
2-Chlorotoluene	ND	0.0010	mg/L							
2-Hexanone	ND	0.0100	mg/L							
4-Chlorotoluene	ND	0.0010	mg/L							
4-Isopropyltoluene	ND	0.0010	mg/L							
4-Methyl-2-Pentanone	ND	0.0250	mg/L							
Acetone	ND	0.0100	mg/L							
Benzene	ND	0.0010	mg/L							
Bromobenzene	ND	0.0020	mg/L							
Bromochloromethane	ND	0.0010	mg/L							
Bromodichloromethane	ND	0.0006	mg/L							
Bromoform	ND	0.0010	mg/L							
Bromomethane	ND	0.0020	mg/L							
Carbon Disulfide	ND	0.0010	mg/L							
Carbon Tetrachloride	ND	0.0010	mg/L							
Chlorobenzene	ND	0.0010	mg/L							
Chloroethane	ND	0.0020	mg/L							
Chloroform	ND	0.0010	mg/L							
Chloromethane	ND	0.0020	mg/L							
cis-1,2-Dichloroethene	ND	0.0010	mg/L							
cis-1,3-Dichloropropene	ND	0.0004	mg/L							

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0209

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ90864 - 5030B										
Dibromochloromethane	ND	0.0010	mg/L							
Dibromomethane	ND	0.0010	mg/L							
Dichlorodifluoromethane	ND	0.0020	mg/L							
Diethyl Ether	ND	0.0010	mg/L							
Di-isopropyl ether	ND	0.0010	mg/L							
Ethyl tertiary-butyl ether	ND	0.0010	mg/L							
Ethylbenzene	ND	0.0010	mg/L							
Hexachlorobutadiene	ND	0.0006	mg/L							
Hexachloroethane	ND	0.0010	mg/L							
Isopropylbenzene	ND	0.0010	mg/L							
Methyl tert-Butyl Ether	ND	0.0010	mg/L							
Methylene Chloride	ND	0.0020	mg/L							
Naphthalene	ND	0.0010	mg/L							
n-Butylbenzene	ND	0.0010	mg/L							
n-Propylbenzene	ND	0.0010	mg/L							
sec-Butylbenzene	ND	0.0010	mg/L							
Styrene	ND	0.0010	mg/L							
tert-Butylbenzene	ND	0.0010	mg/L							
Tertiary-amyl methyl ether	ND	0.0010	mg/L							
Tetrachloroethene	ND	0.0010	mg/L							
Tetrahydrofuran	ND	0.0050	mg/L							
Toluene	ND	0.0010	mg/L							
trans-1,2-Dichloroethene	ND	0.0010	mg/L							
trans-1,3-Dichloropropene	ND	0.0004	mg/L							
Trichloroethene	ND	0.0010	mg/L							
Trichlorofluoromethane	ND	0.0010	mg/L							
Vinyl Acetate	ND	0.0050	mg/L							
Vinyl Chloride	ND	0.0010	mg/L							
Xylene O	ND	0.0010	mg/L							
Xylene P,M	ND	0.0020	mg/L							
Surrogate: 1,2-Dichloroethane-d4	*0.0204*		mg/L	*0.02500*		*82*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0277*		mg/L	*0.02500*		*111*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0222*		mg/L	*0.02500*		*89*	*70-130*			
Surrogate: Toluene-d8	*0.0282*		mg/L	*0.02500*		*113*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	8.98		ug/L	10.00		90	70-130			
1,1,1-Trichloroethane	9.36		ug/L	10.00		94	70-130			
1,1,2,2-Tetrachloroethane	9.34		ug/L	10.00		93	70-130			
1,1,2-Trichloroethane	9.26		ug/L	10.00		93	70-130			
1,1-Dichloroethane	9.44		ug/L	10.00		94	70-130			
1,1-Dichloroethene	9.87		ug/L	10.00		99	70-130			
1,1-Dichloropropene	9.36		ug/L	10.00		94	70-130			
1,2,3-Trichlorobenzene	9.35		ug/L	10.00		94	70-130			
1,2,3-Trichloropropane	8.51		ug/L	10.00		85	70-130			
1,2,4-Trichlorobenzene	9.37		ug/L	10.00		94	70-130			

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0209

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ90864 - 5030B										
1,2,4-Trimethylbenzene	9.41		ug/L	10.00		94	70-130			
1,2-Dibromo-3-Chloropropane	9.15		ug/L	10.00		92	70-130			
1,2-Dibromoethane	9.14		ug/L	10.00		91	70-130			
1,2-Dichlorobenzene	9.13		ug/L	10.00		91	70-130			
1,2-Dichloroethane	9.43		ug/L	10.00		94	70-130			
1,2-Dichloropropane	9.35		ug/L	10.00		94	70-130			
1,3,5-Trimethylbenzene	9.39		ug/L	10.00		94	70-130			
1,3-Dichlorobenzene	9.14		ug/L	10.00		91	70-130			
1,3-Dichloropropane	9.59		ug/L	10.00		96	70-130			
1,4-Dichlorobenzene	9.49		ug/L	10.00		95	70-130			
1,4-Dioxane - Screen	228		ug/L	200.0		114	0-332			
1-Chlorohexane	9.16		ug/L	10.00		92	70-130			
2,2-Dichloropropane	9.26		ug/L	10.00		93	70-130			
2-Butanone	48.7		ug/L	50.00		97	70-130			
2-Chlorotoluene	9.24		ug/L	10.00		92	70-130			
2-Hexanone	48.0		ug/L	50.00		96	70-130			
4-Chlorotoluene	9.32		ug/L	10.00		93	70-130			
4-Isopropyltoluene	9.30		ug/L	10.00		93	70-130			
4-Methyl-2-Pentanone	47.5		ug/L	50.00		95	70-130			
Acetone	48.2		ug/L	50.00		96	70-130			
Benzene	9.27		ug/L	10.00		93	70-130			
Bromobenzene	9.35		ug/L	10.00		94	70-130			
Bromochloromethane	8.77		ug/L	10.00		88	70-130			
Bromodichloromethane	9.39		ug/L	10.00		94	70-130			
Bromoform	8.67		ug/L	10.00		87	70-130			
Bromomethane	8.14		ug/L	10.00		81	70-130			
Carbon Disulfide	8.76		ug/L	10.00		88	70-130			
Carbon Tetrachloride	8.95		ug/L	10.00		90	70-130			
Chlorobenzene	9.11		ug/L	10.00		91	70-130			
Chloroethane	7.90		ug/L	10.00		79	70-130			
Chloroform	9.58		ug/L	10.00		96	70-130			
Chloromethane	8.24		ug/L	10.00		82	70-130			
cis-1,2-Dichloroethene	9.47		ug/L	10.00		95	70-130			
cis-1,3-Dichloropropene	9.11		ug/L	10.00		91	70-130			
Dibromochloromethane	8.76		ug/L	10.00		88	70-130			
Dibromomethane	9.48		ug/L	10.00		95	70-130			
Dichlorodifluoromethane	7.39		ug/L	10.00		74	70-130			
Diethyl Ether	8.59		ug/L	10.00		86	70-130			
Di-isopropyl ether	9.83		ug/L	10.00		98	70-130			
Ethyl tertiary-butyl ether	9.11		ug/L	10.00		91	70-130			
Ethylbenzene	9.35		ug/L	10.00		94	70-130			
Hexachlorobutadiene	9.75		ug/L	10.00		98	70-130			
Hexachloroethane	7.89		ug/L	10.00		79	70-130			
Isopropylbenzene	9.28		ug/L	10.00		93	70-130			
Methyl tert-Butyl Ether	8.89		ug/L	10.00		89	70-130			

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0209

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ90864 - 5030B										
Methylene Chloride	9.24		ug/L	10.00		92	70-130			
Naphthalene	8.91		ug/L	10.00		89	70-130			
n-Butylbenzene	9.45		ug/L	10.00		94	70-130			
n-Propylbenzene	9.28		ug/L	10.00		93	70-130			
sec-Butylbenzene	9.24		ug/L	10.00		92	70-130			
Styrene	9.04		ug/L	10.00		90	70-130			
tert-Butylbenzene	9.09		ug/L	10.00		91	70-130			
Tertiary-amyl methyl ether	9.53		ug/L	10.00		95	70-130			
Tetrachloroethene	7.66		ug/L	10.00		77	70-130			
Tetrahydrofuran	8.70		ug/L	10.00		87	70-130			
Toluene	9.17		ug/L	10.00		92	70-130			
trans-1,2-Dichloroethene	9.68		ug/L	10.00		97	70-130			
trans-1,3-Dichloropropene	9.02		ug/L	10.00		90	70-130			
Trichloroethene	9.02		ug/L	10.00		90	70-130			
Trichlorofluoromethane	9.40		ug/L	10.00		94	70-130			
Vinyl Acetate	10.7		ug/L	10.00		107	70-130			
Vinyl Chloride	8.71		ug/L	10.00		87	70-130			
Xylene O	9.14		ug/L	10.00		91	70-130			
Xylene P,M	18.5		ug/L	20.00		93	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0251*		mg/L	*0.02500*		*100*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0246*		mg/L	*0.02500*		*99*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0248*		mg/L	*0.02500*		*99*	*70-130*			
Surrogate: Toluene-d8	*0.0249*		mg/L	*0.02500*		*99*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	8.86		ug/L	10.00		89	70-130	1	25	
1,1,1-Trichloroethane	9.25		ug/L	10.00		92	70-130	1	25	
1,1,2,2-Tetrachloroethane	8.96		ug/L	10.00		90	70-130	4	25	
1,1,2-Trichloroethane	9.16		ug/L	10.00		92	70-130	1	25	
1,1-Dichloroethane	9.43		ug/L	10.00		94	70-130	0.1	25	
1,1-Dichloroethene	9.86		ug/L	10.00		99	70-130	0.1	25	
1,1-Dichloropropene	9.26		ug/L	10.00		93	70-130	1	25	
1,2,3-Trichlorobenzene	8.96		ug/L	10.00		90	70-130	4	25	
1,2,3-Trichloropropane	8.03		ug/L	10.00		80	70-130	6	25	
1,2,4-Trichlorobenzene	8.95		ug/L	10.00		90	70-130	5	25	
1,2,4-Trimethylbenzene	9.38		ug/L	10.00		94	70-130	0.3	25	
1,2-Dibromo-3-Chloropropane	8.71		ug/L	10.00		87	70-130	5	25	
1,2-Dibromoethane	8.86		ug/L	10.00		89	70-130	3	25	
1,2-Dichlorobenzene	8.87		ug/L	10.00		89	70-130	3	25	
1,2-Dichloroethane	9.19		ug/L	10.00		92	70-130	3	25	
1,2-Dichloropropane	9.24		ug/L	10.00		92	70-130	1	25	
1,3,5-Trimethylbenzene	9.06		ug/L	10.00		91	70-130	4	25	
1,3-Dichlorobenzene	9.02		ug/L	10.00		90	70-130	1	25	
1,3-Dichloropropane	9.39		ug/L	10.00		94	70-130	2	25	
1,4-Dichlorobenzene	9.08		ug/L	10.00		91	70-130	4	25	
1,4-Dioxane - Screen	216		ug/L	200.0		108	0-332	5	200	

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0209

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ90864 - 5030B										
1-Chlorohexane	9.26		ug/L	10.00		93	70-130	1	25	
2,2-Dichloropropane	9.14		ug/L	10.00		91	70-130	1	25	
2-Butanone	47.9		ug/L	50.00		96	70-130	2	25	
2-Chlorotoluene	8.95		ug/L	10.00		90	70-130	3	25	
2-Hexanone	46.8		ug/L	50.00		94	70-130	3	25	
4-Chlorotoluene	9.01		ug/L	10.00		90	70-130	3	25	
4-Isopropyltoluene	9.03		ug/L	10.00		90	70-130	3	25	
4-Methyl-2-Pentanone	45.9		ug/L	50.00		92	70-130	3	25	
Acetone	46.7		ug/L	50.00		93	70-130	3	25	
Benzene	9.06		ug/L	10.00		91	70-130	2	25	
Bromobenzene	9.17		ug/L	10.00		92	70-130	2	25	
Bromochloromethane	8.74		ug/L	10.00		87	70-130	0.3	25	
Bromodichloromethane	9.29		ug/L	10.00		93	70-130	1	25	
Bromoform	8.33		ug/L	10.00		83	70-130	4	25	
Bromomethane	7.95		ug/L	10.00		80	70-130	2	25	
Carbon Disulfide	8.57		ug/L	10.00		86	70-130	2	25	
Carbon Tetrachloride	8.92		ug/L	10.00		89	70-130	0.3	25	
Chlorobenzene	9.03		ug/L	10.00		90	70-130	0.9	25	
Chloroethane	7.99		ug/L	10.00		80	70-130	1	25	
Chloroform	9.32		ug/L	10.00		93	70-130	3	25	
Chloromethane	8.01		ug/L	10.00		80	70-130	3	25	
cis-1,2-Dichloroethene	9.32		ug/L	10.00		93	70-130	2	25	
cis-1,3-Dichloropropene	8.94		ug/L	10.00		89	70-130	2	25	
Dibromochloromethane	8.61		ug/L	10.00		86	70-130	2	25	
Dibromomethane	9.14		ug/L	10.00		91	70-130	4	25	
Dichlorodifluoromethane	7.04		ug/L	10.00		70	70-130	5	25	
Diethyl Ether	8.29		ug/L	10.00		83	70-130	4	25	
Di-isopropyl ether	9.59		ug/L	10.00		96	70-130	2	25	
Ethyl tertiary-butyl ether	8.91		ug/L	10.00		89	70-130	2	25	
Ethylbenzene	9.18		ug/L	10.00		92	70-130	2	25	
Hexachlorobutadiene	9.12		ug/L	10.00		91	70-130	7	25	
Hexachloroethane	7.71		ug/L	10.00		77	70-130	2	25	
Isopropylbenzene	8.86		ug/L	10.00		89	70-130	5	25	
Methyl tert-Butyl Ether	8.80		ug/L	10.00		88	70-130	1	25	
Methylene Chloride	9.20		ug/L	10.00		92	70-130	0.4	25	
Naphthalene	8.46		ug/L	10.00		85	70-130	5	25	
n-Butylbenzene	9.05		ug/L	10.00		90	70-130	4	25	
n-Propylbenzene	9.08		ug/L	10.00		91	70-130	2	25	
sec-Butylbenzene	8.92		ug/L	10.00		89	70-130	4	25	
Styrene	8.89		ug/L	10.00		89	70-130	2	25	
tert-Butylbenzene	8.94		ug/L	10.00		89	70-130	2	25	
Tertiary-amyl methyl ether	9.32		ug/L	10.00		93	70-130	2	25	
Tetrachloroethene	7.61		ug/L	10.00		76	70-130	0.7	25	
Tetrahydrofuran	8.24		ug/L	10.00		82	70-130	5	25	
Toluene	9.11		ug/L	10.00		91	70-130	0.7	25	

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0209

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ90864 - 5030B										
trans-1,2-Dichloroethene	9.51		ug/L	10.00		95	70-130	2	25	
trans-1,3-Dichloropropene	8.72		ug/L	10.00		87	70-130	3	25	
Trichloroethene	8.99		ug/L	10.00		90	70-130	0.3	25	
Trichlorofluoromethane	9.25		ug/L	10.00		92	70-130	2	25	
Vinyl Acetate	10.4		ug/L	10.00		104	70-130	4	25	
Vinyl Chloride	8.56		ug/L	10.00		86	70-130	2	25	
Xylene O	9.00		ug/L	10.00		90	70-130	2	25	
Xylene P,M	18.2		ug/L	20.00		91	70-130	2	25	
Surrogate: 1,2-Dichloroethane-d4	*0.0249*		mg/L	*0.02500*		*100*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0247*		mg/L	*0.02500*		*99*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0249*		mg/L	*0.02500*		*100*	*70-130*			
Surrogate: Toluene-d8	*0.0247*		mg/L	*0.02500*		*99*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport ESS Laboratory Work Order: 19J0209

Notes and Definitions

U	Analyte included in the analysis, but not detected
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0209

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Sage Environmental, Inc. - ML/ML

Shipped/Delivered Via: ESS Courier

ESS Project ID: 19J0209
Date Received: 10/7/2019
Project Due Date: 10/15/2019
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 0.4 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	395865	Yes	No	Yes	VOA Vial - HCl	HCl	
01	395866	Yes	No	Yes	VOA Vial - HCl	HCl	
01	395867	Yes	No	Yes	VOA Vial - HCl	HCl	
02	395862	Yes	No	Yes	VOA Vial - HCl	HCl	
02	395863	Yes	No	Yes	VOA Vial - HCl	HCl	
02	395864	Yes	No	Yes	VOA Vial - HCl	HCl	
03	395859	Yes	No	Yes	VOA Vial - HCl	HCl	
03	395860	Yes	No	Yes	VOA Vial - HCl	HCl	
03	395861	Yes	No	Yes	VOA Vial - HCl	HCl	

2nd Review

Were all containers scanned into storage/lab? Initials AL Yes / No
Are barcode labels on correct containers? Yes / No / NA
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: Date & Time: 10/7/19 1451
Reviewed

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Sage Environmental, Inc. - ML/ML

ESS Project ID: 19J0209

Date Received: 10/7/2019

By: [signature] Date & Time: 10/7/19 1615

Delivered By: [signature] 10/7/19 1615

ESS Laboratory
Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab # 19J0209

Turn Time: 5-Day Rush
Regulatory State
Is this project for any of the following?: ○CT RCP ○MA MCP ○RGP
Reporting Limits: RIDEM GB
Electonic Deliverables: ☐Limit Checker ☐Standard Excel ☐Other (Please Specify →)

Company Name	Project #	Project Name
SAGE ENVIRONMENTAL	52935	WAITES WHARF, Newport

Contact Person	Address
DAN BOYNES	172 ARMISTICE BLVD

City	State	Zip Code	PO #
PAWTUCKET	RI	02860	

Telephone Number	FAX Number	Email Address

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	Analysis: VOCs
1	10/4		G	GW	SE-104 (MW)	X
2	↓		↓	↓	SE-105 (MW)	X
3	↓		↓	↓	SE-106 (MW)	X

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer G - Glass O-Other P-Poly S-Sterile V-Vial — V →
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 7 →
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 2 →
Number of Containers per Sample: 3 →

Laboratory Use Only
Cooler Present: ✓
Seals Intact: Ice
Cooler Temperature: 0.4 °C

Sampled by : D. Boynes
Comments: Please specify "Other" preservative and containers types in this space

Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
10/7 10:00	10/7/19 10:00	10/7/19 11:09	10/7/19 1258
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)

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CERTIFICATE OF ANALYSIS

Dan Boynes
Sage Environmental, inc.
172 Armistice Boulevard
Pawtucket, RI 02860

RE: Waites Wharf Newport (S2935)
ESS Laboratory Work Order Number: 19J0210

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 1:31 pm, Oct 15, 2019

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0210

SAMPLE RECEIPT

The following samples were received on October 07, 2019 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
19J0210-01	SE-101 MW	Ground Water	8260B
19J0210-02	SE-102 MW	Ground Water	8260B
19J0210-03	SE-103 MW	Ground Water	8260B

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0210

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0210

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-101 MW
Date Sampled: 10/04/19 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19J0210
ESS Laboratory Sample ID: 19J0210-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
1-Chlorohexane	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
2-Butanone	ND (0.0100)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
2-Chlorotoluene	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
2-Hexanone	ND (0.0100)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
4-Chlorotoluene	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Acetone	ND (0.0100)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Benzene	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Bromobenzene	ND (0.0020)		8260B		1	10/09/19 2:26	C9J0167	CJ90864

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-101 MW
Date Sampled: 10/04/19 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19J0210
ESS Laboratory Sample ID: 19J0210-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Bromodichloromethane	ND (0.0006)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Bromoform	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Bromomethane	ND (0.0020)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Carbon Disulfide	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Chlorobenzene	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Chloroethane	ND (0.0020)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Chloroform	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Chloromethane	ND (0.0020)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Dibromochloromethane	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Dibromomethane	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Diethyl Ether	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Di-isopropyl ether	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Ethylbenzene	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Hexachloroethane	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Isopropylbenzene	**0.0047** (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Methylene Chloride	ND (0.0020)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Naphthalene	**0.0018** (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
n-Butylbenzene	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
n-Propylbenzene	**0.0028** (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
sec-Butylbenzene	**0.0033** (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Styrene	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
tert-Butylbenzene	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Tetrachloroethene	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-101 MW
Date Sampled: 10/04/19 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19J0210
ESS Laboratory Sample ID: 19J0210-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Toluene	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Trichloroethene	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Vinyl Acetate	ND (0.0050)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Vinyl Chloride	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Xylene O	ND (0.0010)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Xylene P,M	ND (0.0020)		8260B		1	10/09/19 2:26	C9J0167	CJ90864
Xylenes (Total)	ND (0.00200)		8260B		1	10/09/19 2:26		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*102 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*98 %*		*70-130*
Surrogate: Dibromofluoromethane	*97 %*		*70-130*
Surrogate: Toluene-d8	*98 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-102 MW
Date Sampled: 10/04/19 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19J0210
ESS Laboratory Sample ID: 19J0210-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
1-Chlorohexane	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
2-Butanone	ND (0.0100)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
2-Chlorotoluene	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
2-Hexanone	ND (0.0100)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
4-Chlorotoluene	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Acetone	ND (0.0100)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Benzene	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Bromobenzene	ND (0.0020)		8260B		1	10/09/19 1:08	C9J0167	CJ90864

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-102 MW
Date Sampled: 10/04/19 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19J0210
ESS Laboratory Sample ID: 19J0210-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Bromodichloromethane	ND (0.0006)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Bromoform	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Bromomethane	ND (0.0020)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Carbon Disulfide	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Chlorobenzene	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Chloroethane	ND (0.0020)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Chloroform	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Chloromethane	ND (0.0020)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Dibromochloromethane	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Dibromomethane	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Diethyl Ether	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Di-isopropyl ether	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Ethylbenzene	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Hexachloroethane	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Isopropylbenzene	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Methylene Chloride	ND (0.0020)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Naphthalene	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
n-Butylbenzene	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
n-Propylbenzene	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
sec-Butylbenzene	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Styrene	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
tert-Butylbenzene	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Tetrachloroethene	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-102 MW
Date Sampled: 10/04/19 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19J0210
ESS Laboratory Sample ID: 19J0210-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Toluene	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Trichloroethene	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Vinyl Acetate	ND (0.0050)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Vinyl Chloride	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Xylene O	ND (0.0010)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Xylene P,M	ND (0.0020)		8260B		1	10/09/19 1:08	C9J0167	CJ90864
Xylenes (Total)	ND (0.00200)		8260B		1	10/09/19 1:08		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*101 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*98 %*		*70-130*
Surrogate: Dibromofluoromethane	*98 %*		*70-130*
Surrogate: Toluene-d8	*99 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-103 MW
Date Sampled: 10/04/19 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19J0210
ESS Laboratory Sample ID: 19J0210-03
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
1,1-Dichloroethane	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
1,1-Dichloroethene	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
1,1-Dichloropropene	ND (0.0020)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
1,2-Dibromoethane	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
1,2-Dichloroethane	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
1,2-Dichloropropane	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
1,3-Dichloropropane	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
1,4-Dioxane - Screen	ND (0.500)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
1-Chlorohexane	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
2,2-Dichloropropane	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
2-Butanone	ND (0.0100)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
2-Chlorotoluene	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
2-Hexanone	ND (0.0100)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
4-Chlorotoluene	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
4-Isopropyltoluene	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
4-Methyl-2-Pentanone	ND (0.0250)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Acetone	ND (0.0100)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Benzene	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Bromobenzene	ND (0.0020)		8260B		1	10/09/19 1:34	C9J0167	CJ90864

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-103 MW
Date Sampled: 10/04/19 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19J0210
ESS Laboratory Sample ID: 19J0210-03
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Bromodichloromethane	ND (0.0006)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Bromoform	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Bromomethane	ND (0.0020)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Carbon Disulfide	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Carbon Tetrachloride	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Chlorobenzene	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Chloroethane	ND (0.0020)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Chloroform	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Chloromethane	ND (0.0020)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Dibromochloromethane	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Dibromomethane	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Dichlorodifluoromethane	ND (0.0020)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Diethyl Ether	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Di-isopropyl ether	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Ethylbenzene	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Hexachlorobutadiene	ND (0.0006)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Hexachloroethane	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Isopropylbenzene	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Methylene Chloride	ND (0.0020)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Naphthalene	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
n-Butylbenzene	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
n-Propylbenzene	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
sec-Butylbenzene	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Styrene	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
tert-Butylbenzene	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Tetrachloroethene	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport
Client Sample ID: SE-103 MW
Date Sampled: 10/04/19 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 19J0210
ESS Laboratory Sample ID: 19J0210-03
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Toluene	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Trichloroethene	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Trichlorofluoromethane	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Vinyl Acetate	ND (0.0050)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Vinyl Chloride	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Xylene O	ND (0.0010)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Xylene P,M	ND (0.0020)		8260B		1	10/09/19 1:34	C9J0167	CJ90864
Xylenes (Total)	ND (0.00200)		8260B		1	10/09/19 1:34		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*101 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*98 %*		*70-130*
Surrogate: Dibromofluoromethane	*97 %*		*70-130*
Surrogate: Toluene-d8	*99 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0210

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ90864 - 5030B										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0010	mg/L							
1,1,1-Trichloroethane	ND	0.0010	mg/L							
1,1,2,2-Tetrachloroethane	ND	0.0005	mg/L							
1,1,2-Trichloroethane	ND	0.0010	mg/L							
1,1-Dichloroethane	ND	0.0010	mg/L							
1,1-Dichloroethene	ND	0.0010	mg/L							
1,1-Dichloropropene	ND	0.0020	mg/L							
1,2,3-Trichlorobenzene	ND	0.0010	mg/L							
1,2,3-Trichloropropane	ND	0.0010	mg/L							
1,2,4-Trichlorobenzene	ND	0.0010	mg/L							
1,2,4-Trimethylbenzene	ND	0.0010	mg/L							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/L							
1,2-Dibromoethane	ND	0.0010	mg/L							
1,2-Dichlorobenzene	ND	0.0010	mg/L							
1,2-Dichloroethane	ND	0.0010	mg/L							
1,2-Dichloropropane	ND	0.0010	mg/L							
1,3,5-Trimethylbenzene	ND	0.0010	mg/L							
1,3-Dichlorobenzene	ND	0.0010	mg/L							
1,3-Dichloropropane	ND	0.0010	mg/L							
1,4-Dichlorobenzene	ND	0.0010	mg/L							
1,4-Dioxane - Screen	ND	0.500	mg/L							
1-Chlorohexane	ND	0.0010	mg/L							
2,2-Dichloropropane	ND	0.0010	mg/L							
2-Butanone	ND	0.0100	mg/L							
2-Chlorotoluene	ND	0.0010	mg/L							
2-Hexanone	ND	0.0100	mg/L							
4-Chlorotoluene	ND	0.0010	mg/L							
4-Isopropyltoluene	ND	0.0010	mg/L							
4-Methyl-2-Pentanone	ND	0.0250	mg/L							
Acetone	ND	0.0100	mg/L							
Benzene	ND	0.0010	mg/L							
Bromobenzene	ND	0.0020	mg/L							
Bromochloromethane	ND	0.0010	mg/L							
Bromodichloromethane	ND	0.0006	mg/L							
Bromoform	ND	0.0010	mg/L							
Bromomethane	ND	0.0020	mg/L							
Carbon Disulfide	ND	0.0010	mg/L							
Carbon Tetrachloride	ND	0.0010	mg/L							
Chlorobenzene	ND	0.0010	mg/L							
Chloroethane	ND	0.0020	mg/L							
Chloroform	ND	0.0010	mg/L							
Chloromethane	ND	0.0020	mg/L							
cis-1,2-Dichloroethene	ND	0.0010	mg/L							
cis-1,3-Dichloropropene	ND	0.0004	mg/L							

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0210

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ90864 - 5030B										
Dibromochloromethane	ND	0.0010	mg/L							
Dibromomethane	ND	0.0010	mg/L							
Dichlorodifluoromethane	ND	0.0020	mg/L							
Diethyl Ether	ND	0.0010	mg/L							
Di-isopropyl ether	ND	0.0010	mg/L							
Ethyl tertiary-butyl ether	ND	0.0010	mg/L							
Ethylbenzene	ND	0.0010	mg/L							
Hexachlorobutadiene	ND	0.0006	mg/L							
Hexachloroethane	ND	0.0010	mg/L							
Isopropylbenzene	ND	0.0010	mg/L							
Methyl tert-Butyl Ether	ND	0.0010	mg/L							
Methylene Chloride	ND	0.0020	mg/L							
Naphthalene	ND	0.0010	mg/L							
n-Butylbenzene	ND	0.0010	mg/L							
n-Propylbenzene	ND	0.0010	mg/L							
sec-Butylbenzene	ND	0.0010	mg/L							
Styrene	ND	0.0010	mg/L							
tert-Butylbenzene	ND	0.0010	mg/L							
Tertiary-amyl methyl ether	ND	0.0010	mg/L							
Tetrachloroethene	ND	0.0010	mg/L							
Tetrahydrofuran	ND	0.0050	mg/L							
Toluene	ND	0.0010	mg/L							
trans-1,2-Dichloroethene	ND	0.0010	mg/L							
trans-1,3-Dichloropropene	ND	0.0004	mg/L							
Trichloroethene	ND	0.0010	mg/L							
Trichlorofluoromethane	ND	0.0010	mg/L							
Vinyl Acetate	ND	0.0050	mg/L							
Vinyl Chloride	ND	0.0010	mg/L							
Xylene O	ND	0.0010	mg/L							
Xylene P,M	ND	0.0020	mg/L							
Surrogate: 1,2-Dichloroethane-d4	*0.0204*		mg/L	*0.02500*		*82*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0277*		mg/L	*0.02500*		*111*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0222*		mg/L	*0.02500*		*89*	*70-130*			
Surrogate: Toluene-d8	*0.0282*		mg/L	*0.02500*		*113*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	8.98		ug/L	10.00		90	70-130			
1,1,1-Trichloroethane	9.36		ug/L	10.00		94	70-130			
1,1,2,2-Tetrachloroethane	9.34		ug/L	10.00		93	70-130			
1,1,2-Trichloroethane	9.26		ug/L	10.00		93	70-130			
1,1-Dichloroethane	9.44		ug/L	10.00		94	70-130			
1,1-Dichloroethene	9.87		ug/L	10.00		99	70-130			
1,1-Dichloropropene	9.36		ug/L	10.00		94	70-130			
1,2,3-Trichlorobenzene	9.35		ug/L	10.00		94	70-130			
1,2,3-Trichloropropane	8.51		ug/L	10.00		85	70-130			
1,2,4-Trichlorobenzene	9.37		ug/L	10.00		94	70-130			

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0210

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ90864 - 5030B										
1,2,4-Trimethylbenzene	9.41		ug/L	10.00		94	70-130			
1,2-Dibromo-3-Chloropropane	9.15		ug/L	10.00		92	70-130			
1,2-Dibromoethane	9.14		ug/L	10.00		91	70-130			
1,2-Dichlorobenzene	9.13		ug/L	10.00		91	70-130			
1,2-Dichloroethane	9.43		ug/L	10.00		94	70-130			
1,2-Dichloropropane	9.35		ug/L	10.00		94	70-130			
1,3,5-Trimethylbenzene	9.39		ug/L	10.00		94	70-130			
1,3-Dichlorobenzene	9.14		ug/L	10.00		91	70-130			
1,3-Dichloropropane	9.59		ug/L	10.00		96	70-130			
1,4-Dichlorobenzene	9.49		ug/L	10.00		95	70-130			
1,4-Dioxane - Screen	228		ug/L	200.0		114	0-332			
1-Chlorohexane	9.16		ug/L	10.00		92	70-130			
2,2-Dichloropropane	9.26		ug/L	10.00		93	70-130			
2-Butanone	48.7		ug/L	50.00		97	70-130			
2-Chlorotoluene	9.24		ug/L	10.00		92	70-130			
2-Hexanone	48.0		ug/L	50.00		96	70-130			
4-Chlorotoluene	9.32		ug/L	10.00		93	70-130			
4-Isopropyltoluene	9.30		ug/L	10.00		93	70-130			
4-Methyl-2-Pentanone	47.5		ug/L	50.00		95	70-130			
Acetone	48.2		ug/L	50.00		96	70-130			
Benzene	9.27		ug/L	10.00		93	70-130			
Bromobenzene	9.35		ug/L	10.00		94	70-130			
Bromochloromethane	8.77		ug/L	10.00		88	70-130			
Bromodichloromethane	9.39		ug/L	10.00		94	70-130			
Bromoform	8.67		ug/L	10.00		87	70-130			
Bromomethane	8.14		ug/L	10.00		81	70-130			
Carbon Disulfide	8.76		ug/L	10.00		88	70-130			
Carbon Tetrachloride	8.95		ug/L	10.00		90	70-130			
Chlorobenzene	9.11		ug/L	10.00		91	70-130			
Chloroethane	7.90		ug/L	10.00		79	70-130			
Chloroform	9.58		ug/L	10.00		96	70-130			
Chloromethane	8.24		ug/L	10.00		82	70-130			
cis-1,2-Dichloroethene	9.47		ug/L	10.00		95	70-130			
cis-1,3-Dichloropropene	9.11		ug/L	10.00		91	70-130			
Dibromochloromethane	8.76		ug/L	10.00		88	70-130			
Dibromomethane	9.48		ug/L	10.00		95	70-130			
Dichlorodifluoromethane	7.39		ug/L	10.00		74	70-130			
Diethyl Ether	8.59		ug/L	10.00		86	70-130			
Di-isopropyl ether	9.83		ug/L	10.00		98	70-130			
Ethyl tertiary-butyl ether	9.11		ug/L	10.00		91	70-130			
Ethylbenzene	9.35		ug/L	10.00		94	70-130			
Hexachlorobutadiene	9.75		ug/L	10.00		98	70-130			
Hexachloroethane	7.89		ug/L	10.00		79	70-130			
Isopropylbenzene	9.28		ug/L	10.00		93	70-130			
Methyl tert-Butyl Ether	8.89		ug/L	10.00		89	70-130			

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0210

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ90864 - 5030B										
Methylene Chloride	9.24		ug/L	10.00		92	70-130			
Naphthalene	8.91		ug/L	10.00		89	70-130			
n-Butylbenzene	9.45		ug/L	10.00		94	70-130			
n-Propylbenzene	9.28		ug/L	10.00		93	70-130			
sec-Butylbenzene	9.24		ug/L	10.00		92	70-130			
Styrene	9.04		ug/L	10.00		90	70-130			
tert-Butylbenzene	9.09		ug/L	10.00		91	70-130			
Tertiary-amyl methyl ether	9.53		ug/L	10.00		95	70-130			
Tetrachloroethene	7.66		ug/L	10.00		77	70-130			
Tetrahydrofuran	8.70		ug/L	10.00		87	70-130			
Toluene	9.17		ug/L	10.00		92	70-130			
trans-1,2-Dichloroethene	9.68		ug/L	10.00		97	70-130			
trans-1,3-Dichloropropene	9.02		ug/L	10.00		90	70-130			
Trichloroethene	9.02		ug/L	10.00		90	70-130			
Trichlorofluoromethane	9.40		ug/L	10.00		94	70-130			
Vinyl Acetate	10.7		ug/L	10.00		107	70-130			
Vinyl Chloride	8.71		ug/L	10.00		87	70-130			
Xylene O	9.14		ug/L	10.00		91	70-130			
Xylene P,M	18.5		ug/L	20.00		93	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0251*		mg/L	*0.02500*		*100*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0246*		mg/L	*0.02500*		*99*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0248*		mg/L	*0.02500*		*99*	*70-130*			
Surrogate: Toluene-d8	*0.0249*		mg/L	*0.02500*		*99*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	8.86		ug/L	10.00		89	70-130	1	25	
1,1,1-Trichloroethane	9.25		ug/L	10.00		92	70-130	1	25	
1,1,2,2-Tetrachloroethane	8.96		ug/L	10.00		90	70-130	4	25	
1,1,2-Trichloroethane	9.16		ug/L	10.00		92	70-130	1	25	
1,1-Dichloroethane	9.43		ug/L	10.00		94	70-130	0.1	25	
1,1-Dichloroethene	9.86		ug/L	10.00		99	70-130	0.1	25	
1,1-Dichloropropene	9.26		ug/L	10.00		93	70-130	1	25	
1,2,3-Trichlorobenzene	8.96		ug/L	10.00		90	70-130	4	25	
1,2,3-Trichloropropane	8.03		ug/L	10.00		80	70-130	6	25	
1,2,4-Trichlorobenzene	8.95		ug/L	10.00		90	70-130	5	25	
1,2,4-Trimethylbenzene	9.38		ug/L	10.00		94	70-130	0.3	25	
1,2-Dibromo-3-Chloropropane	8.71		ug/L	10.00		87	70-130	5	25	
1,2-Dibromoethane	8.86		ug/L	10.00		89	70-130	3	25	
1,2-Dichlorobenzene	8.87		ug/L	10.00		89	70-130	3	25	
1,2-Dichloroethane	9.19		ug/L	10.00		92	70-130	3	25	
1,2-Dichloropropane	9.24		ug/L	10.00		92	70-130	1	25	
1,3,5-Trimethylbenzene	9.06		ug/L	10.00		91	70-130	4	25	
1,3-Dichlorobenzene	9.02		ug/L	10.00		90	70-130	1	25	
1,3-Dichloropropane	9.39		ug/L	10.00		94	70-130	2	25	
1,4-Dichlorobenzene	9.08		ug/L	10.00		91	70-130	4	25	
1,4-Dioxane - Screen	216		ug/L	200.0		108	0-332	5	200	

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0210

Quality Control Data

8260B Volatile Organic Compounds

Batch CJ90864 - 5030B

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
1-Chlorohexane	9.26		ug/L	10.00		93	70-130	1	25	
2,2-Dichloropropane	9.14		ug/L	10.00		91	70-130	1	25	
2-Butanone	47.9		ug/L	50.00		96	70-130	2	25	
2-Chlorotoluene	8.95		ug/L	10.00		90	70-130	3	25	
2-Hexanone	46.8		ug/L	50.00		94	70-130	3	25	
4-Chlorotoluene	9.01		ug/L	10.00		90	70-130	3	25	
4-Isopropyltoluene	9.03		ug/L	10.00		90	70-130	3	25	
4-Methyl-2-Pentanone	45.9		ug/L	50.00		92	70-130	3	25	
Acetone	46.7		ug/L	50.00		93	70-130	3	25	
Benzene	9.06		ug/L	10.00		91	70-130	2	25	
Bromobenzene	9.17		ug/L	10.00		92	70-130	2	25	
Bromochloromethane	8.74		ug/L	10.00		87	70-130	0.3	25	
Bromodichloromethane	9.29		ug/L	10.00		93	70-130	1	25	
Bromoform	8.33		ug/L	10.00		83	70-130	4	25	
Bromomethane	7.95		ug/L	10.00		80	70-130	2	25	
Carbon Disulfide	8.57		ug/L	10.00		86	70-130	2	25	
Carbon Tetrachloride	8.92		ug/L	10.00		89	70-130	0.3	25	
Chlorobenzene	9.03		ug/L	10.00		90	70-130	0.9	25	
Chloroethane	7.99		ug/L	10.00		80	70-130	1	25	
Chloroform	9.32		ug/L	10.00		93	70-130	3	25	
Chloromethane	8.01		ug/L	10.00		80	70-130	3	25	
cis-1,2-Dichloroethene	9.32		ug/L	10.00		93	70-130	2	25	
cis-1,3-Dichloropropene	8.94		ug/L	10.00		89	70-130	2	25	
Dibromochloromethane	8.61		ug/L	10.00		86	70-130	2	25	
Dibromomethane	9.14		ug/L	10.00		91	70-130	4	25	
Dichlorodifluoromethane	7.04		ug/L	10.00		70	70-130	5	25	
Diethyl Ether	8.29		ug/L	10.00		83	70-130	4	25	
Di-isopropyl ether	9.59		ug/L	10.00		96	70-130	2	25	
Ethyl tertiary-butyl ether	8.91		ug/L	10.00		89	70-130	2	25	
Ethylbenzene	9.18		ug/L	10.00		92	70-130	2	25	
Hexachlorobutadiene	9.12		ug/L	10.00		91	70-130	7	25	
Hexachloroethane	7.71		ug/L	10.00		77	70-130	2	25	
Isopropylbenzene	8.86		ug/L	10.00		89	70-130	5	25	
Methyl tert-Butyl Ether	8.80		ug/L	10.00		88	70-130	1	25	
Methylene Chloride	9.20		ug/L	10.00		92	70-130	0.4	25	
Naphthalene	8.46		ug/L	10.00		85	70-130	5	25	
n-Butylbenzene	9.05		ug/L	10.00		90	70-130	4	25	
n-Propylbenzene	9.08		ug/L	10.00		91	70-130	2	25	
sec-Butylbenzene	8.92		ug/L	10.00		89	70-130	4	25	
Styrene	8.89		ug/L	10.00		89	70-130	2	25	
tert-Butylbenzene	8.94		ug/L	10.00		89	70-130	2	25	
Tertiary-amyl methyl ether	9.32		ug/L	10.00		93	70-130	2	25	
Tetrachloroethene	7.61		ug/L	10.00		76	70-130	0.7	25	
Tetrahydrofuran	8.24		ug/L	10.00		82	70-130	5	25	
Toluene	9.11		ug/L	10.00		91	70-130	0.7	25	

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0210

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch CJ90864 - 5030B										
trans-1,2-Dichloroethene	9.51		ug/L	10.00		95	70-130	2	25	
trans-1,3-Dichloropropene	8.72		ug/L	10.00		87	70-130	3	25	
Trichloroethene	8.99		ug/L	10.00		90	70-130	0.3	25	
Trichlorofluoromethane	9.25		ug/L	10.00		92	70-130	2	25	
Vinyl Acetate	10.4		ug/L	10.00		104	70-130	4	25	
Vinyl Chloride	8.56		ug/L	10.00		86	70-130	2	25	
Xylene O	9.00		ug/L	10.00		90	70-130	2	25	
Xylene P,M	18.2		ug/L	20.00		91	70-130	2	25	
Surrogate: 1,2-Dichloroethane-d4	*0.0249*		mg/L	*0.02500*		*100*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0247*		mg/L	*0.02500*		*99*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0249*		mg/L	*0.02500*		*100*	*70-130*			
Surrogate: Toluene-d8	*0.0247*		mg/L	*0.02500*		*99*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0210

Notes and Definitions

U	Analyte included in the analysis, but not detected
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probably Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: Sage Environmental, inc.
Client Project ID: Waites Wharf Newport

ESS Laboratory Work Order: 19J0210

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

United States Department of Agriculture Soil Permit: P330-12-00139

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Sage Environmental, Inc. - ML/ML

Shipped/Delivered Via: ESS Courier

ESS Project ID: 19J0210
Date Received: 10/7/2019
Project Due Date: 10/15/2019
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 0.4 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

11. Any Subcontracting needed? Yes / No
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / No
    a. Air bubbles in aqueous VOAs? Yes / No / NA
    b. Does methanol cover soil completely? Yes / No / NA
13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
01	395874	Yes	No	Yes	VOA Vial - HCl	HCl	
01	395875	Yes	No	Yes	VOA Vial - HCl	HCl	
01	395876	Yes	No	Yes	VOA Vial - HCl	HCl	
02	395871	Yes	No	Yes	VOA Vial - HCl	HCl	
02	395872	Yes	No	Yes	VOA Vial - HCl	HCl	
02	395873	Yes	No	Yes	VOA Vial - HCl	HCl	
03	395868	Yes	No	Yes	VOA Vial - HCl	HCl	
03	395869	Yes	No	Yes	VOA Vial - HCl	HCl	
03	395870	Yes	No	Yes	VOA Vial - HCl	HCl	

2nd Review

Were all containers scanned into storage/lab? Initials: LC
Are barcode labels on correct containers? Yes / No
Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA
Are all Hex Chrome stickers attached? Yes / No / NA
Are all QC stickers attached? Yes / No / NA
Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By:
Reviewed By: Date & Time: 10/7/19 1457

ESS Laboratory Sample and Cooler Receipt Checklist

Client: Sage Environmental, Inc. - ML/ML

ESS Project ID: 19J0210

Date Received: 10/7/2019

By: [signature] Date & Time: 10/7/19 1616

Delivered By: [signature] 10/7/19 1616

ESS Laboratory

Division of Thielsch Engineering, Inc.
185 Frances Avenue, Cranston RI 02910
Tel. (401) 461-7181 Fax (401) 461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab # 19J0210

Turn Time: 5-Day Rush
Regulatory State
Is this project for any of the following?: ○CT RCP ○MA MCP ○RGP

Reporting Limits: RIDEM GB

Electonic Deliverables: ☐Limit Checker ☐Standard Excel ☐Other (Please Specify →)

Company Name	Project #	Project Name
SAGE ENVIRONMENTAL	52935	WAITES LJHARF, NEWPORT

Contact Person	Address
DAN BOYNES	172 ARMISTICE BLVD

City	State	Zip Code	PO #
PAWTUCKET	RI	02860	

Telephone Number	FAX Number	Email Address

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	Analysis: VOCs
1	10/4		G	GW	SE-101 (MW)	X
2	↓		↓	↓	SE-102 (MW)	X
3	↓		↓	↓	SE-103 (MW)	X

Container Type: AC-Air Cassette AG-Amber Glass B-BOD Bottle C-Cubitainer G - Glass O-Other P-Poly S-Sterile V-Vial — V →
Container Volume: 1-100 mL 2-2.5 gal 3-250 mL 4-300 mL 5-500 mL 6-1L 7-VOA 8-2 oz 9-4 oz 10-8 oz 11-Other* — 7 →
Preservation Code: 1-Non Preserved 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Methanol 7-Na2S2O3 8-ZnAce, NaOH 9-NH4Cl 10-DI H2O 11-Other* — 2 →
Number of Containers per Sample: 3 →

Laboratory Use Only
Cooler Present: ✓
Seals Intact:
Cooler Temperature: 0.4 Ice °C

Sampled by : D. Boynes
Comments: Please specify "Other" preservative and containers types in this space

Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)
10/7 10:00	10/7/19 10:00	10/7/19 11:09	HMasse 10/7/19 1208
Relinquished by: (Signature, Date & Time)	Received By: (Signature, Date & Time)	Relinquished By: (Signature, Date & Time)	Received By: (Signature, Date & Time)

ATTACHMENT 8

Appendix C
OFFICE OF WASTE MANAGEMENT – SITE REMEDIATION SECTION HAZARDOUS MATERIAL RELEASE NOTIFICATION FORM

THIS FORM IS NOT TO BE USED TO REPORT AN IMMINENT HAZARD

1. Notifier Information

Name: SAGE Environmental, Inc.
Address: 172 Armistice Boulevard, Pawtucket, RI

Phone: 401-723-9900

Email: sage@sage-enviro.com

Status: X Environmental Professional ___ Owner ___ Operator ___ Secured Creditor __Voluntary

If Environmental Professional is selected, please supply the follow information for your client below:

Name: Tommy Abruzese c/o/ Harbor Realty LLC
Address: 39 Agar Street, Yonkers, NY 10701

Phone: 914-714-4257

Email: agaroffice@aol.com, cc: davidmslye@gmail.com

Status: X Owner ___ Operator ___ Secured Creditor __Voluntary

2. Property Information

Name of Site:
Site Address: 20 West Extension & 16 Waites Wharf, Newport, RI

Plat/Lot Numbers: Assessor's Plat 32, Lots 248, 267 & 272

Approximate Acreage of Property: 0.47

Latitude/Longitude: 41.479298, -71.315292 & 41.479934, -71.315146

Site Land Usage Type: ___ Residential X Industrial/Commercial

Location of Release: Throughout Site, See attached figure

(Attach site sketch as necessary)

3. Release Information

Date of Discovery: October 10, 2019
Source: Urban fill
Release Media: Soil

Hazardous Materials and Concentrations: Select volatile organic compounds (VOCs), select polynuclear aromatic hydrcarbons (PAHs), Arsenic & Lead. See attached Cover Letter for concentrations & Analytical Reports

(Attach certificates of analysis as necessary)

Extent of Contamination: Throughout the Site

Approximate acreage of Contaminated Area: 0.47 Acres

4. Resource Information

Site Land Usage:	X Industrial/Commercial	___ Residential
Adjacent Land Usage:	X Industrial/Commercial	X Residential
Site Groundwater Class:	___ GA/GAA	X GB
Adjacent Groundwater Class: (if different than site groundwater classification within 500 feet)	___ GA/GAA	X GB

Nearest Surface Water or Wetland:

X Less Than 500 Feet ___ Greater Than 500 Feet

Potential for adverse impact No Yes/No

5. Potentially Responsible Parties

Name: Tommy Abruzese c/o Harbor Realty LLC
Address: 39 Agar Street, Yonkers, NY 10701

Status: X Owner ___ Operator ___ Other:

Name: _____
Address:

Status: ___ Owner ___ Operator ___ Other:

6. Measures Taken or Proposed to be Taken in Response to Release
Advancement of soil borings & groundwater monitoring wells. Sampling of surfacial soils and groundwater.

Check all that apply: X Site Investigation __Short-Term/Emergency __EXPRESS __ Dig & Haul

7. Other Significant Remarks about Release (Will a background determination be made?)
N/A

Signature: Daniel Boynes Date 11/04/2019

Title:

ATTACHMENT 9

SAGE
ENVIRONMENTAL

January 23, 2020

Mr. Joseph Martella
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, RI 02908

RE: ***Waites Wharf 2***
20 West Extension Street (Lot 267 – 20 West Extension LLC)
16 Waites Wharf (Lot 248 – TOMORL LLC)
Waites Wharf (Lot 272 – Waites Wharf Realty Assoc., LLC)
Newport, Rhode Island

Dear Mr. Martella:

Attached is the Public Notice Document and copies of letters distributed to abutters of the above-referenced property via certified mail. A list of recipients noticed is provided in the following table. A copy of this notice is also being provided to Patricia Reynolds, Director of Planning and Economic Development in Newport.

Abutting Properties to
Waites Wharf 2
20 West Extension Street (Lot 267), 16 Waites Wharf (Lot 248)
Waites Wharf (Lot 272)
Newport, Rhode Island

Plat/Lot	Property Address	Owner
32-285	Spring Wharf	Spring Wharf Marine Holdings LLC
32-125	10 Spring Wharf	International Yacht Restoration School
32-126	11 West Extension Street	Arthur Grover
32-153	14 West Extension Street	Timothy Sterns
32-319	9 Waites Wharf #1	Ronald F. Clemens III
32-269	Waites Wharf	William & Elizabeth Casey
32-155	25 Waites Wharf	Harbour Realty LLC, c/o Thomas Abruzese
32-268	Waites Wharf	Harbour Realty LLC, c/o Thomas Abruzese
32-221	31 Coddington Wharf	Paul & Joanne S Koch
32-293	23 Coddington Wharf	Thomas B Abruzese
32-219	21 Coddington Wharf	Marion F Dunn/Maroney
32-218	13 Coddington Wharf	Everett and Marion Maroney
32-249	Waites Wharf	Tunc Trees LLC
32-283	7 Waites Wharf	81 Daybreak LLC

Should you have any questions, comments or require further information, please contact this office.

Sincerely,
SAGE Environmental, Inc.

Daniel Boynes
Project Manager

DB:jl

Attachments

c: Thomas A. Abruzese, 20 West Extension LLC, TOMORL LLC, Waites Wharf Realty Assoc., LLC

Notification to Abutters
20 West Extension Street & 16 Waites Wharf
Newport, Rhode Island
January 23, 2020

In accordance with the Rhode Island Department of Environmental Management's (RIDEM's) Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (the Remediation Regulations), 20 West Extension LLC, TOMORL LLC, and Waites Wharf Realty Assoc., LLC are providing notice to abutters of their intent to conduct a Site Investigation at 20 West Extension Street & 16 Waites Wharf, Newport, Rhode Island. The goal of this investigation is to determine if a release of hazardous materials has occurred on the property. The investigation will involve a review of existing analytical data from the sampling of environmental media (soil and groundwater), conducted by SAGE Environmental, Inc. personnel, and potentially further sampling of environmental media (soil and groundwater). The property is further designated as Plat 32, Lots 267, 248, & 272 of the City of Newport Tax Assessor's plat maps. RIDEM has determined that conducting this investigation is in the public interest.

The investigation is scheduled to be conducted in February 2020 and is expected to take approximately one month. The results of the investigation should be available by March 2020.

For more information regarding this notice or this investigation, or to make arrangements to review Department records pertaining to this property location, contact Joseph Martella at (401) 222-2797, extension 7109.

SAGE
ENVIRONMENTAL

January 23, 2020

Spring Wharf Marine Holdings LLC
Spring Wharf
Newport, RI 02840

RE: Site Investigation Activities
20 West Extension Street & 16 Waites Wharf
Newport, Rhode Island
SAGE Job No. S3432

Dear Property Owner:

The attached Public Notice is being provided to inform you that Site Investigation activities will be initiated at the properties located at 20 West Extension Street & 16 Waites Wharf, Newport, Rhode Island, which neighbors your property.

Should you have any questions or comments concerning this correspondence, please do not hesitate to contact this office at (401) 723-9900 or the designated contact at the Rhode Island Department of Environmental Management, Office of Waste Management, stipulated in the Notice.

Sincerely,
SAGE Environmental, Inc.

Daniel Boynes

Daniel Boynes
Project Manager

DB/jl

Attachment

SAGE
ENVIRONMENTAL

January 23, 2020

International Yacht Restoration School
10 Spring Wharf
Newport, RI 02840

RE: ***Site Investigation Activities***
20 West Extension Street & 16 Waites Wharf
Newport, Rhode Island
SAGE Job No. S3432

Dear Property Owner:

The attached Public Notice is being provided to inform you that Site Investigation activities will be initiated at the properties located at 20 West Extension Street & 16 Waites Wharf, Newport, Rhode Island, which neighbors your property.

Should you have any questions or comments concerning this correspondence, please do not hesitate to contact this office at (401) 723-9900 or the designated contact at the Rhode Island Department of Environmental Management, Office of Waste Management, stipulated in the Notice.

Sincerely,
SAGE Environmental, Inc.

Daniel Boynes

Daniel Boynes
Project Manager

DB/jl

Attachment

SAGE
ENVIRONMENTAL

January 23, 2020

Arthur Grover
PO Box 739
Newport, RI 02840

RE: ***Site Investigation Activities***
20 West Extension Street & 16 Waites Wharf
Newport, Rhode Island
SAGE Job No. S3432

Dear Property Owner:

The attached Public Notice is being provided to inform you that Site Investigation activities will be initiated at the properties located at 20 West Extension Street & 16 Waites Wharf, Newport, Rhode Island, which neighbors your property.

Should you have any questions or comments concerning this correspondence, please do not hesitate to contact this office at (401) 723-9900 or the designated contact at the Rhode Island Department of Environmental Management, Office of Waste Management, stipulated in the Notice.

Sincerely,
SAGE Environmental, Inc.

Daniel Boynes
Daniel Boynes
Project Manager

DB/jl

Attachment

SAGE
ENVIRONMENTAL

January 23, 2020

Timothy Sterns
4 Farm Street
Bellingham, MA 02019

RE: Site Investigation Activities
20 West Extension Street & 16 Waites Wharf
Newport, Rhode Island
SAGE Job No. S3432

Dear Property Owner:

The attached Public Notice is being provided to inform you that Site Investigation activities will be initiated at the properties located at 20 West Extension Street & 16 Waites Wharf, Newport, Rhode Island, which neighbors your property.

Should you have any questions or comments concerning this correspondence, please do not hesitate to contact this office at (401) 723-9900 or the designated contact at the Rhode Island Department of Environmental Management, Office of Waste Management, stipulated in the Notice.

Sincerely,
SAGE Environmental, Inc.

Daniel Boynes
Daniel Boynes
Project Manager

DB/jl

Attachment

SAGE
ENVIRONMENTAL

January 23, 2020

Ronald F. Clemens III
9 Waites Wharf #1
Newport, RI 02840

RE: ***Site Investigation Activities***
20 West Extension Street & 16 Waites Wharf
Newport, Rhode Island
SAGE Job No. S3432

Dear Property Owner:

The attached Public Notice is being provided to inform you that Site Investigation activities will be initiated at the properties located at 20 West Extension Street & 16 Waites Wharf, Newport, Rhode Island, which neighbors your property.

Should you have any questions or comments concerning this correspondence, please do not hesitate to contact this office at (401) 723-9900 or the designated contact at the Rhode Island Department of Environmental Management, Office of Waste Management, stipulated in the Notice.

Sincerely,
SAGE Environmental, Inc.

Daniel Boynes
Daniel Boynes
Project Manager

DB/jl

Attachment

SAGE
ENVIRONMENTAL

January 23, 2020

William & Elizabeth Casey
11 Waites Wharf
Newport, RI 02840

RE: ***Site Investigation Activities***
20 West Extension Street & 16 Waites Wharf
Newport, Rhode Island
SAGE Job No. S3432

Dear Property Owner:

The attached Public Notice is being provided to inform you that Site Investigation activities will be initiated at the properties located at 20 West Extension Street & 16 Waites Wharf, Newport, Rhode Island, which neighbors your property.

Should you have any questions or comments concerning this correspondence, please do not hesitate to contact this office at (401) 723-9900 or the designated contact at the Rhode Island Department of Environmental Management, Office of Waste Management, stipulated in the Notice.

Sincerely,
SAGE Environmental, Inc.

Daniel Boynes

Daniel Boynes
Project Manager

DB/jl

Attachment

SAGE
ENVIRONMENTAL

January 23, 2020

Harbour Realty LLC, c/o Thomas Abruzese
39 Agar Street
Yonkers, NY 10701

RE: Site Investigation Activities
20 West Extension Street & 16 Waites Wharf
Newport, Rhode Island
SAGE Job No. S3432

Dear Property Owner:

The attached Public Notice is being provided to inform you that Site Investigation activities will be initiated at the properties located at 20 West Extension Street & 16 Waites Wharf, Newport, Rhode Island, which neighbors your properties located at Waites Wharf and 25 Waites Wharf.

Should you have any questions or comments concerning this correspondence, please do not hesitate to contact this office at (401) 723-9900 or the designated contact at the Rhode Island Department of Environmental Management, Office of Waste Management, stipulated in the Notice.

Sincerely,
SAGE Environmental, Inc.

Daniel Boynes

Daniel Boynes
Project Manager

DB/jl

Attachment

SAGE
ENVIRONMENTAL

January 23, 2020

Paul & Joanne S Koch
80 Beachwood Drive
East Greenwich, RI 02818

RE: ***Site Investigation Activities***
20 West Extension Street & 16 Waites Wharf
Newport, Rhode Island
SAGE Job No. S3432

Dear Property Owner:

The attached Public Notice is being provided to inform you that Site Investigation activities will be initiated at the properties located at 20 West Extension Street & 16 Waites Wharf, Newport, Rhode Island, which neighbors your property.

Should you have any questions or comments concerning this correspondence, please do not hesitate to contact this office at (401) 723-9900 or the designated contact at the Rhode Island Department of Environmental Management, Office of Waste Management, stipulated in the Notice.

Sincerely,
SAGE Environmental, Inc.

Daniel Boynes
Daniel Boynes
Project Manager

DB/jl

Attachment

SAGE
ENVIRONMENTAL

January 23, 2020

Thomas B Abruzese
39 Agar Street
Yonkers, NY 10701

RE: Site Investigation Activities
20 West Extension Street & 16 Waites Wharf
Newport, Rhode Island
SAGE Job No. S3432

Dear Property Owner:

The attached Public Notice is being provided to inform you that Site Investigation activities will be initiated at the properties located at 20 West Extension Street & 16 Waites Wharf, Newport, Rhode Island, which neighbors your property.

Should you have any questions or comments concerning this correspondence, please do not hesitate to contact this office at (401) 723-9900 or the designated contact at the Rhode Island Department of Environmental Management, Office of Waste Management, stipulated in the Notice.

Sincerely,
SAGE Environmental, Inc.

Daniel Boynes

Daniel Boynes
Project Manager

DB/jl

Attachment

SAGE
ENVIRONMENTAL

January 23, 2020

Marion F Dunn/Maroney
13 Coddington Wharf
Newport, RI 02840

RE: ***Site Investigation Activities***
20 West Extension Street & 16 Waites Wharf
Newport, Rhode Island
SAGE Job No. S3432

Dear Property Owner:

The attached Public Notice is being provided to inform you that Site Investigation activities will be initiated at the properties located at 20 West Extension Street & 16 Waites Wharf, Newport, Rhode Island, which neighbors your property.

Should you have any questions or comments concerning this correspondence, please do not hesitate to contact this office at (401) 723-9900 or the designated contact at the Rhode Island Department of Environmental Management, Office of Waste Management, stipulated in the Notice.

Sincerely,
SAGE Environmental, Inc.

Daniel Boynes

Daniel Boynes
Project Manager

DB/jl

Attachment

SAGE
ENVIRONMENTAL

January 23, 2020

Everett and Marion Maroney
13 Coddington Wharf
Newport, RI 02840

RE: ***Site Investigation Activities***
20 West Extension Street & 16 Waites Wharf
Newport, Rhode Island
SAGE Job No. S3432

Dear Property Owner:

The attached Public Notice is being provided to inform you that Site Investigation activities will be initiated at the properties located at 20 West Extension Street & 16 Waites Wharf, Newport, Rhode Island, which neighbors your property.

Should you have any questions or comments concerning this correspondence, please do not hesitate to contact this office at (401) 723-9900 or the designated contact at the Rhode Island Department of Environmental Management, Office of Waste Management, stipulated in the Notice.

Sincerely,
SAGE Environmental, Inc.

Daniel Boynes

Daniel Boynes
Project Manager

DB/jl

Attachment

SAGE
ENVIRONMENTAL

January 23, 2020

Tunc Trees LLC
501 Thames Street
Newport, RI 02840

RE: ***Site Investigation Activities***
20 West Extension Street & 16 Waites Wharf
Newport, Rhode Island
SAGE Job No. S3432

Dear Property Owner:

The attached Public Notice is being provided to inform you that Site Investigation activities will be initiated at the properties located at 20 West Extension Street & 16 Waites Wharf, Newport, Rhode Island, which neighbors your property.

Should you have any questions or comments concerning this correspondence, please do not hesitate to contact this office at (401) 723-9900 or the designated contact at the Rhode Island Department of Environmental Management, Office of Waste Management, stipulated in the Notice.

Sincerely,
SAGE Environmental, Inc.

Daniel Boynes

Daniel Boynes
Project Manager

DB/jl

Attachment

SAGE
ENVIRONMENTAL

January 23, 2020

81 Daybreak LLC
69 Washington Street
Newport, RI 02840

RE: Site Investigation Activities
20 West Extension Street & 16 Waites Wharf
Newport, Rhode Island
SAGE Job No. S3432

Dear Property Owner:

The attached Public Notice is being provided to inform you that Site Investigation activities will be initiated at the properties located at 20 West Extension Street & 16 Waites Wharf, Newport, Rhode Island, which neighbors your property.

Should you have any questions or comments concerning this correspondence, please do not hesitate to contact this office at (401) 723-9900 or the designated contact at the Rhode Island Department of Environmental Management, Office of Waste Management, stipulated in the Notice.

Sincerely,
SAGE Environmental, Inc.

Daniel Boynes
Daniel Boynes
Project Manager

DB/jl

Attachment

SAGE
ENVIRONMENTAL

January 23, 2020

Ms. Patricia Reynolds
Director of Planning & Economic Development
City of Newport
43 Broadway
Newport, RI 02840

RE: Site Investigation Activities
20 West Extension Street & 16 Waites Wharf
Newport, Rhode Island
SAGE Job No. S3432

Dear Property Owner:

The attached Public Notice is being provided to inform you that Site Investigation activities will be initiated at the properties located at 20 West Extension Street & 16 Waites Wharf, Newport, Rhode Island.

Should you have any questions or comments concerning this correspondence, please do not hesitate to contact this office at (401) 723-9900 or the designated contact at the Rhode Island Department of Environmental Management, Office of Waste Management, stipulated in the Notice.

Sincerely,
SAGE Environmental, Inc.

Daniel Boynes
Daniel Boynes
Project Manager

DB/jl

Attachment