55 Walkers Brook Drive, Suite 100, Reading, MA 01867
Tel: 978.532.1900

July 28, 2020

Massachusetts Department of Environmental Protection
Northeast Regional Office
Bureau of Waste Site Cleanup
205B Lowell Street
Wilmington, Massachusetts 01887

Re: **LSP Opinion - Soil Disposal**
618R Waverly Street (Parcel IDs 134-64-7867 and 134-64-9905)
Framingham, Massachusetts
RTN 3-36304

Dear Sir/Madam:

Weston & Sampson has prepared this Licensed Site Professional (LSP) Opinion letter to document information related to the disposal of one 55-gallon drum of soil that was generated during assessment activities at the above-referenced properties, one with an address of 618R Waverly Street, located in Framingham, Massachusetts (collectively, the Site). The Site consists of two parcels: a larger parcel with Tax ID 134-64-7867 (address of 618R Waverly Street) and a smaller parcel with Tax ID 134-64-9905 (no address), which together cover approximately 2.08 acres of vacant land comprised primarily of woodlands and wetland, with two paved areas to the north and west. MassDEP assigned a Release Tracking Number (RTN) 3-36304 to an approximately 500-square-foot portion of the Site after the City reported elevated concentrations of lead in the shallow soil on June 3, 2020, as described below. See Figure 1 for the general location of the Site.

The Site is regulated under the Massachusetts Contingency Plan (MCP), 310 CMR 40.0000, and the subject soil was generated from soil borings during routine Site assessment activities conducted under the City of Framingham's US (Environmental Protection Agency (EPA) Brownfields Grant. Based on the data obtained and evaluated as part of the Site assessment, a 2-hour Notification Condition was identified due to elevated concentrations of lead identified in a limited area (approximately 500 square feet, sf) of shallow soil. On June 3, 2020, the City reported this condition (referred to as a "Release" under the MCP regulations) to MassDEP as required. The drummed soil contains all soil from the borings across the entire Site, as required by the MCP (not only the release area); and has been tested as required for proper disposal at a licensed facility.

Current and Former Site Use

The Site consists of approximately 2.08 acres of vacant land comprised of woodlands, wetland, and paved parking lot. North of the 618R Waverly Street parcel (parcel ID: 134-64-7867) is a developed property, now with the address of 618 Waverly Street (Parcel ID 134-64-6996), that was formerly occupied by Silton Glass Co. Historical operations on the Silton Glass property and northern/western paved portions of the Site, included an auto parts retailer, filling station, auto salvage yard, and auto glass facility.

An ASTM Phase I ESA in 2009, ASTM Phase II ESA in 2010, and cleanup/reuse planning was conducted by Fuss & O'Neill, Inc. on adjacent property, the former Silton Glass property with a former address of 612-618 Waverly Street. An Activity and Use Limitation (AUL), for RTN 3-29744 was filed in 2012 for the Silton Glass property by the property owner at that time, Charles L. Silton, Inc. Compounds of concern identified at the Silton Glass property included metals, Extractable Petroleum Hydrocarbons (EPH) and Polycyclic Aromatic Hydrocarbons (PAHs). These impacts were associated with historic fill materials and point source releases of petroleum from past operations as a gasoline station and salvage facility. The AUL restricts the use of the property to commercial / industrial uses only and requires a Soil Management Plan and Health and Safety Plan prior to any soil disturbance.

The former Silton Glass property formerly numbered 612 Waverly Street (including the westerly and northerly paved areas) was acquired in 2015 by the City of Framingham through tax title foreclosure. The Silton Glass property was subsequently divided under an Approval Not Required Plan endorsed and recorded in 2015, resulting in reconfiguration of the parent parcel. The majority of the former Silton Glass property along Waverly Street and Mellen Street, which was developed and used for commercial purposes, was conveyed to DMGDR Realty, LLC in February 2016, and is now known and numbered as 618 Waverly Street. The City retains ownership of two paved

portions of the former Silton Glass property which are located on Waverly Street and Mellen Street and are included as part of the land now known and numbered as 618R Waverly Street.

Soil Generation and Sampling

From April 6 through 8, 2020, Weston & Sampson oversaw the advancement of 15 soil borings (SB-101 through SB-115) at locations depicted in Figure 2, Site Plan. During the course of drilling activities, approximately 40 gallons of surplus drill cuttings were placed in a labeled and secured 55-gallon steel drum and stored on-Site (see Figure 2 for location of drum). The soil was generated in small volumes from each of the boring locations depicted on the attached Figure 2. Thirty-five soil samples were collected from discrete depth intervals, as shown on Tables 1A-1C and Table 2. Samples were submitted to Absolute Resource Associates of Portsmouth, NH (ARA) for analysis of antimony, arsenic, barium, beryllium, cadmium, chromium (III), chromium (VI), lead, mercury, nickel, silver, thallium, vanadium, zinc, extractable petroleum hydrocarbons (EPH) with target polycyclic aromatic hydrocarbons (PAHs), volatile petroleum hydrocarbons (VPH) with target volatile organic compounds (VOCs), and/or VOCs.

On June 15, 2020, Weston & Sampson collected one composite sample from the drummed soil (IDW-1) and submitted it to ARA for analysis of arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver by Toxicity Characteristic Leaching Procedures (TCLP) methods. Copies of the laboratory analytical reports are included as an attachment.

Analytical Results

Data in the attached tables were compared to applicable MCP Reportable Concentrations criteria (RCS-1) and US EPA TCLP criteria for determining if the soil meets the regulatory category of a hazardous waste for disposal purposes.

Metals

All metals, excepting selenium, were detected above laboratory reporting limits in at least one of the 35 soil samples submitted for analysis. Antimony, arsenic, lead, and zinc were detected at concentrations exceeding the applicable RCS-1 threshold in multiple samples. The result of the TCLP analysis for the subject sample showed concentrations below levels indicative of a characteristic hazardous waste, for the purposes of soil disposal at a licensed facility.

EPH/PAHs

EPH aliphatic and aromatic fractions, as well as target PAHs were detected above the laboratory reporting limits at multiple boring locations. The PAHs benzo(a)pyrene and dibenz(a,h)anthracene were detected at concentrations exceeding the respective MCP RCS-1 in multiple samples.

VPH/VOCs

VPH aliphatic and aromatic fractions, as well as target petroleum VOCs were detected above the laboratory reporting limits, but below the respective RCS-1 threshold at three locations.

In addition, including two chlorinated VOCs (cis-1,2-dichloroethylene and trichloroethylene) were detected in sample SB-108 (6-9) at concentrations above the respective RCS-1 threshold.

Closure Statement

Due diligence was used to characterize the soil for the presence of listed hazardous waste and characteristic hazardous waste in accordance with DEP Policy # HW93-01. Historical Site review and chemical testing performed on the soil did not indicate the presence of a listed hazardous waste nor did the soil exhibit a characteristic of hazardous waste. Importantly, there is no known history of activities involving cis-1,2-dichloroethylene and trichloroethylene that indicate the presence of these contaminants constitute a hazardous waste.

In consideration of the Site history and current conditions at the Site from which the soil proposed for disposal has been generated, it is our opinion that the samples collected to characterize the soil were sufficient in terms of sampling methods, sampling dates, analytes tested for, QA/QC criteria, number of samples, sampling depth, and sampling locations to provide analytical data which are representative of the soil proposed for such disposal/re-use.

Weston & Sampson has completed an evaluation of the laboratory analytical QA/QC data accompanying the laboratory reports and this submittal contains data which are judged to be useable and representative. Based on our review of the chemical soil testing data obtained during this sampling program, the soils represented by this submittal are suitable for disposal as non-hazardous waste at a landfill. If you have any questions or comments regarding this letter or need any additional information, please do not hesitate to contact our office at (978) 532-1900.

Sincerely,

WESTON & SAMPSON ENGINEERS, INC.

Frank M. Ricciardi, PE, LSP
Vice President

Attachments:
Figures
Tables
Stericycle Waste Profile Sheet
Laboratory Analytical Reports

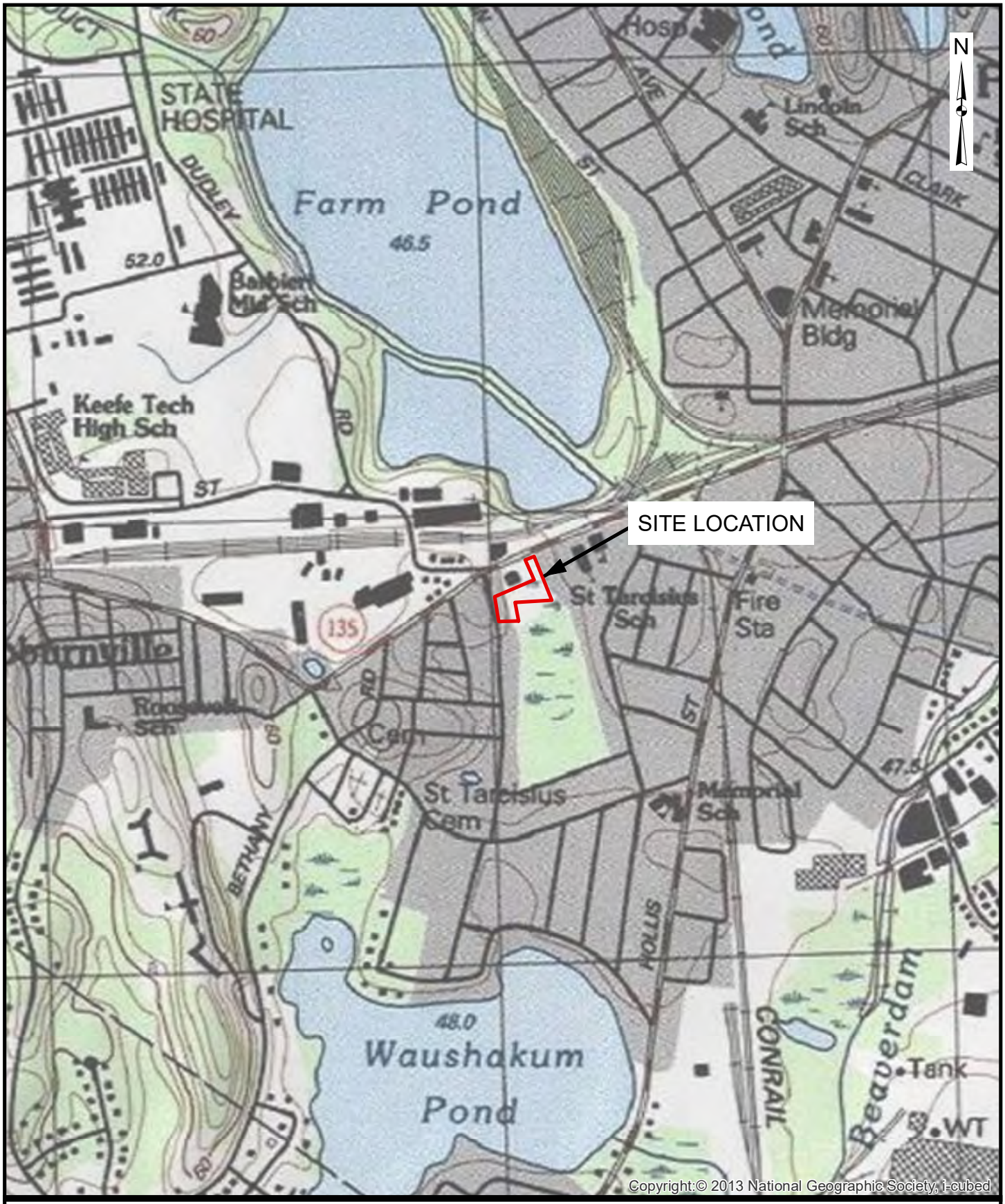

FIGURE 1
CEDAR WOODS
FRAMINGHAM, MA

LOCUS MAP

1,600 0 1,600

Scale In Feet

Weston & Sampson

N

WAVERLY STREET

PARCEL 134-64-5986
(SILTON CHARLES INC)

PARCEL 134-64-6996
(DMGDR REALTY, LLC)

PARCEL 134-64-9905
(CITY OF FRAMINGHAM)

PARCEL 134-64-7867
(CITY OF FRAMINGHAM)

PARCEL 134-64-9696
(CITY OF FRAMINGHAM)

MELLEN STREET

SB-115
SB/MW-114
SB-113
SB-112
SB-111
SB-108
SB/MW-109
SB-110
SB/MW-106
SB-107
SW-1
SB-104
SB-105
SB-103
SB-102
SB-101

APPROXIMATE LOCATION OF SUBJECT DRUM

Legend

- SURFACE WATER SAMPLE
- GROUNDWATER MONITORING WELL
- SOIL BORING
- 30' NO ALTERATION ZONE (2014)
- BORDERING VEGETATED WETLANDS (2014)
- TEMP FENCE **(RTN 3-36304)**
- AREA SUBJECT TO AUL (RTN 3-29744)
- PARCEL BOUNDARY

Notes

1. ALL LOCATIONS ARE APPROXIMATE
2. SOME PROPOSED FEATURES OMITTED FOR SIMPLICITY
3. BASEMAP SOURCE: USGS 2014-2015 ORTHO IMAGES
4. VEGETATED WETLAND DELINEATION COMPLETED BY BEALS+THOMAS IN 2014

50 0 50
Scale In Feet

FIGURE 2

CEDAR WOODS
FRAMINGHAM, MASSACHUSETTS

SITE PLAN

JUNE 2020 SCALE: NOTED

Weston & Sampson

Table 1A
Summary of Soil Analytical Results - April 2020 Soil Borings
Cedar Woods
Framingham, Massachusetts

Parameter	Units	Reportable Concentrations	Method 1 Cleanup Standards (1)		SB-101		SB-102		SB-103			SB-104		SB-105	
		RCS-1	S-1/GW-2	S-1/GW-3	0-3 feet	9-12 feet	0-3 feet	11-14 feet	0-3 feet	3-5 feet	7-10 feet	0-3 Feet	8-10 Feet	0-3 feet	5-8 feet
					4/6/2020	4/6/2020	4/6/2020	4/6/2020	4/6/2020	4/6/2020	4/6/2020	4/7/2020	4/7/2020	4/6/2020	4/6/2020
EPH															
C9-C18 Aliphatics	mg/kg	1000	1000	1000	<21	<25	<20	<46	NT	NT	NT	<20	<22	<24	<22
C19-C36 Aliphatics	mg/kg	3000	3000	3000	**35**	**82**	**130**	**80**	NT	NT	NT	**34**	**100**	**280**	**23**
C11-C22 Aromatics	mg/kg	1000	1000	1000	<21	**41**	**50**	<46	NT	NT	NT	**25**	<22	**130**	<22
Target PAHS															
Acenaphthene	mg/kg	4	1000	1000	<0.21	<0.25	<0.20	<0.46	NT	NT	NT	<0.20	<0.22	<0.24	<0.22
Acenaphthylene	mg/kg	1	600	10	<0.21	<0.25	<0.20	<0.46	NT	NT	NT	<0.20	<0.22	<0.24	<0.22
Anthracene	mg/kg	1000	1000	1000	<0.21	**0.40**	<0.20	<0.46	NT	NT	NT	<0.20	<0.22	<0.24	<0.22
Benzo(A)Anthracene	mg/kg	7	7	7	<0.21	**0.98**	<0.20	<0.46	NT	NT	NT	**0.40**	<0.22	**1.5**	<0.22
Benzo(A)Pyrene	mg/kg	2	2	2	<0.21	**0.89**	<0.20	<0.46	NT	NT	NT	**0.44**	<0.22	**1.4**	<0.22
Benzo(B)Fluoranthene	mg/kg	7	7	7	<0.21	**0.88**	<0.20	<0.46	NT	NT	NT	**0.46**	<0.22	**1.6**	<0.22
Benzo(G,H,I)Perylene	mg/kg	1000	1000	1000	<0.21	**0.72**	<0.20	<0.46	NT	NT	NT	**0.35**	<0.22	**1.2**	<0.22
Benzo(K)Fluoranthene	mg/kg	70	70	70	<0.21	**0.71**	<0.20	<0.46	NT	NT	NT	**0.44**	<0.22	**1.2**	<0.22
Chrysene	mg/kg	70	70	70	<0.21	**1.0**	<0.20	<0.46	NT	NT	NT	**0.56**	<0.22	**1.9**	<0.22
Dibenz(A,H)Anthracene	mg/kg	0.7	1	1	<0.21	<0.25	<0.20	<0.46	NT	NT	NT	<0.20	<0.22	**0.38**	<0.22
Fluoranthene	mg/kg	1000	1000	1000	**0.22**	**2.1**	<0.20	**0.48**	NT	NT	NT	**0.80**	<0.22	**3.2**	<0.22
Fluorene	mg/kg	1000	1000	1000	<0.21	<0.25	<0.20	<0.46	NT	NT	NT	<0.20	<0.22	<0.24	<0.22
Indeno(1,2,3-Cd)Pyrene	mg/kg	7	7	7	<0.21	**0.63**	<0.20	<0.46	NT	NT	NT	**0.30**	<0.22	**1.1**	<0.22
2-Methylnaphthalene	mg/kg	0.7	80	300	<0.21	<0.25	<0.20	<0.46	NT	NT	NT	<0.20	<0.22	<0.24	<0.22
Naphthalene	mg/kg	4	20	500	<0.21	<0.25	<0.20	<0.46	NT	NT	NT	<0.20	<0.22	<0.24	<0.22
Phenanthrene	mg/kg	10	500	500	<0.21	**2.1**	<0.20	<0.46	NT	NT	NT	**0.39**	<0.22	**1.5**	<0.22
Pyrene	mg/kg	1000	1000	1000	**0.24**	**2.3**	<0.20	**0.56**	NT	NT	NT	**0.85**	<0.22	**2.9**	<0.22
VPH															
C5-C8 Aliphatics	mg/kg	100	100	100	NT	<6.3	NT	<16	NT	NT	<5.8	NT	<4.9	NT	<4.3
C9-C12 Aliphatics	mg/kg	1000	1000	1000	NT	<6.3	NT	<16	NT	NT	<5.8	NT	<4.9	NT	<4.3
C9-C10 Aromatics	mg/kg	100	100	100	NT	<6.3	NT	<16	NT	NT	<5.8	NT	<4.9	NT	<4.3
Target VOCs															
Benzene	mg/kg	2	40	40	NT	<0.13	NT	<0.31	NT	NT	<0.12	NT	<0.097	NT	<0.087
Ethylbenzene	mg/kg	40	500	500	NT	<0.13	NT	<0.31	NT	NT	<0.12	NT	<0.097	NT	<0.087
Methyl tert-Butyl Ether (MTBE)	mg/kg	0.1	100	100	NT	<0.13	NT	<0.31	NT	NT	<0.12	NT	<0.097	NT	<0.087
Naphthalene	mg/kg	4	20	500	NT	<0.31	NT	<0.78	NT	NT	<0.29	NT	<0.24	NT	<0.22
Toluene	mg/kg	30	500	500	NT	<0.13	NT	<0.31	NT	NT	<0.12	NT	<0.097	NT	<0.087
m+p Xylene	mg/kg	100	100	500	NT	<0.13	NT	<0.31	NT	NT	<0.12	NT	<0.097	NT	<0.087
o-Xylene	mg/kg	100	100	500	NT	<0.13	NT	<.31	NT	NT	<0.12	NT	<0.097	NT	<0.087
Metals															
Antimony	mg/kg	20	20	20	<0.52	**2.7**	<0.54	<1.1	<0.51	**3.7**	<0.60	<0.54	<0.57	**4.7**	<0.55
Arsenic	mg/kg	20	20	20	**3.3**	**28**	**3.3**	**10**	**3.5**	**13**	**3.3**	<2.7	**3.1**	**7.3**	**3.0**
Barium	mg/kg	1000	1000	1000	**18**	**140**	**27**	**56**	**25**	**250**	**36**	**17**	**27**	**310**	**23**
Beryllium	mg/kg	90	90	90	<0.52	<0.68	<0.54	<1.1	<0.51	<0.62	<0.60	<0.54	<0.57	<0.60	<0.55
Cadmium	mg/kg	70	70	70	<0.52	**1.3**	<0.54	<1.1	<0.51	**4.9**	<0.60	<0.54	<0.57	**2.0**	<0.55
Chromium (III)	mg/kg	1000	1000	1000	NT	**51**	NT	**41**	NT	**9.4**	NT	NT	**16**	**18**	NT
Chromium (VI)	mg/kg	100	100	100	**7.3**	**3.8**	**17**	<1.00	**6.9**	<0.49	**18**	<5.4	<0.47	<0.48	**11**
Lead	mg/kg	200	200	200	**8.7**	**230**	**16**	**190**	**22**	**710**	**8.4**	**16**	**5.5**	**650**	**5.0**
Mercury	mg/kg	20	20	20	<0.15	**0.58**	<0.13	<0.31	<0.15	**0.58**	<0.17	<0.15	<0.16	**2.9**	<0.15
Nickel	mg/kg	600	600	600	**7.4**	**14**	**23**	**64**	**6.3**	**12**	**13**	**5.4**	**17**	**18**	**14**
Selenium	mg/kg	400	400	400	<5.2	<6.8	<5.4	<11	<5.1	<6.2	<6.0	<5.4	<5.7	<6.0	<5.5
Silver	mg/kg	100	100	100	<2.6	<3.4	<2.7	<5.6	<2.5	<3.1	<3.0	<2.7	<2.8	<3.0	<2.7
Thallium	mg/kg	8	8	8	<0.52	<0.68	<0.54	<1.1	<0.51	<0.62	<0.60	<0.54	<0.57	<0.60	<0.55
Vanadium	mg/kg	400	400	400	**11**	**15**	**20**	**17**	**10**	**10.0**	**25**	**8.3**	**22**	**19**	**14**
Zinc	mg/kg	1000	1000	1000	**17**	**220**	**31**	**530**	**19**	**920**	**18**	**16**	**18**	**770**	**69**
VOCs															
Benzene	mg/kg	2	40	40	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Sec-Butylbenzene	mg/kg	~	~	~	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Cis-1,2-Dichloroethylene	mg/kg	0.1	0.1	100	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Ethylbenzene	mg/kg	40	500	500	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Isopropylbenzene (Cumene)	mg/kg	1000	~	~	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
P-Isopropyltoluene (p-Cymene)	mg/kg	100	~	~	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Naphthalene	mg/kg	4	20	500	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
N-Propylbenzene	mg/kg	100	~	~	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Toluene	mg/kg	30	500	500	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Trichloroethylene	mg/kg	0.3	0.3	30	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,2,4-Trimethylbenzene	mg/kg	1000	~	~	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,3,5-Trimethylbenzene	mg/kg	10	~	~	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Xylenes	mg/kg	100	100	500	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT

QC by JMR 5/8/2020

Abbreviations:
EPH and VPH= Extractable and Volatile Petroleum Hydrocarbons
VOCs and SVOCs = Volatile and Semivolatile Organic Compounds
PAH = Polycyclic Aromatic Hydrocarbons
NT = Not Tested
BDL = Below Detection Limit
MCP = Massachusetts Contingency Plan
mg/kg = milligram per killiogram

Notes:
~ = No standard available
< = indicates parameter not detected above laboratory method reporting limit, shown
BOLD Parameter detected above laboratory detection limit
BOLD Parameter equals or exceeds the MCP Method 1, RCS-1 standard (NS Tapley & NWS Bay only)
BOLD Parameter exceeds the most stringent MCP Method 1, S-1 standard
BOLD Parameter exceeds the applicable MCP Method 1, S-2/3 standard
1 = Standards are from Massachusetts Contingency Plan (MCP), 310 CMR 40, April 2014.

Table 1B
Summary of Soil Analytical Results - April 2020 Soil Borings
Cedar Woods
Framingham, Massachusetts

Parameter	Units	Reportable Concentrations	Method 1 Cleanup Standards (1)		Sample Location, Depth, and Date												
		RCS-1	S-1/GW-2	S-1/GW-3	SB-106			SB-107		SB-108		SB-109			SB-110		
					0-3 feet	3-4 feet	5-8 feet	0-3 Feet	10-11 Feet	0-3 Feet	6-9 Feet	0-3 Feet	5-8 Feet	DUP-1	0-3 Feet	5-8 Feet	
					4/6/2020	4/6/2020	4/6/2020	4/7/2020	4/7/2020	4/7/2020	4/7/2020	4/7/2020	4/7/2020	4/7/2020	4/7/2020	4/7/2020	
EPH																	
C9-C18 Aliphatics	mg/kg	1000	1000	1000	<21	NT	<240	<23	**34**	<26	**92**	<28	<78	<83	<22	<110	
C19-C36 Aliphatics	mg/kg	3000	3000	3000	**91**	NT	**570**	**36**	**410**	**39**	**1900**	**42**	**290**	**390**	**68**	**140**	
C11-C22 Aromatics	mg/kg	1000	1000	1000	**44**	NT	**290**	<23	**76**	<0.26	**350**	<28	**100**	**300**	**53**	<110	
Target PAHS																	
Acenaphthene	mg/kg	4	1000	1000	<0.21	NT	<0.47	<0.23	<0.23	<0.26	<0.24	<0.28	<0.78	<0.83	<0.22	<1.1	
Acenaphthylene	mg/kg	1	600	10	<0.21	NT	<0.47	<0.23	<0.23	<0.26	<0.24	<0.28	<0.78	<0.83	<0.22	<1.1	
Anthracene	mg/kg	1000	1000	1000	<0.21	NT	<0.47	<0.23	<0.23	<0.26	**0.46**	<0.28	<0.78	**0.92**	<0.22	<1.1	
Benzo(A)Anthracene	mg/kg	7	7	7	**0.42**	NT	<0.47	<0.23	<0.23	<0.26	**0.79**	<0.28	**0.78**	**4**	**0.59**	<1.1	
Benzo(A)Pyrene	mg/kg	2	2	2	**0.40**	NT	<0.47	<0.23	<0.23	<0.26	**0.70**	<0.28	**0.91**	**4.4**	**0.63**	<1.1	
Benzo(B)Fluoranthene	mg/kg	7	7	7	**0.35**	NT	<0.47	<0.23	<0.23	<0.26	**0.64**	<0.28	**0.89**	**4.4**	**0.57**	<1.1	
Benzo(G,H,I)Perylene	mg/kg	1000	1000	1000	**0.46**	NT	<0.47	<0.23	<0.23	<0.26	**0.51**	<0.28	<0.78	**3.2**	**0.42**	<1.1	
Benzo(K)Fluoranthene	mg/kg	70	70	70	**0.39**	NT	<0.47	<0.23	<0.23	<0.26	**0.57**	<0.28	<0.78	**3.7**	**0.53**	<1.1	
Chrysene	mg/kg	70	70	70	**0.52**	NT	<0.47	<0.23	<0.23	<0.26	**0.87**	<0.28	**0.96**	**5.3**	**0.74**	<1.1	
Dibenz(A,H)Anthracene	mg/kg	0.7	1	1	<0.21	NT	<0.47	<0.23	<0.23	<0.26	<0.24	<0.28	<0.78	<0.83	<0.22	<1.1	
Fluoranthene	mg/kg	1000	1000	1000	**0.81**	NT	<0.47	**0.25**	<0.23	<0.26	**1.9**	<0.28	**1.5**	**9.2**	**1.3**	<1.1	
Fluorene	mg/kg	1000	1000	1000	<0.21	NT	<0.47	<0.23	<0.23	<0.26	**0.37**	<0.28	<0.78	<0.83	<0.22	<1.1	
Indeno(1,2,3-Cd)Pyrene	mg/kg	7	7	7	**0.36**	NT	<0.47	<0.23	<0.23	<0.26	**0.36**	<0.28	<0.78	**2.9**	**0.36**	<1.1	
2-Methylnaphthalene	mg/kg	0.7	80	300	<0.21	NT	<0.47	<0.23	<0.23	<0.26	**0.57**	<0.28	<0.78	<0.83	<0.22	<1.1	
Naphthalene	mg/kg	4	20	500	<0.21	NT	<0.47	<0.23	<0.23	<0.26	**0.50**	<0.28	<0.78	**0.86**	<0.22	<1.1	
Phenanthrene	mg/kg	10	500	500	**0.44**	NT	<0.47	<0.23	<0.23	<0.26	**2.1**	<0.28	**0.80**	**5.7**	**1.1**	<1.1	
Pyrene	mg/kg	1000	1000	1000	**0.88**	NT	<0.47	<0.23	<0.23	<0.26	**2.1**	<0.28	**1.7**	**9**	**1.4**	<1.1	
VPH																	
C5-C8 Aliphatics	mg/kg	100	100	100	NT	NT	<5.5	**7.6**	**26**	NT	**30**	NT	<29	<29	NT	<42	
C9-C12 Aliphatics	mg/kg	1000	1000	1000	NT	NT	<5.5	<5.4	**22**	NT	**24**	NT	<29	<29	NT	<42	
C9-C10 Aromatics	mg/kg	100	100	100	NT	NT	<5.5	<5.4	**39**	NT	**67**	NT	<29	<29	NT	<42	
Target VOCs																	
Benzene	mg/kg	2	40	40	NT	NT	<0.11	<0.11	<0.094	NT	**0.30**	NT	<0.59	<0.59	NT	<0.83	
Ethylbenzene	mg/kg	40	500	500	NT	NT	<0.11	<0.11	**0.48**	NT	**0.49**	NT	<0.59	<0.59	NT	<0.83	
Methyl tert-Butyl Ether (MTBE)	mg/kg	0.1	100	100	NT	NT	<0.11	<0.11	<0.094	NT	<0.11	NT	<0.59	<0.59	NT	<0.83	
Naphthalene	mg/kg	4	20	500	NT	NT	<0.28	<0.27	**1.3**	NT	**1.9**	NT	<1.5	<1.5	NT	<2.1	
Toluene	mg/kg	30	500	500	NT	NT	<0.11	<0.11	<0.094	NT	**0.42**	NT	<0.59	<0.59	NT	<0.83	
m+p Xylene	mg/kg	100	100	500	NT	NT	<0.11	<0.11	**1.6**	NT	**2.7**	NT	<0.59	<0.59	NT	<0.83	
o-Xylene	mg/kg	100	100	500	NT	NT	<0.11	<0.11	<0.094	NT	**0.45**	NT	<0.59	<0.59	NT	<0.83	
Metals															NT		
Antimony	mg/kg	20	20	20	**0.9**	NT	**0.78**	**55**	**5.9**	**51**	**10**	**64**	**3.5**	**2.1**	<0.51	**3.5**	
Arsenic	mg/kg	20	20	20	**4**	NT	**3.2**	**8.0**	**3.5**	**8.1**	**7.1**	**23**	**15**	**20**	**2.9**	<14	
Barium	mg/kg	1000	1000	1000	**200**	NT	**32**	**280**	**48**	**430**	**470**	**300**	**78**	**86**	**41**	**160**	
Beryllium	mg/kg	90	90	90	<0.56	NT	<0.59	<0.63	<0.49	<0.65	<0.60	<0.67	<2.0	<2.0	<0.51	<2.8	
Cadmium	mg/kg	70	70	70	<0.56	NT	<0.59	**4.4**	**2.0**	**5.8**	**11**	**3.6**	<2.0	<2.0	<0.51	<2.8	
Chromium (III)	mg/kg	1000	1000	1000	NT	NT	NT	**33**	NT	NT	**25**	NT	<20	NT	NT	<28	
Chromium (VI)	mg/kg	100	100	100	**16**	**0.50**	**23**	<0.51	**19**	**70**	<0.48	**64**	<1.6	<20	**10**	<2.2	
Lead	mg/kg	200	200	200	**120**	NT	**150**	**1200**	**300**	**1200**	**970**	**1300**	**180**	**250**	**8.1**	**280**	
Mercury	mg/kg	20	20	20	**0.17**	NT	<0.15	**0.60**	<0.14	**0.18**	**0.47**	<0.19	<0.58	**0.99**	<0.16	<0.78	
Nickel	mg/kg	600	600	600	**12**	NT	**9.8**	**76**	**16**	**88**	**40**	**100**	<20	<20	**12**	<28	
Selenium	mg/kg	400	400	400	<5.36	NT	<5.9	<6.3	<4.9	<6.5	<6.0	<6.7	<20	<20	<5.1	<28	
Silver	mg/kg	100	100	100	<2.8	NT	<3.0	**32**	<2.5	**7.3**	<3.0	**12**	<9.9	<10	<2.5	<14	
Thallium	mg/kg	8	8	8	<0.56	NT	<0.59	<0.63	<0.49	<0.65	<0.60	<0.67	<2.0	<2.0	<0.51	<2.8	
Vanadium	mg/kg	400	400	400	**17**	NT	**12**	**20**	**12**	**10**	**18**	**8.1**	<20	<20	**16**	<28	
Zinc	mg/kg	1000	1000	1000	**190**	NT	**91**	**2900**	**250**	**2900**	**2400**	**4000**	**270**	**250**	**19**	**230**	
VOCs																	
Benzene	mg/kg	2	40	40	NT	NT	NT	NT	NT	NT	**0.19**	NT	NT	NT	NT	NT	
Sec-Butylbenzene	mg/kg	~	~	~	NT	NT	NT	NT	NT	NT	**0.26**	NT	NT	NT	NT	NT	
Cis-1,2-Dichloroethylene	mg/kg	0.1	0.1	100	NT	NT	NT	NT	NT	NT	**0.20**	NT	NT	NT	NT	NT	
Ethylbenzene	mg/kg	40	500	500	NT	NT	NT	NT	NT	NT	**0.59**	NT	NT	NT	NT	NT	
Isopropylbenzene (Cumene)	mg/kg	1000	~	~	NT	NT	NT	NT	NT	NT	**0.34**	NT	NT	NT	NT	NT	
P-Isopropyltoluene (p-Cymene)	mg/kg	100	~	~	NT	NT	NT	NT	NT	NT	**0.30**	NT	NT	NT	NT	NT	
Naphthalene	mg/kg	4	20	500	NT	NT	NT	NT	NT	NT	**1.8**	NT	NT	NT	NT	NT	
N-Propylbenzene	mg/kg	100	~	~	NT	NT	NT	NT	NT	NT	**0.93**	NT	NT	NT	NT	NT	
Toluene	mg/kg	30	500	500	NT	NT	NT	NT	NT	NT	**0.46**	NT	NT	NT	NT	NT	
Trichloroethylene	mg/kg	0.3	0.3	30	NT	NT	NT	NT	NT	NT	**0.36**	NT	NT	NT	NT	NT	
1,2,4-Trimethylbenzene	mg/kg	1000	~	~	NT	NT	NT	NT	NT	NT	**6.9**	NT	NT	NT	NT	NT	
1,3,5-Trimethylbenzene	mg/kg	10	~	~	NT	NT	NT	NT	NT	NT	**2.3**	NT	NT	NT	NT	NT	
Xylenes	mg/kg	100	100	500	NT	NT	NT	NT	NT	NT	**3.43**	NT	NT	NT	NT	NT	

QC by JMR 5/8/2020

Abbreviations:
EPH and VPH= Extractable and Volatile Petroleum Hydrocarbons
VOCs and SVOCs = Volatile and Semivolatile Organic Compounds
PAH = Polycyclic Aromatic Hydrocarbons
NT = Not Tested
BDL = Below Detection Limit
MCP = Massachusetts Contingency Plan
mg/kg = milligram per killiogram

Notes:
~ = No standard available
< = indicates parameter not detected
BOLD Parameter detecte
BOLD Parameter equals
BOLD Parameter exceed
BOLD Parameter exceed
1 = Standards are from Massachuset

Table 1C
Summary of Soil Analytical Results - April 2020 Soil Borings
Cedar Woods
Framingham, Massachusetts

Parameter	Units	Reportable Concentrations	Method 1 Cleanup Standards (1)														
		RCS-1	S-1/GW-2	S-1/GW-3	SB-111			SB-112		SB-113			SB-114		SB-115		
					0-1 feet	0-3 feet	4-7 feet	0-3 Feet	5-8 Feet	0-3 feet	5-8 feet	DUP-2	0-3 feet	5-8 feet	0-3 feet	5-8 feet	
					4/8/2020	4/8/2020	4/8/2020	4/7/2020	4/7/2020	4/8/2020	4/8/2020	4/8/2020	4/8/2020	4/8/2020	4/8/2020	4/8/2020	
EPH																	
C9-C18 Aliphatics	mg/kg	1000	1000	1000	<20	<19	<97	<21	<38	<97	<19	<20	<19	<19	<19	<20	
C19-C36 Aliphatics	mg/kg	3000	3000	3000	**85**	**40**	**340**	**50**	**190**	**450**	<19	<20	**40**	**55**	<19	**57**	
C11-C22 Aromatics	mg/kg	1000	1000	1000	**62**	<19	**200**	**22**	**140**	**97**	<19	<20	**220**	**33**	<19	**75**	
Target PAHS																	
Acenaphthene	mg/kg	4	1000	1000	<0.20	<0.19	**0.24**	<0.21	<0.38	<0.19	<0.19	<0.20	<0.19	<0.19	<0.19	<0.20	
Acenaphthylene	mg/kg	1	600	10	<0.20	<0.19	<0.19	<0.21	<0.38	<0.19	<0.19	<0.20	**0.77**	<0.19	<0.19	<0.20	
Anthracene	mg/kg	1000	1000	1000	<0.20	<0.19	**1.3**	<0.21	**0.84**	<0.19	<0.19	<0.20	**0.61**	<0.19	<0.19	**0.33**	
Benzo(A)Anthracene	mg/kg	7	7	7	**1.5**	<0.19	**4.1**	**0.39**	**3**	<0.19	<0.19	<0.20	**4.9**	**0.33**	<0.19	**1.6**	
Benzo(A)Pyrene	mg/kg	2	2	2	**2**	<0.19	**4.1**	**0.4**	**3**	<0.19	<0.19	<0.20	**4.4**	**0.37**	<0.19	**1.7**	
Benzo(B)Fluoranthene	mg/kg	7	7	7	**2.3**	<0.19	**3.9**	**0.37**	**2.8**	<0.19	<0.19	<0.20	**3.6**	**0.29**	<0.19	**1.8**	
Benzo(G,H,I)Perylene	mg/kg	1000	1000	1000	**2**	<0.19	**3**	**0.25**	**2**	<0.19	<0.19	<0.20	**3.4**	**0.34**	<0.19	**1.5**	
Benzo(K)Fluoranthene	mg/kg	70	70	70	**1.7**	<0.19	**3.4**	**0.38**	**2.7**	<0.19	<0.19	<0.20	**3.4**	**0.31**	<0.19	**1.4**	
Chrysene	mg/kg	70	70	70	**1.8**	<0.19	**4.4**	**0.42**	**3.6**	<0.19	<0.19	<0.20	**5.7**	**0.38**	<0.19	**1.9**	
Dibenz(A,H)Anthracene	mg/kg	0.7	1	1	**0.51**	<0.19	**0.95**	<0.21	**0.62**	<0.19	<0.19	<0.20	**0.78**	<0.19	<0.19	**0.38**	
Fluoranthene	mg/kg	1000	1000	1000	**2.2**	<0.19	**8.5**	**0.8**	**6.8**	<0.19	<0.19	<0.20	**9.3**	**0.77**	<0.19	**3.3**	
Fluorene	mg/kg	1000	1000	1000	<0.20	<0.19	**0.43**	<0.21	**0.43**	<0.19	<0.19	<0.20	<0.19	<0.19	<0.19	**0.2**	
Indeno(1,2,3-Cd)Pyrene	mg/kg	7	7	7	**1.7**	<0.19	**2.7**	**0.21**	**1.7**	<0.19	<0.19	<0.20	**2.7**	**0.25**	<0.19	**1.2**	
2-Methylnaphthalene	mg/kg	0.7	80	300	<0.20	<0.19	**0.22**	<0.21	<0.38	<0.19	<0.19	<0.20	<0.19	<0.19	<0.19	<0.20	
Naphthalene	mg/kg	4	20	500	<0.20	<0.19	**0.35**	<0.21	<0.38	<0.19	<0.19	<0.20	<0.19	<0.19	<0.19	**0.26**	
Phenanthrene	mg/kg	10	500	500	0.57	<0.19	**5.1**	**0.41**	**4.7**	<0.19	<0.19	<0.20	**4.1**	**0.54**	<0.19	**2.2**	
Pyrene	mg/kg	1000	1000	1000	**1.9**	<0.19	**6.7**	**0.73**	**5.8**	<0.19	<0.19	<0.20	**11**	**0.69**	<0.19	**3.5**	
VPH																	
C5-C8 Aliphatics	mg/kg	100	100	100	NT	NT	<5.4	NT	<10	NT	<4.5	<4.5	<3.9	NT	NT	<7.3	
C9-C12 Aliphatics	mg/kg	1000	1000	1000	NT	NT	<5.4	NT	<10	NT	<4.5	<4.5	<3.9	NT	NT	<7.3	
C9-C10 Aromatics	mg/kg	100	100	100	NT	NT	<5.4	NT	<10	NT	<4.5	<4.5	<3.9	NT	NT	<7.3	
Target VOCs																	
Benzene	mg/kg	2	40	40	NT	NT	<0.11	NT	<0.21	NT	<0.090	<0.090	<0.078	NT	NT	<0.15	
Ethylbenzene	mg/kg	40	500	500	NT	NT	<0.11	NT	<0.21	NT	<0.090	<0.090	<0.078	NT	NT	<0.15	
Methyl tert-Butyl Ether (MTBE)	mg/kg	0.1	100	100	NT	NT	<0.11	NT	<0.21	NT	<0.090	<0.090	<0.078	NT	NT	<0.15	
Naphthalene	mg/kg	4	20	500	NT	NT	**0.3**	NT	<0.52	NT	<0.23	<0.23	<0.20	NT	NT	<0.37	
Toluene	mg/kg	30	500	500	NT	NT	<0.11	NT	<0.21	NT	<0.090	<0.090	<0.078	NT	NT	<0.15	
m+p Xylene	mg/kg	100	100	500	NT	NT	<0.11	NT	<0.21	NT	<0.090	<0.090	<0.078	NT	NT	<0.15	
o-Xylene	mg/kg	100	100	500	NT	NT	<0.11	NT	<0.21	NT	<0.090	<0.090	<0.078	NT	NT	<0.15	
Metals								NT									
Antimony	mg/kg	20	20	20	**0.45**	**29**	**4.6**	<0.50	**4.2**	<0.56	<0.42	<0.44	<0.48	**0.66**	<0.40	**1.7**	
Arsenic	mg/kg	20	20	20	<1.7	**12**	**8.2**	**5.0**	**16**	**3.7**	**2.1**	<2.2	<2.4	<15	**2.6**	**8.3**	
Barium	mg/kg	1000	1000	1000	**51**	**260**	**80**	**38**	**130**	**48**	**26**	**26**	**17**	**210**	**30**	**94**	
Beryllium	mg/kg	90	90	90	<0.34	<0.48	**0.44**	<0.50	<0.95	**0.69**	<0.42	<0.044	<0.48	<0.59	**0.56**	<0.64	
Cadmium	mg/kg	70	70	70	<0.34	**3.8**	**0.7**	<0.50	**1.1**	<0.56	<0.42	<0.44	<0.48	<0.59	<0.40	<0.64	
Chromium (III)	mg/kg	1000	1000	1000	NT	NT	**13**	NT	**21**	NT	**5.7**	NT	NT	<29	NT	**15**	
Chromium (VI)	mg/kg	100	100	100	**12**	**43**	**2**	**18**	**1.3**	**15**	<0.40	**6.3**	<4.8	<0.59	**8**	<0.59	
Lead	mg/kg	200	200	200	**21**	**630**	**460**	**66**	**470**	**36**	**3.2**	**3.4**	**21**	**270**	**14**	**330**	
Mercury	mg/kg	20	20	20	<0.14	**0.26**	<0.16	<0.15	**0.80**	<0.16	<0.15	<0.14	<0.15	<0.21	<0.13	<0.21	
Nickel	mg/kg	600	600	600	**11**	**52**	**18**	**18**	**17**	<5.6	**6.2**	**5.9**	<4.8	<29	**5.4**	**9.9**	
Selenium	mg/kg	400	400	400	<3.4	<4.8	<4.0	<5.0	<9.5	<5.6	<4.2	<4.4	<4.8	<29	<4.0	<6.4	
Silver	mg/kg	100	100	100	<1.7	**4.5**	<2.0	<2.5	<4.8	<2.8	<2.1	<2.2	<2.4	<2.9	<2.0	<3.2	
Thallium	mg/kg	8	8	8	<0.34	**0.48**	**0.4**	<0.50	<0.95	<0.56	<0.42	<0.44	<0.48	<0.59	<0.40	<0.64	
Vanadium	mg/kg	400	400	400	**19**	**12**	**14**	**21**	**26**	**16**	**7.8**	**8.3**	<4.8	<29	**11**	**16**	
Zinc	mg/kg	1000	1000	1000	**42**	**1500**	**330**	**51**	**300**	**43**	**18**	**18**	**40**	**340**	**28**	**210**	
VOCs																	
Benzene	mg/kg	2	40	40	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
Sec-Butylbenzene	mg/kg	~	~	~	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
Cis-1,2-Dichloroethylene	mg/kg	0.1	0.1	100	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
Ethylbenzene	mg/kg	40	500	500	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
Isopropylbenzene (Cumene)	mg/kg	1000	~	~	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
P-Isopropyltoluene (p-Cymene)	mg/kg	100	~	~	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
Naphthalene	mg/kg	4	20	500	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
N-Propylbenzene	mg/kg	100	~	~	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
Toluene	mg/kg	30	500	500	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
Trichloroethylene	mg/kg	0.3	0.3	30	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
1,2,4-Trimethylbenzene	mg/kg	1000	~	~	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
1,3,5-Trimethylbenzene	mg/kg	10	~	~	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
Xylenes	mg/kg	100	100	500	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	

QC by JMR 5/8/2020

Abbreviations:
EPH and VPH= Extractable and Volatile Petroleum Hydrocarbons
VOCs and SVOCs = Volatile and Semivolatile Organic Compounds
PAH = Polycyclic Aromatic Hydrocarbons
NT = Not Tested
BDL = Below Detection Limit
MCP = Massachusetts Contingency Plan
mg/kg = milligram per killiogram

Notes:
~ = No standard available
< = indicates parameter not detected
BOLD Parameter detecte
BOLD Parameter equals
BOLD Parameter exceed
BOLD Parameter exceed
1 = Standards are from Massachuset

Table 2
Summary of Soil Analytical Results - Shallow Lead Concentrations
Cedar Woods
618R Waverly Street
Framingham, Massachusetts

Parameters	Units	MCP - Method 1 Cleanup Standards [1]	Sample Location, Date, and Depth							
		S-1/GW-3	SB-102	SB-106	SB-107	SB-108	SB-109	SB-110	SB-111	SB-112
			4/6/2020 0-1 feet	4/6/2020 0-1 feet	4/7/2020 0-1 feet	4/7/2020 0-1 feet	4/7/2020 0-1 feet	4/7/2020 0-1 feet	4/8/2020 0-1 feet	4/7/2020 0-1 feet
Metals										
LEAD	mg/Kg	200	**73**	**68**	**67**	**900**	**790**	**11**	**21**	**25**

Abbreviations:
MCP = Massachusetts Contingency Plan
mg/kg = milligram per killiogram

Notes:
< = indicates parameter not detected above laboratory method reporting limit, shown
1 = Standards are from Massachusetts Contingency Plan (MCP), 310 CMR 40, April 2014.
BOLD Parameter detected above laboratory detection limit
BOLD Parameter exceeds the MCP Method 1, S-1/GW-3 Cleanup Standard

Generator's Waste Profile 1663004-00

Stericycle Environmental Solutions

Starts : 07 JUL 2020
Expires : 06 JUL 2021

Status : PENDING
Sales Rep 1511 Greg Viens
Acct Mngr 1510 Evan Altmann

A: GENERATOR (646334) SITE INFORMATION

Cedar Woods
618R Waverly Street
FRAMINGHAM, MA 01702
> Contact .
TSDF Approval List No Sub Part P No

EPA EXE
NAICS 531190 Neshap N
Phone (508) 532-5470

B: CUSTOMER (39396) INFORMATION

STRATEGIC ENVIRONMENTAL SERVIC ES, Inc.
PO BOX 676
SHREWSBURY, MA 01545-8676

C: WASTE INFORMATION

On File > MSDS No Analysis Yes Sample No Formulary No

Waste Name SOIL/WATER
Process BORINGS. SOURCE OF SOLVENTS IS UNKNOWN. FORMER AUTO GLASS COMPANY, AUTO PARTS RETAILER, FILLING STATION. SEE ANALYTICAL
Unused Commercial Product No Spill Residue No

D: PHYSICAL CHARACTERISTICS OF WASTE

Phys States L-Liq S-Sol
Top Color clear/amber
Mid Color
Bot Color brown
% Ash 0
% Water 50
Odor None
Layers Bi-Layered
Spec Grav 1.1
BTU/Lbs N/A
% Halogens N/A
PH Range 4-10
Free Liq % 50
Flash Test Gen Knowledge
Flash Rnge >200F
Viscosity Med
Pumpable No

E: CHEMICAL COMPOSITION OF WASTE

soil/water (100 %)

PCB's 0 Cyanides 0 Phenolics No Sulfides 0 Dioxins No
TOC <1% VOC <500PPM TAB Profile Information Provided By Generator

F: METALS METHOD TCLP

Arsenic	<5	Cadmium	<1	Chromium	<5	Silver	<5
Barium	<100	Lead	<5	Merc TCLP	<0.2	Selenium	<1
Nickel	0	Zinc	0	Merc Tot	<260	Thallium	0
Copper	0	Chrome-6					

G: OTHER CHARACTERISTICS OF WASTE

Ign. Solid	No	Oxidizer	No	Explosive	No	Shock Sensitive	No
Explosive	N/A	Asbestos	N/A	Radioactive	No	Water Reactive	No
Herbicides	No	Pesticides	0	Ammonia	No	Infectious	No
Gen State UW	No						

Cyanide Reactive	No	Sulfide Reactive	No				
Reactive (Other)	No	Medical	No				

H: EPA / STATE WASTE IDENTIFICATION

EPA Waste No State Waste Yes TSCA No Waste Water No Universal Waste No
Form W113 Source G19 Origin SubPart CC No NESHAPS No CERCLA No Debris No Gen State UW No
EPA Codes
State Codes R015
UHC
Categorical Discharge Standards No Sub Part P No CTW Category N/A DW/EHW:

I: SHIPPING INFORMATION

Marine Pollutant No
Containers DM Metal Drum Qty to Ship Now 1 Projected Volume 55/Onetime
DOT Descrip NON-DOT/NON-RCRA REGULATED

J: SPECIAL DISPOSAL INSTRUCTIONS

Generator's Waste Profile 1663004-00

Status : PENDING

Stericycle Environmental Solutions

Starts : 07 JUL 2020
Expires : 06 JUL 2021

Sales Rep 1511 Greg Viens
Acct Mngr 1510 Evan Altmann

GENERATOR CERTIFICATION

To the best of my knowledge and belief, I hereby warrant and represent that the information contained and submitted in this waste profile and all attached documents is true, accurate, and complete and that no material fact has been omitted as to make this misleading. I understand that others may rely on this information in the handling and processing of the waste material described herein. By signing this waste profile, I am certifying that I am authorized to sign such documentation on behalf of the generator.

Signature	Printed Name	Title	Date
	Thatcher W. Kezer, III	Chief Operating Officer	7/23/2020

In accordance with 40 CFR 264.12(b), Northland Environmental, LLC has the appropriate permits for, and will accept the waste the generator is shipping as described in this profile.

Laboratory Report

Absolute Resource associates
124 Heritage Avenue Portsmouth NH 03801

Jill Murphy
Weston & Sampson
55 Walkers Brook Drive
Reading, MA 01867

PO Number: Framingham Brownfields
Job ID: 52498
Date Received: 4/6/20

Project: Cedar Woods 2180311

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below. The reported results apply to the sample(s) in the condition as received at the time the laboratory took custody. This report shall not be reproduced except in full and with approval from the laboratory. The liability of ARA is limited to the cost of the requested analyses, unless otherwise agreed upon in writing.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

Aaron DeWees
Chief Operating Officer

Date of Approval: 5/4/2020
Total number of pages: 48

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH902		

Project ID: Cedar Woods 2180311

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SB-106 (0-3')	Solid	4/6/2020 9:40	52498-002	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				Zinc in solids by 6020
SB-106 (5-8')	Solid	4/6/2020 10:00	52498-003	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				VPH in solids by MA DEP Method
				Zinc in solids by 6020
SB-106 (3-4')	Solid	4/6/2020 9:50	52498-004	
				Hexavalent Chromium in solids by SW3060A7196A
				ORP in solids by ASTM-1498-08
				pH in solids by SW9045C

Project ID: Cedar Woods 2180311

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SB-105 (0-3')	Solid	4/6/2020 10:40	52498-005	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Hexavalent Chromium in solids by SW3060A7196A
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				ORP in solids by ASTM-1498-08
				pH in solids by SW9045C
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				Zinc in solids by 6020
SB-105 (5-8')	Solid	4/6/2020 11:00	52498-006	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				VPH in solids by MA DEP Method
				Zinc in solids by 6020

Project ID: Cedar Woods 2180311

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SB-102 (0-3')	Solid	4/6/2020 11:45	52498-007	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				Zinc in solids by 6020
SB-102 (11-14')	Solid	4/6/2020 11:40	52498-009	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Hexavalent Chromium in solids by SW3060A7196A
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				ORP in solids by ASTM-1498-08
				pH in solids by SW9045C
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				VPH in solids by MA DEP Method
				Zinc in solids by 6020

Project ID: Cedar Woods 2180311

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SB-101 (0-3')	Solid	4/6/2020 12:55	52498-010	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				Zinc in solids by 6020
SB-101 (9-12')	Solid	4/6/2020 13:05	52498-011	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Hexavalent Chromium in solids by SW3060A7196A
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				ORP in solids by ASTM-1498-08
				pH in solids by SW9045C
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				VPH in solids by MA DEP Method
				Zinc in solids by 6020

Project ID: Cedar Woods 2180311

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SB-103 (0-3')	Solid	4/6/2020 12:20	52498-012	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				Zinc in solids by 6020
SB-103 (3-5')	Solid	4/6/2020 12:20	52498-013	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				Hexavalent Chromium in solids by SW3060A7196A
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				ORP in solids by ASTM-1498-08
				pH in solids by SW9045C
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				Zinc in solids by 6020

Project ID: Cedar Woods 2180311

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SB-103 (7-10')	Solid	4/6/2020 12:25	52498-014	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				VPH in solids by MA DEP Method
				Zinc in solids by 6020
Trip Blank	Solid	4/6/2020 0:00	52498-015	
				VPH in solids by MA DEP Method
SB-106 (5-8')REX	Solid	4/6/2020 10:00	52498-016	
				EPH in solids by MADEP Method

Project ID: Cedar Woods 2180311

Job ID: 52498

Sample#: 52498-003

Sample ID: SB-106 (5-8')

Matrix: Solid Percent Dry: 81.1% Results expressed on a dry weight basis.

Samples prepared in methanol at a ratio of 0.7 mL MeOH/g soil.

Received on ice at 0˚C, in satisfactory condition.

Sampled: 4/6/20 10:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Unadjusted C5-C8 Aliphatics	< 5.5	5.5	ug/g	1	LMM	4/8/20	12628	4/9/20	12:49	MA VPH
Unadjusted C9-C12 Aliphatics	< 5.5	5.5	ug/g	1	LMM	4/8/20	12628	4/9/20	12:49	MA VPH
methyl t-butyl ether (MTBE)	< 0.11	0.11	ug/g	1	LMM	4/8/20	12628	4/9/20	12:49	MA VPH
benzene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12628	4/9/20	12:49	MA VPH
toluene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12628	4/9/20	12:49	MA VPH
ethylbenzene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12628	4/9/20	12:49	MA VPH
m&p-xylenes	< 0.11	0.11	ug/g	1	LMM	4/8/20	12628	4/9/20	12:49	MA VPH
o-xylene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12628	4/9/20	12:49	MA VPH
naphthalene	< 0.28	0.28	ug/g	1	LMM	4/8/20	12628	4/9/20	12:49	MA VPH
C5-C8 Aliphatics	< 5.5	5.5	ug/g	1	LMM	4/8/20	12628	4/9/20	12:49	MA VPH
C9-C12 Aliphatics	< 5.5	5.5	ug/g	1	LMM	4/8/20	12628	4/9/20	12:49	MA VPH
C9-C10 Aromatics	< 5.5	5.5	ug/g	1	LMM	4/8/20	12628	4/9/20	12:49	MA VPH
Surrogate Recovery		**Limits**								
2,5-dibromotoluene as Aromatic SUR	**108**	70-130	%	1	LMM	4/8/20	12628	4/9/20	12:49	MA VPH
2,5-dibromotoluene as Aliphatic SUR	**108**	70-130	%	1	LMM	4/8/20	12628	4/9/20	12:49	MA VPH
a,a,a-trifluorotoluene SUR	**91**	70-130	%	1	LMM	4/8/20	12628	4/9/20	12:49	MA VPH

Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in that range.

C9-C12 Aliphatic Hydrocarbons exclude concentration of target analytes eluting in that range AND C9-C10 Aromatics.

Project ID: Cedar Woods 2180311

Job ID: 52498

Sample#: 52498-006

Sample ID: SB-105 (5-8')

Matrix: Solid Percent Dry: 88% Results expressed on a dry weight basis.

Samples prepared in methanol at a ratio of 0.65 mL MeOH/g soil.

Received on ice at 0˚C, in satisfactory condition.

Sampled: 4/6/20 11:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Unadjusted C5-C8 Aliphatics	< 4.3	4.3	ug/g	1	LMM	4/8/20	12628	4/9/20	13:19	MA VPH
Unadjusted C9-C12 Aliphatics	< 4.3	4.3	ug/g	1	LMM	4/8/20	12628	4/9/20	13:19	MA VPH
methyl t-butyl ether (MTBE)	< 0.087	0.087	ug/g	1	LMM	4/8/20	12628	4/9/20	13:19	MA VPH
benzene	< 0.087	0.087	ug/g	1	LMM	4/8/20	12628	4/9/20	13:19	MA VPH
toluene	< 0.087	0.087	ug/g	1	LMM	4/8/20	12628	4/9/20	13:19	MA VPH
ethylbenzene	< 0.087	0.087	ug/g	1	LMM	4/8/20	12628	4/9/20	13:19	MA VPH
m&p-xylenes	< 0.087	0.087	ug/g	1	LMM	4/8/20	12628	4/9/20	13:19	MA VPH
o-xylene	< 0.087	0.087	ug/g	1	LMM	4/8/20	12628	4/9/20	13:19	MA VPH
naphthalene	< 0.22	0.22	ug/g	1	LMM	4/8/20	12628	4/9/20	13:19	MA VPH
C5-C8 Aliphatics	< 4.3	4.3	ug/g	1	LMM	4/8/20	12628	4/9/20	13:19	MA VPH
C9-C12 Aliphatics	< 4.3	4.3	ug/g	1	LMM	4/8/20	12628	4/9/20	13:19	MA VPH
C9-C10 Aromatics	< 4.3	4.3	ug/g	1	LMM	4/8/20	12628	4/9/20	13:19	MA VPH
Surrogate Recovery		**Limits**								
2,5-dibromotoluene as Aromatic SUR	**107**	70-130	%	1	LMM	4/8/20	12628	4/9/20	13:19	MA VPH
2,5-dibromotoluene as Aliphatic SUR	**107**	70-130	%	1	LMM	4/8/20	12628	4/9/20	13:19	MA VPH
a,a,a-trifluorotoluene SUR	**99**	70-130	%	1	LMM	4/8/20	12628	4/9/20	13:19	MA VPH

Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in that range.

C9-C12 Aliphatic Hydrocarbons exclude concentration of target analytes eluting in that range AND C9-C10 Aromatics.

Project ID: Cedar Woods 2180311
Job ID: 52498
Sample#: 52498-009
Sample ID: SB-102 (11-14')
Matrix: Solid Percent Dry: 40% Results expressed on a dry weight basis.
Samples prepared in methanol at a ratio of 0.65 mL MeOH/g soil.
Received on ice at 0˚C, in satisfactory condition.
Sampled: 4/6/20 11:40

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Unadjusted C5-C8 Aliphatics	< 16	16	ug/g	1	LMM	4/8/20	12628	4/9/20	13:49	MA VPH
Unadjusted C9-C12 Aliphatics	< 16	16	ug/g	1	LMM	4/8/20	12628	4/9/20	13:49	MA VPH
methyl t-butyl ether (MTBE)	< 0.31	0.31	ug/g	1	LMM	4/8/20	12628	4/9/20	13:49	MA VPH
benzene	< 0.31	0.31	ug/g	1	LMM	4/8/20	12628	4/9/20	13:49	MA VPH
toluene	< 0.31	0.31	ug/g	1	LMM	4/8/20	12628	4/9/20	13:49	MA VPH
ethylbenzene	< 0.31	0.31	ug/g	1	LMM	4/8/20	12628	4/9/20	13:49	MA VPH
m&p-xylenes	< 0.31	0.31	ug/g	1	LMM	4/8/20	12628	4/9/20	13:49	MA VPH
o-xylene	< 0.31	0.31	ug/g	1	LMM	4/8/20	12628	4/9/20	13:49	MA VPH
naphthalene	< 0.78	0.78	ug/g	1	LMM	4/8/20	12628	4/9/20	13:49	MA VPH
C5-C8 Aliphatics	< 16	16	ug/g	1	LMM	4/8/20	12628	4/9/20	13:49	MA VPH
C9-C12 Aliphatics	< 16	16	ug/g	1	LMM	4/8/20	12628	4/9/20	13:49	MA VPH
C9-C10 Aromatics	< 16	16	ug/g	1	LMM	4/8/20	12628	4/9/20	13:49	MA VPH
Surrogate Recovery		**Limits**								
2,5-dibromotoluene as Aromatic SUR	**110**	70-130	%	1	LMM	4/8/20	12628	4/9/20	13:49	MA VPH
2,5-dibromotoluene as Aliphatic SUR	**110**	70-130	%	1	LMM	4/8/20	12628	4/9/20	13:49	MA VPH
a,a,a-trifluorotoluene SUR	**106**	70-130	%	1	LMM	4/8/20	12628	4/9/20	13:49	MA VPH

Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in that range.
C9-C12 Aliphatic Hydrocarbons exclude concentration of target analytes eluting in that range AND C9-C10 Aromatics.

Project ID: Cedar Woods 2180311
Job ID: 52498
Sample#: 52498-011
Sample ID: SB-101 (9-12')
Matrix: Solid Percent Dry: 74% Results expressed on a dry weight basis.
Samples prepared in methanol at a ratio of 0.67 mL MeOH/g soil.
Received on ice at 0˚C, in satisfactory condition.
Sampled: 4/6/20 13:05

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Unadjusted C5-C8 Aliphatics	< 6.3	6.3	ug/g	1	LMM	4/8/20	12628	4/9/20	14:19	MA VPH
Unadjusted C9-C12 Aliphatics	< 6.3	6.3	ug/g	1	LMM	4/8/20	12628	4/9/20	14:19	MA VPH
methyl t-butyl ether (MTBE)	< 0.13	0.13	ug/g	1	LMM	4/8/20	12628	4/9/20	14:19	MA VPH
benzene	< 0.13	0.13	ug/g	1	LMM	4/8/20	12628	4/9/20	14:19	MA VPH
toluene	< 0.13	0.13	ug/g	1	LMM	4/8/20	12628	4/9/20	14:19	MA VPH
ethylbenzene	< 0.13	0.13	ug/g	1	LMM	4/8/20	12628	4/9/20	14:19	MA VPH
m&p-xylenes	< 0.13	0.13	ug/g	1	LMM	4/8/20	12628	4/9/20	14:19	MA VPH
o-xylene	< 0.13	0.13	ug/g	1	LMM	4/8/20	12628	4/9/20	14:19	MA VPH
naphthalene	< 0.31	0.31	ug/g	1	LMM	4/8/20	12628	4/9/20	14:19	MA VPH
C5-C8 Aliphatics	< 6.3	6.3	ug/g	1	LMM	4/8/20	12628	4/9/20	14:19	MA VPH
C9-C12 Aliphatics	< 6.3	6.3	ug/g	1	LMM	4/8/20	12628	4/9/20	14:19	MA VPH
C9-C10 Aromatics	< 6.3	6.3	ug/g	1	LMM	4/8/20	12628	4/9/20	14:19	MA VPH
Surrogate Recovery		**Limits**								
2,5-dibromotoluene as Aromatic SUR	**102**	70-130	%	1	LMM	4/8/20	12628	4/9/20	14:19	MA VPH
2,5-dibromotoluene as Aliphatic SUR	**103**	70-130	%	1	LMM	4/8/20	12628	4/9/20	14:19	MA VPH
a,a,a-trifluorotoluene SUR	**69** *	70-130	%	1	LMM	4/8/20	12628	4/9/20	14:19	MA VPH

**** This surrogate showed recovery outside the acceptance limits.***

Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in that range.

C9-C12 Aliphatic Hydrocarbons exclude concentration of target analytes eluting in that range AND C9-C10 Aromatics.

Project ID: Cedar Woods 2180311

Job ID: 52498

Sample#: 52498-014

Sample ID: SB-103 (7-10')

Matrix: Solid Percent Dry: 76.8% Results expressed on a dry weight basis.

Samples prepared in methanol at a ratio of 0.66 mL MeOH/g soil.

Received on ice at 0˚C, in satisfactory condition.

Sampled: 4/6/20 12:25

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Unadjusted C5-C8 Aliphatics	< 5.8	5.8	ug/g	1	LMM	4/8/20	12628	4/9/20	14:49	MA VPH
Unadjusted C9-C12 Aliphatics	< 5.8	5.8	ug/g	1	LMM	4/8/20	12628	4/9/20	14:49	MA VPH
methyl t-butyl ether (MTBE)	< 0.12	0.12	ug/g	1	LMM	4/8/20	12628	4/9/20	14:49	MA VPH
benzene	< 0.12	0.12	ug/g	1	LMM	4/8/20	12628	4/9/20	14:49	MA VPH
toluene	< 0.12	0.12	ug/g	1	LMM	4/8/20	12628	4/9/20	14:49	MA VPH
ethylbenzene	< 0.12	0.12	ug/g	1	LMM	4/8/20	12628	4/9/20	14:49	MA VPH
m&p-xylenes	< 0.12	0.12	ug/g	1	LMM	4/8/20	12628	4/9/20	14:49	MA VPH
o-xylene	< 0.12	0.12	ug/g	1	LMM	4/8/20	12628	4/9/20	14:49	MA VPH
naphthalene	< 0.29	0.29	ug/g	1	LMM	4/8/20	12628	4/9/20	14:49	MA VPH
C5-C8 Aliphatics	< 5.8	5.8	ug/g	1	LMM	4/8/20	12628	4/9/20	14:49	MA VPH
C9-C12 Aliphatics	< 5.8	5.8	ug/g	1	LMM	4/8/20	12628	4/9/20	14:49	MA VPH
C9-C10 Aromatics	< 5.8	5.8	ug/g	1	LMM	4/8/20	12628	4/9/20	14:49	MA VPH
Surrogate Recovery		**Limits**								
2,5-dibromotoluene as Aromatic SUR	**104**	70-130	%	1	LMM	4/8/20	12628	4/9/20	14:49	MA VPH
2,5-dibromotoluene as Aliphatic SUR	**105**	70-130	%	1	LMM	4/8/20	12628	4/9/20	14:49	MA VPH
a,a,a-trifluorotoluene SUR	**78**	70-130	%	1	LMM	4/8/20	12628	4/9/20	14:49	MA VPH

Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in that range.

C9-C12 Aliphatic Hydrocarbons exclude concentration of target analytes eluting in that range AND C9-C10 Aromatics.

Project ID: Cedar Woods 2180311

Job ID: 52498

Sample#: 52498-015

Sample ID: Trip Blank

Matrix: Solid

Samples prepared in methanol within a 1:1 ratio +/- 25% mL MeOH/g soil

Received on ice at 0˚C, in satisfactory condition.

Sampled: 4/6/20 0:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Unadjusted C5-C8 Aliphatics	< 5.0	5.0	ug/g	1	LMM	4/8/20	12628	4/9/20	11:49	MA VPH
Unadjusted C9-C12 Aliphatics	< 5.0	5.0	ug/g	1	LMM	4/8/20	12628	4/9/20	11:49	MA VPH
methyl t-butyl ether (MTBE)	< 0.10	0.10	ug/g	1	LMM	4/8/20	12628	4/9/20	11:49	MA VPH
benzene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12628	4/9/20	11:49	MA VPH
toluene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12628	4/9/20	11:49	MA VPH
ethylbenzene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12628	4/9/20	11:49	MA VPH
m&p-xylenes	< 0.10	0.10	ug/g	1	LMM	4/8/20	12628	4/9/20	11:49	MA VPH
o-xylene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12628	4/9/20	11:49	MA VPH
naphthalene	< 0.25	0.25	ug/g	1	LMM	4/8/20	12628	4/9/20	11:49	MA VPH
C5-C8 Aliphatics	< 5.0	5.0	ug/g	1	LMM	4/8/20	12628	4/9/20	11:49	MA VPH
C9-C12 Aliphatics	< 5.0	5.0	ug/g	1	LMM	4/8/20	12628	4/9/20	11:49	MA VPH
C9-C10 Aromatics	< 5.0	5.0	ug/g	1	LMM	4/8/20	12628	4/9/20	11:49	MA VPH
Surrogate Recovery		**Limits**								
2,5-dibromotoluene as Aromatic SUR	**105**	70-130	%	1	LMM	4/8/20	12628	4/9/20	11:49	MA VPH
2,5-dibromotoluene as Aliphatic SUR	**105**	70-130	%	1	LMM	4/8/20	12628	4/9/20	11:49	MA VPH
a,a,a-trifluorotoluene SUR	**90**	70-130	%	1	LMM	4/8/20	12628	4/9/20	11:49	MA VPH

Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in that range.

C9-C12 Aliphatic Hydrocarbons exclude concentration of target analytes eluting in that range AND C9-C10 Aromatics.

Project ID: Cedar Woods 2180311
Job ID: 52498
Sample#: 52498-002
Sample ID: SB-106 (0-3')
Matrix: Solid Percent Dry: 89.1% Results expressed on a dry weight basis.
Sampled: 4/6/20 9:40

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.21	0.21	ug/g	1	CL	4/7/20	12625	4/9/20	7:07	MA EPH
2-methylnaphthalene	< 0.21	0.21	ug/g	1	CL	4/7/20	12625	4/9/20	7:07	MA EPH
phenanthrene	**0.44**	0.21	ug/g	1	CL	4/7/20	12625	4/9/20	7:07	MA EPH
acenaphthene	< 0.21	0.21	ug/g	1	CL	4/7/20	12625	4/9/20	7:07	MA EPH
acenaphthylene	< 0.21	0.21	ug/g	1	CL	4/7/20	12625	4/9/20	7:07	MA EPH
fluorene	< 0.21	0.21	ug/g	1	CL	4/7/20	12625	4/9/20	7:07	MA EPH
anthracene	< 0.21	0.21	ug/g	1	CL	4/7/20	12625	4/9/20	7:07	MA EPH
fluoranthene	**0.81**	0.21	ug/g	1	CL	4/7/20	12625	4/9/20	7:07	MA EPH
pyrene	**0.88**	0.21	ug/g	1	CL	4/7/20	12625	4/9/20	7:07	MA EPH
benzo(a)anthracene	**0.42**	0.21	ug/g	1	CL	4/7/20	12625	4/9/20	7:07	MA EPH
chrysene	**0.52**	0.21	ug/g	1	CL	4/7/20	12625	4/9/20	7:07	MA EPH
benzo(b)fluoranthene	**0.35**	0.21	ug/g	1	CL	4/7/20	12625	4/9/20	7:07	MA EPH
benzo(k)fluoranthene	**0.39**	0.21	ug/g	1	CL	4/7/20	12625	4/9/20	7:07	MA EPH
benzo(a)pyrene	**0.40**	0.21	ug/g	1	CL	4/7/20	12625	4/9/20	7:07	MA EPH
indeno(1,2,3-cd)pyrene	**0.36**	0.21	ug/g	1	CL	4/7/20	12625	4/9/20	7:07	MA EPH
dibenzo(a,h)anthracene	< 0.21	0.21	ug/g	1	CL	4/7/20	12625	4/9/20	7:07	MA EPH
benzo(g,h,i)perylene	**0.46**	0.21	ug/g	1	CL	4/7/20	12625	4/9/20	7:07	MA EPH
Unadjusted C11-C22 Aromatics	**49**	21	ug/g	1	DBV	4/7/20	12625	4/9/20	22:29	MA EPH
C9-C18 Aliphatics	< 21	21	ug/g	1	DBV	4/7/20	12625	4/9/20	22:29	MA EPH
C19-C36 Aliphatics	**91**	21	ug/g	1	DBV	4/7/20	12625	4/9/20	22:29	MA EPH
C11-C22 Aromatics	**44**	21	ug/g	1	DBV	4/7/20	12625	4/9/20	22:29	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**55**	40-140	%	1	DBV	4/7/20	12625	4/9/20	22:29	MA EPH
o-terphenyl SUR	**56**	40-140	%	1	DBV	4/7/20	12625	4/9/20	22:29	MA EPH
2-fluorobiphenyl SUR	**66**	40-140	%	1	DBV	4/7/20	12625	4/9/20	22:29	MA EPH
2-bromonaphthalene SUR	**62**	40-140	%	1	DBV	4/7/20	12625	4/9/20	22:29	MA EPH

Project ID: Cedar Woods 2180311
Job ID: 52498
Sample#: 52498-003
Sample ID: SB-106 (5-8')
Matrix: Solid Percent Dry: 81.1% Results expressed on a dry weight basis.
Sampled: 4/6/20 10:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.47	0.47	ug/g	1	CL	4/7/20	12625	4/9/20	8:07	MA EPH
2-methylnaphthalene	< 0.47	0.47	ug/g	1	CL	4/7/20	12625	4/9/20	8:07	MA EPH
phenanthrene	< 0.47	0.47	ug/g	1	CL	4/7/20	12625	4/9/20	8:07	MA EPH
acenaphthene	< 0.47	0.47	ug/g	1	CL	4/7/20	12625	4/9/20	8:07	MA EPH
acenaphthylene	< 0.47	0.47	ug/g	1	CL	4/7/20	12625	4/9/20	8:07	MA EPH
fluorene	< 0.47	0.47	ug/g	1	CL	4/7/20	12625	4/9/20	8:07	MA EPH
anthracene	< 0.47	0.47	ug/g	1	CL	4/7/20	12625	4/9/20	8:07	MA EPH
fluoranthene	< 0.47	0.47	ug/g	1	CL	4/7/20	12625	4/9/20	8:07	MA EPH
pyrene	< 0.47	0.47	ug/g	1	CL	4/7/20	12625	4/9/20	8:07	MA EPH
benzo(a)anthracene	< 0.47	0.47	ug/g	1	CL	4/7/20	12625	4/9/20	8:07	MA EPH
chrysene	< 0.47	0.47	ug/g	1	CL	4/7/20	12625	4/9/20	8:07	MA EPH
benzo(b)fluoranthene	< 0.47	0.47	ug/g	1	CL	4/7/20	12625	4/9/20	8:07	MA EPH
benzo(k)fluoranthene	< 0.47	0.47	ug/g	1	CL	4/7/20	12625	4/9/20	8:07	MA EPH
benzo(a)pyrene	< 0.47	0.47	ug/g	1	CL	4/7/20	12625	4/9/20	8:07	MA EPH
indeno(1,2,3-cd)pyrene	< 0.47	0.47	ug/g	1	CL	4/7/20	12625	4/9/20	8:07	MA EPH
dibenzo(a,h)anthracene	< 0.47	0.47	ug/g	1	CL	4/7/20	12625	4/9/20	8:07	MA EPH
benzo(g,h,i)perylene	< 0.47	0.47	ug/g	1	CL	4/7/20	12625	4/9/20	8:07	MA EPH
Unadjusted C11-C22 Aromatics	**290**	240	ug/g	5	DBV	4/7/20	12625	4/8/20	17:17	MA EPH
C9-C18 Aliphatics	< 240	240	ug/g	5	DBV	4/7/20	12625	4/8/20	17:17	MA EPH
C19-C36 Aliphatics	**570**	240	ug/g	5	DBV	4/7/20	12625	4/8/20	17:17	MA EPH
C11-C22 Aromatics	**290**	240	ug/g	5	DBV	4/7/20	12625	4/8/20	17:17	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**17** *	40-140	%	5	DBV	4/7/20	12625	4/8/20	17:17	MA EPH
o-terphenyl SUR	**17** *	40-140	%	5	DBV	4/7/20	12625	4/8/20	17:17	MA EPH
2-fluorobiphenyl SUR	**141** *	40-140	%	5	DBV	4/7/20	12625	4/8/20	17:17	MA EPH
2-bromonaphthalene SUR	**125**	40-140	%	5	DBV	4/7/20	12625	4/8/20	17:17	MA EPH

**** The surrogate showed recovery outside the acceptance limits. Re-extraction beyond method holding time produced similar results. The re-extracted results are included.***

Project ID: Cedar Woods 2180311
Job ID: 52498
Sample#: 52498-005
Sample ID: SB-105 (0-3')
Matrix: Solid Percent Dry: 81.3% Results expressed on a dry weight basis.
Sampled: 4/6/20 10:40

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.24	0.24	ug/g	1	CL	4/7/20	12625	4/9/20	3:36	MA EPH
2-methylnaphthalene	< 0.24	0.24	ug/g	1	CL	4/7/20	12625	4/9/20	3:36	MA EPH
phenanthrene	**1.5**	0.24	ug/g	1	CL	4/7/20	12625	4/9/20	3:36	MA EPH
acenaphthene	< 0.24	0.24	ug/g	1	CL	4/7/20	12625	4/9/20	3:36	MA EPH
acenaphthylene	< 0.24	0.24	ug/g	1	CL	4/7/20	12625	4/9/20	3:36	MA EPH
fluorene	< 0.24	0.24	ug/g	1	CL	4/7/20	12625	4/9/20	3:36	MA EPH
anthracene	< 0.24	0.24	ug/g	1	CL	4/7/20	12625	4/9/20	3:36	MA EPH
fluoranthene	**3.2**	0.24	ug/g	1	CL	4/7/20	12625	4/9/20	3:36	MA EPH
pyrene	**2.9**	0.24	ug/g	1	CL	4/7/20	12625	4/9/20	3:36	MA EPH
benzo(a)anthracene	**1.5**	0.24	ug/g	1	CL	4/7/20	12625	4/9/20	3:36	MA EPH
chrysene	**1.9**	0.24	ug/g	1	CL	4/7/20	12625	4/9/20	3:36	MA EPH
benzo(b)fluoranthene	**1.6**	0.24	ug/g	1	CL	4/7/20	12625	4/9/20	3:36	MA EPH
benzo(k)fluoranthene	**1.2**	0.24	ug/g	1	CL	4/7/20	12625	4/9/20	3:36	MA EPH
benzo(a)pyrene	**1.4**	0.24	ug/g	1	CL	4/7/20	12625	4/9/20	3:36	MA EPH
indeno(1,2,3-cd)pyrene	**1.1**	0.24	ug/g	1	CL	4/7/20	12625	4/9/20	3:36	MA EPH
dibenzo(a,h)anthracene	**0.38**	0.24	ug/g	1	CL	4/7/20	12625	4/9/20	3:36	MA EPH
benzo(g,h,i)perylene	**1.2**	0.24	ug/g	1	CL	4/7/20	12625	4/9/20	3:36	MA EPH
Unadjusted C11-C22 Aromatics	**150**	24	ug/g	1	DBV	4/7/20	12625	4/8/20	15:34	MA EPH
C9-C18 Aliphatics	< 24	24	ug/g	1	DBV	4/7/20	12625	4/8/20	15:34	MA EPH
C19-C36 Aliphatics	**280**	24	ug/g	1	DBV	4/7/20	12625	4/8/20	15:34	MA EPH
C11-C22 Aromatics	**130**	24	ug/g	1	DBV	4/7/20	12625	4/8/20	15:34	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**47**	40-140	%	1	DBV	4/7/20	12625	4/8/20	15:34	MA EPH
o-terphenyl SUR	**49**	40-140	%	1	DBV	4/7/20	12625	4/8/20	15:34	MA EPH
2-fluorobiphenyl SUR	**69**	40-140	%	1	DBV	4/7/20	12625	4/8/20	15:34	MA EPH
2-bromonaphthalene SUR	**67**	40-140	%	1	DBV	4/7/20	12625	4/8/20	15:34	MA EPH

Project ID: Cedar Woods 2180311
Job ID: 52498
Sample#: 52498-006
Sample ID: SB-105 (5-8')
Matrix: Solid Percent Dry: 88% Results expressed on a dry weight basis.
Sampled: 4/6/20 11:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.22	0.22	ug/g	1	CL	4/7/20	12625	4/8/20	18:33	MA EPH
2-methylnaphthalene	< 0.22	0.22	ug/g	1	CL	4/7/20	12625	4/8/20	18:33	MA EPH
phenanthrene	< 0.22	0.22	ug/g	1	CL	4/7/20	12625	4/8/20	18:33	MA EPH
acenaphthene	< 0.22	0.22	ug/g	1	CL	4/7/20	12625	4/8/20	18:33	MA EPH
acenaphthylene	< 0.22	0.22	ug/g	1	CL	4/7/20	12625	4/8/20	18:33	MA EPH
fluorene	< 0.22	0.22	ug/g	1	CL	4/7/20	12625	4/8/20	18:33	MA EPH
anthracene	< 0.22	0.22	ug/g	1	CL	4/7/20	12625	4/8/20	18:33	MA EPH
fluoranthene	< 0.22	0.22	ug/g	1	CL	4/7/20	12625	4/8/20	18:33	MA EPH
pyrene	< 0.22	0.22	ug/g	1	CL	4/7/20	12625	4/8/20	18:33	MA EPH
benzo(a)anthracene	< 0.22	0.22	ug/g	1	CL	4/7/20	12625	4/8/20	18:33	MA EPH
chrysene	< 0.22	0.22	ug/g	1	CL	4/7/20	12625	4/8/20	18:33	MA EPH
benzo(b)fluoranthene	< 0.22	0.22	ug/g	1	CL	4/7/20	12625	4/8/20	18:33	MA EPH
benzo(k)fluoranthene	< 0.22	0.22	ug/g	1	CL	4/7/20	12625	4/8/20	18:33	MA EPH
benzo(a)pyrene	< 0.22	0.22	ug/g	1	CL	4/7/20	12625	4/8/20	18:33	MA EPH
indeno(1,2,3-cd)pyrene	< 0.22	0.22	ug/g	1	CL	4/7/20	12625	4/8/20	18:33	MA EPH
dibenzo(a,h)anthracene	< 0.22	0.22	ug/g	1	CL	4/7/20	12625	4/8/20	18:33	MA EPH
benzo(g,h,i)perylene	< 0.22	0.22	ug/g	1	CL	4/7/20	12625	4/8/20	18:33	MA EPH
Unadjusted C11-C22 Aromatics	< 22	22	ug/g	1	DBV	4/7/20	12625	4/8/20	13:18	MA EPH
C9-C18 Aliphatics	< 22	22	ug/g	1	DBV	4/7/20	12625	4/8/20	13:18	MA EPH
C19-C36 Aliphatics	**23**	22	ug/g	1	DBV	4/7/20	12625	4/8/20	13:18	MA EPH
C11-C22 Aromatics	< 22	22	ug/g	1	DBV	4/7/20	12625	4/8/20	13:18	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**58**	40-140	%	1	DBV	4/7/20	12625	4/8/20	13:18	MA EPH
o-terphenyl SUR	**58**	40-140	%	1	DBV	4/7/20	12625	4/8/20	13:18	MA EPH
2-fluorobiphenyl SUR	**66**	40-140	%	1	DBV	4/7/20	12625	4/8/20	13:18	MA EPH
2-bromonaphthalene SUR	**64**	40-140	%	1	DBV	4/7/20	12625	4/8/20	13:18	MA EPH

Project ID: Cedar Woods 2180311
Job ID: 52498
Sample#: 52498-007
Sample ID: SB-102 (0-3')
Matrix: Solid Percent Dry: 93% Results expressed on a dry weight basis.
Sampled: 4/6/20 11:45

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.20	0.20	ug/g	1	CL	4/7/20	12625	4/9/20	7:37	MA EPH
2-methylnaphthalene	< 0.20	0.20	ug/g	1	CL	4/7/20	12625	4/9/20	7:37	MA EPH
phenanthrene	< 0.20	0.20	ug/g	1	CL	4/7/20	12625	4/9/20	7:37	MA EPH
acenaphthene	< 0.20	0.20	ug/g	1	CL	4/7/20	12625	4/9/20	7:37	MA EPH
acenaphthylene	< 0.20	0.20	ug/g	1	CL	4/7/20	12625	4/9/20	7:37	MA EPH
fluorene	< 0.20	0.20	ug/g	1	CL	4/7/20	12625	4/9/20	7:37	MA EPH
anthracene	< 0.20	0.20	ug/g	1	CL	4/7/20	12625	4/9/20	7:37	MA EPH
fluoranthene	< 0.20	0.20	ug/g	1	CL	4/7/20	12625	4/9/20	7:37	MA EPH
pyrene	< 0.20	0.20	ug/g	1	CL	4/7/20	12625	4/9/20	7:37	MA EPH
benzo(a)anthracene	< 0.20	0.20	ug/g	1	CL	4/7/20	12625	4/9/20	7:37	MA EPH
chrysene	< 0.20	0.20	ug/g	1	CL	4/7/20	12625	4/9/20	7:37	MA EPH
benzo(b)fluoranthene	< 0.20	0.20	ug/g	1	CL	4/7/20	12625	4/9/20	7:37	MA EPH
benzo(k)fluoranthene	< 0.20	0.20	ug/g	1	CL	4/7/20	12625	4/9/20	7:37	MA EPH
benzo(a)pyrene	< 0.20	0.20	ug/g	1	CL	4/7/20	12625	4/9/20	7:37	MA EPH
indeno(1,2,3-cd)pyrene	< 0.20	0.20	ug/g	1	CL	4/7/20	12625	4/9/20	7:37	MA EPH
dibenzo(a,h)anthracene	< 0.20	0.20	ug/g	1	CL	4/7/20	12625	4/9/20	7:37	MA EPH
benzo(g,h,i)perylene	< 0.20	0.20	ug/g	1	CL	4/7/20	12625	4/9/20	7:37	MA EPH
Unadjusted C11-C22 Aromatics	**51**	20	ug/g	1	DBV	4/7/20	12625	4/9/20	23:03	MA EPH
C9-C18 Aliphatics	< 20	20	ug/g	1	DBV	4/7/20	12625	4/9/20	23:03	MA EPH
C19-C36 Aliphatics	**130**	20	ug/g	1	DBV	4/7/20	12625	4/9/20	23:03	MA EPH
C11-C22 Aromatics	**50**	20	ug/g	1	DBV	4/7/20	12625	4/9/20	23:03	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**43**	40-140	%	1	DBV	4/7/20	12625	4/9/20	23:03	MA EPH
o-terphenyl SUR	**44**	40-140	%	1	DBV	4/7/20	12625	4/9/20	23:03	MA EPH
2-fluorobiphenyl SUR	**66**	40-140	%	1	DBV	4/7/20	12625	4/9/20	23:03	MA EPH
2-bromonaphthalene SUR	**62**	40-140	%	1	DBV	4/7/20	12625	4/9/20	23:03	MA EPH

Project ID: Cedar Woods 2180311
Job ID: 52498
Sample#: 52498-009
Sample ID: SB-102 (11-14')
Matrix: Solid Percent Dry: 40% Results expressed on a dry weight basis.
Sampled: 4/6/20 11:40

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.46	0.46	ug/g	1	CL	4/7/20	12625	4/9/20	2:36	MA EPH
2-methylnaphthalene	< 0.46	0.46	ug/g	1	CL	4/7/20	12625	4/9/20	2:36	MA EPH
phenanthrene	< 0.46	0.46	ug/g	1	CL	4/7/20	12625	4/9/20	2:36	MA EPH
acenaphthene	< 0.46	0.46	ug/g	1	CL	4/7/20	12625	4/9/20	2:36	MA EPH
acenaphthylene	< 0.46	0.46	ug/g	1	CL	4/7/20	12625	4/9/20	2:36	MA EPH
fluorene	< 0.46	0.46	ug/g	1	CL	4/7/20	12625	4/9/20	2:36	MA EPH
anthracene	< 0.46	0.46	ug/g	1	CL	4/7/20	12625	4/9/20	2:36	MA EPH
fluoranthene	**0.48**	0.46	ug/g	1	CL	4/7/20	12625	4/9/20	2:36	MA EPH
pyrene	**0.56**	0.46	ug/g	1	CL	4/7/20	12625	4/9/20	2:36	MA EPH
benzo(a)anthracene	< 0.46	0.46	ug/g	1	CL	4/7/20	12625	4/9/20	2:36	MA EPH
chrysene	< 0.46	0.46	ug/g	1	CL	4/7/20	12625	4/9/20	2:36	MA EPH
benzo(b)fluoranthene	< 0.46	0.46	ug/g	1	CL	4/7/20	12625	4/9/20	2:36	MA EPH
benzo(k)fluoranthene	< 0.46	0.46	ug/g	1	CL	4/7/20	12625	4/9/20	2:36	MA EPH
benzo(a)pyrene	< 0.46	0.46	ug/g	1	CL	4/7/20	12625	4/9/20	2:36	MA EPH
indeno(1,2,3-cd)pyrene	< 0.46	0.46	ug/g	1	CL	4/7/20	12625	4/9/20	2:36	MA EPH
dibenzo(a,h)anthracene	< 0.46	0.46	ug/g	1	CL	4/7/20	12625	4/9/20	2:36	MA EPH
benzo(g,h,i)perylene	< 0.46	0.46	ug/g	1	CL	4/7/20	12625	4/9/20	2:36	MA EPH
Unadjusted C11-C22 Aromatics	< 46	46	ug/g	1	DBV	4/7/20	12625	4/8/20	15:00	MA EPH
C9-C18 Aliphatics	< 46	46	ug/g	1	DBV	4/7/20	12625	4/8/20	15:00	MA EPH
C19-C36 Aliphatics	**80**	46	ug/g	1	DBV	4/7/20	12625	4/8/20	15:00	MA EPH
C11-C22 Aromatics	< 46	46	ug/g	1	DBV	4/7/20	12625	4/8/20	15:00	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**54**	40-140	%	1	DBV	4/7/20	12625	4/8/20	15:00	MA EPH
o-terphenyl SUR	**58**	40-140	%	1	DBV	4/7/20	12625	4/8/20	15:00	MA EPH
2-fluorobiphenyl SUR	**66**	40-140	%	1	DBV	4/7/20	12625	4/8/20	15:00	MA EPH
2-bromonaphthalene SUR	**62**	40-140	%	1	DBV	4/7/20	12625	4/8/20	15:00	MA EPH

Project ID: Cedar Woods 2180311
Job ID: 52498
Sample#: 52498-010
Sample ID: SB-101 (0-3')
Matrix: Solid Percent Dry: 90.7% Results expressed on a dry weight basis.
Sampled: 4/6/20 12:55

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.21	0.21	ug/g	1	CL	4/7/20	12625	4/8/20	22:35	MA EPH
2-methylnaphthalene	< 0.21	0.21	ug/g	1	CL	4/7/20	12625	4/8/20	22:35	MA EPH
phenanthrene	< 0.21	0.21	ug/g	1	CL	4/7/20	12625	4/8/20	22:35	MA EPH
acenaphthene	< 0.21	0.21	ug/g	1	CL	4/7/20	12625	4/8/20	22:35	MA EPH
acenaphthylene	< 0.21	0.21	ug/g	1	CL	4/7/20	12625	4/8/20	22:35	MA EPH
fluorene	< 0.21	0.21	ug/g	1	CL	4/7/20	12625	4/8/20	22:35	MA EPH
anthracene	< 0.21	0.21	ug/g	1	CL	4/7/20	12625	4/8/20	22:35	MA EPH
fluoranthene	**0.22**	0.21	ug/g	1	CL	4/7/20	12625	4/8/20	22:35	MA EPH
pyrene	**0.24**	0.21	ug/g	1	CL	4/7/20	12625	4/8/20	22:35	MA EPH
benzo(a)anthracene	< 0.21	0.21	ug/g	1	CL	4/7/20	12625	4/8/20	22:35	MA EPH
chrysene	< 0.21	0.21	ug/g	1	CL	4/7/20	12625	4/8/20	22:35	MA EPH
benzo(b)fluoranthene	< 0.21	0.21	ug/g	1	CL	4/7/20	12625	4/8/20	22:35	MA EPH
benzo(k)fluoranthene	< 0.21	0.21	ug/g	1	CL	4/7/20	12625	4/8/20	22:35	MA EPH
benzo(a)pyrene	< 0.21	0.21	ug/g	1	CL	4/7/20	12625	4/8/20	22:35	MA EPH
indeno(1,2,3-cd)pyrene	< 0.21	0.21	ug/g	1	CL	4/7/20	12625	4/8/20	22:35	MA EPH
dibenzo(a,h)anthracene	< 0.21	0.21	ug/g	1	CL	4/7/20	12625	4/8/20	22:35	MA EPH
benzo(g,h,i)perylene	< 0.21	0.21	ug/g	1	CL	4/7/20	12625	4/8/20	22:35	MA EPH
Unadjusted C11-C22 Aromatics	< 21	21	ug/g	1	DBV	4/7/20	12625	4/8/20	13:52	MA EPH
C9-C18 Aliphatics	< 21	21	ug/g	1	DBV	4/7/20	12625	4/8/20	13:52	MA EPH
C19-C36 Aliphatics	**35**	21	ug/g	1	DBV	4/7/20	12625	4/8/20	13:52	MA EPH
C11-C22 Aromatics	< 21	21	ug/g	1	DBV	4/7/20	12625	4/8/20	13:52	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**61**	40-140	%	1	DBV	4/7/20	12625	4/8/20	13:52	MA EPH
o-terphenyl SUR	**63**	40-140	%	1	DBV	4/7/20	12625	4/8/20	13:52	MA EPH
2-fluorobiphenyl SUR	**67**	40-140	%	1	DBV	4/7/20	12625	4/8/20	13:52	MA EPH
2-bromonaphthalene SUR	**64**	40-140	%	1	DBV	4/7/20	12625	4/8/20	13:52	MA EPH

Project ID: Cedar Woods 2180311
Job ID: 52498
Sample#: 52498-011
Sample ID: SB-101 (9-12')
Matrix: Solid Percent Dry: 74% Results expressed on a dry weight basis.
Sampled: 4/6/20 13:05

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.25	0.25	ug/g	1	CL	4/7/20	12625	4/9/20	3:06	MA EPH
2-methylnaphthalene	< 0.25	0.25	ug/g	1	CL	4/7/20	12625	4/9/20	3:06	MA EPH
phenanthrene	**2.1**	0.25	ug/g	1	CL	4/7/20	12625	4/9/20	3:06	MA EPH
acenaphthene	< 0.25	0.25	ug/g	1	CL	4/7/20	12625	4/9/20	3:06	MA EPH
acenaphthylene	< 0.25	0.25	ug/g	1	CL	4/7/20	12625	4/9/20	3:06	MA EPH
fluorene	< 0.25	0.25	ug/g	1	CL	4/7/20	12625	4/9/20	3:06	MA EPH
anthracene	**0.40**	0.25	ug/g	1	CL	4/7/20	12625	4/9/20	3:06	MA EPH
fluoranthene	**2.1**	0.25	ug/g	1	CL	4/7/20	12625	4/9/20	3:06	MA EPH
pyrene	**2.3**	0.25	ug/g	1	CL	4/7/20	12625	4/9/20	3:06	MA EPH
benzo(a)anthracene	**0.98**	0.25	ug/g	1	CL	4/7/20	12625	4/9/20	3:06	MA EPH
chrysene	**1.0**	0.25	ug/g	1	CL	4/7/20	12625	4/9/20	3:06	MA EPH
benzo(b)fluoranthene	**0.88**	0.25	ug/g	1	CL	4/7/20	12625	4/9/20	3:06	MA EPH
benzo(k)fluoranthene	**0.71**	0.25	ug/g	1	CL	4/7/20	12625	4/9/20	3:06	MA EPH
benzo(a)pyrene	**0.89**	0.25	ug/g	1	CL	4/7/20	12625	4/9/20	3:06	MA EPH
indeno(1,2,3-cd)pyrene	**0.63**	0.25	ug/g	1	CL	4/7/20	12625	4/9/20	3:06	MA EPH
dibenzo(a,h)anthracene	< 0.25	0.25	ug/g	1	CL	4/7/20	12625	4/9/20	3:06	MA EPH
benzo(g,h,i)perylene	**0.72**	0.25	ug/g	1	CL	4/7/20	12625	4/9/20	3:06	MA EPH
Unadjusted C11-C22 Aromatics	**54**	25	ug/g	1	DBV	4/7/20	12625	4/8/20	14:26	MA EPH
C9-C18 Aliphatics	< 25	25	ug/g	1	DBV	4/7/20	12625	4/8/20	14:26	MA EPH
C19-C36 Aliphatics	**82**	25	ug/g	1	DBV	4/7/20	12625	4/8/20	14:26	MA EPH
C11-C22 Aromatics	**41**	25	ug/g	1	DBV	4/7/20	12625	4/8/20	14:26	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**57**	40-140	%	1	DBV	4/7/20	12625	4/8/20	14:26	MA EPH
o-terphenyl SUR	**63**	40-140	%	1	DBV	4/7/20	12625	4/8/20	14:26	MA EPH
2-fluorobiphenyl SUR	**69**	40-140	%	1	DBV	4/7/20	12625	4/8/20	14:26	MA EPH
2-bromonaphthalene SUR	**67**	40-140	%	1	DBV	4/7/20	12625	4/8/20	14:26	MA EPH

Project ID: Cedar Woods 2180311
Job ID: 52498
Sample#: 52498-016
Sample ID: SB-106 (5-8')REX
Matrix: Solid Percent Dry: 81.1% Results expressed on a dry weight basis.
Sampled: 4/6/20 10:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 2.4	2.4	ug/g	5	CL	4/9/20	12630	4/9/20	21:15	MA EPH
2-methylnaphthalene	< 2.4	2.4	ug/g	5	CL	4/9/20	12630	4/9/20	21:15	MA EPH
phenanthrene	< 2.4	2.4	ug/g	5	CL	4/9/20	12630	4/9/20	21:15	MA EPH
acenaphthene	< 2.4	2.4	ug/g	5	CL	4/9/20	12630	4/9/20	21:15	MA EPH
acenaphthylene	< 2.4	2.4	ug/g	5	CL	4/9/20	12630	4/9/20	21:15	MA EPH
fluorene	< 2.4	2.4	ug/g	5	CL	4/9/20	12630	4/9/20	21:15	MA EPH
anthracene	< 2.4	2.4	ug/g	5	CL	4/9/20	12630	4/9/20	21:15	MA EPH
fluoranthene	< 2.4	2.4	ug/g	5	CL	4/9/20	12630	4/9/20	21:15	MA EPH
pyrene	< 2.4	2.4	ug/g	5	CL	4/9/20	12630	4/9/20	21:15	MA EPH
benzo(a)anthracene	< 2.4	2.4	ug/g	5	CL	4/9/20	12630	4/9/20	21:15	MA EPH
chrysene	< 2.4	2.4	ug/g	5	CL	4/9/20	12630	4/9/20	21:15	MA EPH
benzo(b)fluoranthene	< 2.4	2.4	ug/g	5	CL	4/9/20	12630	4/9/20	21:15	MA EPH
benzo(k)fluoranthene	< 2.4	2.4	ug/g	5	CL	4/9/20	12630	4/9/20	21:15	MA EPH
benzo(a)pyrene	< 2.4	2.4	ug/g	5	CL	4/9/20	12630	4/9/20	21:15	MA EPH
indeno(1,2,3-cd)pyrene	< 2.4	2.4	ug/g	5	CL	4/9/20	12630	4/9/20	21:15	MA EPH
dibenzo(a,h)anthracene	< 2.4	2.4	ug/g	5	CL	4/9/20	12630	4/9/20	21:15	MA EPH
benzo(g,h,i)perylene	< 2.4	2.4	ug/g	5	CL	4/9/20	12630	4/9/20	21:15	MA EPH
Unadjusted C11-C22 Aromatics	**410**	240	ug/g	5	DBV	4/9/20	12630	4/9/20	23:38	MA EPH
C9-C18 Aliphatics	< 240	240	ug/g	5	DBV	4/9/20	12630	4/9/20	23:38	MA EPH
C19-C36 Aliphatics	**830**	240	ug/g	5	DBV	4/9/20	12630	4/9/20	23:38	MA EPH
C11-C22 Aromatics	**410**	240	ug/g	5	DBV	4/9/20	12630	4/9/20	23:38	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**21** *	40-140	%	5	DBV	4/9/20	12630	4/9/20	23:38	MA EPH
o-terphenyl SUR	**23** *	40-140	%	5	DBV	4/9/20	12630	4/9/20	23:38	MA EPH
2-fluorobiphenyl SUR	**118**	40-140	%	5	DBV	4/9/20	12630	4/9/20	23:38	MA EPH
2-bromonaphthalene SUR	**107**	40-140	%	5	DBV	4/9/20	12630	4/9/20	23:38	MA EPH

**** The surrogate showed recovery outside the acceptance limits.***
Note: Dilution was required due to sample matrix interference.

Project ID: Cedar Woods 2180311

Job ID: 52498

Sample#: 52498-002

Sample ID: SB-106 (0-3')

Matrix: Solid Percent Dry: 89.1% Results expressed on a dry weight basis.

Sampled: 4/6/20 9:40

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	**0.90**	0.56	ug/g	5	AGN	4/8/20	12626	4/10/20	0:52	SW3051A6020A
Arsenic	**4.0**	2.8	ug/g	5	AGN	4/8/20	12626	4/9/20	2:01	SW3051A6020A
Barium	**200** DM	5.6	ug/g	5	AGN	4/8/20	12626	4/10/20	0:52	SW3051A6020A
Beryllium	< 0.56	0.56	ug/g	5	AGN	4/8/20	12626	4/9/20	2:01	SW3051A6020A
Cadmium	< 0.56	0.56	ug/g	5	AGN	4/8/20	12626	4/9/20	2:01	SW3051A6020A
Chromium	**16**	5.6	ug/g	5	AGN	4/8/20	12626	4/10/20	0:52	SW3051A6020A
Lead	**120**	2.8	ug/g	5	AGN	4/8/20	12626	4/10/20	0:52	SW3051A6020A
Mercury	**0.17**	0.14	ug/g	1	AGN	4/7/20	12622	4/7/20	18:25	SW7471B
Nickel	**12**	5.6	ug/g	5	AGN	4/8/20	12626	4/10/20	0:52	SW3051A6020A
Selenium	< 5.6	5.6	ug/g	5	AGN	4/8/20	12626	4/9/20	2:01	SW3051A6020A
Silver	< 2.8	2.8	ug/g	5	AGN	4/8/20	12626	4/9/20	2:01	SW3051A6020A
Thallium	< 0.56	0.56	ug/g	5	AGN	4/8/20	12626	4/9/20	2:01	SW3051A6020A
Vanadium	**17**	5.6	ug/g	5	AGN	4/8/20	12626	4/10/20	0:52	SW3051A6020A
Zinc	**190** M	5.6	ug/g	5	AGN	4/8/20	12626	4/10/20	0:52	SW3051A6020A

D = The RPD for the sample duplicate, run as internal QC, was outside the 20% acceptance range. M = The recovery for the matrix spike was 161%. The acceptance criteria is 75-125%.

M = The recovery for the matrix spike was 141%. The acceptance criteria is 75-125%.

Sample#: 52498-003

Sample ID: SB-106 (5-8')

Matrix: Solid Percent Dry: 81.1% Results expressed on a dry weight basis.

Sampled: 4/6/20 10:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	**0.78**	0.59	ug/g	5	AGN	4/8/20	12626	4/10/20	1:20	SW3051A6020A
Arsenic	**3.2**	3.0	ug/g	5	AGN	4/8/20	12626	4/9/20	2:29	SW3051A6020A
Barium	**32**	5.9	ug/g	5	AGN	4/8/20	12626	4/10/20	1:20	SW3051A6020A
Beryllium	< 0.59	0.59	ug/g	5	AGN	4/8/20	12626	4/9/20	2:29	SW3051A6020A
Cadmium	< 0.59	0.59	ug/g	5	AGN	4/8/20	12626	4/9/20	2:29	SW3051A6020A
Chromium	**23**	5.9	ug/g	5	AGN	4/8/20	12626	4/10/20	1:20	SW3051A6020A
Lead	**150**	3.0	ug/g	5	AGN	4/8/20	12626	4/10/20	1:20	SW3051A6020A
Mercury	< 0.15	0.15	ug/g	1	AGN	4/7/20	12622	4/7/20	18:27	SW7471B
Nickel	**9.8**	5.9	ug/g	5	AGN	4/8/20	12626	4/10/20	1:20	SW3051A6020A
Selenium	< 5.9	5.9	ug/g	5	AGN	4/8/20	12626	4/9/20	2:29	SW3051A6020A
Silver	< 3.0	3.0	ug/g	5	AGN	4/8/20	12626	4/9/20	2:29	SW3051A6020A
Thallium	< 0.59	0.59	ug/g	5	AGN	4/8/20	12626	4/9/20	2:29	SW3051A6020A
Vanadium	**12**	5.9	ug/g	5	AGN	4/8/20	12626	4/10/20	1:20	SW3051A6020A
Zinc	**91**	5.9	ug/g	5	AGN	4/8/20	12626	4/10/20	1:20	SW3051A6020A

Project ID: Cedar Woods 2180311

Job ID: 52498

Sample#: 52498-005

Sample ID: SB-105 (0-3')

Matrix: Solid Percent Dry: 81.3% Results expressed on a dry weight basis.

Sampled: 4/6/20 10:40

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	**4.7**	0.60	ug/g	5	AGN	4/8/20	12626	4/10/20	1:29	SW3051A6020A
Arsenic	**7.3**	3.0	ug/g	5	AGN	4/8/20	12626	4/10/20	1:29	SW3051A6020A
Barium	**310**	6.0	ug/g	5	AGN	4/8/20	12626	4/10/20	1:29	SW3051A6020A
Beryllium	< 0.60	0.60	ug/g	5	AGN	4/8/20	12626	4/9/20	2:38	SW3051A6020A
Cadmium	**2.0**	0.60	ug/g	5	AGN	4/8/20	12626	4/9/20	2:38	SW3051A6020A
Chromium	**18**	6.0	ug/g	5	AGN	4/8/20	12626	4/10/20	1:29	SW3051A6020A
Lead	**650**	3.0	ug/g	5	AGN	4/8/20	12626	4/10/20	1:29	SW3051A6020A
Mercury	**2.9**	0.79	ug/g	5	AGN	4/7/20	12622	4/7/20	18:53	SW7471B
Nickel	**18**	6.0	ug/g	5	AGN	4/8/20	12626	4/10/20	1:29	SW3051A6020A
Selenium	< 6.0	6.0	ug/g	5	AGN	4/8/20	12626	4/9/20	2:38	SW3051A6020A
Silver	< 3.0	3.0	ug/g	5	AGN	4/8/20	12626	4/9/20	2:38	SW3051A6020A
Thallium	< 0.60	0.60	ug/g	5	AGN	4/8/20	12626	4/9/20	2:38	SW3051A6020A
Vanadium	**19**	6.0	ug/g	5	AGN	4/8/20	12626	4/10/20	1:29	SW3051A6020A
Zinc	**770**	6.0	ug/g	5	AGN	4/8/20	12626	4/10/20	1:29	SW3051A6020A

Sample#: 52498-006

Sample ID: SB-105 (5-8')

Matrix: Solid Percent Dry: 88% Results expressed on a dry weight basis.

Sampled: 4/6/20 11:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	< 0.55	0.55	ug/g	5	AGN	4/8/20	12626	4/9/20	3:16	SW3051A6020A
Arsenic	**3.0**	2.7	ug/g	5	AGN	4/8/20	12626	4/9/20	3:16	SW3051A6020A
Barium	**23**	5.5	ug/g	5	AGN	4/8/20	12626	4/10/20	1:39	SW3051A6020A
Beryllium	< 0.55	0.55	ug/g	5	AGN	4/8/20	12626	4/9/20	3:16	SW3051A6020A
Cadmium	< 0.55	0.55	ug/g	5	AGN	4/8/20	12626	4/9/20	3:16	SW3051A6020A
Chromium	**11**	5.5	ug/g	5	AGN	4/8/20	12626	4/10/20	1:39	SW3051A6020A
Lead	**5.0**	2.7	ug/g	5	AGN	4/8/20	12626	4/9/20	3:16	SW3051A6020A
Mercury	< 0.15	0.15	ug/g	1	AGN	4/7/20	12622	4/7/20	18:31	SW7471B
Nickel	**14**	5.5	ug/g	5	AGN	4/8/20	12626	4/10/20	1:39	SW3051A6020A
Selenium	< 5.5	5.5	ug/g	5	AGN	4/8/20	12626	4/9/20	3:16	SW3051A6020A
Silver	< 2.7	2.7	ug/g	5	AGN	4/8/20	12626	4/9/20	3:16	SW3051A6020A
Thallium	< 0.55	0.55	ug/g	5	AGN	4/8/20	12626	4/9/20	3:16	SW3051A6020A
Vanadium	**14**	5.5	ug/g	5	AGN	4/8/20	12626	4/10/20	1:39	SW3051A6020A
Zinc	**69**	5.5	ug/g	5	AGN	4/8/20	12626	4/10/20	1:39	SW3051A6020A

Project ID: Cedar Woods 2180311

Job ID: 52498

Sample#: 52498-007

Sample ID: SB-102 (0-3')

Matrix: Solid Percent Dry: 93% Results expressed on a dry weight basis.

Sampled: 4/6/20 11:45

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	< 0.54	0.54	ug/g	5	AGN	4/8/20	12626	4/9/20	3:25	SW3051A6020A
Arsenic	**3.3**	2.7	ug/g	5	AGN	4/8/20	12626	4/9/20	3:25	SW3051A6020A
Barium	**27**	5.4	ug/g	5	AGN	4/8/20	12626	4/10/20	1:48	SW3051A6020A
Beryllium	< 0.54	0.54	ug/g	5	AGN	4/8/20	12626	4/9/20	3:25	SW3051A6020A
Cadmium	< 0.54	0.54	ug/g	5	AGN	4/8/20	12626	4/9/20	3:25	SW3051A6020A
Chromium	**17**	5.4	ug/g	5	AGN	4/8/20	12626	4/10/20	1:48	SW3051A6020A
Lead	**16**	2.7	ug/g	5	AGN	4/8/20	12626	4/10/20	1:48	SW3051A6020A
Mercury	< 0.13	0.13	ug/g	1	AGN	4/7/20	12622	4/7/20	18:33	SW7471B
Nickel	**23**	5.4	ug/g	5	AGN	4/8/20	12626	4/10/20	1:48	SW3051A6020A
Selenium	< 5.4	5.4	ug/g	5	AGN	4/8/20	12626	4/9/20	3:25	SW3051A6020A
Silver	< 2.7	2.7	ug/g	5	AGN	4/8/20	12626	4/9/20	3:25	SW3051A6020A
Thallium	< 0.54	0.54	ug/g	5	AGN	4/8/20	12626	4/9/20	3:25	SW3051A6020A
Vanadium	**20**	5.4	ug/g	5	AGN	4/8/20	12626	4/10/20	1:48	SW3051A6020A
Zinc	**31**	5.4	ug/g	5	AGN	4/8/20	12626	4/10/20	1:48	SW3051A6020A

Sample#: 52498-009

Sample ID: SB-102 (11-14')

Matrix: Solid Percent Dry: 40% Results expressed on a dry weight basis.

Sampled: 4/6/20 11:40

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	< 1.1	1.1	ug/g	5	AGN	4/8/20	12626	4/10/20	2:25	SW3051A6020A
Arsenic	**10**	5.6	ug/g	5	AGN	4/8/20	12626	4/9/20	3:34	SW3051A6020A
Barium	**56**	11	ug/g	5	AGN	4/8/20	12626	4/10/20	2:25	SW3051A6020A
Beryllium	< 1.1	1.1	ug/g	5	AGN	4/8/20	12626	4/9/20	3:34	SW3051A6020A
Cadmium	< 1.1	1.1	ug/g	5	AGN	4/8/20	12626	4/9/20	3:34	SW3051A6020A
Chromium	**41**	11	ug/g	5	AGN	4/8/20	12626	4/10/20	2:25	SW3051A6020A
Lead	**190**	5.6	ug/g	5	AGN	4/8/20	12626	4/10/20	2:25	SW3051A6020A
Mercury	< 0.31	0.31	ug/g	1	AGN	4/7/20	12622	4/7/20	18:34	SW7471B
Nickel	**64**	11	ug/g	5	AGN	4/8/20	12626	4/10/20	2:25	SW3051A6020A
Selenium	< 11	11	ug/g	5	AGN	4/8/20	12626	4/9/20	3:34	SW3051A6020A
Silver	< 5.6	5.6	ug/g	5	AGN	4/8/20	12626	4/9/20	3:34	SW3051A6020A
Thallium	< 1.1	1.1	ug/g	5	AGN	4/8/20	12626	4/9/20	3:34	SW3051A6020A
Vanadium	**17**	11	ug/g	5	AGN	4/8/20	12626	4/10/20	2:25	SW3051A6020A
Zinc	**530**	11	ug/g	5	AGN	4/8/20	12626	4/10/20	2:25	SW3051A6020A

Project ID: Cedar Woods 2180311

Job ID: 52498

Sample#: 52498-010

Sample ID: SB-101 (0-3')

Matrix: Solid Percent Dry: 90.7% Results expressed on a dry weight basis.

Sampled: 4/6/20 12:55

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	< 0.52	0.52	ug/g	5	AGN	4/8/20	12626	4/9/20	3:44	SW3051A6020A
Arsenic	**3.3**	2.6	ug/g	5	AGN	4/8/20	12626	4/9/20	3:44	SW3051A6020A
Barium	**18**	5.2	ug/g	5	AGN	4/8/20	12626	4/10/20	2:35	SW3051A6020A
Beryllium	< 0.52	0.52	ug/g	5	AGN	4/8/20	12626	4/9/20	3:44	SW3051A6020A
Cadmium	< 0.52	0.52	ug/g	5	AGN	4/8/20	12626	4/9/20	3:44	SW3051A6020A
Chromium	**7.3**	5.2	ug/g	5	AGN	4/8/20	12626	4/10/20	2:35	SW3051A6020A
Lead	**8.7**	2.6	ug/g	5	AGN	4/8/20	12626	4/10/20	2:35	SW3051A6020A
Mercury	< 0.15	0.15	ug/g	1	AGN	4/7/20	12622	4/7/20	18:36	SW7471B
Nickel	**7.4**	5.2	ug/g	5	AGN	4/8/20	12626	4/10/20	2:35	SW3051A6020A
Selenium	< 5.2	5.2	ug/g	5	AGN	4/8/20	12626	4/9/20	3:44	SW3051A6020A
Silver	< 2.6	2.6	ug/g	5	AGN	4/8/20	12626	4/9/20	3:44	SW3051A6020A
Thallium	< 0.52	0.52	ug/g	5	AGN	4/8/20	12626	4/9/20	3:44	SW3051A6020A
Vanadium	**11**	5.2	ug/g	5	AGN	4/8/20	12626	4/10/20	2:35	SW3051A6020A
Zinc	**17**	5.2	ug/g	5	AGN	4/8/20	12626	4/10/20	2:35	SW3051A6020A

Sample#: 52498-011

Sample ID: SB-101 (9-12')

Matrix: Solid Percent Dry: 74% Results expressed on a dry weight basis.

Sampled: 4/6/20 13:05

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	**2.7**	0.68	ug/g	5	AGN	4/8/20	12626	4/10/20	2:44	SW3051A6020A
Arsenic	**28**	3.4	ug/g	5	AGN	4/8/20	12626	4/10/20	2:44	SW3051A6020A
Barium	**140**	6.8	ug/g	5	AGN	4/8/20	12626	4/10/20	2:44	SW3051A6020A
Beryllium	< 0.68	0.68	ug/g	5	AGN	4/8/20	12626	4/9/20	3:53	SW3051A6020A
Cadmium	**1.3**	0.68	ug/g	5	AGN	4/8/20	12626	4/10/20	2:44	SW3051A6020A
Chromium	**51**	6.8	ug/g	5	AGN	4/8/20	12626	4/10/20	2:44	SW3051A6020A
Lead	**230**	3.4	ug/g	5	AGN	4/8/20	12626	4/10/20	2:44	SW3051A6020A
Mercury	**0.58**	0.18	ug/g	1	AGN	4/7/20	12622	4/7/20	18:42	SW7471B
Nickel	**14**	6.8	ug/g	5	AGN	4/8/20	12626	4/10/20	2:44	SW3051A6020A
Selenium	< 6.8	6.8	ug/g	5	AGN	4/8/20	12626	4/9/20	3:53	SW3051A6020A
Silver	< 3.4	3.4	ug/g	5	AGN	4/8/20	12626	4/9/20	3:53	SW3051A6020A
Thallium	< 0.68	0.68	ug/g	5	AGN	4/8/20	12626	4/9/20	3:53	SW3051A6020A
Vanadium	**15**	6.8	ug/g	5	AGN	4/8/20	12626	4/10/20	2:44	SW3051A6020A
Zinc	**220**	6.8	ug/g	5	AGN	4/8/20	12626	4/10/20	2:44	SW3051A6020A

Project ID: Cedar Woods 2180311

Job ID: 52498

Sample#: 52498-012

Sample ID: SB-103 (0-3')

Matrix: Solid Percent Dry: 93% Results expressed on a dry weight basis.

Sampled: 4/6/20 12:20

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	< 0.51	0.51	ug/g	5	AGN	4/8/20	12626	4/9/20	4:02	SW3051A6020A
Arsenic	**3.5**	2.5	ug/g	5	AGN	4/8/20	12626	4/9/20	4:02	SW3051A6020A
Barium	**25**	5.1	ug/g	5	AGN	4/8/20	12626	4/10/20	2:53	SW3051A6020A
Beryllium	< 0.51	0.51	ug/g	5	AGN	4/8/20	12626	4/9/20	4:02	SW3051A6020A
Cadmium	< 0.51	0.51	ug/g	5	AGN	4/8/20	12626	4/9/20	4:02	SW3051A6020A
Chromium	**6.9**	5.1	ug/g	5	AGN	4/8/20	12626	4/10/20	2:53	SW3051A6020A
Lead	**22**	2.5	ug/g	5	AGN	4/8/20	12626	4/10/20	2:53	SW3051A6020A
Mercury	< 0.15	0.15	ug/g	1	AGN	4/7/20	12622	4/7/20	18:48	SW7471B
Nickel	**6.3**	5.1	ug/g	5	AGN	4/8/20	12626	4/10/20	2:53	SW3051A6020A
Selenium	< 5.1	5.1	ug/g	5	AGN	4/8/20	12626	4/9/20	4:02	SW3051A6020A
Silver	< 2.5	2.5	ug/g	5	AGN	4/8/20	12626	4/9/20	4:02	SW3051A6020A
Thallium	< 0.51	0.51	ug/g	5	AGN	4/8/20	12626	4/9/20	4:02	SW3051A6020A
Vanadium	**10**	5.1	ug/g	5	AGN	4/8/20	12626	4/10/20	2:53	SW3051A6020A
Zinc	**19**	5.1	ug/g	5	AGN	4/8/20	12626	4/10/20	2:53	SW3051A6020A

Sample#: 52498-013

Sample ID: SB-103 (3-5')

Matrix: Solid Percent Dry: 81.1% Results expressed on a dry weight basis.

Sampled: 4/6/20 12:20

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	**3.7**	0.62	ug/g	5	AGN	4/8/20	12626	4/10/20	3:03	SW3051A6020A
Arsenic	**13**	3.1	ug/g	5	AGN	4/8/20	12626	4/10/20	3:03	SW3051A6020A
Barium	**250**	6.2	ug/g	5	AGN	4/8/20	12626	4/10/20	3:03	SW3051A6020A
Beryllium	< 0.62	0.62	ug/g	5	AGN	4/8/20	12626	4/9/20	4:12	SW3051A6020A
Cadmium	**4.9**	0.62	ug/g	5	AGN	4/8/20	12626	4/10/20	3:03	SW3051A6020A
Chromium	**9.4**	6.2	ug/g	5	AGN	4/8/20	12626	4/10/20	3:03	SW3051A6020A
Lead	**710**	3.1	ug/g	5	AGN	4/8/20	12626	4/10/20	3:03	SW3051A6020A
Mercury	**0.58**	0.16	ug/g	1	AGN	4/7/20	12622	4/7/20	18:49	SW7471B
Nickel	**12**	6.2	ug/g	5	AGN	4/8/20	12626	4/10/20	3:03	SW3051A6020A
Selenium	< 6.2	6.2	ug/g	5	AGN	4/8/20	12626	4/9/20	4:12	SW3051A6020A
Silver	< 3.1	3.1	ug/g	5	AGN	4/8/20	12626	4/9/20	4:12	SW3051A6020A
Thallium	< 0.62	0.62	ug/g	5	AGN	4/8/20	12626	4/9/20	4:12	SW3051A6020A
Vanadium	**10.0**	6.2	ug/g	5	AGN	4/8/20	12626	4/10/20	3:03	SW3051A6020A
Zinc	**920**	6.2	ug/g	5	AGN	4/8/20	12626	4/10/20	3:03	SW3051A6020A

Project ID: Cedar Woods 2180311
Job ID: 52498
Sample#: 52498-014
Sample ID: SB-103 (7-10')
Matrix: Solid Percent Dry: 76.8% Results expressed on a dry weight basis.
Sampled: 4/6/20 12:25

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	< 0.60	0.60	ug/g	5	AGN	4/8/20	12626	4/9/20	4:21	SW3051A6020A
Arsenic	**3.3**	3.0	ug/g	5	AGN	4/8/20	12626	4/9/20	4:21	SW3051A6020A
Barium	**36**	6.0	ug/g	5	AGN	4/8/20	12626	4/10/20	3:12	SW3051A6020A
Beryllium	< 0.60	0.60	ug/g	5	AGN	4/8/20	12626	4/9/20	4:21	SW3051A6020A
Cadmium	< 0.60	0.60	ug/g	5	AGN	4/8/20	12626	4/9/20	4:21	SW3051A6020A
Chromium	**18**	6.0	ug/g	5	AGN	4/8/20	12626	4/10/20	3:12	SW3051A6020A
Lead	**8.4**	3.0	ug/g	5	AGN	4/8/20	12626	4/10/20	3:12	SW3051A6020A
Mercury	< 0.17	0.17	ug/g	1	AGN	4/7/20	12622	4/7/20	18:51	SW7471B
Nickel	**13**	6.0	ug/g	5	AGN	4/8/20	12626	4/10/20	3:12	SW3051A6020A
Selenium	< 6.0	6.0	ug/g	5	AGN	4/8/20	12626	4/9/20	4:21	SW3051A6020A
Silver	< 3.0	3.0	ug/g	5	AGN	4/8/20	12626	4/9/20	4:21	SW3051A6020A
Thallium	< 0.60	0.60	ug/g	5	AGN	4/8/20	12626	4/9/20	4:21	SW3051A6020A
Vanadium	**25**	6.0	ug/g	5	AGN	4/8/20	12626	4/10/20	3:12	SW3051A6020A
Zinc	**18**	6.0	ug/g	5	AGN	4/8/20	12626	4/10/20	3:12	SW3051A6020A

Project ID: Cedar Woods 2180311

Job ID: 52498

Sample#: 52498-004

Sample ID: SB-106 (3-4')

Matrix: Solid Percent Dry: 88.6% Results expressed on a dry weight basis.

Sampled: 4/6/20 9:50

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Chromium, Hexavalent	**0.50**	0.45	ug/g	1	SFM		2001871	4/10/20	11:30	SW3060A7196A
Oxidation Reduction Potential	**430**		mV	1	WAS		2001824	4/7/20	8:00	ASTM1498-08
pH	**5.9**		pH	1	WAS		2001823	4/7/20	7:47	SW9045C

Sample#: 52498-005

Sample ID: SB-105 (0-3')

Matrix: Solid Percent Dry: 81.3% Results expressed on a dry weight basis.

Sampled: 4/6/20 10:40

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Chromium, Hexavalent	< 0.48	0.48	ug/g	1	SFM		2001871	4/10/20	11:30	SW3060A7196A
Oxidation Reduction Potential	**450**		mV	1	WAS		2001824	4/7/20	8:10	ASTM1498-08
pH	**6.8**		pH	1	WAS		2001823	4/7/20	7:53	SW9045C

Sample#: 52498-009

Sample ID: SB-102 (11-14')

Matrix: Solid Percent Dry: 40% Results expressed on a dry weight basis.

Sampled: 4/6/20 11:40

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Chromium, Hexavalent	< 1.00	1.00	ug/g	1	SFM		2001871	4/10/20	11:30	SW3060A7196A
Oxidation Reduction Potential	**49**		mV	1	WAS		2001824	4/7/20	8:14	ASTM1498-08
pH	**6.9**		pH	1	WAS		2001823	4/7/20	8:04	SW9045C

Sample#: 52498-011

Sample ID: SB-101 (9-12')

Matrix: Solid Percent Dry: 74% Results expressed on a dry weight basis.

Sampled: 4/6/20 13:05

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Chromium, Hexavalent	**3.8**	2.8	ug/g	5	SFM		2001871	4/10/20	11:30	SW3060A7196A
Oxidation Reduction Potential	**180**		mV	1	WAS		2001824	4/7/20	8:26	ASTM1498-08
pH	**6.1**		pH	1	WAS		2001823	4/7/20	7:55	SW9045C

Sample#: 52498-013

Sample ID: SB-103 (3-5')

Matrix: Solid Percent Dry: 81.1% Results expressed on a dry weight basis.

Sampled: 4/6/20 12:20

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Chromium, Hexavalent	< 0.49	0.49	ug/g	1	SFM		2001871	4/10/20	11:30	SW3060A7196A
Oxidation Reduction Potential	**250** D		mV	1	WAS		2001824	4/7/20	8:39	ASTM1498-08

D = The RPD for the sample duplicate, run as internal QC, was outside the 10mV acceptance range. The duplicate result is 370 mV.

pH	**6.4**		pH	1	WAS		2001823	4/7/20	8:00	SW9045C

Quality Control Report

124 Heritage Avenue Unit 16
Portsmouth, NH 03801
www.absoluteresourceassociates.com

MassDEP Analytical Protocol Certification Form

Laboratory Name: Absolute Resource Associates	Project #: 2180311
Project Location: Massachusetts	RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s): 52498

Matrices: ☐ Groundwater/Surface Water ☑ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A ☐	7470/7471 Hg CAM III B ☑	MassDEP VPH (GC/PID/FID) CAM IV A ☑	8082 PCB CAM V A ☐	9014 Total Cyanide/PAC CAM VI A ☐	6860 Perchlorate CAM VIII B ☐
8270 SVOC CAM II B ☐	7010 Metals CAM III C ☐	MassDEP VPH (GC/MS) CAM IV C ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☑	MassDEP APH CAM IX A ☐
6010 Metals CAM III A ☐	6020 Metals CAM III D ☑	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	VPH, EPH, APH, and TO-15 only a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No[1]

***Data User Note*: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.**

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	☐ Yes ☑ No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☑ Yes ☐ No[1]

[1]*All negative responses must be addressed in an attached laboratory narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, is accurate and complete.

Signature: _____ **Position:** Chief Operating Officer

Printed Name: Aaron DeWees **Date**: 5/1/20

Sample Integrity Table

Parameter	Method	Matrix	Minimum Volume	Recommended Container(s)	Required Preservation	Holding Time
Volatile Organics	EPA 8260	Aqueous	40mL	2 x 40mL VOA Vials with Teflon lined septa	Cool to ≤6°C 1:1 HCl to pH <2	14 Days
Volatile Organics	EPA 8260	Solid	40mL	1 x 40mL VOA Vial with 10mLs Methanol and 1 unpreserved container for percent moisture	Cool to ≤6°C Methanol	14 Days
Semivolatile Organics	EPA 8270	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Semivolatile Organics	EPA 8270	Solid	20g	4oz Amber Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
Organochlorine Pesticides	EPA 8081	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Organochlorine Pesticides	EPA 8081	Solid	20g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
PCBs	EPA 8082	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	365 Days
PCBs	EPA 8082	Solid	20g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	365 Days
Herbicides (subcontracted)	EPA 8151	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Herbicides (subcontracted)	EPA 8151	Solid	30g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
MA DEP VPH	MADEP VPH	Aqueous	40mL	2 x 40mL VOA Vials with Teflon lined septa	Cool to ≤6°C 1:1 HCl to pH <2	14 Days
MA DEP VPH	MADEP VPH	Solid	40mL	1 x 40mL VOA Vial with 10mLs Methanol and 1 unpreserved container for percent moisture	Cool to ≤6°C Methanol	28 Days
MA DEP EPH	MADEP EPH	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C 1:1 HCl to pH <2	14 Days
MA DEP EPH	MADEP EPH	Solid	30g	4oz Amber Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
Total Metals	EPA 6010	Aqueous	100mL	250mL Polyethylene Bottle	1:1 HNO_3 to pH <2	180 Days
Dissolved Metals	EPA 6010	Aqueous	100mL	250mL Polyethylene Bottle	Filter First 1:1 HNO_3 to pH <2	180 Days
Total Metals	EPA 6010	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	180 Days
Total Mercury (may be combined with Total Metals)	EPA 7470	Aqueous	100mL	125mL Polyethylene Bottle	1:1 HNO_3 to pH <2	28 Days
Total Mercury (may be combined with Total Metals)	EPA 7471	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	28 Days
Chromium, Hexavalent	EPA 7196	Aqueous	100mL	125mL Polyethylene Bottle	Cool to ≤6°C (NH4)2SO4 buffer	28 Days
Chromium, Hexavalent (subcontract)	EPA 7196	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	30 Days
Cyanide, Total	EPA 9014	Aqueous	125mL	125mL Polyethylene Bottle	Cool to ≤6°C 1:1 NaOH to pH >8	14 Days
Cyanide, Total	EPA 9014	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days

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Absolute Resource associates

Case Narrative
Lab # 52498

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, between 0 and 6 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines.
As noted on the result page, the VPH samples did not meet the 1:1 +/-25% methanol to soil ratio.

Calibration

No exceptions noted.

Method Blank

No exceptions noted.

Surrogate Recoveries

EPH: Sample 52498-003 had recoveries for both extraction surrogates below acceptance criteria and one fractionation surrogate above acceptance criteria. The sample was re-extracted beyond method holding time with similar results. Both extractions are included.
VPH: The surrogate a,a,a-trifluorotoluene was below acceptance criteria in sample 52498-011.

Laboratory Control Sample Results

VOC: The LCSD2001516 did not meet the acceptance criteria for t-butanol (TBA). Since <10% of the compounds were outside of the acceptance criteria, reanalysis is not required.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results

Metals: The percent recovery for barium in the matrix spike for sample 52498-002 was 161% the recovery for Zinc was 141%, outside the acceptance criteria of 75-125%. The duplicate of sample 52498-002 had an RPD for barium that was outside the acceptance criteria. Results have been qualified accordingly.
ORP: The duplicate of sample 52498-013 was outside the 10 mV limit. Both results have been included.

Other

VPH: The trap used for VPH analysis is a Tekmar STRATUM Purge Trap 9. The column used for VPH analysis is a Restek Rtx-502.2, 105m, 0.53mmID, and 3um df.

MassDEP Analytical Protocol Certification Form Questions A through I

No explanation is needed for Questions A through I answered in the affirmative.
Question G: The CAM protocol reporting limits were not achieved for this project due to dilutions necessary for sample analysis. Box G is "No."
Question H: See surrogate section above. Box H is "No."

GLOSSARY

%R	Percent Recovery
BLK	Blank (Method Blank, Preparation Blank)
CCB	Continuing Calibration Blank
CCV	Continuing Calibration Verification
CRM	Certified Reference Material (associated with solid Metals samples)
CRMD	Certified Reference Material Duplicate (associated with solid Metals samples)
Dil'n	Dilution
DL	Detection Limit
DUP	Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection
LOQ	Limit of Quantitation
MB	Methanol Blank (associated with solid VOC samples)
MLCS	Methanol Laboratory Control Sample (associated with solid VOC samples)
MLCSD	Methanol Laboratory Control Sample Duplicate (associated with solid VOC samples)
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PB	Preparation Blank
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference
SUR	Surrogate

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
MA VPH	MB12628	Unadjusted C5-C8 Aliphatics		<	5.0	ug/g						
		Unadjusted C9-C12 Aliphatics		<	5.0	ug/g						
		methyl t-butyl ether (MTBE)		<	0.10	ug/g						
		benzene		<	0.10	ug/g						
		toluene		<	0.10	ug/g						
		ethylbenzene		<	0.10	ug/g						
		m&p-xylenes		<	0.10	ug/g						
		o-xylene		<	0.10	ug/g						
		naphthalene		<	0.25	ug/g						
		C5-C8 Aliphatics		<	5.0	ug/g						
		C9-C12 Aliphatics		<	5.0	ug/g						
		C9-C10 Aromatics		<	5.0	ug/g						
		2,5-dibromotoluene as Aromatic SUR			113	%			70	130		
		2,5-dibromotoluene as Aliphatic SUR			112	%			70	130		
		a,a,a-trifluorotoluene SUR			90	%			70	130		
MA VPH	MLCS12628	Unadjusted C5-C8 Aliphatics			14	ug/g	15	93	70	130		
		Unadjusted C9-C12 Aliphatics			13	ug/g	15	89	70	130		
		methyl t-butyl ether (MTBE)			4.6	ug/g	5	92	70	130		
		benzene			4.8	ug/g	5	97	70	130		
		toluene			4.8	ug/g	5	95	70	130		
		ethylbenzene			4.8	ug/g	5	96	70	130		
		m&p-xylenes			9.7	ug/g	10	97	70	130		
		o-xylene			4.8	ug/g	5	96	70	130		
		naphthalene			5.0	ug/g	5	100	70	130		
		C5-C8 Aliphatics		<	5.0	ug/g			70	130		
		C9-C12 Aliphatics		<	5.0	ug/g			70	130		
		C9-C10 Aromatics			5.1	ug/g	5	102	70	130		
		2,5-dibromotoluene as Aromatic SUR			111	%			70	130		
		2,5-dibromotoluene as Aliphatic SUR			112	%			70	130		
		a,a,a-trifluorotoluene SUR			86	%			70	130		
MA VPH	MLCSD12628	Unadjusted C5-C8 Aliphatics			14	ug/g	15	93	70	130	0	25
		Unadjusted C9-C12 Aliphatics			14	ug/g	15	90	70	130	2	25
		methyl t-butyl ether (MTBE)			4.7	ug/g	5	93	70	130	1	25
		benzene			4.9	ug/g	5	99	70	130	2	25
		toluene			4.9	ug/g	5	98	70	130	3	25
		ethylbenzene			4.9	ug/g	5	99	70	130	3	25
		m&p-xylenes			10.0	ug/g	10	100	70	130	3	25
		o-xylene			4.9	ug/g	5	99	70	130	2	25
		naphthalene			5.1	ug/g	5	102	70	130	2	25
		C5-C8 Aliphatics		<	5.0	ug/g			70	130		25
		C9-C12 Aliphatics		<	5.0	ug/g			70	130		25
		C9-C10 Aromatics			5.2	ug/g	5	103	70	130	1	25
		2,5-dibromotoluene as Aromatic SUR			99	%			70	130		
		2,5-dibromotoluene as Aliphatic SUR			100	%			70	130		
		a,a,a-trifluorotoluene SUR			90	%			70	130		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
MA EPH	BLK12625	naphthalene		<	0.20	ug/g						
		2-methylnaphthalene		<	0.20	ug/g						
		phenanthrene		<	0.20	ug/g						
		acenaphthene		<	0.20	ug/g						
		acenaphthylene		<	0.20	ug/g						
		fluorene		<	0.20	ug/g						
		anthracene		<	0.20	ug/g						
		fluoranthene		<	0.20	ug/g						
		pyrene		<	0.20	ug/g						
		benzo(a)anthracene		<	0.20	ug/g						
		chrysene		<	0.20	ug/g						
		benzo(b)fluoranthene		<	0.20	ug/g						
		benzo(k)fluoranthene		<	0.20	ug/g						
		benzo(a)pyrene		<	0.20	ug/g						
		indeno(1,2,3-cd)pyrene		<	0.20	ug/g						
		dibenzo(a,h)anthracene		<	0.20	ug/g						
		benzo(g,h,i)perylene		<	0.20	ug/g						
		Unadjusted C11-C22 Aromatics		<	20	ug/g						
		C9-C18 Aliphatics		<	20	ug/g						
		C19-C36 Aliphatics		<	20	ug/g						
		C11-C22 Aromatics		<	20	ug/g						
		1-chloro-octadecane SUR			52	%			40	140		
		o-terphenyl SUR			53	%			40	140		
		2-fluorobiphenyl SUR			67	%			40	140		
		2-bromonaphthalene SUR			65	%			40	140		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
MA EPH	LCS12625	naphthalene			3.0	ug/g	6	50	40	140		
		2-methylnaphthalene			3.0	ug/g	6	50	40	140		
		phenanthrene			3.6	ug/g	6	60	40	140		
		acenaphthene			3.3	ug/g	6	55	40	140		
		acenaphthylene			3.1	ug/g	6	51	40	140		
		fluorene			3.4	ug/g	6	57	40	140		
		anthracene			3.5	ug/g	6	58	40	140		
		fluoranthene			3.8	ug/g	6	64	40	140		
		pyrene			4.1	ug/g	6	69	40	140		
		benzo(a)anthracene			4.1	ug/g	6	68	40	140		
		chrysene			4.2	ug/g	6	71	40	140		
		benzo(b)fluoranthene			4.0	ug/g	6	67	40	140		
		benzo(k)fluoranthene			3.9	ug/g	6	65	40	140		
		benzo(a)pyrene			4.0	ug/g	6	66	40	140		
		indeno(1,2,3-cd)pyrene			4.2	ug/g	6	71	40	140		
		dibenzo(a,h)anthracene			4.2	ug/g	6	70	40	140		
		benzo(g,h,i)perylene			4.2	ug/g	6	69	40	140		
		Unadjusted C11-C22 Aromatics			68	ug/g	102	66	40	140		
		C9-C18 Aliphatics			20	ug/g	36	57	40	140		
		C19-C36 Aliphatics			56	ug/g	48	116	40	140		
		C11-C22 Aromatics		<	20	ug/g			40	140		
		1-chloro-octadecane SUR			60	%			40	140		
		o-terphenyl SUR			58	%			40	140		
		2-fluorobiphenyl SUR			65	%			40	140		
		2-bromonaphthalene SUR			64	%			40	140		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
MA EPH	LCSD12625	naphthalene			2.9	ug/g	6	48	40	140	2	25
		2-methylnaphthalene			2.9	ug/g	6	49	40	140	3	25
		phenanthrene			3.5	ug/g	6	59	40	140	1	25
		acenaphthene			3.3	ug/g	6	55	40	140	0	25
		acenaphthylene			3.1	ug/g	6	51	40	140	0	25
		fluorene			3.4	ug/g	6	57	40	140	1	25
		anthracene			3.4	ug/g	6	57	40	140	1	25
		fluoranthene			3.7	ug/g	6	61	40	140	4	25
		pyrene			4.0	ug/g	6	67	40	140	3	25
		benzo(a)anthracene			4.0	ug/g	6	66	40	140	3	25
		chrysene			4.1	ug/g	6	68	40	140	4	25
		benzo(b)fluoranthene			4.0	ug/g	6	66	40	140	1	25
		benzo(k)fluoranthene			3.8	ug/g	6	63	40	140	3	25
		benzo(a)pyrene			3.9	ug/g	6	64	40	140	3	25
		indeno(1,2,3-cd)pyrene			4.2	ug/g	6	69	40	140	2	25
		dibenzo(a,h)anthracene			4.1	ug/g	6	69	40	140	2	25
		benzo(g,h,i)perylene			4.1	ug/g	6	68	40	140	1	25
		Unadjusted C11-C22 Aromatics			65	ug/g	102	63	40	140	5	25
		C9-C18 Aliphatics		<	20	ug/g	36	52	40	140	8	25
		C19-C36 Aliphatics			54	ug/g	48	113	40	140	3	25
		C11-C22 Aromatics		<	20	ug/g			40	140		25
		1-chloro-octadecane SUR			55	%			40	140		
		o-terphenyl SUR			55	%			40	140		
		2-fluorobiphenyl SUR			68	%			40	140		
		2-bromonaphthalene SUR			66	%			40	140		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
MA EPH	BLK12630	naphthalene		<	0.20	ug/g						
		2-methylnaphthalene		<	0.20	ug/g						
		phenanthrene		<	0.20	ug/g						
		acenaphthene		<	0.20	ug/g						
		acenaphthylene		<	0.20	ug/g						
		fluorene		<	0.20	ug/g						
		anthracene		<	0.20	ug/g						
		fluoranthene		<	0.20	ug/g						
		pyrene		<	0.20	ug/g						
		benzo(a)anthracene		<	0.20	ug/g						
		chrysene		<	0.20	ug/g						
		benzo(b)fluoranthene		<	0.20	ug/g						
		benzo(k)fluoranthene		<	0.20	ug/g						
		benzo(a)pyrene		<	0.20	ug/g						
		indeno(1,2,3-cd)pyrene		<	0.20	ug/g						
		dibenzo(a,h)anthracene		<	0.20	ug/g						
		benzo(g,h,i)perylene		<	0.20	ug/g						
		Unadjusted C11-C22 Aromatics		<	20	ug/g						
		C9-C18 Aliphatics		<	20	ug/g						
		C19-C36 Aliphatics		<	20	ug/g						
		C11-C22 Aromatics		<	20	ug/g						
		1-chloro-octadecane SUR			52	%			40	140		
		o-terphenyl SUR			59	%			40	140		
		2-fluorobiphenyl SUR			66	%			40	140		
		2-bromonaphthalene SUR			64	%			40	140		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
MA EPH	LCS12630	naphthalene			3.1	ug/g	6	51	40	140		
		2-methylnaphthalene			3.1	ug/g	6	52	40	140		
		phenanthrene			3.6	ug/g	6	60	40	140		
		acenaphthene			3.3	ug/g	6	56	40	140		
		acenaphthylene			3.3	ug/g	6	54	40	140		
		fluorene			3.6	ug/g	6	60	40	140		
		anthracene			3.5	ug/g	6	59	40	140		
		fluoranthene			4.0	ug/g	6	66	40	140		
		pyrene			4.2	ug/g	6	70	40	140		
		benzo(a)anthracene			4.3	ug/g	6	71	40	140		
		chrysene			4.4	ug/g	6	73	40	140		
		benzo(b)fluoranthene			4.4	ug/g	6	73	40	140		
		benzo(k)fluoranthene			3.9	ug/g	6	65	40	140		
		benzo(a)pyrene			4.1	ug/g	6	68	40	140		
		indeno(1,2,3-cd)pyrene			4.4	ug/g	6	73	40	140		
		dibenzo(a,h)anthracene			4.4	ug/g	6	73	40	140		
		benzo(g,h,i)perylene			4.4	ug/g	6	73	40	140		
		Unadjusted C11-C22 Aromatics			65	ug/g	102	64	40	140		
		C9-C18 Aliphatics		<	20	ug/g	36	44	40	140		
		C19-C36 Aliphatics			49	ug/g	48	102	40	140		
		C11-C22 Aromatics		<	20	ug/g			40	140		
		1-chloro-octadecane SUR			52	%			40	140		
		o-terphenyl SUR			57	%			40	140		
		2-fluorobiphenyl SUR			64	%			40	140		
		2-bromonaphthalene SUR			61	%			40	140		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
MA EPH	LCSD12630	naphthalene			2.9	ug/g	6	48	40	140	6	25
		2-methylnaphthalene			2.9	ug/g	6	49	40	140	6	25
		phenanthrene			3.5	ug/g	6	59	40	140	2	25
		acenaphthene			3.3	ug/g	6	55	40	140	1	25
		acenaphthylene			3.1	ug/g	6	52	40	140	4	25
		fluorene			3.6	ug/g	6	59	40	140	1	25
		anthracene			3.5	ug/g	6	59	40	140	0	25
		fluoranthene			4.1	ug/g	6	68	40	140	3	25
		pyrene			4.0	ug/g	6	66	40	140	5	25
		benzo(a)anthracene			4.2	ug/g	6	70	40	140	2	25
		chrysene			4.3	ug/g	6	71	40	140	2	25
		benzo(b)fluoranthene			4.1	ug/g	6	68	40	140	8	25
		benzo(k)fluoranthene			4.2	ug/g	6	70	40	140	8	25
		benzo(a)pyrene			4.1	ug/g	6	68	40	140	0	25
		indeno(1,2,3-cd)pyrene			4.2	ug/g	6	71	40	140	4	25
		dibenzo(a,h)anthracene			4.2	ug/g	6	71	40	140	3	25
		benzo(g,h,i)perylene			4.1	ug/g	6	69	40	140	6	25
		Unadjusted C11-C22 Aromatics			67	ug/g	102	66	40	140	3	25
		C9-C18 Aliphatics		<	20	ug/g	36	53	40	140	18	25
		C19-C36 Aliphatics			54	ug/g	48	112	40	140	9	25
		C11-C22 Aromatics		<	20	ug/g			40	140		25
		1-chloro-octadecane SUR			63	%			40	140		
		o-terphenyl SUR			60	%			40	140		
		2-fluorobiphenyl SUR			60	%			40	140		
		2-bromonaphthalene SUR			59	%			40	140		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3051A6020A	BLK12626	Silver		<	2.5	ug/g						
		Arsenic		<	2.5	ug/g						
		Barium		<	5.0	ug/g						
		Beryllium		<	0.50	ug/g						
		Cadmium		<	0.50	ug/g						
		Chromium		<	5.0	ug/g						
		Nickel		<	5.0	ug/g						
		Lead		<	2.5	ug/g						
		Antimony		<	0.50	ug/g						
		Selenium		<	5.0	ug/g						
		Thallium		<	0.50	ug/g						
		Vanadium		<	5.0	ug/g						
		Zinc		<	5.0	ug/g						
SW3051A6020A	CRM12626	Silver			47.3	ug/g	53.8		31.9	59.7		
		Arsenic			172	ug/g	219		129	240		
		Barium			634	ug/g	788		509	867		
		Beryllium			204	ug/g	247		160	272		
		Cadmium			155	ug/g	175		111	192		
		Chromium			301	ug/g	375		223	414		
		Nickel			258	ug/g	318		193	358		
		Lead			269	ug/g	321		207	353		
		Antimony			97.6	ug/g	159		15.9	180		
		Selenium			117	ug/g	145		78.5	160		
		Thallium			89.0	ug/g	98.6		53.7	111		
		Vanadium			205	ug/g	267		168	294		
		Zinc			239	ug/g	311		190	352		
SW3051A6020A	CRMD12626	Silver			45.8	ug/g	53.8		31.9	59.7	3	20
		Arsenic			168	ug/g	219		129	240	2	20
		Barium			592	ug/g	788		509	867	7	20
		Beryllium			205	ug/g	247		160	272	1	20
		Cadmium			147	ug/g	175		111	192	6	20
		Chromium			294	ug/g	375		223	414	2	20
		Nickel			254	ug/g	318		193	358	1	20
		Lead			251	ug/g	321		207	353	7	20
		Antimony			92.7	ug/g	159		15.9	180	5	20
		Selenium			106	ug/g	145		78.5	160	10	20
		Thallium			83.4	ug/g	98.6		53.7	111	6	20
		Vanadium			196	ug/g	267		168	294	5	20
		Zinc			230	ug/g	311		190	352	4	20

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD		RPD Limit
SW3051A6020A	DUP12626	Silver	52498-002	<	2.6	ug/g								20
		Arsenic	52498-002		4.8	ug/g						19		20
		Barium	52498-002		300	ug/g						39	*	20
		Beryllium	52498-002	<	0.51	ug/g								20
		Cadmium	52498-002		0.53	ug/g						43		20
		Chromium	52498-002		18	ug/g						15		20
		Nickel	52498-002		12	ug/g						3		20
		Lead	52498-002		140	ug/g						13		20
		Antimony	52498-002		0.83	ug/g						9		20
		Selenium	52498-002	<	5.1	ug/g								20
		Thallium	52498-002	<	0.51	ug/g								20
		Vanadium	52498-002		17	ug/g						2		20
		Zinc	52498-002		230	ug/g						17		20
SW3051A6020A	MS12626	Silver	52498-002		120	ug/g	125	97		75	125			
		Arsenic	52498-002		200	ug/g	250	78		75	125			
		Barium	52498-002		610	ug/g	250	161	*	75	125			
		Beryllium	52498-002		240	ug/g	250	96		75	125			
		Cadmium	52498-002		240	ug/g	250	97		75	125			
		Chromium	52498-002		240	ug/g	250	90		75	125			
		Nickel	52498-002		230	ug/g	250	87		75	125			
		Lead	52498-002		400	ug/g	250	110		75	125			
		Antimony	52498-002		240	ug/g	250	94		75	125			
		Selenium	52498-002		200	ug/g	250	78		75	125			
		Vanadium	52498-002		240	ug/g	250	89		75	125			
		Zinc	52498-002		550	ug/g	250	141	*	75	125			
SW7471B	BLK12622	Mercury		<	0.14	ug/g								
SW7471B	CRM12622	Mercury			0.249	ug/g	0.221			0.0908	0.351			
SW7471B	CRMD12622	Mercury			0.223	ug/g	0.221			0.0908	0.351		11	35
SW7471B	DUP12622	Mercury	52490-001	<	0.14	ug/g								35
SW7471B	MS12622	Mercury	52490-001		0.40	ug/g	0.333	119		80	120			

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW3060A7196A	CRM2001871	Chromium, Hexavalent			110	ug/g	260			93.3	350		
SW3060A7196A	CRMD2001871	Chromium, Hexavalent			100	ug/g	260			93.3	350		30
SW3060A7196A	DUP2001871	Chromium, Hexavalent	52498-013	<	0.48	ug/g							20
SW3060A7196A	MS2001871	Chromium, Hexavalent	52513-004	<	0.50	ug/g	25.01	1	*	75	125		
SW3060A7196A	MS2001871	Chromium, Hexavalent	52537-009	<	0.55	ug/g	27.25	1	*	75	125		
SW3060A7196A	MSD2001871	Chromium, Hexavalent	52513-004	<	0.49	ug/g	24.43	1	*	75	125	25	20
SW3060A7196A	MSD2001871	Chromium, Hexavalent	52537-009	<	0.55	ug/g	27.35	1	*	75	125	63	20
SW3060A7196A	PB2001871	Chromium, Hexavalent		<	0.40	ug/g							
SW9045C	DUP2001823	pH	52498-004		6.0	pH							

AROMATIC HYDROCARBON BREAKTHROUGH CALCULATION

Method: MADEP EPH 2019 Rev 2.1

	lcs12625 Aliphatic Breakthrough (%)	Acceptance Criteria	Date of Analysis
naphthalene	0.3%	<5.0%	4/8/2020
2-methylnaphthalene	0.2%	<5.0%	4/8/2020

	lcsd12625 Aliphatic Breakthrough (%)	Acceptance Criteria	Date of Analysis
naphthalene	0.3%	<5.0%	4/8/2020
2-methylnaphthalene	0.3%	<5.0%	4/8/2020

AROMATIC HYDROCARBON BREAKTHROUGH CALCULATION

Method: MADEP EPH 2019 Rev 2.1

	lcs12630 Aliphatic Breakthrough (%)	Acceptance Criteria	Date of Analysis
naphthalene	0.6%	<5.0%	4/9/2020
2-methylnaphthalene	0.2%	<5.0%	4/9/2020

	lcsd12630 Aliphatic Breakthrough (%)	Acceptance Criteria	Date of Analysis
naphthalene	0.4%	<5.0%	4/9/2020
2-methylnaphthalene	0.2%	<5.0%	4/9/2020

Absolute Resource associates
124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

52498

Company Name: WESTON & SAMPSON
Company Address: 55 WALKERS BROOK DR READING, MA
Report To: SARAH DESTEFANO & JILL MURPHY
Phone #: 1800 SAMPSON
Invoice to: SARAH DESTEFANO
Email: DESTEFANOS@WSEINC.COM
PO #: FRAMINGHAM BROWNFIELDS

Project Name: CEDAR WOODS
Project #: 2180311
Project Location: NH (MA) ME VT
Accreditation Required? N/Y: Y
Protocol: RCRA SDWA NPDES; (MCP) NHDES DOD
Reporting Limits: ~~QAPP~~ MDEP CW-1 (S-1); EPA DW Other
Quote # N/A
☐ NH Reimbursement Pricing

ANALYSIS REQUEST

☐ VOC 8260 ☐ VOC 8260 NHDES ☐ VOC 8260 MADEP
☐ VOC 624.1 ☐ VOC BTEX MtBE, only ☐ VOC 8021VT
☒ VPH MADEP ☐ GRO 8015 ☐ 1,4-Dioxane *
☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List:
☐ TPH ☐ DRO 8015 ☒ EPH MADEP ☐ TPH Fingerprint
☐ 8270PAH ☐ 8270ABN ☐ 625.1 ☐ EDB
☐ 8082 PCB ☐ 8081 Pesticides ☐ 608.3 Pest/PCB
☐ O&G 1664 ☐ Mineral O&G 1664
☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity ☐ Apparent Color
☐ TSS ☐ TDS ☐ TS ☐ TVS ☐ Alkalinity ☐ Acidity
☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Hardness
☒ Total Metals-list: MCP 14 METALS
☐ Dissolved Metals-list:
☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON ☐ TOC ☐ Ferrous Iron
☐ T-Phosphorus ☐ Bacteria P/A ☐ Bacteria MPN ☐ Enterococci
☐ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P ☐ Phenols
☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride
☐ Corrosivity ☐ Ignitibility/FP
☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide
Subcontract: ☐ Grain Size ☐ Herbicides ☐ Asbestos ☐ PFAS
HEXAVALENT CHROMIUM (CR IV)
Grab (G) or Composite (C)

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO3	H2SO4	NaOH	MeOH	Sampling: DATE	TIME	SAMPLER
52498-01 HOLD	SB-106(0-1')			X		~~X~~	X			X	4/6/20	0920	
-02	SB-106(0-3')			X						X		0940	
-03	SB-106(5-8')			X						X		1006	
-04	SB-106(3-4')			X						X		0950	
-05	SB-105(0-3')			X						X		1040	
-06	SB-105(5-8')			X						X		1100	
-07	SB-102(0-3')			X						X		1145	
-08 HOLD	SB-102(0-1')			X						X		1130	
-09	SB-102(11-14')			X						X		1140	
-10	SB-101(0-3')			X						X		1255	
-11	SB-101(9-12')			X						X		1305	

TAT REQUESTED
Priority (24 hr)* ☐
Expedited (48 hr)* ☐
Standard ☐ (10 Business Days)
*Date Needed: 5-DAY

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS
* VPH W/ TARGET VOCS

REPORTING INSTRUCTIONS ☒ PDF (e-mail address) murphyj@wseinc.com
☐ HARD COPY REQUIRED ☒ EDD

RECEIVED ON ICE ☒ YES ☐ NO
TEMPERATURE 0 °C

CUSTODY RECORD
QSD-01 Revision 11/06/19

	Date	Time		Date	Time
Relinquished by Sampler:	4/6/20	1340	Received by:	4-6	1:48
Relinquished by:	4-6	15:43	Received by:		
Relinquished by:			Received by Laboratory:	4/6/20	15:43

Absolute Resource associates
124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

52498

Company Name:

Company Address: SEE PAGE

Report To: 1 OF 2

Phone #:

Invoice to:

Email:

PO #:

Project Name:

Project #:

Project Location: NH MA ME VT

Accreditation Required? N/Y:

Protocol: RCRA SDWA NPDES MCP NHDES DOD

Reporting Limits: QAPP GW-1 S-1 EPA DW Other

Quote #

❑ NH Reimbursement Pricing

ANALYSIS REQUEST

❑ VOC 8260 MADEP ❑ VOC 8260 NHDES ❑ VOC 8260 ❑ VOC 624.1 ❑ VOC BTEX MtBE, only ❑ VOC 8021VT ✓ VPH MADEP ❑ GRO 8015 ❑ 1,4-Dioxane * ❑ VOC 524.2 ❑ VOC 524.2 NH List ❑ Gases-List: ❑ TPH ❑ DRO 8015 ✓EPH MADEP ❑ TPH Fingerprint ❑ 8270PAH ❑ 8270ABN ❑ 625.1 ❑ EDB ❑ 8082 PCB ❑ 8081 Pesticides ❑ 608.3 Pest/PCB ❑ O&G 1664 ❑ Mineral O&G 1664 ❑ pH ❑ BOD ❑ Conductivity ❑ Turbidity ❑ Apparent Color ❑ TSS ❑ TDS ❑ TS ❑ TVS ❑ Alkalinity ❑ Acidity ❑ RCRA Metals ❑ Priority Pollutant Metals ❑ TAL Metals ❑ Hardness ✓ Total Metals-list: MCP 14 METALS ❑ Dissolved Metals-list: ❑ Ammonia ❑ COD ❑ TKN ❑ TN ❑ TON ❑ TOC ❑ Ferrous Iron ❑ T-Phosphorus ❑ Bacteria P/A ❑ Bacteria MPN ❑ Enterococci ❑ Cyanide ❑ Sulfide ❑ Nitrate + Nitrite ❑ Ortho P ❑ Phenols ❑ Nitrate ❑ Nitrite ❑ Chloride ❑ Sulfate ❑ Bromide ❑ Fluoride ❑ Corrosivity ❑ Ignitibility/FP ❑ TCLP Metals ❑ TCLP VOC ❑ TCLP SVOC ❑ TCLP Pesticide Subcontract: ❑ Grain Size ❑ Herbicides ❑ Asbestos ❑ PFAS ✓ HEXAVALENT CHROMIUM (CR IV) Grab (G) or Composite (C)

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	Sampling: DATE	TIME	SAMPLER
52498-12	SB-103(0-3')			X						X	4/6/20	1220	
-13	SB-103(3-5')			X						X		1220	
-14	SB-103(7-10')			X						X		1225	
-15	TRIP BLANK			X						X	4/6/20		

VPH MADEP 4/6/20 MDM — Total Metals-list: MCP 14 METALS
VPH MADEP 4/6/20 MDM — Total Metals-list: MCP 14 METALS
VPH — Total Metals-list: MCP 14 METALS
Trip Blank — VOC 8260 MADEP: X

HEXAVALENT CHROMIUM (CR IV): MDM 4/6/20 (G) (G)

TAT REQUESTED
Priority (24 hr)* ❑
Expedited (48 hr)* ❑
Standard ❑
(10 Business Days)
*Date Needed 5-DAY

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS
*VPH W/TARGET VOCS

REPORTING INSTRUCTIONS ✓PDF (e-mail address) ❑ HARD COPY REQUIRED ❑ EDD

RECEIVED ON ICE ✓YES ❑NO
TEMPERATURE 6 °C

CUSTODY RECORD
QSD-01 Revision 11/06/19

	Relinquished by Sampler:	Date	Time	Received by:	Date	Time
		4/6/20	1340		4-6	1-40
	Relinquished by:	Date	Time	Received by:	Date	Time
		4-6	1543			
	Relinquished by:	Date	Time	Received by Laboratory:	Date	Time
					4/6/20	1543

Laboratory Report

Absolute Resource associates
124 Heritage Avenue Portsmouth NH 03801

Jill Murphy
Weston & Sampson
55 Walkers Brook Drive
Reading, MA 01867

PO Number: Framingham Brownfields
Job ID: 52513
Date Received: 4/7/20

Project: Cedar Woods 21

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below. The reported results apply to the sample(s) in the condition as received at the time the laboratory took custody. This report shall not be reproduced except in full and with approval from the laboratory. The liability of ARA is limited to the cost of the requested analyses, unless otherwise agreed upon in writing.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

Aaron DeWees
Chief Operating Officer

Date of Approval: 5/4/2020
Total number of pages: 69

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH902		

Project ID: Cedar Woods 21

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SB-104 (0-3')	Solid	4/7/2020 8:45	52513-001	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				Zinc in solids by 6020
SB-104 (8-10')	Solid	4/7/2020 8:55	52513-002	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Hexavalent Chromium in solids by SW3060A7196A
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				ORP in solids by ASTM-1498-08
				pH in solids by SW9045C
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				VPH in solids by MA DEP Method
				Zinc in solids by 6020

Project ID: Cedar Woods 21

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SB-107 (0-3')	Solid	4/7/2020 10:00	52513-004	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Field Specified Laboratory Duplicate
				Field Specified Matrix Spike
				Hexavalent Chromium in solids by SW3060A7196A
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				ORP in solids by ASTM-1498-08
				pH in solids by SW9045C
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				VPH in solids by MA DEP Method
				Zinc in solids by 6020
SB-107 (10-11')	Solid	4/7/2020 10:20	52513-005	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				VPH in solids by MA DEP Method
				Zinc in solids by 6020

Project ID: Cedar Woods 21

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SB-108 (0-3')	Solid	4/7/2020 10:50	52513-007	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				Zinc in solids by 6020
SB-108 (6-9')	Solid	4/7/2020 11:00	52513-008	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Hexavalent Chromium in solids by SW3060A7196A
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				ORP in solids by ASTM-1498-08
				pH in solids by SW9045C
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				VOCs in solids by 8260
				VPH in solids by MA DEP Method
				Zinc in solids by 6020

Project ID: Cedar Woods 21

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SB-109 (0-3')	Solid	4/7/2020 11:40	52513-010	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				Zinc in solids by 6020
SB-109 (5-8')	Solid	4/7/2020 11:45	52513-011	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Hexavalent Chromium in solids by SW3060A7196A
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				ORP in solids by ASTM-1498-08
				pH in solids by SW9045C
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				VPH in solids by MA DEP Method
				Zinc in solids by 6020

Project ID: Cedar Woods 21

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SB-110 (0-3')	Solid	4/7/2020 12:50	52513-013	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				Zinc in solids by 6020
SB-110 (5-8')	Solid	4/7/2020 12:55	52513-014	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Hexavalent Chromium in solids by SW3060A7196A
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				ORP in solids by ASTM-1498-08
				pH in solids by SW9045C
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				VPH in solids by MA DEP Method
				Zinc in solids by 6020

Project ID: Cedar Woods 21

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SB-112 (0-3')	Solid	4/7/2020 13:20	52513-016	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				Zinc in solids by 6020
SB-112 (5-8')	Solid	4/7/2020 13:25	52513-017	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Hexavalent Chromium in solids by SW3060A7196A
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				ORP in solids by ASTM-1498-08
				pH in solids by SW9045C
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				VPH in solids by MA DEP Method
				Zinc in solids by 6020

Project ID: Cedar Woods 21

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
DUP-1	Solid	4/7/2020 0:00	52513-018	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				VPH in solids by MA DEP Method
				Zinc in solids by 6020
Trip Blank	Solid	4/7/2020 0:00	52513-019	
				VOCs in solids by 8260

Project ID: Cedar Woods 21
Job ID: 52513

Sample#: 52513-008
Sample ID: SB-108 (6-9')
Matrix: Solid Percent Dry: 80.4% Results expressed on a dry weight basis.
Samples prepared in methanol at a ratio of 0.67 mL MeOH/g soil.
Received on ice at 2˚C, in satisfactory condition.
Sampled: 4/7/20 11:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
dichlorodifluoromethane	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
chloromethane	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
vinyl chloride	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
bromomethane	< 0.27	0.27	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
chloroethane	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
trichlorofluoromethane	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
diethyl ether	< 0.54	0.54	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
acetone	< 2.7	2.7	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
1,1-dichloroethene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
methylene chloride	< 0.27	0.27	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
carbon disulfide	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
methyl t-butyl ether (MTBE)	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
trans-1,2-dichloroethene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
isopropyl ether (DIPE)	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
ethyl t-butyl ether (ETBE)	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
1,1-dichloroethane	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
t-butanol (TBA)	< 2.7	2.7	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
2-butanone (MEK)	< 0.32	0.32	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
2,2-dichloropropane	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
cis-1,2-dichloroethene	**0.20**	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
chloroform	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
bromochloromethane	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
tetrahydrofuran (THF)	< 0.54	0.54	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
1,1,1-trichloroethane	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
1,1-dichloropropene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
t-amyl-methyl ether (TAME)	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
carbon tetrachloride	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
1,2-dichloroethane	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
benzene	**0.19**	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
trichloroethene	**0.36**	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
1,2-dichloropropane	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
bromodichloromethane	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
1,4-dioxane	< 2.7	2.7	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
dibromomethane	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
4-methyl-2-pentanone (MIBK)	< 0.49	0.49	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
cis-1,3-dichloropropene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
toluene	**0.46**	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
trans-1,3-dichloropropene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
2-hexanone	< 0.54	0.54	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
1,1,2-trichloroethane	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
1,3-dichloropropane	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D

Project ID: Cedar Woods 21
Job ID: 52513

Sample#: 52513-008
Sample ID: SB-108 (6-9')
Matrix: Solid Percent Dry: 80.4% Results expressed on a dry weight basis.
Samples prepared in methanol at a ratio of 0.67 mL MeOH/g soil.
Received on ice at 2˚C, in satisfactory condition.
Sampled: 4/7/20 11:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
tetrachloroethene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
dibromochloromethane	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
1,2-dibromoethane (EDB)	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
chlorobenzene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
1,1,1,2-tetrachloroethane	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
ethylbenzene	**0.59**	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
m&p-xylenes	**2.9**	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
o-xylene	**0.53**	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
styrene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
bromoform	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
isopropylbenzene	**0.34**	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
1,1,2,2-tetrachloroethane	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
1,2,3-trichloropropane	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
n-propylbenzene	**0.93**	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
bromobenzene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
1,3,5-trimethylbenzene	**2.3**	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
2-chlorotoluene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
4-chlorotoluene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
tert-butylbenzene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
1,2,4-trimethylbenzene	**6.9**	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
sec-butylbenzene	**0.26**	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
1,3-dichlorobenzene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
4-isopropyltoluene	**0.30**	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
1,4-dichlorobenzene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
1,2-dichlorobenzene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
n-butylbenzene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
1,2-dibromo-3-chloropropane (DBCP)	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
1,2,4-trichlorobenzene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
hexachlorobutadiene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
naphthalene	**1.8**	0.27	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
1,2,3-trichlorobenzene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**81**	78-114	%	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
toluene-D8 SUR	**98**	88-110	%	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
4-bromofluorobenzene SUR	**116** *	86-115	%	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D
a,a,a-trifluorotoluene SUR	**89**	70-130	%	1	LMM	4/8/20	12627	4/10/20	9:36	SW5035A8260D

**** The surrogate showed recovery outside the acceptance limits as a result of hydrocarbons present in the sample.***

Project ID: Cedar Woods 21
Job ID: 52513

Sample#: 52513-019
Sample ID: Trip Blank
Matrix: Solid
Samples prepared in methanol within a 1:1 ratio +/- 25% mL MeOH/g soil
Received on ice at 2˚C, in satisfactory condition.
Sampled: 4/7/20 0:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
dichlorodifluoromethane	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
chloromethane	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
vinyl chloride	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
bromomethane	< 0.25	0.25	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
chloroethane	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
trichlorofluoromethane	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
diethyl ether	< 0.50	0.50	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
acetone	< 2.5	2.5	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
1,1-dichloroethene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
methylene chloride	< 0.25	0.25	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
carbon disulfide	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
methyl t-butyl ether (MTBE)	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
trans-1,2-dichloroethene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
isopropyl ether (DIPE)	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
ethyl t-butyl ether (ETBE)	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
1,1-dichloroethane	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
t-butanol (TBA)	< 2.5	2.5	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
2-butanone (MEK)	< 0.30	0.30	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
2,2-dichloropropane	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
cis-1,2-dichloroethene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
chloroform	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
bromochloromethane	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
tetrahydrofuran (THF)	< 0.50	0.50	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
1,1,1-trichloroethane	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
1,1-dichloropropene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
t-amyl-methyl ether (TAME)	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
carbon tetrachloride	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
1,2-dichloroethane	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
benzene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
trichloroethene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
1,2-dichloropropane	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
bromodichloromethane	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
1,4-dioxane	< 2.5	2.5	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
dibromomethane	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
4-methyl-2-pentanone (MIBK)	< 0.45	0.45	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
cis-1,3-dichloropropene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
toluene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
trans-1,3-dichloropropene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
2-hexanone	< 0.50	0.50	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
1,1,2-trichloroethane	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
1,3-dichloropropane	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D

Project ID: Cedar Woods 21
Job ID: 52513
Sample#: 52513-019
Sample ID: Trip Blank
Matrix: Solid
Samples prepared in methanol within a 1:1 ratio +/- 25% mL MeOH/g soil
Received on ice at 2˚C, in satisfactory condition.
Sampled: 4/7/20 0:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
tetrachloroethene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
dibromochloromethane	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
1,2-dibromoethane (EDB)	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
chlorobenzene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
1,1,1,2-tetrachloroethane	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
ethylbenzene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
m&p-xylenes	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
o-xylene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
styrene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
bromoform	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
isopropylbenzene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
1,1,2,2-tetrachloroethane	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
1,2,3-trichloropropane	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
n-propylbenzene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
bromobenzene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
1,3,5-trimethylbenzene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
2-chlorotoluene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
4-chlorotoluene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
tert-butylbenzene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
1,2,4-trimethylbenzene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
sec-butylbenzene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
1,3-dichlorobenzene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
4-isopropyltoluene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
1,4-dichlorobenzene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
1,2-dichlorobenzene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
n-butylbenzene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
1,2-dibromo-3-chloropropane (DBCP)	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
1,2,4-trichlorobenzene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
hexachlorobutadiene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
naphthalene	< 0.25	0.25	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
1,2,3-trichlorobenzene	< 0.10	0.10	ug/g	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
Surrogate Recovery		**Limits**								
dibromofluoromethane SUR	**98**	78-114	%	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
toluene-D8 SUR	**105**	88-110	%	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
4-bromofluorobenzene SUR	**110**	86-115	%	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D
a,a,a-trifluorotoluene SUR	**110**	70-130	%	1	LMM	4/8/20	12627	4/9/20	12:48	SW5035A8260D

Project ID: Cedar Woods 21
Job ID: 52513

Sample#: 52513-002
Sample ID: SB-104 (8-10')
Matrix: Solid Percent Dry: 83.1% Results expressed on a dry weight basis.
Samples prepared in methanol at a ratio of 0.64 mL MeOH/g soil.
Received on ice at 2˚C, in satisfactory condition.
Sampled: 4/7/20 8:55

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Unadjusted C5-C8 Aliphatics	< 4.9	4.9	ug/g	1	LMM	4/8/20	12628	4/9/20	15:19	MA VPH
Unadjusted C9-C12 Aliphatics	< 4.9	4.9	ug/g	1	LMM	4/8/20	12628	4/9/20	15:19	MA VPH
methyl t-butyl ether (MTBE)	< 0.097	0.097	ug/g	1	LMM	4/8/20	12628	4/9/20	15:19	MA VPH
benzene	< 0.097	0.097	ug/g	1	LMM	4/8/20	12628	4/9/20	15:19	MA VPH
toluene	< 0.097	0.097	ug/g	1	LMM	4/8/20	12628	4/9/20	15:19	MA VPH
ethylbenzene	< 0.097	0.097	ug/g	1	LMM	4/8/20	12628	4/9/20	15:19	MA VPH
m&p-xylenes	< 0.097	0.097	ug/g	1	LMM	4/8/20	12628	4/9/20	15:19	MA VPH
o-xylene	< 0.097	0.097	ug/g	1	LMM	4/8/20	12628	4/9/20	15:19	MA VPH
naphthalene	< 0.24	0.24	ug/g	1	LMM	4/8/20	12628	4/9/20	15:19	MA VPH
C5-C8 Aliphatics	< 4.9	4.9	ug/g	1	LMM	4/8/20	12628	4/9/20	15:19	MA VPH
C9-C12 Aliphatics	< 4.9	4.9	ug/g	1	LMM	4/8/20	12628	4/9/20	15:19	MA VPH
C9-C10 Aromatics	< 4.9	4.9	ug/g	1	LMM	4/8/20	12628	4/9/20	15:19	MA VPH
Surrogate Recovery		**Limits**								
2,5-dibromotoluene as Aromatic SUR	**106**	70-130	%	1	LMM	4/8/20	12628	4/9/20	15:19	MA VPH
2,5-dibromotoluene as Aliphatic SUR	**107**	70-130	%	1	LMM	4/8/20	12628	4/9/20	15:19	MA VPH
a,a,a-trifluorotoluene SUR	**79**	70-130	%	1	LMM	4/8/20	12628	4/9/20	15:19	MA VPH

Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in that range.
C9-C12 Aliphatic Hydrocarbons exclude concentration of target analytes eluting in that range AND C9-C10 Aromatics.

Project ID: Cedar Woods 21
Job ID: 52513

Sample#: 52513-004
Sample ID: SB-107 (0-3')
Matrix: Solid Percent Dry: 79% Results expressed on a dry weight basis.
Samples prepared in methanol at a ratio of 0.65 mL MeOH/g soil.
Received on ice at 2˚C, in satisfactory condition.
Sampled: 4/7/20 10:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Unadjusted C5-C8 Aliphatics	**7.6**	5.4	ug/g	1	LMM	4/8/20	12628	4/9/20	15:49	MA VPH
Unadjusted C9-C12 Aliphatics	< 5.4	5.4	ug/g	1	LMM	4/8/20	12628	4/9/20	15:49	MA VPH
methyl t-butyl ether (MTBE)	< 0.11	0.11	ug/g	1	LMM	4/8/20	12628	4/9/20	15:49	MA VPH
benzene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12628	4/9/20	15:49	MA VPH
toluene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12628	4/9/20	15:49	MA VPH
ethylbenzene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12628	4/9/20	15:49	MA VPH
m&p-xylenes	< 0.11	0.11	ug/g	1	LMM	4/8/20	12628	4/9/20	15:49	MA VPH
o-xylene	< 0.11	0.11	ug/g	1	LMM	4/8/20	12628	4/9/20	15:49	MA VPH
naphthalene	< 0.27	0.27	ug/g	1	LMM	4/8/20	12628	4/9/20	15:49	MA VPH
C5-C8 Aliphatics	**7.6**	5.4	ug/g	1	LMM	4/8/20	12628	4/9/20	15:49	MA VPH
C9-C12 Aliphatics	< 5.4	5.4	ug/g	1	LMM	4/8/20	12628	4/9/20	15:49	MA VPH
C9-C10 Aromatics	< 5.4	5.4	ug/g	1	LMM	4/8/20	12628	4/9/20	15:49	MA VPH
Surrogate Recovery		**Limits**								
2,5-dibromotoluene as Aromatic SUR	**106**	70-130	%	1	LMM	4/8/20	12628	4/9/20	15:49	MA VPH
2,5-dibromotoluene as Aliphatic SUR	**106**	70-130	%	1	LMM	4/8/20	12628	4/9/20	15:49	MA VPH
a,a,a-trifluorotoluene SUR	**32** *	70-130	%	1	LMM	4/8/20	12628	4/9/20	15:49	MA VPH

**** This surrogate showed recovery outside the acceptance limits.***

Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in that range.

C9-C12 Aliphatic Hydrocarbons exclude concentration of target analytes eluting in that range AND C9-C10 Aromatics.

Project ID: Cedar Woods 21
Job ID: 52513

Sample#: 52513-005
Sample ID: SB-107 (10-11')
Matrix: Solid Percent Dry: 84.5% Results expressed on a dry weight basis.
Samples prepared in methanol at a ratio of 0.64 mL MeOH/g soil.
Received on ice at 2˚C, in satisfactory condition.
Sampled: 4/7/20 10:20

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Unadjusted C5-C8 Aliphatics	**26**	4.7	ug/g	1	LMM	4/8/20	12628	4/9/20	16:19	MA VPH
Unadjusted C9-C12 Aliphatics	**62**	4.7	ug/g	1	LMM	4/8/20	12628	4/9/20	16:19	MA VPH
methyl t-butyl ether (MTBE)	< 0.094	0.094	ug/g	1	LMM	4/8/20	12628	4/9/20	16:19	MA VPH
benzene	< 0.094	0.094	ug/g	1	LMM	4/8/20	12628	4/9/20	16:19	MA VPH
toluene	< 0.094	0.094	ug/g	1	LMM	4/8/20	12628	4/9/20	16:19	MA VPH
ethylbenzene	**0.48**	0.094	ug/g	1	LMM	4/8/20	12628	4/9/20	16:19	MA VPH
m&p-xylenes	**1.6**	0.094	ug/g	1	LMM	4/8/20	12628	4/9/20	16:19	MA VPH
o-xylene	< 0.094	0.094	ug/g	1	LMM	4/8/20	12628	4/9/20	16:19	MA VPH
naphthalene	**1.3**	0.23	ug/g	1	LMM	4/8/20	12628	4/9/20	16:19	MA VPH
C5-C8 Aliphatics	**26**	4.7	ug/g	1	LMM	4/8/20	12628	4/9/20	16:19	MA VPH
C9-C12 Aliphatics	**22**	4.7	ug/g	1	LMM	4/8/20	12628	4/9/20	16:19	MA VPH
C9-C10 Aromatics	**39**	4.7	ug/g	1	LMM	4/8/20	12628	4/9/20	16:19	MA VPH
Surrogate Recovery		**Limits**								
2,5-dibromotoluene as Aromatic SUR	**121**	70-130	%	1	LMM	4/8/20	12628	4/9/20	16:19	MA VPH
2,5-dibromotoluene as Aliphatic SUR	**136** *	70-130	%	1	LMM	4/8/20	12628	4/9/20	16:19	MA VPH
a,a,a-trifluorotoluene SUR	**115**	70-130	%	1	LMM	4/8/20	12628	4/9/20	16:19	MA VPH

**** The surrogate showed recovery outside the acceptance limits as a result of hydrocarbons present in the sample.***

Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in that range.

C9-C12 Aliphatic Hydrocarbons exclude concentration of target analytes eluting in that range AND C9-C10 Aromatics.

Project ID: Cedar Woods 21
Job ID: 52513

Sample#: 52513-008
Sample ID: SB-108 (6-9')
Matrix: Solid Percent Dry: 80.4% Results expressed on a dry weight basis.
Samples prepared in methanol at a ratio of 0.67 mL MeOH/g soil.
Received on ice at 2˚C, in satisfactory condition.
Sampled: 4/7/20 11:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Unadjusted C5-C8 Aliphatics	**31**	5.4	ug/g	1	LMM	4/8/20	12628	4/9/20	16:49	MA VPH
Unadjusted C9-C12 Aliphatics	**95**	5.4	ug/g	1	LMM	4/8/20	12628	4/9/20	16:49	MA VPH
methyl t-butyl ether (MTBE)	< 0.11	0.11	ug/g	1	LMM	4/8/20	12628	4/9/20	16:49	MA VPH
benzene	**0.30**	0.11	ug/g	1	LMM	4/8/20	12628	4/9/20	16:49	MA VPH
toluene	**0.42**	0.11	ug/g	1	LMM	4/8/20	12628	4/9/20	16:49	MA VPH
ethylbenzene	**0.49**	0.11	ug/g	1	LMM	4/8/20	12628	4/9/20	16:49	MA VPH
m&p-xylenes	**2.7**	0.11	ug/g	1	LMM	4/8/20	12628	4/9/20	16:49	MA VPH
o-xylene	**0.45**	0.11	ug/g	1	LMM	4/8/20	12628	4/9/20	16:49	MA VPH
naphthalene	**1.9**	0.27	ug/g	1	LMM	4/8/20	12628	4/9/20	16:49	MA VPH
C5-C8 Aliphatics	**30**	5.4	ug/g	1	LMM	4/8/20	12628	4/9/20	16:49	MA VPH
C9-C12 Aliphatics	**24**	5.4	ug/g	1	LMM	4/8/20	12628	4/9/20	16:49	MA VPH
C9-C10 Aromatics	**67**	5.4	ug/g	1	LMM	4/8/20	12628	4/9/20	16:49	MA VPH
Surrogate Recovery		**Limits**								
2,5-dibromotoluene as Aromatic SUR	**98**	70-130	%	1	LMM	4/8/20	12628	4/9/20	16:49	MA VPH
2,5-dibromotoluene as Aliphatic SUR	**98**	70-130	%	1	LMM	4/8/20	12628	4/9/20	16:49	MA VPH
a,a,a-trifluorotoluene SUR	**96**	70-130	%	1	LMM	4/8/20	12628	4/9/20	16:49	MA VPH

Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in that range.
C9-C12 Aliphatic Hydrocarbons exclude concentration of target analytes eluting in that range AND C9-C10 Aromatics.

Project ID: Cedar Woods 21
Job ID: 52513

Sample#: 52513-011
Sample ID: SB-109 (5-8')
Matrix: Solid Percent Dry: 23.7% Results expressed on a dry weight basis.
Samples prepared in methanol at a ratio of 0.63 mL MeOH/g soil.
Received on ice at 2˚C, in satisfactory condition.
Sampled: 4/7/20 11:45

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Unadjusted C5-C8 Aliphatics	< 29	29	ug/g	1	LMM	4/8/20	12628	4/9/20	17:19	MA VPH
Unadjusted C9-C12 Aliphatics	< 29	29	ug/g	1	LMM	4/8/20	12628	4/9/20	17:19	MA VPH
methyl t-butyl ether (MTBE)	< 0.59	0.59	ug/g	1	LMM	4/8/20	12628	4/9/20	17:19	MA VPH
benzene	< 0.59	0.59	ug/g	1	LMM	4/8/20	12628	4/9/20	17:19	MA VPH
toluene	< 0.59	0.59	ug/g	1	LMM	4/8/20	12628	4/9/20	17:19	MA VPH
ethylbenzene	< 0.59	0.59	ug/g	1	LMM	4/8/20	12628	4/9/20	17:19	MA VPH
m&p-xylenes	< 0.59	0.59	ug/g	1	LMM	4/8/20	12628	4/9/20	17:19	MA VPH
o-xylene	< 0.59	0.59	ug/g	1	LMM	4/8/20	12628	4/9/20	17:19	MA VPH
naphthalene	< 1.5	1.5	ug/g	1	LMM	4/8/20	12628	4/9/20	17:19	MA VPH
C5-C8 Aliphatics	< 29	29	ug/g	1	LMM	4/8/20	12628	4/9/20	17:19	MA VPH
C9-C12 Aliphatics	< 29	29	ug/g	1	LMM	4/8/20	12628	4/9/20	17:19	MA VPH
C9-C10 Aromatics	< 29	29	ug/g	1	LMM	4/8/20	12628	4/9/20	17:19	MA VPH
Surrogate Recovery		**Limits**								
2,5-dibromotoluene as Aromatic SUR	**100**	70-130	%	1	LMM	4/8/20	12628	4/9/20	17:19	MA VPH
2,5-dibromotoluene as Aliphatic SUR	**98**	70-130	%	1	LMM	4/8/20	12628	4/9/20	17:19	MA VPH
a,a,a-trifluorotoluene SUR	**75**	70-130	%	1	LMM	4/8/20	12628	4/9/20	17:19	MA VPH

Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in that range.
C9-C12 Aliphatic Hydrocarbons exclude concentration of target analytes eluting in that range AND C9-C10 Aromatics.

Project ID: Cedar Woods 21
Job ID: 52513

Sample#: 52513-014
Sample ID: SB-110 (5-8')
Matrix: Solid Percent Dry: 17.7% Results expressed on a dry weight basis.
Samples prepared in methanol at a ratio of 0.65 mL MeOH/g soil.
Received on ice at 2˚C, in satisfactory condition.
Sampled: 4/7/20 12:55

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Unadjusted C5-C8 Aliphatics	< 42	42	ug/g	1	LMM	4/8/20	12628	4/9/20	17:49	MA VPH
Unadjusted C9-C12 Aliphatics	< 42	42	ug/g	1	LMM	4/8/20	12628	4/9/20	17:49	MA VPH
methyl t-butyl ether (MTBE)	< 0.83	0.83	ug/g	1	LMM	4/8/20	12628	4/9/20	17:49	MA VPH
benzene	< 0.83	0.83	ug/g	1	LMM	4/8/20	12628	4/9/20	17:49	MA VPH
toluene	< 0.83	0.83	ug/g	1	LMM	4/8/20	12628	4/9/20	17:49	MA VPH
ethylbenzene	< 0.83	0.83	ug/g	1	LMM	4/8/20	12628	4/9/20	17:49	MA VPH
m&p-xylenes	< 0.83	0.83	ug/g	1	LMM	4/8/20	12628	4/9/20	17:49	MA VPH
o-xylene	< 0.83	0.83	ug/g	1	LMM	4/8/20	12628	4/9/20	17:49	MA VPH
naphthalene	< 2.1	2.1	ug/g	1	LMM	4/8/20	12628	4/9/20	17:49	MA VPH
C5-C8 Aliphatics	< 42	42	ug/g	1	LMM	4/8/20	12628	4/9/20	17:49	MA VPH
C9-C12 Aliphatics	< 42	42	ug/g	1	LMM	4/8/20	12628	4/9/20	17:49	MA VPH
C9-C10 Aromatics	< 42	42	ug/g	1	LMM	4/8/20	12628	4/9/20	17:49	MA VPH
Surrogate Recovery		**Limits**								
2,5-dibromotoluene as Aromatic SUR	**102**	70-130	%	1	LMM	4/8/20	12628	4/9/20	17:49	MA VPH
2,5-dibromotoluene as Aliphatic SUR	**103**	70-130	%	1	LMM	4/8/20	12628	4/9/20	17:49	MA VPH
a,a,a-trifluorotoluene SUR	**158** *	70-130	%	1	LMM	4/8/20	12628	4/9/20	17:49	MA VPH

**** This surrogate showed recovery outside the acceptance limits. This is likely a result of high moisture content in the sample.***

Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in that range.

C9-C12 Aliphatic Hydrocarbons exclude concentration of target analytes eluting in that range AND C9-C10 Aromatics.

Project ID: Cedar Woods 21
Job ID: 52513

Sample#: 52513-017
Sample ID: SB-112 (5-8')
Matrix: Solid Percent Dry: 52.4% Results expressed on a dry weight basis.
Samples prepared in methanol at a ratio of 0.61 mL MeOH/g soil.
Received on ice at 2˚C, in satisfactory condition.
Sampled: 4/7/20 13:25

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Unadjusted C5-C8 Aliphatics	< 10	10	ug/g	1	LMM	4/8/20	12628	4/9/20	18:19	MA VPH
Unadjusted C9-C12 Aliphatics	< 10	10	ug/g	1	LMM	4/8/20	12628	4/9/20	18:19	MA VPH
methyl t-butyl ether (MTBE)	< 0.21	0.21	ug/g	1	LMM	4/8/20	12628	4/9/20	18:19	MA VPH
benzene	< 0.21	0.21	ug/g	1	LMM	4/8/20	12628	4/9/20	18:19	MA VPH
toluene	< 0.21	0.21	ug/g	1	LMM	4/8/20	12628	4/9/20	18:19	MA VPH
ethylbenzene	< 0.21	0.21	ug/g	1	LMM	4/8/20	12628	4/9/20	18:19	MA VPH
m&p-xylenes	< 0.21	0.21	ug/g	1	LMM	4/8/20	12628	4/9/20	18:19	MA VPH
o-xylene	< 0.21	0.21	ug/g	1	LMM	4/8/20	12628	4/9/20	18:19	MA VPH
naphthalene	< 0.52	0.52	ug/g	1	LMM	4/8/20	12628	4/9/20	18:19	MA VPH
C5-C8 Aliphatics	< 10	10	ug/g	1	LMM	4/8/20	12628	4/9/20	18:19	MA VPH
C9-C12 Aliphatics	< 10	10	ug/g	1	LMM	4/8/20	12628	4/9/20	18:19	MA VPH
C9-C10 Aromatics	< 10	10	ug/g	1	LMM	4/8/20	12628	4/9/20	18:19	MA VPH
Surrogate Recovery		**Limits**								
2,5-dibromotoluene as Aromatic SUR	**105**	70-130	%	1	LMM	4/8/20	12628	4/9/20	18:19	MA VPH
2,5-dibromotoluene as Aliphatic SUR	**106**	70-130	%	1	LMM	4/8/20	12628	4/9/20	18:19	MA VPH
a,a,a-trifluorotoluene SUR	**75**	70-130	%	1	LMM	4/8/20	12628	4/9/20	18:19	MA VPH

Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in that range.
C9-C12 Aliphatic Hydrocarbons exclude concentration of target analytes eluting in that range AND C9-C10 Aromatics.

Project ID: Cedar Woods 21
Job ID: 52513

Sample#: 52513-018
Sample ID: DUP-1
Matrix: Solid Percent Dry: 23.7% Results expressed on a dry weight basis.
Samples prepared in methanol at a ratio of 0.63 mL MeOH/g soil.
Received on ice at 2˚C, in satisfactory condition.
Sampled: 4/7/20 0:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Unadjusted C5-C8 Aliphatics	< 29	29	ug/g	1	LMM	4/8/20	12628	4/9/20	18:49	MA VPH
Unadjusted C9-C12 Aliphatics	< 29	29	ug/g	1	LMM	4/8/20	12628	4/9/20	18:49	MA VPH
methyl t-butyl ether (MTBE)	< 0.59	0.59	ug/g	1	LMM	4/8/20	12628	4/9/20	18:49	MA VPH
benzene	< 0.59	0.59	ug/g	1	LMM	4/8/20	12628	4/9/20	18:49	MA VPH
toluene	< 0.59	0.59	ug/g	1	LMM	4/8/20	12628	4/9/20	18:49	MA VPH
ethylbenzene	< 0.59	0.59	ug/g	1	LMM	4/8/20	12628	4/9/20	18:49	MA VPH
m&p-xylenes	< 0.59	0.59	ug/g	1	LMM	4/8/20	12628	4/9/20	18:49	MA VPH
o-xylene	< 0.59	0.59	ug/g	1	LMM	4/8/20	12628	4/9/20	18:49	MA VPH
naphthalene	< 1.5	1.5	ug/g	1	LMM	4/8/20	12628	4/9/20	18:49	MA VPH
C5-C8 Aliphatics	< 29	29	ug/g	1	LMM	4/8/20	12628	4/9/20	18:49	MA VPH
C9-C12 Aliphatics	< 29	29	ug/g	1	LMM	4/8/20	12628	4/9/20	18:49	MA VPH
C9-C10 Aromatics	< 29	29	ug/g	1	LMM	4/8/20	12628	4/9/20	18:49	MA VPH
Surrogate Recovery		**Limits**								
2,5-dibromotoluene as Aromatic SUR	**107**	70-130	%	1	LMM	4/8/20	12628	4/9/20	18:49	MA VPH
2,5-dibromotoluene as Aliphatic SUR	**105**	70-130	%	1	LMM	4/8/20	12628	4/9/20	18:49	MA VPH
a,a,a-trifluorotoluene SUR	**71**	70-130	%	1	LMM	4/8/20	12628	4/9/20	18:49	MA VPH

Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in that range.
C9-C12 Aliphatic Hydrocarbons exclude concentration of target analytes eluting in that range AND C9-C10 Aromatics.

Project ID: Cedar Woods 21
Job ID: 52513
Sample#: 52513-001
Sample ID: SB-104 (0-3')
Matrix: Solid Percent Dry: 89.3% Results expressed on a dry weight basis.
Sampled: 4/7/20 8:45

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.20	0.20	ug/g	1	CL	4/8/20	12630	4/9/20	18:13	MA EPH
2-methylnaphthalene	< 0.20	0.20	ug/g	1	CL	4/8/20	12630	4/9/20	18:13	MA EPH
phenanthrene	**0.39**	0.20	ug/g	1	CL	4/8/20	12630	4/9/20	18:13	MA EPH
acenaphthene	< 0.20	0.20	ug/g	1	CL	4/8/20	12630	4/9/20	18:13	MA EPH
acenaphthylene	< 0.20	0.20	ug/g	1	CL	4/8/20	12630	4/9/20	18:13	MA EPH
fluorene	< 0.20	0.20	ug/g	1	CL	4/8/20	12630	4/9/20	18:13	MA EPH
anthracene	< 0.20	0.20	ug/g	1	CL	4/8/20	12630	4/9/20	18:13	MA EPH
fluoranthene	**0.80**	0.20	ug/g	1	CL	4/8/20	12630	4/9/20	18:13	MA EPH
pyrene	**0.85**	0.20	ug/g	1	CL	4/8/20	12630	4/9/20	18:13	MA EPH
benzo(a)anthracene	**0.40**	0.20	ug/g	1	CL	4/8/20	12630	4/9/20	18:13	MA EPH
chrysene	**0.56**	0.20	ug/g	1	CL	4/8/20	12630	4/9/20	18:13	MA EPH
benzo(b)fluoranthene	**0.46**	0.20	ug/g	1	CL	4/8/20	12630	4/9/20	18:13	MA EPH
benzo(k)fluoranthene	**0.44**	0.20	ug/g	1	CL	4/8/20	12630	4/9/20	18:13	MA EPH
benzo(a)pyrene	**0.44**	0.20	ug/g	1	CL	4/8/20	12630	4/9/20	18:13	MA EPH
indeno(1,2,3-cd)pyrene	**0.30**	0.20	ug/g	1	CL	4/8/20	12630	4/9/20	18:13	MA EPH
dibenzo(a,h)anthracene	< 0.20	0.20	ug/g	1	CL	4/8/20	12630	4/9/20	18:13	MA EPH
benzo(g,h,i)perylene	**0.35**	0.20	ug/g	1	CL	4/8/20	12630	4/9/20	18:13	MA EPH
Unadjusted C11-C22 Aromatics	**31**	20	ug/g	1	DBV	4/8/20	12630	4/9/20	12:48	MA EPH
C9-C18 Aliphatics	< 20	20	ug/g	1	DBV	4/8/20	12630	4/9/20	12:48	MA EPH
C19-C36 Aliphatics	**34**	20	ug/g	1	DBV	4/8/20	12630	4/9/20	12:48	MA EPH
C11-C22 Aromatics	**25**	20	ug/g	1	DBV	4/8/20	12630	4/9/20	12:48	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**55**	40-140	%	1	DBV	4/8/20	12630	4/9/20	12:48	MA EPH
o-terphenyl SUR	**61**	40-140	%	1	DBV	4/8/20	12630	4/9/20	12:48	MA EPH
2-fluorobiphenyl SUR	**65**	40-140	%	1	DBV	4/8/20	12630	4/9/20	12:48	MA EPH
2-bromonaphthalene SUR	**63**	40-140	%	1	DBV	4/8/20	12630	4/9/20	12:48	MA EPH

Project ID: Cedar Woods 21
Job ID: 52513
Sample#: 52513-002
Sample ID: SB-104 (8-10')
Matrix: Solid Percent Dry: 83.1% Results expressed on a dry weight basis.
Sampled: 4/7/20 8:55

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.22	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	19:44	MA EPH
2-methylnaphthalene	< 0.22	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	19:44	MA EPH
phenanthrene	< 0.22	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	19:44	MA EPH
acenaphthene	< 0.22	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	19:44	MA EPH
acenaphthylene	< 0.22	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	19:44	MA EPH
fluorene	< 0.22	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	19:44	MA EPH
anthracene	< 0.22	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	19:44	MA EPH
fluoranthene	< 0.22	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	19:44	MA EPH
pyrene	< 0.22	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	19:44	MA EPH
benzo(a)anthracene	< 0.22	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	19:44	MA EPH
chrysene	< 0.22	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	19:44	MA EPH
benzo(b)fluoranthene	< 0.22	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	19:44	MA EPH
benzo(k)fluoranthene	< 0.22	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	19:44	MA EPH
benzo(a)pyrene	< 0.22	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	19:44	MA EPH
indeno(1,2,3-cd)pyrene	< 0.22	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	19:44	MA EPH
dibenzo(a,h)anthracene	< 0.22	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	19:44	MA EPH
benzo(g,h,i)perylene	< 0.22	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	19:44	MA EPH
Unadjusted C11-C22 Aromatics	< 22	22	ug/g	1	DBV	4/8/20	12630	4/9/20	21:55	MA EPH
C9-C18 Aliphatics	< 22	22	ug/g	1	DBV	4/8/20	12630	4/9/20	21:55	MA EPH
C19-C36 Aliphatics	**100**	22	ug/g	1	DBV	4/8/20	12630	4/9/20	21:55	MA EPH
C11-C22 Aromatics	< 22	22	ug/g	1	DBV	4/8/20	12630	4/9/20	21:55	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**65**	40-140	%	1	DBV	4/8/20	12630	4/9/20	21:55	MA EPH
o-terphenyl SUR	**71**	40-140	%	1	DBV	4/8/20	12630	4/9/20	21:55	MA EPH
2-fluorobiphenyl SUR	**70**	40-140	%	1	DBV	4/8/20	12630	4/9/20	21:55	MA EPH
2-bromonaphthalene SUR	**69**	40-140	%	1	DBV	4/8/20	12630	4/9/20	21:55	MA EPH

Project ID: Cedar Woods 21
Job ID: 52513
Sample#: 52513-004
Sample ID: SB-107 (0-3')
Matrix: Solid Percent Dry: 79% Results expressed on a dry weight basis.
Sampled: 4/7/20 10:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	14:41	MA EPH
2-methylnaphthalene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	14:41	MA EPH
phenanthrene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	14:41	MA EPH
acenaphthene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	14:41	MA EPH
acenaphthylene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	14:41	MA EPH
fluorene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	14:41	MA EPH
anthracene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	14:41	MA EPH
fluoranthene	**0.25**	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	14:41	MA EPH
pyrene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	14:41	MA EPH
benzo(a)anthracene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	14:41	MA EPH
chrysene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	14:41	MA EPH
benzo(b)fluoranthene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	14:41	MA EPH
benzo(k)fluoranthene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	14:41	MA EPH
benzo(a)pyrene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	14:41	MA EPH
indeno(1,2,3-cd)pyrene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	14:41	MA EPH
dibenzo(a,h)anthracene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	14:41	MA EPH
benzo(g,h,i)perylene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	14:41	MA EPH
Unadjusted C11-C22 Aromatics	< 23	23	ug/g	1	DBV	4/8/20	12630	4/9/20	13:22	MA EPH
C9-C18 Aliphatics	< 23	23	ug/g	1	DBV	4/8/20	12630	4/9/20	13:22	MA EPH
C19-C36 Aliphatics	**36**	23	ug/g	1	DBV	4/8/20	12630	4/9/20	13:22	MA EPH
C11-C22 Aromatics	< 23	23	ug/g	1	DBV	4/8/20	12630	4/9/20	13:22	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**55**	40-140	%	1	DBV	4/8/20	12630	4/9/20	13:22	MA EPH
o-terphenyl SUR	**54**	40-140	%	1	DBV	4/8/20	12630	4/9/20	13:22	MA EPH
2-fluorobiphenyl SUR	**63**	40-140	%	1	DBV	4/8/20	12630	4/9/20	13:22	MA EPH
2-bromonaphthalene SUR	**59**	40-140	%	1	DBV	4/8/20	12630	4/9/20	13:22	MA EPH

Project ID: Cedar Woods 21
Job ID: 52513
Sample#: 52513-005
Sample ID: SB-107 (10-11')
Matrix: Solid Percent Dry: 84.5% Results expressed on a dry weight basis.
Sampled: 4/7/20 10:20

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	18:44	MA EPH
2-methylnaphthalene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	18:44	MA EPH
phenanthrene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	18:44	MA EPH
acenaphthene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	18:44	MA EPH
acenaphthylene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	18:44	MA EPH
fluorene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	18:44	MA EPH
anthracene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	18:44	MA EPH
fluoranthene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	18:44	MA EPH
pyrene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	18:44	MA EPH
benzo(a)anthracene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	18:44	MA EPH
chrysene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	18:44	MA EPH
benzo(b)fluoranthene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	18:44	MA EPH
benzo(k)fluoranthene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	18:44	MA EPH
benzo(a)pyrene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	18:44	MA EPH
indeno(1,2,3-cd)pyrene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	18:44	MA EPH
dibenzo(a,h)anthracene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	18:44	MA EPH
benzo(g,h,i)perylene	< 0.23	0.23	ug/g	1	CL	4/8/20	12630	4/9/20	18:44	MA EPH
Unadjusted C11-C22 Aromatics	**77**	23	ug/g	1	DBV	4/8/20	12630	4/9/20	21:21	MA EPH
C9-C18 Aliphatics	**34**	23	ug/g	1	DBV	4/8/20	12630	4/14/20	12:58	MA EPH
C19-C36 Aliphatics	**410**	23	ug/g	1	DBV	4/8/20	12630	4/14/20	12:58	MA EPH
C11-C22 Aromatics	**76**	23	ug/g	1	DBV	4/8/20	12630	4/9/20	21:21	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**60**	40-140	%	1	DBV	4/8/20	12630	4/14/20	12:58	MA EPH
o-terphenyl SUR	**63**	40-140	%	1	DBV	4/8/20	12630	4/9/20	21:21	MA EPH
2-fluorobiphenyl SUR	**65**	40-140	%	1	DBV	4/8/20	12630	4/9/20	21:21	MA EPH
2-bromonaphthalene SUR	**64**	40-140	%	1	DBV	4/8/20	12630	4/9/20	21:21	MA EPH

Project ID: Cedar Woods 21
Job ID: 52513
Sample#: 52513-007
Sample ID: SB-108 (0-3')
Matrix: Solid Percent Dry: 73.6% Results expressed on a dry weight basis.
Sampled: 4/7/20 10:50

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.26	0.26	ug/g	1	CL	4/8/20	12630	4/9/20	15:11	MA EPH
2-methylnaphthalene	< 0.26	0.26	ug/g	1	CL	4/8/20	12630	4/9/20	15:11	MA EPH
phenanthrene	< 0.26	0.26	ug/g	1	CL	4/8/20	12630	4/9/20	15:11	MA EPH
acenaphthene	< 0.26	0.26	ug/g	1	CL	4/8/20	12630	4/9/20	15:11	MA EPH
acenaphthylene	< 0.26	0.26	ug/g	1	CL	4/8/20	12630	4/9/20	15:11	MA EPH
fluorene	< 0.26	0.26	ug/g	1	CL	4/8/20	12630	4/9/20	15:11	MA EPH
anthracene	< 0.26	0.26	ug/g	1	CL	4/8/20	12630	4/9/20	15:11	MA EPH
fluoranthene	< 0.26	0.26	ug/g	1	CL	4/8/20	12630	4/9/20	15:11	MA EPH
pyrene	< 0.26	0.26	ug/g	1	CL	4/8/20	12630	4/9/20	15:11	MA EPH
benzo(a)anthracene	< 0.26	0.26	ug/g	1	CL	4/8/20	12630	4/9/20	15:11	MA EPH
chrysene	< 0.26	0.26	ug/g	1	CL	4/8/20	12630	4/9/20	15:11	MA EPH
benzo(b)fluoranthene	< 0.26	0.26	ug/g	1	CL	4/8/20	12630	4/9/20	15:11	MA EPH
benzo(k)fluoranthene	< 0.26	0.26	ug/g	1	CL	4/8/20	12630	4/9/20	15:11	MA EPH
benzo(a)pyrene	< 0.26	0.26	ug/g	1	CL	4/8/20	12630	4/9/20	15:11	MA EPH
indeno(1,2,3-cd)pyrene	< 0.26	0.26	ug/g	1	CL	4/8/20	12630	4/9/20	15:11	MA EPH
dibenzo(a,h)anthracene	< 0.26	0.26	ug/g	1	CL	4/8/20	12630	4/9/20	15:11	MA EPH
benzo(g,h,i)perylene	< 0.26	0.26	ug/g	1	CL	4/8/20	12630	4/9/20	15:11	MA EPH
Unadjusted C11-C22 Aromatics	< 26	26	ug/g	1	DBV	4/8/20	12630	4/9/20	13:56	MA EPH
C9-C18 Aliphatics	< 26	26	ug/g	1	DBV	4/8/20	12630	4/9/20	13:56	MA EPH
C19-C36 Aliphatics	**39**	26	ug/g	1	DBV	4/8/20	12630	4/9/20	13:56	MA EPH
C11-C22 Aromatics	< 26	26	ug/g	1	DBV	4/8/20	12630	4/9/20	13:56	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**60**	40-140	%	1	DBV	4/8/20	12630	4/9/20	13:56	MA EPH
o-terphenyl SUR	**57**	40-140	%	1	DBV	4/8/20	12630	4/9/20	13:56	MA EPH
2-fluorobiphenyl SUR	**60**	40-140	%	1	DBV	4/8/20	12630	4/9/20	13:56	MA EPH
2-bromonaphthalene SUR	**58**	40-140	%	1	DBV	4/8/20	12630	4/9/20	13:56	MA EPH

Project ID: Cedar Woods 21
Job ID: 52513
Sample#: 52513-008
Sample ID: SB-108 (6-9')
Matrix: Solid Percent Dry: 80.4% Results expressed on a dry weight basis.
Sampled: 4/7/20 11:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	**0.50**	0.24	ug/g	1	CL	4/8/20	12630	4/9/20	20:15	MA EPH
2-methylnaphthalene	**0.57**	0.24	ug/g	1	CL	4/8/20	12630	4/9/20	20:15	MA EPH
phenanthrene	**2.1**	0.24	ug/g	1	CL	4/8/20	12630	4/9/20	20:15	MA EPH
acenaphthene	< 0.24	0.24	ug/g	1	CL	4/8/20	12630	4/9/20	20:15	MA EPH
acenaphthylene	< 0.24	0.24	ug/g	1	CL	4/8/20	12630	4/9/20	20:15	MA EPH
fluorene	**0.37**	0.24	ug/g	1	CL	4/8/20	12630	4/9/20	20:15	MA EPH
anthracene	**0.46**	0.24	ug/g	1	CL	4/8/20	12630	4/9/20	20:15	MA EPH
fluoranthene	**1.9**	0.24	ug/g	1	CL	4/8/20	12630	4/9/20	20:15	MA EPH
pyrene	**2.1**	0.24	ug/g	1	CL	4/8/20	12630	4/9/20	20:15	MA EPH
benzo(a)anthracene	**0.79**	0.24	ug/g	1	CL	4/8/20	12630	4/9/20	20:15	MA EPH
chrysene	**0.87**	0.24	ug/g	1	CL	4/8/20	12630	4/9/20	20:15	MA EPH
benzo(b)fluoranthene	**0.64**	0.24	ug/g	1	CL	4/8/20	12630	4/9/20	20:15	MA EPH
benzo(k)fluoranthene	**0.57**	0.24	ug/g	1	CL	4/8/20	12630	4/9/20	20:15	MA EPH
benzo(a)pyrene	**0.70**	0.24	ug/g	1	CL	4/8/20	12630	4/9/20	20:15	MA EPH
indeno(1,2,3-cd)pyrene	**0.36**	0.24	ug/g	1	CL	4/8/20	12630	4/9/20	20:15	MA EPH
dibenzo(a,h)anthracene	< 0.24	0.24	ug/g	1	CL	4/8/20	12630	4/9/20	20:15	MA EPH
benzo(g,h,i)perylene	**0.51**	0.24	ug/g	1	CL	4/8/20	12630	4/9/20	20:15	MA EPH
Unadjusted C11-C22 Aromatics	**360**	24	ug/g	1	DBV	4/8/20	12630	4/9/20	20:46	MA EPH
C9-C18 Aliphatics	**92**	24	ug/g	1	DBV	4/8/20	12630	4/9/20	20:46	MA EPH
C19-C36 Aliphatics	**1900**	24	ug/g	1	DBV	4/8/20	12630	4/9/20	20:46	MA EPH
C11-C22 Aromatics	**350**	24	ug/g	1	DBV	4/8/20	12630	4/9/20	20:46	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**58**	40-140	%	1	DBV	4/8/20	12630	4/9/20	20:46	MA EPH
o-terphenyl SUR	**62**	40-140	%	1	DBV	4/8/20	12630	4/9/20	20:46	MA EPH
2-fluorobiphenyl SUR	**68**	40-140	%	1	DBV	4/8/20	12630	4/9/20	20:46	MA EPH
2-bromonaphthalene SUR	**72**	40-140	%	1	DBV	4/8/20	12630	4/9/20	20:46	MA EPH

Project ID: Cedar Woods 21
Job ID: 52513
Sample#: 52513-010
Sample ID: SB-109 (0-3')
Matrix: Solid Percent Dry: 70.9% Results expressed on a dry weight basis.
Sampled: 4/7/20 11:40

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.28	0.28	ug/g	1	CL	4/8/20	12630	4/9/20	15:41	MA EPH
2-methylnaphthalene	< 0.28	0.28	ug/g	1	CL	4/8/20	12630	4/9/20	15:41	MA EPH
phenanthrene	< 0.28	0.28	ug/g	1	CL	4/8/20	12630	4/9/20	15:41	MA EPH
acenaphthene	< 0.28	0.28	ug/g	1	CL	4/8/20	12630	4/9/20	15:41	MA EPH
acenaphthylene	< 0.28	0.28	ug/g	1	CL	4/8/20	12630	4/9/20	15:41	MA EPH
fluorene	< 0.28	0.28	ug/g	1	CL	4/8/20	12630	4/9/20	15:41	MA EPH
anthracene	< 0.28	0.28	ug/g	1	CL	4/8/20	12630	4/9/20	15:41	MA EPH
fluoranthene	< 0.28	0.28	ug/g	1	CL	4/8/20	12630	4/9/20	15:41	MA EPH
pyrene	< 0.28	0.28	ug/g	1	CL	4/8/20	12630	4/9/20	15:41	MA EPH
benzo(a)anthracene	< 0.28	0.28	ug/g	1	CL	4/8/20	12630	4/9/20	15:41	MA EPH
chrysene	< 0.28	0.28	ug/g	1	CL	4/8/20	12630	4/9/20	15:41	MA EPH
benzo(b)fluoranthene	< 0.28	0.28	ug/g	1	CL	4/8/20	12630	4/9/20	15:41	MA EPH
benzo(k)fluoranthene	< 0.28	0.28	ug/g	1	CL	4/8/20	12630	4/9/20	15:41	MA EPH
benzo(a)pyrene	< 0.28	0.28	ug/g	1	CL	4/8/20	12630	4/9/20	15:41	MA EPH
indeno(1,2,3-cd)pyrene	< 0.28	0.28	ug/g	1	CL	4/8/20	12630	4/9/20	15:41	MA EPH
dibenzo(a,h)anthracene	< 0.28	0.28	ug/g	1	CL	4/8/20	12630	4/9/20	15:41	MA EPH
benzo(g,h,i)perylene	< 0.28	0.28	ug/g	1	CL	4/8/20	12630	4/9/20	15:41	MA EPH
Unadjusted C11-C22 Aromatics	< 28	28	ug/g	1	DBV	4/8/20	12630	4/9/20	14:31	MA EPH
C9-C18 Aliphatics	< 28	28	ug/g	1	DBV	4/8/20	12630	4/9/20	14:31	MA EPH
C19-C36 Aliphatics	**42**	28	ug/g	1	DBV	4/8/20	12630	4/9/20	14:31	MA EPH
C11-C22 Aromatics	< 28	28	ug/g	1	DBV	4/8/20	12630	4/9/20	14:31	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**56**	40-140	%	1	DBV	4/8/20	12630	4/9/20	14:31	MA EPH
o-terphenyl SUR	**61**	40-140	%	1	DBV	4/8/20	12630	4/9/20	14:31	MA EPH
2-fluorobiphenyl SUR	**68**	40-140	%	1	DBV	4/8/20	12630	4/9/20	14:31	MA EPH
2-bromonaphthalene SUR	**65**	40-140	%	1	DBV	4/8/20	12630	4/9/20	14:31	MA EPH

Project ID: Cedar Woods 21
Job ID: 52513
Sample#: 52513-011
Sample ID: SB-109 (5-8')
Matrix: Solid Percent Dry: 23.7% Results expressed on a dry weight basis.
Sampled: 4/7/20 11:45

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.78	0.78	ug/g	1	CL	4/8/20	12630	4/9/20	16:12	MA EPH
2-methylnaphthalene	< 0.78	0.78	ug/g	1	CL	4/8/20	12630	4/9/20	16:12	MA EPH
phenanthrene	**0.80**	0.78	ug/g	1	CL	4/8/20	12630	4/9/20	16:12	MA EPH
acenaphthene	< 0.78	0.78	ug/g	1	CL	4/8/20	12630	4/9/20	16:12	MA EPH
acenaphthylene	< 0.78	0.78	ug/g	1	CL	4/8/20	12630	4/9/20	16:12	MA EPH
fluorene	< 0.78	0.78	ug/g	1	CL	4/8/20	12630	4/9/20	16:12	MA EPH
anthracene	< 0.78	0.78	ug/g	1	CL	4/8/20	12630	4/9/20	16:12	MA EPH
fluoranthene	**1.5**	0.78	ug/g	1	CL	4/8/20	12630	4/9/20	16:12	MA EPH
pyrene	**1.7**	0.78	ug/g	1	CL	4/8/20	12630	4/9/20	16:12	MA EPH
benzo(a)anthracene	**0.78**	0.78	ug/g	1	CL	4/8/20	12630	4/9/20	16:12	MA EPH
chrysene	**0.96**	0.78	ug/g	1	CL	4/8/20	12630	4/9/20	16:12	MA EPH
benzo(b)fluoranthene	**0.89**	0.78	ug/g	1	CL	4/8/20	12630	4/9/20	16:12	MA EPH
benzo(k)fluoranthene	< 0.78	0.78	ug/g	1	CL	4/8/20	12630	4/9/20	16:12	MA EPH
benzo(a)pyrene	**0.91**	0.78	ug/g	1	CL	4/8/20	12630	4/9/20	16:12	MA EPH
indeno(1,2,3-cd)pyrene	< 0.78	0.78	ug/g	1	CL	4/8/20	12630	4/9/20	16:12	MA EPH
dibenzo(a,h)anthracene	< 0.78	0.78	ug/g	1	CL	4/8/20	12630	4/9/20	16:12	MA EPH
benzo(g,h,i)perylene	< 0.78	0.78	ug/g	1	CL	4/8/20	12630	4/9/20	16:12	MA EPH
Unadjusted C11-C22 Aromatics	**110**	78	ug/g	1	DBV	4/8/20	12630	4/9/20	15:05	MA EPH
C9-C18 Aliphatics	< 78	78	ug/g	1	DBV	4/8/20	12630	4/9/20	15:05	MA EPH
C19-C36 Aliphatics	**290**	78	ug/g	1	DBV	4/8/20	12630	4/9/20	15:05	MA EPH
C11-C22 Aromatics	**100**	78	ug/g	1	DBV	4/8/20	12630	4/9/20	15:05	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**62**	40-140	%	1	DBV	4/8/20	12630	4/9/20	15:05	MA EPH
o-terphenyl SUR	**63**	40-140	%	1	DBV	4/8/20	12630	4/9/20	15:05	MA EPH
2-fluorobiphenyl SUR	**63**	40-140	%	1	DBV	4/8/20	12630	4/9/20	15:05	MA EPH
2-bromonaphthalene SUR	**60**	40-140	%	1	DBV	4/8/20	12630	4/9/20	15:05	MA EPH

Project ID: Cedar Woods 21
Job ID: 52513
Sample#: 52513-013
Sample ID: SB-110 (0-3')
Matrix: Solid Percent Dry: 88.3% Results expressed on a dry weight basis.
Sampled: 4/7/20 12:50

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.22	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	16:42	MA EPH
2-methylnaphthalene	< 0.22	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	16:42	MA EPH
phenanthrene	**1.1**	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	16:42	MA EPH
acenaphthene	< 0.22	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	16:42	MA EPH
acenaphthylene	< 0.22	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	16:42	MA EPH
fluorene	< 0.22	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	16:42	MA EPH
anthracene	< 0.22	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	16:42	MA EPH
fluoranthene	**1.3**	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	16:42	MA EPH
pyrene	**1.4**	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	16:42	MA EPH
benzo(a)anthracene	**0.59**	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	16:42	MA EPH
chrysene	**0.74**	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	16:42	MA EPH
benzo(b)fluoranthene	**0.57**	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	16:42	MA EPH
benzo(k)fluoranthene	**0.53**	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	16:42	MA EPH
benzo(a)pyrene	**0.63**	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	16:42	MA EPH
indeno(1,2,3-cd)pyrene	**0.36**	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	16:42	MA EPH
dibenzo(a,h)anthracene	< 0.22	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	16:42	MA EPH
benzo(g,h,i)perylene	**0.42**	0.22	ug/g	1	CL	4/8/20	12630	4/9/20	16:42	MA EPH
Unadjusted C11-C22 Aromatics	**62**	22	ug/g	1	DBV	4/8/20	12630	4/9/20	15:39	MA EPH
C9-C18 Aliphatics	< 22	22	ug/g	1	DBV	4/8/20	12630	4/9/20	15:39	MA EPH
C19-C36 Aliphatics	**68**	22	ug/g	1	DBV	4/8/20	12630	4/9/20	15:39	MA EPH
C11-C22 Aromatics	**53**	22	ug/g	1	DBV	4/8/20	12630	4/9/20	15:39	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**45**	40-140	%	1	DBV	4/8/20	12630	4/9/20	15:39	MA EPH
o-terphenyl SUR	**54**	40-140	%	1	DBV	4/8/20	12630	4/9/20	15:39	MA EPH
2-fluorobiphenyl SUR	**73**	40-140	%	1	DBV	4/8/20	12630	4/9/20	15:39	MA EPH
2-bromonaphthalene SUR	**72**	40-140	%	1	DBV	4/8/20	12630	4/9/20	15:39	MA EPH

Project ID: Cedar Woods 21
Job ID: 52513
Sample#: 52513-014
Sample ID: SB-110 (5-8')
Matrix: Solid Percent Dry: 17.7% Results expressed on a dry weight basis.
Sampled: 4/7/20 12:55

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 1.1	1.1	ug/g	1	CL	4/8/20	12630	4/9/20	14:10	MA EPH
2-methylnaphthalene	< 1.1	1.1	ug/g	1	CL	4/8/20	12630	4/9/20	14:10	MA EPH
phenanthrene	< 1.1	1.1	ug/g	1	CL	4/8/20	12630	4/9/20	14:10	MA EPH
acenaphthene	< 1.1	1.1	ug/g	1	CL	4/8/20	12630	4/9/20	14:10	MA EPH
acenaphthylene	< 1.1	1.1	ug/g	1	CL	4/8/20	12630	4/9/20	14:10	MA EPH
fluorene	< 1.1	1.1	ug/g	1	CL	4/8/20	12630	4/9/20	14:10	MA EPH
anthracene	< 1.1	1.1	ug/g	1	CL	4/8/20	12630	4/9/20	14:10	MA EPH
fluoranthene	< 1.1	1.1	ug/g	1	CL	4/8/20	12630	4/9/20	14:10	MA EPH
pyrene	< 1.1	1.1	ug/g	1	CL	4/8/20	12630	4/9/20	14:10	MA EPH
benzo(a)anthracene	< 1.1	1.1	ug/g	1	CL	4/8/20	12630	4/9/20	14:10	MA EPH
chrysene	< 1.1	1.1	ug/g	1	CL	4/8/20	12630	4/9/20	14:10	MA EPH
benzo(b)fluoranthene	< 1.1	1.1	ug/g	1	CL	4/8/20	12630	4/9/20	14:10	MA EPH
benzo(k)fluoranthene	< 1.1	1.1	ug/g	1	CL	4/8/20	12630	4/9/20	14:10	MA EPH
benzo(a)pyrene	< 1.1	1.1	ug/g	1	CL	4/8/20	12630	4/9/20	14:10	MA EPH
indeno(1,2,3-cd)pyrene	< 1.1	1.1	ug/g	1	CL	4/8/20	12630	4/9/20	14:10	MA EPH
dibenzo(a,h)anthracene	< 1.1	1.1	ug/g	1	CL	4/8/20	12630	4/9/20	14:10	MA EPH
benzo(g,h,i)perylene	< 1.1	1.1	ug/g	1	CL	4/8/20	12630	4/9/20	14:10	MA EPH
Unadjusted C11-C22 Aromatics	< 110	110	ug/g	1	DBV	4/8/20	12630	4/9/20	16:13	MA EPH
C9-C18 Aliphatics	< 110	110	ug/g	1	DBV	4/8/20	12630	4/9/20	16:13	MA EPH
C19-C36 Aliphatics	**140**	110	ug/g	1	DBV	4/8/20	12630	4/9/20	16:13	MA EPH
C11-C22 Aromatics	< 110	110	ug/g	1	DBV	4/8/20	12630	4/9/20	16:13	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**44**	40-140	%	1	DBV	4/8/20	12630	4/9/20	16:13	MA EPH
o-terphenyl SUR	**47**	40-140	%	1	DBV	4/8/20	12630	4/9/20	16:13	MA EPH
2-fluorobiphenyl SUR	**65**	40-140	%	1	DBV	4/8/20	12630	4/9/20	16:13	MA EPH
2-bromonaphthalene SUR	**62**	40-140	%	1	DBV	4/8/20	12630	4/9/20	16:13	MA EPH

Project ID: Cedar Woods 21
Job ID: 52513
Sample#: 52513-016
Sample ID: SB-112 (0-3')
Matrix: Solid Percent Dry: 90.3% Results expressed on a dry weight basis.
Sampled: 4/7/20 13:20

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.21	0.21	ug/g	1	CL	4/8/20	12630	4/9/20	17:12	MA EPH
2-methylnaphthalene	< 0.21	0.21	ug/g	1	CL	4/8/20	12630	4/9/20	17:12	MA EPH
phenanthrene	**0.41**	0.21	ug/g	1	CL	4/8/20	12630	4/9/20	17:12	MA EPH
acenaphthene	< 0.21	0.21	ug/g	1	CL	4/8/20	12630	4/9/20	17:12	MA EPH
acenaphthylene	< 0.21	0.21	ug/g	1	CL	4/8/20	12630	4/9/20	17:12	MA EPH
fluorene	< 0.21	0.21	ug/g	1	CL	4/8/20	12630	4/9/20	17:12	MA EPH
anthracene	< 0.21	0.21	ug/g	1	CL	4/8/20	12630	4/9/20	17:12	MA EPH
fluoranthene	**0.80**	0.21	ug/g	1	CL	4/8/20	12630	4/9/20	17:12	MA EPH
pyrene	**0.73**	0.21	ug/g	1	CL	4/8/20	12630	4/9/20	17:12	MA EPH
benzo(a)anthracene	**0.39**	0.21	ug/g	1	CL	4/8/20	12630	4/9/20	17:12	MA EPH
chrysene	**0.42**	0.21	ug/g	1	CL	4/8/20	12630	4/9/20	17:12	MA EPH
benzo(b)fluoranthene	**0.37**	0.21	ug/g	1	CL	4/8/20	12630	4/9/20	17:12	MA EPH
benzo(k)fluoranthene	**0.38**	0.21	ug/g	1	CL	4/8/20	12630	4/9/20	17:12	MA EPH
benzo(a)pyrene	**0.40**	0.21	ug/g	1	CL	4/8/20	12630	4/9/20	17:12	MA EPH
indeno(1,2,3-cd)pyrene	**0.21**	0.21	ug/g	1	CL	4/8/20	12630	4/9/20	17:12	MA EPH
dibenzo(a,h)anthracene	< 0.21	0.21	ug/g	1	CL	4/8/20	12630	4/9/20	17:12	MA EPH
benzo(g,h,i)perylene	**0.25**	0.21	ug/g	1	CL	4/8/20	12630	4/9/20	17:12	MA EPH
Unadjusted C11-C22 Aromatics	**26**	21	ug/g	1	DBV	4/8/20	12630	4/9/20	16:47	MA EPH
C9-C18 Aliphatics	< 21	21	ug/g	1	DBV	4/8/20	12630	4/9/20	16:47	MA EPH
C19-C36 Aliphatics	**50**	21	ug/g	1	DBV	4/8/20	12630	4/9/20	16:47	MA EPH
C11-C22 Aromatics	**22**	21	ug/g	1	DBV	4/8/20	12630	4/9/20	16:47	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**62**	40-140	%	1	DBV	4/8/20	12630	4/9/20	16:47	MA EPH
o-terphenyl SUR	**68**	40-140	%	1	DBV	4/8/20	12630	4/9/20	16:47	MA EPH
2-fluorobiphenyl SUR	**66**	40-140	%	1	DBV	4/8/20	12630	4/9/20	16:47	MA EPH
2-bromonaphthalene SUR	**63**	40-140	%	1	DBV	4/8/20	12630	4/9/20	16:47	MA EPH

Project ID: Cedar Woods 21
Job ID: 52513
Sample#: 52513-017
Sample ID: SB-112 (5-8')
Matrix: Solid Percent Dry: 52.4% Results expressed on a dry weight basis.
Sampled: 4/7/20 13:25

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.38	0.38	ug/g	1	CL	4/8/20	12630	4/9/20	19:14	MA EPH
2-methylnaphthalene	< 0.38	0.38	ug/g	1	CL	4/8/20	12630	4/9/20	19:14	MA EPH
phenanthrene	**4.7**	0.38	ug/g	1	CL	4/8/20	12630	4/9/20	19:14	MA EPH
acenaphthene	< 0.38	0.38	ug/g	1	CL	4/8/20	12630	4/9/20	19:14	MA EPH
acenaphthylene	< 0.38	0.38	ug/g	1	CL	4/8/20	12630	4/9/20	19:14	MA EPH
fluorene	**0.43**	0.38	ug/g	1	CL	4/8/20	12630	4/9/20	19:14	MA EPH
anthracene	**0.84**	0.38	ug/g	1	CL	4/8/20	12630	4/9/20	19:14	MA EPH
fluoranthene	**6.8**	0.38	ug/g	1	CL	4/8/20	12630	4/9/20	19:14	MA EPH
pyrene	**5.8**	0.38	ug/g	1	CL	4/8/20	12630	4/9/20	19:14	MA EPH
benzo(a)anthracene	**3.0**	0.38	ug/g	1	CL	4/8/20	12630	4/9/20	19:14	MA EPH
chrysene	**3.6**	0.38	ug/g	1	CL	4/8/20	12630	4/9/20	19:14	MA EPH
benzo(b)fluoranthene	**2.8**	0.38	ug/g	1	CL	4/8/20	12630	4/9/20	19:14	MA EPH
benzo(k)fluoranthene	**2.7**	0.38	ug/g	1	CL	4/8/20	12630	4/9/20	19:14	MA EPH
benzo(a)pyrene	**3.0**	0.38	ug/g	1	CL	4/8/20	12630	4/9/20	19:14	MA EPH
indeno(1,2,3-cd)pyrene	**1.7**	0.38	ug/g	1	CL	4/8/20	12630	4/9/20	19:14	MA EPH
dibenzo(a,h)anthracene	**0.62**	0.38	ug/g	1	CL	4/8/20	12630	4/9/20	19:14	MA EPH
benzo(g,h,i)perylene	**2.0**	0.38	ug/g	1	CL	4/8/20	12630	4/9/20	19:14	MA EPH
Unadjusted C11-C22 Aromatics	**180**	38	ug/g	1	DBV	4/8/20	12630	4/9/20	17:21	MA EPH
C9-C18 Aliphatics	< 38	38	ug/g	1	DBV	4/8/20	12630	4/9/20	17:21	MA EPH
C19-C36 Aliphatics	**190**	38	ug/g	1	DBV	4/8/20	12630	4/9/20	17:21	MA EPH
C11-C22 Aromatics	**140**	38	ug/g	1	DBV	4/8/20	12630	4/9/20	17:21	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**52**	40-140	%	1	DBV	4/8/20	12630	4/9/20	17:21	MA EPH
o-terphenyl SUR	**59**	40-140	%	1	DBV	4/8/20	12630	4/9/20	17:21	MA EPH
2-fluorobiphenyl SUR	**65**	40-140	%	1	DBV	4/8/20	12630	4/9/20	17:21	MA EPH
2-bromonaphthalene SUR	**64**	40-140	%	1	DBV	4/8/20	12630	4/9/20	17:21	MA EPH

Project ID: Cedar Woods 21
Job ID: 52513
Sample#: 52513-018
Sample ID: DUP-1
Matrix: Solid Percent Dry: 23.7% Results expressed on a dry weight basis.
Sampled: 4/7/20 0:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	**0.86**	0.83	ug/g	1	CL	4/8/20	12630	4/9/20	17:43	MA EPH
2-methylnaphthalene	< 0.83	0.83	ug/g	1	CL	4/8/20	12630	4/9/20	17:43	MA EPH
phenanthrene	**5.7**	0.83	ug/g	1	CL	4/8/20	12630	4/9/20	17:43	MA EPH
acenaphthene	< 0.83	0.83	ug/g	1	CL	4/8/20	12630	4/9/20	17:43	MA EPH
acenaphthylene	< 0.83	0.83	ug/g	1	CL	4/8/20	12630	4/9/20	17:43	MA EPH
fluorene	< 0.83	0.83	ug/g	1	CL	4/8/20	12630	4/9/20	17:43	MA EPH
anthracene	**0.92**	0.83	ug/g	1	CL	4/8/20	12630	4/9/20	17:43	MA EPH
fluoranthene	**9.2**	0.83	ug/g	1	CL	4/8/20	12630	4/9/20	17:43	MA EPH
pyrene	**9.0**	0.83	ug/g	1	CL	4/8/20	12630	4/9/20	17:43	MA EPH
benzo(a)anthracene	**4.0**	0.83	ug/g	1	CL	4/8/20	12630	4/9/20	17:43	MA EPH
chrysene	**5.3**	0.83	ug/g	1	CL	4/8/20	12630	4/9/20	17:43	MA EPH
benzo(b)fluoranthene	**4.4**	0.83	ug/g	1	CL	4/8/20	12630	4/9/20	17:43	MA EPH
benzo(k)fluoranthene	**3.7**	0.83	ug/g	1	CL	4/8/20	12630	4/9/20	17:43	MA EPH
benzo(a)pyrene	**4.4**	0.83	ug/g	1	CL	4/8/20	12630	4/9/20	17:43	MA EPH
indeno(1,2,3-cd)pyrene	**2.9**	0.83	ug/g	1	CL	4/8/20	12630	4/9/20	17:43	MA EPH
dibenzo(a,h)anthracene	< 0.83	0.83	ug/g	1	CL	4/8/20	12630	4/9/20	17:43	MA EPH
benzo(g,h,i)perylene	**3.2**	0.83	ug/g	1	CL	4/8/20	12630	4/9/20	17:43	MA EPH
Unadjusted C11-C22 Aromatics	**360**	83	ug/g	1	DBV	4/8/20	12630	4/9/20	17:56	MA EPH
C9-C18 Aliphatics	< 83	83	ug/g	1	DBV	4/8/20	12630	4/9/20	17:56	MA EPH
C19-C36 Aliphatics	**390**	83	ug/g	1	DBV	4/8/20	12630	4/9/20	17:56	MA EPH
C11-C22 Aromatics	**300**	83	ug/g	1	DBV	4/8/20	12630	4/9/20	17:56	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**48**	40-140	%	1	DBV	4/8/20	12630	4/9/20	17:56	MA EPH
o-terphenyl SUR	**54**	40-140	%	1	DBV	4/8/20	12630	4/9/20	17:56	MA EPH
2-fluorobiphenyl SUR	**68**	40-140	%	1	DBV	4/8/20	12630	4/9/20	17:56	MA EPH
2-bromonaphthalene SUR	**66**	40-140	%	1	DBV	4/8/20	12630	4/9/20	17:56	MA EPH

Project ID: Cedar Woods 21
Job ID: 52513

Sample#: 52513-001
Sample ID: SB-104 (0-3')
Matrix: Solid Percent Dry: 89.3% Results expressed on a dry weight basis.
Sampled: 4/7/20 8:45

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	< 0.54	0.54	ug/g	5	AGN	4/9/20	12629	4/10/20	4:27	SW3051A6020A
Arsenic	< 2.7	2.7	ug/g	5	AGN	4/9/20	12629	4/10/20	4:27	SW3051A6020A
Barium	**17**	5.4	ug/g	5	AGN	4/9/20	12629	4/10/20	4:27	SW3051A6020A
Beryllium	< 0.54	0.54	ug/g	5	AGN	4/9/20	12629	4/10/20	4:27	SW3051A6020A
Cadmium	< 0.54	0.54	ug/g	5	AGN	4/9/20	12629	4/10/20	4:27	SW3051A6020A
Chromium	< 5.4	5.4	ug/g	5	AGN	4/9/20	12629	4/10/20	4:27	SW3051A6020A
Lead	**16**	2.7	ug/g	5	AGN	4/9/20	12629	4/10/20	4:27	SW3051A6020A
Mercury	< 0.15	0.15	ug/g	1	AGN	4/9/20	12632	4/15/20	12:18	SW7471B
Nickel	**5.4**	5.4	ug/g	5	AGN	4/9/20	12629	4/10/20	4:27	SW3051A6020A
Selenium	< 5.4	5.4	ug/g	5	AGN	4/9/20	12629	4/10/20	4:27	SW3051A6020A
Silver	< 2.7	2.7	ug/g	5	AGN	4/9/20	12629	4/10/20	4:27	SW3051A6020A
Thallium	< 0.54	0.54	ug/g	5	AGN	4/9/20	12629	4/10/20	4:27	SW3051A6020A
Vanadium	**8.3**	5.4	ug/g	5	AGN	4/9/20	12629	4/10/20	4:27	SW3051A6020A
Zinc	**16**	5.4	ug/g	5	AGN	4/9/20	12629	4/10/20	4:27	SW3051A6020A

Sample#: 52513-002
Sample ID: SB-104 (8-10')
Matrix: Solid Percent Dry: 83.1% Results expressed on a dry weight basis.
Sampled: 4/7/20 8:55

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	< 0.57	0.57	ug/g	5	AGN	4/9/20	12629	4/10/20	4:36	SW3051A6020A
Arsenic	**3.1**	2.8	ug/g	5	AGN	4/9/20	12629	4/10/20	4:36	SW3051A6020A
Barium	**27**	5.7	ug/g	5	AGN	4/9/20	12629	4/10/20	4:36	SW3051A6020A
Beryllium	< 0.57	0.57	ug/g	5	AGN	4/9/20	12629	4/10/20	4:36	SW3051A6020A
Cadmium	< 0.57	0.57	ug/g	5	AGN	4/9/20	12629	4/10/20	4:36	SW3051A6020A
Chromium	**16**	5.7	ug/g	5	AGN	4/9/20	12629	4/10/20	4:36	SW3051A6020A
Lead	**5.5**	2.8	ug/g	5	AGN	4/9/20	12629	4/10/20	4:36	SW3051A6020A
Mercury	< 0.16	0.16	ug/g	1	AGN	4/9/20	12632	4/15/20	12:20	SW7471B
Nickel	**17**	5.7	ug/g	5	AGN	4/9/20	12629	4/10/20	4:36	SW3051A6020A
Selenium	< 5.7	5.7	ug/g	5	AGN	4/9/20	12629	4/10/20	4:36	SW3051A6020A
Silver	< 2.8	2.8	ug/g	5	AGN	4/9/20	12629	4/10/20	4:36	SW3051A6020A
Thallium	< 0.57	0.57	ug/g	5	AGN	4/9/20	12629	4/10/20	4:36	SW3051A6020A
Vanadium	**22**	5.7	ug/g	5	AGN	4/9/20	12629	4/10/20	4:36	SW3051A6020A
Zinc	**18**	5.7	ug/g	5	AGN	4/9/20	12629	4/10/20	4:36	SW3051A6020A

Project ID: Cedar Woods 21
Job ID: 52513

Sample#: 52513-004
Sample ID: SB-107 (0-3')
Matrix: Solid Percent Dry: 79% Results expressed on a dry weight basis.
Sampled: 4/7/20 10:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	**55**	0.63	ug/g	5	AGN	4/9/20	12629	4/10/20	4:45	SW3051A6020A
Arsenic	**8.0**	3.2	ug/g	5	AGN	4/9/20	12629	4/10/20	4:45	SW3051A6020A
Barium	**280** M	6.3	ug/g	5	AGN	4/9/20	12629	4/10/20	4:45	SW3051A6020A
M = The recovery for the matrix spike was 156%. The acceptance criteria is 75-125%.										
Beryllium	< 0.63	0.63	ug/g	5	AGN	4/9/20	12629	4/10/20	4:45	SW3051A6020A
Cadmium	**4.4**	0.63	ug/g	5	AGN	4/9/20	12629	4/10/20	4:45	SW3051A6020A
Chromium	**33**	6.3	ug/g	5	AGN	4/9/20	12629	4/10/20	4:45	SW3051A6020A
Lead	**1200** M	3.2	ug/g	5	AGN	4/9/20	12629	4/10/20	4:45	SW3051A6020A
M = The recovery for the matrix spike was -7%. The acceptance criteria is 75-125%.										
Mercury	**0.60** M	0.16	ug/g	1	AGN	4/9/20	12632	4/15/20	12:21	SW7471B
M = The recovery for the matrix spike/duplicate were 12% and 64%. The acceptance criteria is 80-120%.										
Nickel	**76**	6.3	ug/g	5	AGN	4/9/20	12629	4/10/20	4:45	SW3051A6020A
Selenium	< 6.3 M	6.3	ug/g	5	AGN	4/9/20	12629	4/10/20	4:45	SW3051A6020A
M = The recovery for the matrix spike was 74%. The acceptance criteria is 75-125%.										
Silver	**32**	3.2	ug/g	5	AGN	4/9/20	12629	4/10/20	4:45	SW3051A6020A
Thallium	< 0.63	0.63	ug/g	5	AGN	4/9/20	12629	4/10/20	4:45	SW3051A6020A
Vanadium	**20**	6.3	ug/g	5	AGN	4/9/20	12629	4/10/20	4:45	SW3051A6020A
Zinc	**2900**	6.3	ug/g	5	AGN	4/9/20	12629	4/10/20	4:45	SW3051A6020A

Sample#: 52513-005
Sample ID: SB-107 (10-11')
Matrix: Solid Percent Dry: 84.5% Results expressed on a dry weight basis.
Sampled: 4/7/20 10:20

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	**5.9**	0.49	ug/g	5	AGN	4/9/20	12629	4/10/20	5:13	SW3051A6020A
Arsenic	**3.5**	2.5	ug/g	5	AGN	4/9/20	12629	4/10/20	5:13	SW3051A6020A
Barium	**48**	4.9	ug/g	5	AGN	4/9/20	12629	4/10/20	5:13	SW3051A6020A
Beryllium	< 0.49	0.49	ug/g	5	AGN	4/9/20	12629	4/10/20	5:13	SW3051A6020A
Cadmium	**2.0**	0.49	ug/g	5	AGN	4/9/20	12629	4/10/20	5:13	SW3051A6020A
Chromium	**19**	4.9	ug/g	5	AGN	4/9/20	12629	4/10/20	5:13	SW3051A6020A
Lead	**300**	2.5	ug/g	5	AGN	4/9/20	12629	4/10/20	5:13	SW3051A6020A
Mercury	< 0.14	0.14	ug/g	1	AGN	4/9/20	12632	4/15/20	12:27	SW7471B
Nickel	**16**	4.9	ug/g	5	AGN	4/9/20	12629	4/10/20	5:13	SW3051A6020A
Selenium	< 4.9	4.9	ug/g	5	AGN	4/9/20	12629	4/10/20	5:13	SW3051A6020A
Silver	< 2.5	2.5	ug/g	5	AGN	4/9/20	12629	4/10/20	5:13	SW3051A6020A
Thallium	< 0.49	0.49	ug/g	5	AGN	4/9/20	12629	4/10/20	5:13	SW3051A6020A
Vanadium	**12**	4.9	ug/g	5	AGN	4/9/20	12629	4/10/20	5:13	SW3051A6020A
Zinc	**250**	4.9	ug/g	5	AGN	4/9/20	12629	4/10/20	5:13	SW3051A6020A

Project ID: Cedar Woods 21
Job ID: 52513

Sample#: 52513-007
Sample ID: SB-108 (0-3')
Matrix: Solid Percent Dry: 73.6% Results expressed on a dry weight basis.
Sampled: 4/7/20 10:50

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	**51**	0.65	ug/g	5	AGN	4/9/20	12629	4/10/20	5:23	SW3051A6020A
Arsenic	**8.1**	3.3	ug/g	5	AGN	4/9/20	12629	4/10/20	5:23	SW3051A6020A
Barium	**430**	6.5	ug/g	5	AGN	4/9/20	12629	4/10/20	5:23	SW3051A6020A
Beryllium	< 0.65	0.65	ug/g	5	AGN	4/9/20	12629	4/10/20	5:23	SW3051A6020A
Cadmium	**5.8**	0.65	ug/g	5	AGN	4/9/20	12629	4/10/20	5:23	SW3051A6020A
Chromium	**70**	6.5	ug/g	5	AGN	4/9/20	12629	4/10/20	5:23	SW3051A6020A
Lead	**1200**	3.3	ug/g	5	AGN	4/9/20	12629	4/10/20	5:23	SW3051A6020A
Mercury	**0.18**	0.15	ug/g	1	AGN	4/9/20	12632	4/15/20	12:29	SW7471B
Nickel	**88**	6.5	ug/g	5	AGN	4/9/20	12629	4/10/20	5:23	SW3051A6020A
Selenium	< 6.5	6.5	ug/g	5	AGN	4/9/20	12629	4/10/20	5:23	SW3051A6020A
Silver	**7.3**	3.3	ug/g	5	AGN	4/9/20	12629	4/10/20	5:23	SW3051A6020A
Thallium	< 0.65	0.65	ug/g	5	AGN	4/9/20	12629	4/10/20	5:23	SW3051A6020A
Vanadium	**10**	6.5	ug/g	5	AGN	4/9/20	12629	4/10/20	5:23	SW3051A6020A
Zinc	**2900**	6.5	ug/g	5	AGN	4/9/20	12629	4/10/20	5:23	SW3051A6020A

Sample#: 52513-008
Sample ID: SB-108 (6-9')
Matrix: Solid Percent Dry: 80.4% Results expressed on a dry weight basis.
Sampled: 4/7/20 11:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	**10**	0.60	ug/g	5	AGN	4/9/20	12629	4/10/20	5:32	SW3051A6020A
Arsenic	**7.1**	3.0	ug/g	5	AGN	4/9/20	12629	4/10/20	5:32	SW3051A6020A
Barium	**470**	6.0	ug/g	5	AGN	4/9/20	12629	4/10/20	5:32	SW3051A6020A
Beryllium	< 0.60	0.60	ug/g	5	AGN	4/9/20	12629	4/10/20	5:32	SW3051A6020A
Cadmium	**11**	0.60	ug/g	5	AGN	4/9/20	12629	4/10/20	5:32	SW3051A6020A
Chromium	**25**	6.0	ug/g	5	AGN	4/9/20	12629	4/10/20	5:32	SW3051A6020A
Lead	**970**	3.0	ug/g	5	AGN	4/9/20	12629	4/10/20	5:32	SW3051A6020A
Mercury	**0.47**	0.16	ug/g	1	AGN	4/9/20	12632	4/15/20	12:30	SW7471B
Nickel	**40**	6.0	ug/g	5	AGN	4/9/20	12629	4/10/20	5:32	SW3051A6020A
Selenium	< 6.0	6.0	ug/g	5	AGN	4/9/20	12629	4/10/20	5:32	SW3051A6020A
Silver	< 3.0	3.0	ug/g	5	AGN	4/9/20	12629	4/10/20	5:32	SW3051A6020A
Thallium	< 0.60	0.60	ug/g	5	AGN	4/9/20	12629	4/10/20	5:32	SW3051A6020A
Vanadium	**18**	6.0	ug/g	5	AGN	4/9/20	12629	4/10/20	5:32	SW3051A6020A
Zinc	**2400**	6.0	ug/g	5	AGN	4/9/20	12629	4/10/20	5:32	SW3051A6020A

Project ID: Cedar Woods 21
Job ID: 52513

Sample#: 52513-010
Sample ID: SB-109 (0-3')
Matrix: Solid Percent Dry: 70.9% Results expressed on a dry weight basis.
Sampled: 4/7/20 11:40

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	**64**	0.67	ug/g	5	AGN	4/9/20	12629	4/10/20	5:41	SW3051A6020A
Arsenic	**23**	3.3	ug/g	5	AGN	4/9/20	12629	4/10/20	5:41	SW3051A6020A
Barium	**300**	6.7	ug/g	5	AGN	4/9/20	12629	4/10/20	5:41	SW3051A6020A
Beryllium	< 0.67	0.67	ug/g	5	AGN	4/9/20	12629	4/10/20	5:41	SW3051A6020A
Cadmium	**3.6**	0.67	ug/g	5	AGN	4/9/20	12629	4/10/20	5:41	SW3051A6020A
Chromium	**64**	6.7	ug/g	5	AGN	4/9/20	12629	4/10/20	5:41	SW3051A6020A
Lead	**1300**	3.3	ug/g	5	AGN	4/9/20	12629	4/10/20	5:41	SW3051A6020A
Mercury	< 0.19	0.19	ug/g	1	AGN	4/9/20	12632	4/15/20	12:32	SW7471B
Nickel	**100**	6.7	ug/g	5	AGN	4/9/20	12629	4/10/20	5:41	SW3051A6020A
Selenium	< 6.7	6.7	ug/g	5	AGN	4/9/20	12629	4/10/20	5:41	SW3051A6020A
Silver	**12**	3.3	ug/g	5	AGN	4/9/20	12629	4/10/20	5:41	SW3051A6020A
Thallium	< 0.67	0.67	ug/g	5	AGN	4/9/20	12629	4/10/20	5:41	SW3051A6020A
Vanadium	**8.1**	6.7	ug/g	5	AGN	4/9/20	12629	4/10/20	5:41	SW3051A6020A
Zinc	**4000**	6.7	ug/g	5	AGN	4/9/20	12629	4/10/20	5:41	SW3051A6020A

Sample#: 52513-011
Sample ID: SB-109 (5-8')
Matrix: Solid Percent Dry: 23.7% Results expressed on a dry weight basis.
Sampled: 4/7/20 11:45

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	**3.5**	2.0	ug/g	5	AGN	4/9/20	12629	4/10/20	5:51	SW3051A6020A
Arsenic	**15**	9.9	ug/g	5	AGN	4/9/20	12629	4/10/20	5:51	SW3051A6020A
Barium	**78**	20	ug/g	5	AGN	4/9/20	12629	4/10/20	5:51	SW3051A6020A
Beryllium	< 2.0	2.0	ug/g	5	AGN	4/9/20	12629	4/10/20	5:51	SW3051A6020A
Cadmium	< 2.0	2.0	ug/g	5	AGN	4/9/20	12629	4/10/20	5:51	SW3051A6020A
Chromium	< 20	20	ug/g	5	AGN	4/9/20	12629	4/10/20	5:51	SW3051A6020A
Lead	**180**	9.9	ug/g	5	AGN	4/9/20	12629	4/10/20	5:51	SW3051A6020A
Mercury	< 0.58	0.58	ug/g	1	AGN	4/9/20	12632	4/15/20	12:34	SW7471B
Nickel	< 20	20	ug/g	5	AGN	4/9/20	12629	4/10/20	5:51	SW3051A6020A
Selenium	< 20	20	ug/g	5	AGN	4/9/20	12629	4/10/20	5:51	SW3051A6020A
Silver	< 9.9	9.9	ug/g	5	AGN	4/9/20	12629	4/10/20	5:51	SW3051A6020A
Thallium	< 2.0	2.0	ug/g	5	AGN	4/9/20	12629	4/10/20	5:51	SW3051A6020A
Vanadium	< 20	20	ug/g	5	AGN	4/9/20	12629	4/10/20	5:51	SW3051A6020A
Zinc	**270**	20	ug/g	5	AGN	4/9/20	12629	4/10/20	5:51	SW3051A6020A

Project ID: Cedar Woods 21
Job ID: 52513

Sample#: 52513-013
Sample ID: SB-110 (0-3')
Matrix: Solid Percent Dry: 88.3% Results expressed on a dry weight basis.
Sampled: 4/7/20 12:50

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	< 0.51	0.51	ug/g	5	AGN	4/9/20	12629	4/10/20	6:28	SW3051A6020A
Arsenic	**2.9**	2.5	ug/g	5	AGN	4/9/20	12629	4/10/20	6:28	SW3051A6020A
Barium	**41**	5.1	ug/g	5	AGN	4/9/20	12629	4/10/20	6:28	SW3051A6020A
Beryllium	< 0.51	0.51	ug/g	5	AGN	4/9/20	12629	4/10/20	6:28	SW3051A6020A
Cadmium	< 0.51	0.51	ug/g	5	AGN	4/9/20	12629	4/10/20	6:28	SW3051A6020A
Chromium	**10**	5.1	ug/g	5	AGN	4/9/20	12629	4/10/20	6:28	SW3051A6020A
Lead	**8.1**	2.5	ug/g	5	AGN	4/9/20	12629	4/10/20	19:48	SW3051A6020A
Mercury	< 0.16	0.16	ug/g	1	AGN	4/9/20	12632	4/15/20	12:36	SW7471B
Nickel	**12**	5.1	ug/g	5	AGN	4/9/20	12629	4/10/20	6:28	SW3051A6020A
Selenium	< 5.1	5.1	ug/g	5	AGN	4/9/20	12629	4/10/20	6:28	SW3051A6020A
Silver	< 2.5	2.5	ug/g	5	AGN	4/9/20	12629	4/10/20	6:28	SW3051A6020A
Thallium	< 0.51	0.51	ug/g	5	AGN	4/9/20	12629	4/10/20	6:28	SW3051A6020A
Vanadium	**16**	5.1	ug/g	5	AGN	4/9/20	12629	4/10/20	6:28	SW3051A6020A
Zinc	**19**	5.1	ug/g	5	AGN	4/9/20	12629	4/10/20	6:28	SW3051A6020A

Sample#: 52513-014
Sample ID: SB-110 (5-8')
Matrix: Solid Percent Dry: 17.7% Results expressed on a dry weight basis.
Sampled: 4/7/20 12:55

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	**3.5**	2.8	ug/g	5	AGN	4/9/20	12629	4/10/20	6:38	SW3051A6020A
Arsenic	< 14	14	ug/g	5	AGN	4/9/20	12629	4/10/20	6:38	SW3051A6020A
Barium	**160**	28	ug/g	5	AGN	4/9/20	12629	4/10/20	6:38	SW3051A6020A
Beryllium	< 2.8	2.8	ug/g	5	AGN	4/9/20	12629	4/10/20	6:38	SW3051A6020A
Cadmium	< 2.8	2.8	ug/g	5	AGN	4/9/20	12629	4/10/20	6:38	SW3051A6020A
Chromium	< 28	28	ug/g	5	AGN	4/9/20	12629	4/10/20	6:38	SW3051A6020A
Lead	**290**	14	ug/g	5	AGN	4/9/20	12629	4/10/20	19:56	SW3051A6020A
Mercury	< 0.78	0.78	ug/g	1	AGN	4/9/20	12632	4/15/20	12:41	SW7471B
Nickel	< 28	28	ug/g	5	AGN	4/9/20	12629	4/10/20	6:38	SW3051A6020A
Selenium	< 28	28	ug/g	5	AGN	4/9/20	12629	4/10/20	6:38	SW3051A6020A
Silver	< 14	14	ug/g	5	AGN	4/9/20	12629	4/10/20	6:38	SW3051A6020A
Thallium	< 2.8	2.8	ug/g	5	AGN	4/9/20	12629	4/10/20	6:38	SW3051A6020A
Vanadium	< 28	28	ug/g	5	AGN	4/9/20	12629	4/10/20	6:38	SW3051A6020A
Zinc	**230**	28	ug/g	5	AGN	4/9/20	12629	4/10/20	6:38	SW3051A6020A

Project ID: Cedar Woods 21
Job ID: 52513

Sample#: 52513-016
Sample ID: SB-112 (0-3')
Matrix: Solid Percent Dry: 90.3% Results expressed on a dry weight basis.
Sampled: 4/7/20 13:20

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	< 0.50	0.50	ug/g	5	AGN	4/9/20	12629	4/10/20	6:47	SW3051A6020A
Arsenic	**5.0**	2.5	ug/g	5	AGN	4/9/20	12629	4/10/20	6:47	SW3051A6020A
Barium	**38**	5.0	ug/g	5	AGN	4/9/20	12629	4/10/20	6:47	SW3051A6020A
Beryllium	< 0.50	0.50	ug/g	5	AGN	4/9/20	12629	4/10/20	6:47	SW3051A6020A
Cadmium	< 0.50	0.50	ug/g	5	AGN	4/9/20	12629	4/10/20	6:47	SW3051A6020A
Chromium	**18**	5.0	ug/g	5	AGN	4/9/20	12629	4/10/20	6:47	SW3051A6020A
Lead	**66**	2.5	ug/g	5	AGN	4/9/20	12629	4/10/20	20:04	SW3051A6020A
Mercury	< 0.15	0.15	ug/g	1	AGN	4/9/20	12632	4/15/20	12:43	SW7471B
Nickel	**18**	5.0	ug/g	5	AGN	4/9/20	12629	4/10/20	6:47	SW3051A6020A
Selenium	< 5.0	5.0	ug/g	5	AGN	4/9/20	12629	4/10/20	6:47	SW3051A6020A
Silver	< 2.5	2.5	ug/g	5	AGN	4/9/20	12629	4/10/20	6:47	SW3051A6020A
Thallium	< 0.50	0.50	ug/g	5	AGN	4/9/20	12629	4/10/20	6:47	SW3051A6020A
Vanadium	**21**	5.0	ug/g	5	AGN	4/9/20	12629	4/10/20	6:47	SW3051A6020A
Zinc	**51**	5.0	ug/g	5	AGN	4/9/20	12629	4/10/20	6:47	SW3051A6020A

Sample#: 52513-017
Sample ID: SB-112 (5-8')
Matrix: Solid Percent Dry: 52.4% Results expressed on a dry weight basis.
Sampled: 4/7/20 13:25

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	**4.2**	0.95	ug/g	5	AGN	4/9/20	12629	4/10/20	6:56	SW3051A6020A
Arsenic	**16**	4.8	ug/g	5	AGN	4/9/20	12629	4/10/20	6:56	SW3051A6020A
Barium	**130**	9.5	ug/g	5	AGN	4/9/20	12629	4/10/20	6:56	SW3051A6020A
Beryllium	< 0.95	0.95	ug/g	5	AGN	4/9/20	12629	4/10/20	6:56	SW3051A6020A
Cadmium	**1.1**	0.95	ug/g	5	AGN	4/9/20	12629	4/10/20	20:13	SW3051A6020A
Chromium	**21**	9.5	ug/g	5	AGN	4/9/20	12629	4/10/20	6:56	SW3051A6020A
Lead	**470**	4.8	ug/g	5	AGN	4/9/20	12629	4/10/20	20:13	SW3051A6020A
Mercury	**0.80**	0.25	ug/g	1	AGN	4/9/20	12632	4/15/20	12:45	SW7471B
Nickel	**17**	9.5	ug/g	5	AGN	4/9/20	12629	4/10/20	6:56	SW3051A6020A
Selenium	< 9.5	9.5	ug/g	5	AGN	4/9/20	12629	4/10/20	6:56	SW3051A6020A
Silver	< 4.8	4.8	ug/g	5	AGN	4/9/20	12629	4/10/20	6:56	SW3051A6020A
Thallium	< 0.95	0.95	ug/g	5	AGN	4/9/20	12629	4/10/20	6:56	SW3051A6020A
Vanadium	**26**	9.5	ug/g	5	AGN	4/9/20	12629	4/10/20	6:56	SW3051A6020A
Zinc	**300**	9.5	ug/g	5	AGN	4/9/20	12629	4/10/20	6:56	SW3051A6020A

Project ID: Cedar Woods 21
Job ID: 52513
Sample#: 52513-018
Sample ID: DUP-1
Matrix: Solid Percent Dry: 23.7% Results expressed on a dry weight basis.
Sampled: 4/7/20 0:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	**2.1**	2.0	ug/g	5	AGN	4/9/20	12629	4/10/20	7:06	SW3051A6020A
Arsenic	**20**	10	ug/g	5	AGN	4/9/20	12629	4/10/20	7:06	SW3051A6020A
Barium	**86**	20	ug/g	5	AGN	4/9/20	12629	4/10/20	7:06	SW3051A6020A
Beryllium	< 2.0	2.0	ug/g	5	AGN	4/9/20	12629	4/10/20	7:06	SW3051A6020A
Cadmium	< 2.0	2.0	ug/g	5	AGN	4/9/20	12629	4/10/20	7:06	SW3051A6020A
Chromium	< 20	20	ug/g	5	AGN	4/9/20	12629	4/10/20	7:06	SW3051A6020A
Lead	**250**	10	ug/g	5	AGN	4/9/20	12629	4/10/20	20:46	SW3051A6020A
Mercury	**0.99**	0.54	ug/g	1	AGN	4/9/20	12632	4/15/20	12:47	SW7471B
Nickel	< 20	20	ug/g	5	AGN	4/9/20	12629	4/10/20	7:06	SW3051A6020A
Selenium	< 20	20	ug/g	5	AGN	4/9/20	12629	4/10/20	7:06	SW3051A6020A
Silver	< 10	10	ug/g	5	AGN	4/9/20	12629	4/10/20	7:06	SW3051A6020A
Thallium	< 2.0	2.0	ug/g	5	AGN	4/9/20	12629	4/10/20	7:06	SW3051A6020A
Vanadium	< 20	20	ug/g	5	AGN	4/9/20	12629	4/10/20	7:06	SW3051A6020A
Zinc	**250**	20	ug/g	5	AGN	4/9/20	12629	4/10/20	7:06	SW3051A6020A

Project ID: Cedar Woods 21
Job ID: 52513

Sample#: 52513-002
Sample ID: SB-104 (8-10')
Matrix: Solid Percent Dry: 83.1% Results expressed on a dry weight basis.
Sampled: 4/7/20 8:55

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Chromium, Hexavalent	< 0.47	0.47	ug/g	1	SFM		2001871	4/10/20	11:30	SW3060A7196A
Oxidation Reduction Potential	**470**		mV	1	WAS		2001839	4/8/20	6:07	ASTM1498-08
pH	**5.9** D		pH	1	WAS		2001840	4/8/20	5:55	SW9045C

D = The difference for the sample duplicate, run as internal QC, was outside the 0.2 pH units acceptance range. The duplicate result is 5.6 pH units.

Sample#: 52513-004
Sample ID: SB-107 (0-3')
Matrix: Solid Percent Dry: 79% Results expressed on a dry weight basis.
Sampled: 4/7/20 10:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Chromium, Hexavalent	< 0.51 M	0.51	ug/g	1	SFM		2001871	4/10/20	11:30	SW3060A7196A

M = The percent recovery in the matrix spike was outside acceptance criteria. See case narrative.

Oxidation Reduction Potential	**180**		mV	1	WAS		2001839	4/8/20	6:28	ASTM1498-08
pH	**8.3**		pH	1	WAS		2001840	4/8/20	6:00	SW9045C

Sample#: 52513-008
Sample ID: SB-108 (6-9')
Matrix: Solid Percent Dry: 80.4% Results expressed on a dry weight basis.
Sampled: 4/7/20 11:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Chromium, Hexavalent	< 0.48	0.48	ug/g	1	SFM		2001871	4/10/20	11:30	SW3060A7196A
Oxidation Reduction Potential	**200**		mV	1	WAS		2001839	4/8/20	6:35	ASTM1498-08
pH	**8.0**		pH	1	WAS		2001840	4/8/20	6:08	SW9045C

Sample#: 52513-011
Sample ID: SB-109 (5-8')
Matrix: Solid Percent Dry: 23.7% Results expressed on a dry weight basis.
Sampled: 4/7/20 11:45

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Chromium, Hexavalent	< 1.6	1.6	ug/g	1	SFM		2001871	4/10/20	11:30	SW3060A7196A
Oxidation Reduction Potential	**140**		mV	1	WAS		2001839	4/8/20	6:48	ASTM1498-08
pH	**7.5**		pH	1	WAS		2001840	4/8/20	6:18	SW9045C

Sample#: 52513-014
Sample ID: SB-110 (5-8')
Matrix: Solid Percent Dry: 17.7% Results expressed on a dry weight basis.
Sampled: 4/7/20 12:55

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Chromium, Hexavalent	< 2.2	2.2	ug/g	1	SFM		2001871	4/10/20	11:30	SW3060A7196A
Oxidation Reduction Potential	**130**		mV	1	WAS		2001839	4/8/20	7:02	ASTM1498-08
pH	**7.4**		pH	1	WAS		2001840	4/8/20	6:20	SW9045C

Project ID: Cedar Woods 21
Job ID: 52513
Sample#: 52513-017
Sample ID: SB-112 (5-8')
Matrix: Solid Percent Dry: 52.4% Results expressed on a dry weight basis.
Sampled: 4/7/20 13:25

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Chromium, Hexavalent	**1.3**	0.76	ug/g	1	SFM		2001871	4/10/20	11:30	SW3060A7196A
Oxidation Reduction Potential	**140**		mV	1	WAS		2001839	4/8/20	7:10	ASTM1498-08
pH	**7.6**		pH	1	WAS		2001840	4/8/20	6:22	SW9045C

Quality Control Report

124 Heritage Avenue Unit 16
Portsmouth, NH 03801
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MassDEP Analytical Protocol Certification Form

Laboratory Name: Absolute Resource Associates	Project #: 21
Project Location: Massachusetts	RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s): 52513

Matrices: ☐ Groundwater/Surface Water ☑ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☑	MassDEP VPH (GC/PID/FID) CAM IV A ☑	8082 PCB CAM V A ☐	9014 Total Cyanide/PAC CAM VI A ☐	6860 Perchlorate CAM VIII B ☐
8270 SVOC CAM II B ☐	7010 Metals CAM III C ☐	MassDEP VPH (GC/MS) CAM IV C ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☑	MassDEP APH CAM IX A ☐
6010 Metals CAM III A ☐	6020 Metals CAM III D ☑	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	VPH, EPH, APH, and TO-15 only a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☑ Yes ☐ No[1]

***Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	☐ Yes ☑ No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☑ Yes ☐ No[1]

[1]*All negative responses must be addressed in an attached laboratory narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, is accurate and complete.

Signature: _____ **Position:** Chief Operating Officer

Printed Name: Aaron DeWees **Date**: 5/1/20

Sample Integrity Table

Parameter	Method	Matrix	Minimum Volume	Recommended Container(s)	Required Preservation	Holding Time
Volatile Organics	EPA 8260	Aqueous	40mL	2 x 40mL VOA Vials with Teflon lined septa	Cool to ≤6°C 1:1 HCl to pH <2	14 Days
Volatile Organics	EPA 8260	Solid	40mL	1 x 40mL VOA Vial with 10mLs Methanol and 1 unpreserved container for percent moisture	Cool to ≤6°C Methanol	14 Days
Semivolatile Organics	EPA 8270	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Semivolatile Organics	EPA 8270	Solid	20g	4oz Amber Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
Organochlorine Pesticides	EPA 8081	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Organochlorine Pesticides	EPA 8081	Solid	20g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
PCBs	EPA 8082	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	365 Days
PCBs	EPA 8082	Solid	20g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	365 Days
Herbicides (subcontracted)	EPA 8151	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Herbicides (subcontracted)	EPA 8151	Solid	30g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
MA DEP VPH	MADEP VPH	Aqueous	40mL	2 x 40mL VOA Vials with Teflon lined septa	Cool to ≤6°C 1:1 HCl to pH <2	14 Days
MA DEP VPH	MADEP VPH	Solid	40mL	1 x 40mL VOA Vial with 10mLs Methanol and 1 unpreserved container for percent moisture	Cool to ≤6°C Methanol	28 Days
MA DEP EPH	MADEP EPH	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C 1:1 HCl to pH <2	14 Days
MA DEP EPH	MADEP EPH	Solid	30g	4oz Amber Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
Total Metals	EPA 6010	Aqueous	100mL	250mL Polyethylene Bottle	1:1 HNO_3 to pH <2	180 Days
Dissolved Metals	EPA 6010	Aqueous	100mL	250mL Polyethylene Bottle	Filter First 1:1 HNO_3 to pH <2	180 Days
Total Metals	EPA 6010	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	180 Days
Total Mercury (may be combined with Total Metals)	EPA 7470	Aqueous	100mL	125mL Polyethylene Bottle	1:1 HNO_3 to pH <2	28 Days
Total Mercury (may be combined with Total Metals)	EPA 7471	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	28 Days
Chromium, Hexavalent	EPA 7196	Aqueous	100mL	125mL Polyethylene Bottle	Cool to ≤6°C (NH4)2SO4 buffer	28 Days
Chromium, Hexavalent (subcontract)	EPA 7196	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	30 Days
Cyanide, Total	EPA 9014	Aqueous	125mL	125mL Polyethylene Bottle	Cool to ≤6°C 1:1 NaOH to pH >8	14 Days
Cyanide, Total	EPA 9014	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days

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Absolute Resource associates

Case Narrative
Lab # 52513

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, between 0 and 6 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines.
As noted on the result page, several VOC samples did not meet the 1:1 +/-25% methanol to soil ratio.

Calibration

VOC: See the included table for a list of compounds quantitated by quadratic equation.
SVOC: See the included table for a list of compounds quantitated by quadratic equation.

Method Blank

No exceptions noted.

Surrogate Recoveries

VPH: Sample 52513-004 did not meet acceptance criteria for the surrogate a,a,a-trifluorotoluene. Matrix interference suspected. Sample 52513-005 did not meet acceptance criteria for the aliphatic surrogate 2,5-dibromotoluene, likely as a result of hydrocarbon interference. Sample 52513-014 did not meet acceptance criteria for the surrogate a,a,a-trifluorotoluene, likely as a result of the sample's high moisture content. All of the associated sample chromatograms are included in the report.
VOC: The LCS/D12627 did not meet acceptance limits for the surrogate 4-bromofluorobenzene. The percent recovery for this surrogate was outside of the acceptance criteria in sample 52513-008, likely as a result of hydrocarbon interference. The sample chromatogram is included in the report.

Laboratory Control Sample Results

VOC: The LCS12627 did not meet the acceptance criteria for bromomethane and t-butanol (TBA). Since recoveries were >10% and <10% of the compounds were outside of the acceptance criteria, reanalysis is not required.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results

Metals: The percent recovery for mercury in the MS/D12632 (52513-004) was 12% and 64% respectively, outside the acceptance criteria of 80-120%. All other batch QC was within acceptance limits. Matrix interference is suspected. The percent recovery for lead in the MS/D12629 was -7% and 43% respectively, outside the acceptance criteria of 75-125%. All other batch QC was within acceptance limits. Matrix interference is suspected. The percent recovery in the MSD12629 was 156% for barium and 74% for selenium. All other batch QC was within acceptance limits. Matrix interference is suspected. All samples with results greater than the reporting limit for the affected compounds have been qualified accordingly.

Case Narrative
Lab # 52513

Chromium, Hexavalent: The MS/D2001871 (52513-004) did not meet the acceptance criteria. The percent recovery was acceptable in the associated CRM/CRMD. The results for the ORP and pH analysis show that the sample exhibits a reducing nature therefore resulting in poor spike recovery. The sample has been qualified accordingly.

Other

No other exceptions noted.
VPH: The trap used for VPH analysis is a Tekmar STRATUM Purge Trap 9. The column used for VPH analysis is a Restek Rtx-502.2, 105m, 0.53mmID, and 3um df.

MassDEP Analytical Protocol Certification Form Questions A through I

No explanation is needed for Questions A through I answered in the affirmative.
Question H: See surrogate section above. Box H is "No."

Absolute Resource associates

Quantitation by Quadratic Equation
Lab # 52513

VOC: Quantitation of the following compounds was based on a quadratic equation:

Acetone

2-Hexanone

Bromoform

hexachlorobutadiene

SVOC: Quantitation of the following compounds was based on a quadratic equation:

2-methylnaphthalene

benzo(k)fluoranthene

indeno(1,2,3-cd)pyrene

dibenzo(a,h)anthracene

benzo(g,h,i)perylene

GLOSSARY

%R	Percent Recovery
BLK	Blank (Method Blank, Preparation Blank)
CCB	Continuing Calibration Blank
CCV	Continuing Calibration Verification
CRM	Certified Reference Material (associated with solid Metals samples)
CRMD	Certified Reference Material Duplicate (associated with solid Metals samples)
Dil'n	Dilution
DL	Detection Limit
DUP	Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection
LOQ	Limit of Quantitation
MB	Methanol Blank (associated with solid VOC samples)
MLCS	Methanol Laboratory Control Sample (associated with solid VOC samples)
MLCSD	Methanol Laboratory Control Sample Duplicate (associated with solid VOC samples)
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PB	Preparation Blank
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference
SUR	Surrogate

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
MA VPH	MB12628	Unadjusted C5-C8 Aliphatics		<	5.0	ug/g						
		Unadjusted C9-C12 Aliphatics		<	5.0	ug/g						
		methyl t-butyl ether (MTBE)		<	0.10	ug/g						
		benzene		<	0.10	ug/g						
		toluene		<	0.10	ug/g						
		ethylbenzene		<	0.10	ug/g						
		m&p-xylenes		<	0.10	ug/g						
		o-xylene		<	0.10	ug/g						
		naphthalene		<	0.25	ug/g						
		C5-C8 Aliphatics		<	5.0	ug/g						
		C9-C12 Aliphatics		<	5.0	ug/g						
		C9-C10 Aromatics		<	5.0	ug/g						
		2,5-dibromotoluene as Aromatic SUR			113	%			70	130		
		2,5-dibromotoluene as Aliphatic SUR			112	%			70	130		
		a,a,a-trifluorotoluene SUR			90	%			70	130		
MA VPH	MLCS12628	Unadjusted C5-C8 Aliphatics			14	ug/g	15	93	70	130		
		Unadjusted C9-C12 Aliphatics			13	ug/g	15	89	70	130		
		methyl t-butyl ether (MTBE)			4.6	ug/g	5	92	70	130		
		benzene			4.8	ug/g	5	97	70	130		
		toluene			4.8	ug/g	5	95	70	130		
		ethylbenzene			4.8	ug/g	5	96	70	130		
		m&p-xylenes			9.7	ug/g	10	97	70	130		
		o-xylene			4.8	ug/g	5	96	70	130		
		naphthalene			5.0	ug/g	5	100	70	130		
		C5-C8 Aliphatics		<	5.0	ug/g			70	130		
		C9-C12 Aliphatics		<	5.0	ug/g			70	130		
		C9-C10 Aromatics			5.1	ug/g	5	102	70	130		
		2,5-dibromotoluene as Aromatic SUR			111	%			70	130		
		2,5-dibromotoluene as Aliphatic SUR			112	%			70	130		
		a,a,a-trifluorotoluene SUR			86	%			70	130		
MA VPH	MLCSD12628	Unadjusted C5-C8 Aliphatics			14	ug/g	15	93	70	130	0	25
		Unadjusted C9-C12 Aliphatics			14	ug/g	15	90	70	130	2	25
		methyl t-butyl ether (MTBE)			4.7	ug/g	5	93	70	130	1	25
		benzene			4.9	ug/g	5	99	70	130	2	25
		toluene			4.9	ug/g	5	98	70	130	3	25
		ethylbenzene			4.9	ug/g	5	99	70	130	3	25
		m&p-xylenes			10.0	ug/g	10	100	70	130	3	25
		o-xylene			4.9	ug/g	5	99	70	130	2	25
		naphthalene			5.1	ug/g	5	102	70	130	2	25
		C5-C8 Aliphatics		<	5.0	ug/g			70	130		25
		C9-C12 Aliphatics		<	5.0	ug/g			70	130		25
		C9-C10 Aromatics			5.2	ug/g	5	103	70	130	1	25
		2,5-dibromotoluene as Aromatic SUR			99	%			70	130		
		2,5-dibromotoluene as Aliphatic SUR			100	%			70	130		
		a,a,a-trifluorotoluene SUR			90	%			70	130		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits	RPD	RPD Limit
SW5035A8260D	MB12627	dichlorodifluoromethane		<	0.10	ug/g					
		chloromethane		<	0.10	ug/g					
		vinyl chloride		<	0.10	ug/g					
		bromomethane		<	0.25	ug/g					
		chloroethane		<	0.10	ug/g					
		trichlorofluoromethane		<	0.10	ug/g					
		diethyl ether		<	0.50	ug/g					
		acetone		<	2.5	ug/g					
		1,1-dichloroethene		<	0.10	ug/g					
		methylene chloride		<	0.25	ug/g					
		carbon disulfide		<	0.10	ug/g					
		methyl t-butyl ether (MTBE)		<	0.10	ug/g					
		trans-1,2-dichloroethene		<	0.10	ug/g					
		isopropyl ether (DIPE)		<	0.10	ug/g					
		ethyl t-butyl ether (ETBE)		<	0.10	ug/g					
		1,1-dichloroethane		<	0.10	ug/g					
		t-butanol (TBA)		<	2.5	ug/g					
		2-butanone (MEK)		<	0.30	ug/g					
		2,2-dichloropropane		<	0.10	ug/g					
		cis-1,2-dichloroethene		<	0.10	ug/g					
		chloroform		<	0.10	ug/g					
		bromochloromethane		<	0.10	ug/g					
		tetrahydrofuran (THF)		<	0.50	ug/g					
		1,1,1-trichloroethane		<	0.10	ug/g					
		1,1-dichloropropene		<	0.10	ug/g					
		t-amyl-methyl ether (TAME)		<	0.10	ug/g					
		carbon tetrachloride		<	0.10	ug/g					
		1,2-dichloroethane		<	0.10	ug/g					
		benzene		<	0.10	ug/g					
		trichloroethene		<	0.10	ug/g					
		1,2-dichloropropane		<	0.10	ug/g					
		bromodichloromethane		<	0.10	ug/g					
		1,4-dioxane		<	2.5	ug/g					
		dibromomethane		<	0.10	ug/g					
		4-methyl-2-pentanone (MIBK)		<	0.45	ug/g					
		cis-1,3-dichloropropene		<	0.10	ug/g					
		toluene		<	0.10	ug/g					
		trans-1,3-dichloropropene		<	0.10	ug/g					
		2-hexanone		<	0.50	ug/g					
		1,1,2-trichloroethane		<	0.10	ug/g					
		1,3-dichloropropane		<	0.10	ug/g					
		tetrachloroethene		<	0.10	ug/g					
		dibromochloromethane		<	0.10	ug/g					
		1,2-dibromoethane (EDB)		<	0.10	ug/g					
		chlorobenzene		<	0.10	ug/g					
		1,1,1,2-tetrachloroethane		<	0.10	ug/g					
		ethylbenzene		<	0.10	ug/g					
		m&p-xylenes		<	0.10	ug/g					
		o-xylene		<	0.10	ug/g					

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5035A8260D	MB12627	styrene		<	0.10	ug/g						
		bromoform		<	0.10	ug/g						
		isopropylbenzene		<	0.10	ug/g						
		1,1,2,2-tetrachloroethane		<	0.10	ug/g						
		1,2,3-trichloropropane		<	0.10	ug/g						
		n-propylbenzene		<	0.10	ug/g						
		bromobenzene		<	0.10	ug/g						
		1,3,5-trimethylbenzene		<	0.10	ug/g						
		2-chlorotoluene		<	0.10	ug/g						
		4-chlorotoluene		<	0.10	ug/g						
		tert-butylbenzene		<	0.10	ug/g						
		1,2,4-trimethylbenzene		<	0.10	ug/g						
		sec-butylbenzene		<	0.10	ug/g						
		1,3-dichlorobenzene		<	0.10	ug/g						
		4-isopropyltoluene		<	0.10	ug/g						
		1,4-dichlorobenzene		<	0.10	ug/g						
		1,2-dichlorobenzene		<	0.10	ug/g						
		n-butylbenzene		<	0.10	ug/g						
		1,2-dibromo-3-chloropropane (DBCP)		<	0.10	ug/g						
		1,2,4-trichlorobenzene		<	0.10	ug/g						
		hexachlorobutadiene		<	0.10	ug/g						
		naphthalene		<	0.25	ug/g						
		1,2,3-trichlorobenzene		<	0.10	ug/g						
		dibromofluoromethane SUR			100	%			78	114		
		toluene-D8 SUR			104	%			88	110		
		4-bromofluorobenzene SUR			105	%			86	115		
		a,a,a-trifluorotoluene SUR			122	%			70	130		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260D	MLCS12627	dichlorodifluoromethane			0.79	ug/g	1	79		70	130		
		chloromethane			0.95	ug/g	1	95		70	130		
		vinyl chloride			0.93	ug/g	1	93		70	130		
		bromomethane			0.64	ug/g	1	64	*	70	130		
		chloroethane			1.0	ug/g	1	104		70	130		
		trichlorofluoromethane			1.1	ug/g	1	106		70	130		
		diethyl ether			0.99	ug/g	1	99		70	130		
		acetone		<	2.5	ug/g	1	120					
		1,1-dichloroethene			0.97	ug/g	1	97		70	130		
		methylene chloride			1.1	ug/g	1	106		70	130		
		carbon disulfide			0.94	ug/g	1	94		70	130		
		methyl t-butyl ether (MTBE)			0.96	ug/g	1	96		70	130		
		trans-1,2-dichloroethene			1.0	ug/g	1	102		70	130		
		isopropyl ether (DIPE)			1.0	ug/g	1	101		70	130		
		ethyl t-butyl ether (ETBE)			0.98	ug/g	1	98		70	130		
		1,1-dichloroethane			1.0	ug/g	1	103		70	130		
		t-butanol (TBA)			6.6	ug/g	5	132	*	70	130		
		2-butanone (MEK)			1.2	ug/g	1	119		70	130		
		2,2-dichloropropane			0.90	ug/g	1	90		70	130		
		cis-1,2-dichloroethene			1.1	ug/g	1	106		70	130		
		chloroform			1.0	ug/g	1	102		70	130		
		bromochloromethane			0.98	ug/g	1	98		70	130		
		tetrahydrofuran (THF)			1.1	ug/g	1	106		70	130		
		1,1,1-trichloroethane			0.99	ug/g	1	99		70	130		
		1,1-dichloropropene			0.95	ug/g	1	95		70	130		
		t-amyl-methyl ether (TAME)			0.92	ug/g	1	92		70	130		
		carbon tetrachloride			0.98	ug/g	1	98		70	130		
		1,2-dichloroethane			0.97	ug/g	1	97		70	130		
		benzene			0.99	ug/g	1	99		70	130		
		trichloroethene			1.0	ug/g	1	101		70	130		
		1,2-dichloropropane			0.99	ug/g	1	99		70	130		
		bromodichloromethane			1.00	ug/g	1	100		70	130		
		1,4-dioxane		<	2.5	ug/g	2	117		70	130		
		dibromomethane			1.1	ug/g	1	105		70	130		
		4-methyl-2-pentanone (MIBK)			1.1	ug/g	1	109		70	130		
		cis-1,3-dichloropropene			1.0	ug/g	1	101		70	130		
		toluene			0.99	ug/g	1	99		70	130		
		trans-1,3-dichloropropene			0.98	ug/g	1	98		70	130		
		2-hexanone			1.2	ug/g	1	117		70	130		
		1,1,2-trichloroethane			1.1	ug/g	1	107		70	130		
		1,3-dichloropropane			1.0	ug/g	1	102		70	130		
		tetrachloroethene			1.0	ug/g	1	103		70	130		
		dibromochloromethane			0.98	ug/g	1	98		70	130		
		1,2-dibromoethane (EDB)			1.0	ug/g	1	104		70	130		
		chlorobenzene			1.0	ug/g	1	103		70	130		
		1,1,1,2-tetrachloroethane			1.0	ug/g	1	102		70	130		
		ethylbenzene			1.0	ug/g	1	100		70	130		
		m&p-xylenes			2.1	ug/g	2	107		70	130		
		o-xylene			1.1	ug/g	1	106		70	130		

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260D	MLCS12627	styrene		1.1	ug/g	1	106		70	130		
		bromoform		1.1	ug/g	1	110		70	130		
		isopropylbenzene		1.1	ug/g	1	108		70	130		
		1,1,2,2-tetrachloroethane		1.0	ug/g	1	104		70	130		
		1,2,3-trichloropropane		1.1	ug/g	1	107		70	130		
		n-propylbenzene		0.98	ug/g	1	98		70	130		
		bromobenzene		1.1	ug/g	1	106		70	130		
		1,3,5-trimethylbenzene		1.1	ug/g	1	107		70	130		
		2-chlorotoluene		1.0	ug/g	1	102		70	130		
		4-chlorotoluene		1.1	ug/g	1	106		70	130		
		tert-butylbenzene		0.97	ug/g	1	97		70	130		
		1,2,4-trimethylbenzene		1.0	ug/g	1	101		70	130		
		sec-butylbenzene		0.95	ug/g	1	95		70	130		
		1,3-dichlorobenzene		1.1	ug/g	1	106		70	130		
		4-isopropyltoluene		1.0	ug/g	1	104		70	130		
		1,4-dichlorobenzene		1.1	ug/g	1	107		70	130		
		1,2-dichlorobenzene		1.1	ug/g	1	107		70	130		
		n-butylbenzene		1.0	ug/g	1	101		70	130		
		1,2-dibromo-3-chloropropane (DBCP)		1.1	ug/g	1	112		70	130		
		1,2,4-trichlorobenzene		1.0	ug/g	1	103		70	130		
		hexachlorobutadiene		1.1	ug/g	1	107		70	130		
		naphthalene		1.1	ug/g	1	109		70	130		
		1,2,3-trichlorobenzene		1.1	ug/g	1	108		70	130		
		dibromofluoromethane SUR		87	%				78	114		
		toluene-D8 SUR		104	%				88	110		
		4-bromofluorobenzene SUR		118	%			*	86	115		
		a,a,a-trifluorotoluene SUR		102	%				70	130		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW5035A8260D	MLCSD12627	dichlorodifluoromethane			0.82	ug/g	1	82	70	130	4	30
		chloromethane			1.0	ug/g	1	101	70	130	6	30
		vinyl chloride			0.94	ug/g	1	94	70	130	1	30
		bromomethane			0.86	ug/g	1	86	70	130	30	30
		chloroethane			1.1	ug/g	1	107	70	130	3	30
		trichlorofluoromethane			1.1	ug/g	1	108	70	130	3	30
		diethyl ether			1.0	ug/g	1	100	70	130	1	30
		acetone		<	2.5	ug/g	1	109			9	30
		1,1-dichloroethene			0.98	ug/g	1	98	70	130	1	30
		methylene chloride			1.1	ug/g	1	111	70	130	4	30
		carbon disulfide			0.96	ug/g	1	96	70	130	1	30
		methyl t-butyl ether (MTBE)			0.97	ug/g	1	97	70	130	1	30
		trans-1,2-dichloroethene			1.0	ug/g	1	104	70	130	3	30
		isopropyl ether (DIPE)			1.0	ug/g	1	101	70	130	0	30
		ethyl t-butyl ether (ETBE)			1.0	ug/g	1	100	70	130	2	30
		1,1-dichloroethane			1.0	ug/g	1	103	70	130	0	30
		t-butanol (TBA)			6.1	ug/g	5	122	70	130	8	30
		2-butanone (MEK)			1.1	ug/g	1	113	70	130	5	30
		2,2-dichloropropane			0.91	ug/g	1	91	70	130	2	30
		cis-1,2-dichloroethene			1.1	ug/g	1	107	70	130	1	30
		chloroform			1.1	ug/g	1	106	70	130	3	30
		bromochloromethane			1.0	ug/g	1	103	70	130	5	30
		tetrahydrofuran (THF)			1.0	ug/g	1	102	70	130	4	30
		1,1,1-trichloroethane			1.0	ug/g	1	100	70	130	1	30
		1,1-dichloropropene			1.00	ug/g	1	100	70	130	4	30
		t-amyl-methyl ether (TAME)			0.93	ug/g	1	93	70	130	1	30
		carbon tetrachloride			0.99	ug/g	1	99	70	130	2	30
		1,2-dichloroethane			1.00	ug/g	1	100	70	130	3	30
		benzene			1.0	ug/g	1	101	70	130	3	30
		trichloroethene			1.0	ug/g	1	103	70	130	2	30
		1,2-dichloropropane			1.0	ug/g	1	101	70	130	1	30
		bromodichloromethane			1.0	ug/g	1	101	70	130	2	30
		1,4-dioxane		<	2.5	ug/g	2	115	70	130	2	30
		dibromomethane			1.1	ug/g	1	106	70	130	1	30
		4-methyl-2-pentanone (MIBK)			1.1	ug/g	1	105	70	130	3	30
		cis-1,3-dichloropropene			1.0	ug/g	1	103	70	130	2	30
		toluene			1.0	ug/g	1	101	70	130	2	30
		trans-1,3-dichloropropene			1.0	ug/g	1	101	70	130	3	30
		2-hexanone			1.1	ug/g	1	109	70	130	7	30
		1,1,2-trichloroethane			1.1	ug/g	1	110	70	130	3	30
		1,3-dichloropropane			1.0	ug/g	1	101	70	130	0	30
		tetrachloroethene			1.0	ug/g	1	103	70	130	0	30
		dibromochloromethane			1.00	ug/g	1	100	70	130	2	30
		1,2-dibromoethane (EDB)			1.0	ug/g	1	103	70	130	1	30
		chlorobenzene			1.0	ug/g	1	103	70	130	1	30
		1,1,1,2-tetrachloroethane			1.0	ug/g	1	102	70	130	1	30
		ethylbenzene			1.00	ug/g	1	100	70	130	1	30
		m&p-xylenes			2.1	ug/g	2	107	70	130	1	30
		o-xylene			1.1	ug/g	1	107	70	130	1	30

Method	QC ID	Parameter	Associated Sample	Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW5035A8260D	MLCSD12627	styrene		1.1	ug/g	1	107		70	130	1	30
		bromoform		1.1	ug/g	1	111		70	130	1	30
		isopropylbenzene		1.1	ug/g	1	109		70	130	1	30
		1,1,2,2-tetrachloroethane		1.0	ug/g	1	102		70	130	2	30
		1,2,3-trichloropropane		1.0	ug/g	1	104		70	130	2	30
		n-propylbenzene		0.98	ug/g	1	98		70	130	0	30
		bromobenzene		1.0	ug/g	1	104		70	130	2	30
		1,3,5-trimethylbenzene		1.1	ug/g	1	106		70	130	1	30
		2-chlorotoluene		1.0	ug/g	1	101		70	130	1	30
		4-chlorotoluene		1.1	ug/g	1	107		70	130	1	30
		tert-butylbenzene		0.95	ug/g	1	95		70	130	2	30
		1,2,4-trimethylbenzene		1.0	ug/g	1	101		70	130	0	30
		sec-butylbenzene		0.94	ug/g	1	94		70	130	1	30
		1,3-dichlorobenzene		1.1	ug/g	1	106		70	130	0	30
		4-isopropyltoluene		1.0	ug/g	1	104		70	130	0	30
		1,4-dichlorobenzene		1.1	ug/g	1	107		70	130	0	30
		1,2-dichlorobenzene		1.1	ug/g	1	106		70	130	1	30
		n-butylbenzene		1.00	ug/g	1	100		70	130	2	30
		1,2-dibromo-3-chloropropane (DBCP)		1.0	ug/g	1	105		70	130	6	30
		1,2,4-trichlorobenzene		1.0	ug/g	1	102		70	130	1	30
		hexachlorobutadiene		1.0	ug/g	1	104		70	130	2	30
		naphthalene		1.0	ug/g	1	103		70	130	6	30
		1,2,3-trichlorobenzene		1.0	ug/g	1	103		70	130	4	30
		dibromofluoromethane SUR		88	%				78	114		
		toluene-D8 SUR		106	%				88	110		
		4-bromofluorobenzene SUR		116	%			*	86	115		
		a,a,a-trifluorotoluene SUR		109	%				70	130		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
MA EPH	BLK12630	naphthalene		<	0.20	ug/g						
		2-methylnaphthalene		<	0.20	ug/g						
		phenanthrene		<	0.20	ug/g						
		acenaphthene		<	0.20	ug/g						
		acenaphthylene		<	0.20	ug/g						
		fluorene		<	0.20	ug/g						
		anthracene		<	0.20	ug/g						
		fluoranthene		<	0.20	ug/g						
		pyrene		<	0.20	ug/g						
		benzo(a)anthracene		<	0.20	ug/g						
		chrysene		<	0.20	ug/g						
		benzo(b)fluoranthene		<	0.20	ug/g						
		benzo(k)fluoranthene		<	0.20	ug/g						
		benzo(a)pyrene		<	0.20	ug/g						
		indeno(1,2,3-cd)pyrene		<	0.20	ug/g						
		dibenzo(a,h)anthracene		<	0.20	ug/g						
		benzo(g,h,i)perylene		<	0.20	ug/g						
		Unadjusted C11-C22 Aromatics		<	20	ug/g						
		C9-C18 Aliphatics		<	20	ug/g						
		C19-C36 Aliphatics		<	20	ug/g						
		C11-C22 Aromatics		<	20	ug/g						
		1-chloro-octadecane SUR			52	%			40	140		
		o-terphenyl SUR			59	%			40	140		
		2-fluorobiphenyl SUR			66	%			40	140		
		2-bromonaphthalene SUR			64	%			40	140		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
MA EPH	LCS12630	naphthalene			3.1	ug/g	6	51	40	140		
		2-methylnaphthalene			3.1	ug/g	6	52	40	140		
		phenanthrene			3.6	ug/g	6	60	40	140		
		acenaphthene			3.3	ug/g	6	56	40	140		
		acenaphthylene			3.3	ug/g	6	54	40	140		
		fluorene			3.6	ug/g	6	60	40	140		
		anthracene			3.5	ug/g	6	59	40	140		
		fluoranthene			4.0	ug/g	6	66	40	140		
		pyrene			4.2	ug/g	6	70	40	140		
		benzo(a)anthracene			4.3	ug/g	6	71	40	140		
		chrysene			4.4	ug/g	6	73	40	140		
		benzo(b)fluoranthene			4.4	ug/g	6	73	40	140		
		benzo(k)fluoranthene			3.9	ug/g	6	65	40	140		
		benzo(a)pyrene			4.1	ug/g	6	68	40	140		
		indeno(1,2,3-cd)pyrene			4.4	ug/g	6	73	40	140		
		dibenzo(a,h)anthracene			4.4	ug/g	6	73	40	140		
		benzo(g,h,i)perylene			4.4	ug/g	6	73	40	140		
		Unadjusted C11-C22 Aromatics			65	ug/g	102	64	40	140		
		C9-C18 Aliphatics		<	20	ug/g	36	44	40	140		
		C19-C36 Aliphatics			49	ug/g	48	102	40	140		
		C11-C22 Aromatics		<	20	ug/g			40	140		
		1-chloro-octadecane SUR			52	%			40	140		
		o-terphenyl SUR			57	%			40	140		
		2-fluorobiphenyl SUR			64	%			40	140		
		2-bromonaphthalene SUR			61	%			40	140		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
MA EPH	LCSD12630	naphthalene			2.9	ug/g	6	48	40	140	6	25
		2-methylnaphthalene			2.9	ug/g	6	49	40	140	6	25
		phenanthrene			3.5	ug/g	6	59	40	140	2	25
		acenaphthene			3.3	ug/g	6	55	40	140	1	25
		acenaphthylene			3.1	ug/g	6	52	40	140	4	25
		fluorene			3.6	ug/g	6	59	40	140	1	25
		anthracene			3.5	ug/g	6	59	40	140	0	25
		fluoranthene			4.1	ug/g	6	68	40	140	3	25
		pyrene			4.0	ug/g	6	66	40	140	5	25
		benzo(a)anthracene			4.2	ug/g	6	70	40	140	2	25
		chrysene			4.3	ug/g	6	71	40	140	2	25
		benzo(b)fluoranthene			4.1	ug/g	6	68	40	140	8	25
		benzo(k)fluoranthene			4.2	ug/g	6	70	40	140	8	25
		benzo(a)pyrene			4.1	ug/g	6	68	40	140	0	25
		indeno(1,2,3-cd)pyrene			4.2	ug/g	6	71	40	140	4	25
		dibenzo(a,h)anthracene			4.2	ug/g	6	71	40	140	3	25
		benzo(g,h,i)perylene			4.1	ug/g	6	69	40	140	6	25
		Unadjusted C11-C22 Aromatics			67	ug/g	102	66	40	140	3	25
		C9-C18 Aliphatics		<	20	ug/g	36	53	40	140	18	25
		C19-C36 Aliphatics			54	ug/g	48	112	40	140	9	25
		C11-C22 Aromatics		<	20	ug/g			40	140		25
		1-chloro-octadecane SUR			63	%			40	140		
		o-terphenyl SUR			60	%			40	140		
		2-fluorobiphenyl SUR			60	%			40	140		
		2-bromonaphthalene SUR			59	%			40	140		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3051A6020A	BLK12629	Silver		<	0.025	mg/L						
		Arsenic		<	0.025	mg/L						
		Barium		<	0.050	mg/L						
		Beryllium		<	0.0050	mg/L						
		Cadmium		<	0.0050	mg/L						
		Chromium		<	0.050	mg/L						
		Nickel		<	0.050	mg/L						
		Lead		<	0.025	mg/L						
		Antimony		<	0.0050	mg/L						
		Selenium		<	0.050	mg/L						
		Thallium		<	0.0050	mg/L						
		Vanadium		<	0.050	mg/L						
		Zinc		<	0.050	mg/L						
SW3051A6020A	CRM12629	Silver			44.2	ug/g	53.8		31.9	59.7		
		Arsenic			153	ug/g	219		129	240		
		Barium			586	ug/g	788		509	867		
		Beryllium			183	ug/g	247		160	272		
		Cadmium			141	ug/g	175		111	192		
		Chromium			273	ug/g	375		223	414		
		Nickel			232	ug/g	318		193	358		
		Lead			254	ug/g	321		207	353		
		Antimony			82.9	ug/g	159		15.9	180		
		Selenium			97.8	ug/g	145		78.5	160		
		Thallium			80.5	ug/g	98.6		53.7	111		
		Vanadium			182	ug/g	267		168	294		
		Zinc			215	ug/g	311		190	352		
SW3051A6020A	CRMD12629	Silver			45.1	ug/g	53.8		31.9	59.7	2	20
		Arsenic			157	ug/g	219		129	240	3	20
		Barium			567	ug/g	788		509	867	3	20
		Beryllium			181	ug/g	247		160	272	1	20
		Cadmium			141	ug/g	175		111	192	0	20
		Chromium			278	ug/g	375		223	414	2	20
		Nickel			238	ug/g	318		193	358	3	20
		Lead			250	ug/g	321		207	353	2	20
		Antimony			82.8	ug/g	159		15.9	180	0	20
		Selenium			100	ug/g	145		78.5	160	2	20
		Thallium			80.8	ug/g	98.6		53.7	111	0	20
		Vanadium			185	ug/g	267		168	294	2	20
		Zinc			217	ug/g	311		190	352	1	20

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW3051A6020A	MS12629	Silver	52513-004		170	ug/g	155	86		75	125		
		Arsenic	52513-004		280	ug/g	310	88		75	125		
		Barium	52513-004		660	ug/g	310	122		75	125		
		Beryllium	52513-004		290	ug/g	310	92		75	125		
		Cadmium	52513-004		320	ug/g	310	103		75	125		
		Chromium	52513-004		340	ug/g	310	98		75	125		
		Nickel	52513-004		340	ug/g	310	86		75	125		
		Lead	52513-004		1200	ug/g	310.2	-7	*	75	125		
		Antimony	52513-004		340	ug/g	310	93		75	125		
		Selenium	52513-004		240	ug/g	310	79		75	125		
		Thallium	52513-004		140	ug/g	155	90		75	125		
		Vanadium	52513-004		320	ug/g	310	95		75	125		
		Zinc	52513-004		2000	ug/g	310.2	-270		75	125		
SW3051A6020A	MSD12629	Silver	52513-004		160	ug/g	155	82		75	125	4	20
		Arsenic	52513-004		290	ug/g	310	90		75	125	3	20
		Barium	52513-004		770	ug/g	310	156	*	75	125	15	20
		Beryllium	52513-004		290	ug/g	310	94		75	125	2	20
		Cadmium	52513-004		310	ug/g	310	99		75	125	4	20
		Chromium	52513-004		380	ug/g	310	111		75	125	12	20
		Nickel	52513-004		400	ug/g	310	103		75	125	15	20
		Lead	52513-004		1300	ug/g	310.2	43	*	75	125	12	20
		Antimony	52513-004		350	ug/g	310	96		75	125	3	20
		Selenium	52513-004		230	ug/g	310	74	*	75	125	7	20
		Thallium	52513-004		150	ug/g	155	95		75	125	5	20
		Vanadium	52513-004		310	ug/g	310	94		75	125	1	20
		Zinc	52513-004		2300	ug/g	310.2	-188		75	125	12	20
SW7471B	BLK12632	Mercury		<	0.14	ug/g							
SW7471B	CRM12632	Mercury			0.226	ug/g	0.221			0.0908	0.351		
SW7471B	CRMD12632	Mercury			0.216	ug/g	0.221			0.0908	0.351	4	35
SW7471B	MS12632	Mercury	52513-004		0.65	ug/g	0.405	12	*	80	120		
SW7471B	MSD12632	Mercury	52513-004		0.86	ug/g	0.405	64	*	80	120	28	35

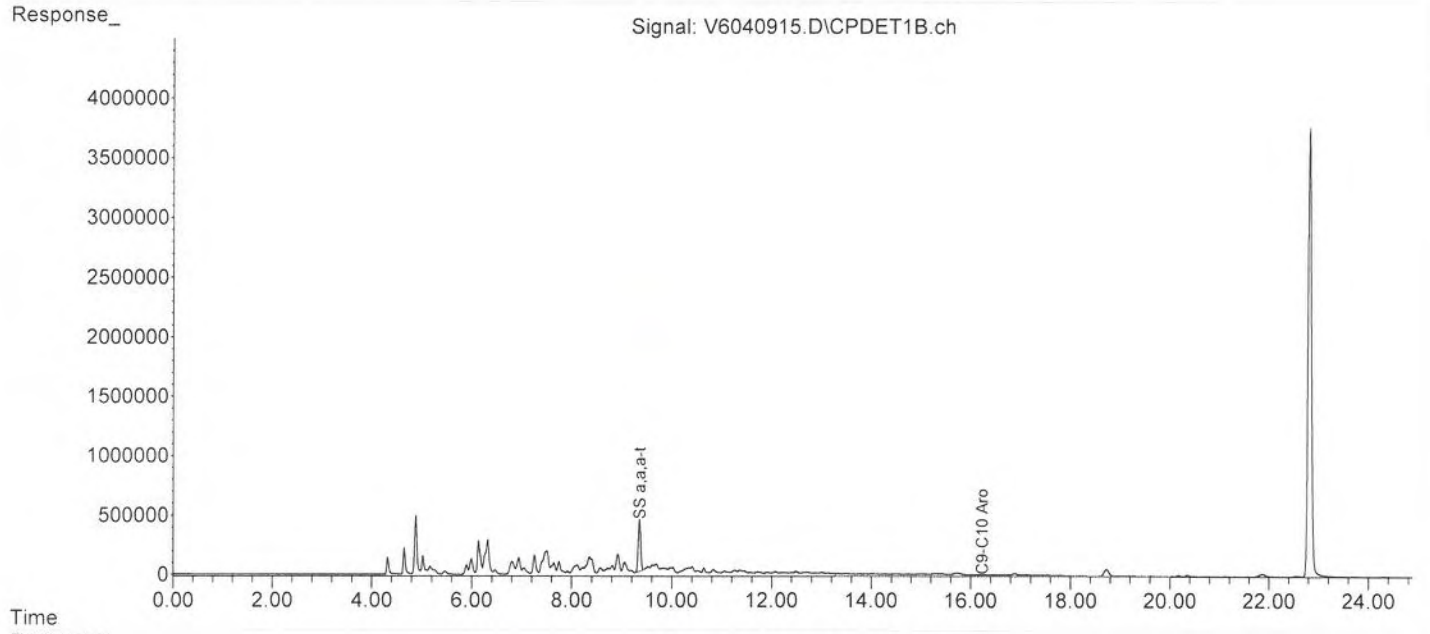
Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW3060A7196A	CRM2001871	Chromium, Hexavalent			110	ug/g	260			93.3	350		
SW3060A7196A	CRMD2001871	Chromium, Hexavalent			100	ug/g	260			93.3	350		30
SW3060A7196A	DUP2001871	Chromium, Hexavalent	52498-013	<	0.48	ug/g							20
SW3060A7196A	MS2001871	Chromium, Hexavalent	52513-004	<	0.50	ug/g	25.01	1	*	75	125		
SW3060A7196A	MS2001871	Chromium, Hexavalent	52537-009	<	0.55	ug/g	27.25	1	*	75	125		
SW3060A7196A	MSD2001871	Chromium, Hexavalent	52513-004	<	0.49	ug/g	24.43	1	*	75	125	25	20
SW3060A7196A	MSD2001871	Chromium, Hexavalent	52537-009	<	0.55	ug/g	27.35	1	*	75	125	63	20
SW3060A7196A	PB2001871	Chromium, Hexavalent		<	0.40	ug/g							
SW9045C	DUP2001840	pH	52513-002		5.6	pH							

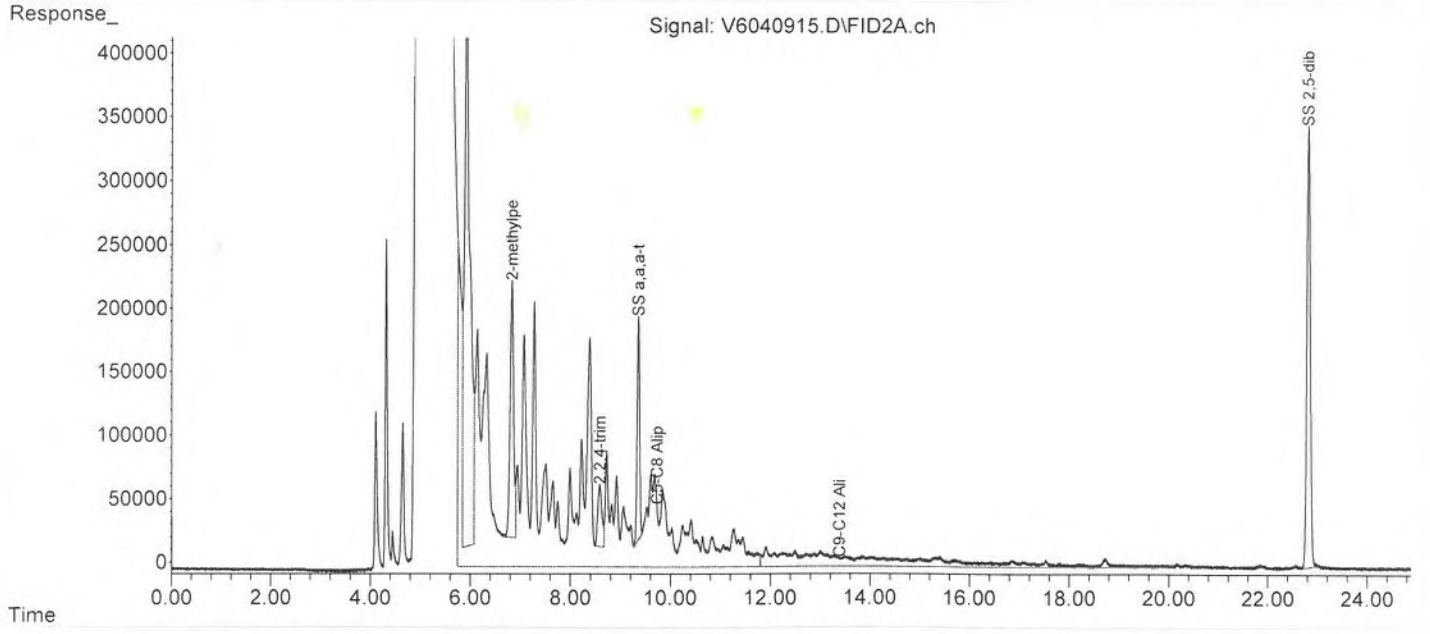
Quantitation Report ✓(QT Reviewed)

Data Path : X:\V6\2020\Apr20\040920\
Data File : V6040915.D
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 9 Apr 2020 3:49 pm
Operator : lmm
Sample : 52513-04 100uLMeOH/5mL
Misc : 100
ALS Vial : 15 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 09 20:07:01 2020
Quant Method : X:\V6\methods\V6VPH040320.M
Quant Title : VOA06 MA VPH
QLast Update : Fri Apr 03 18:09:08 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :



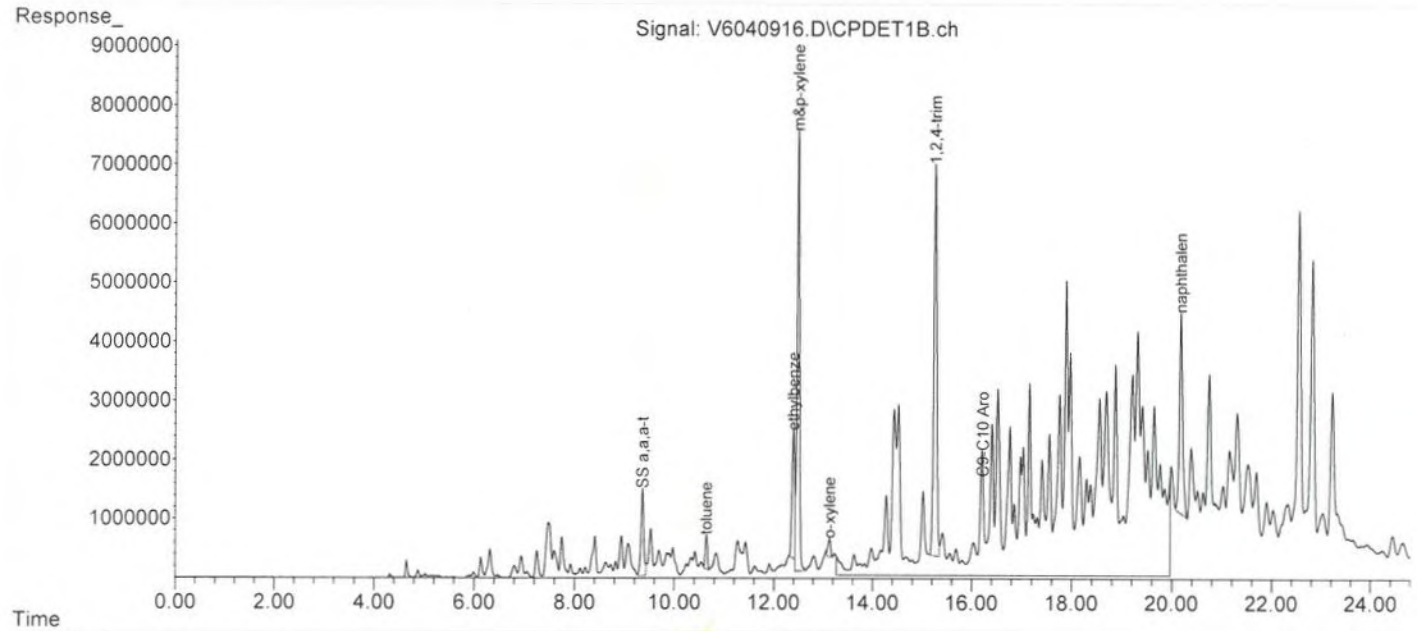


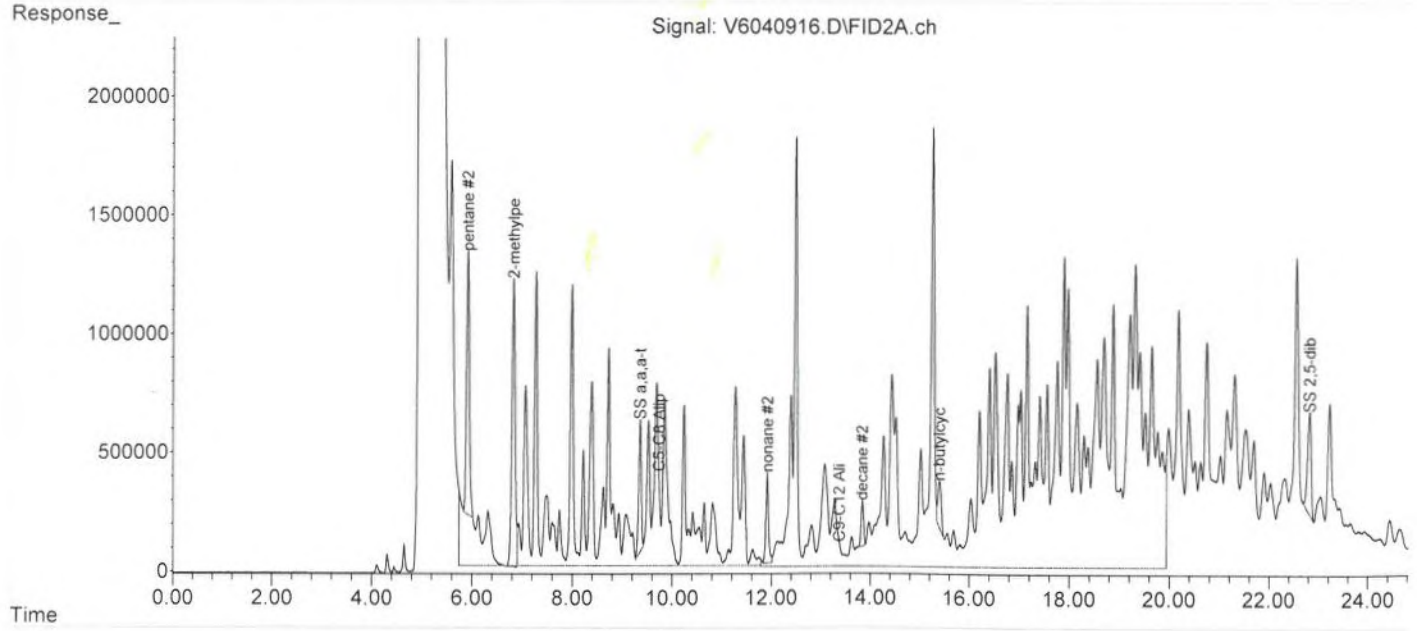
Quantitation Report ✓(QT Reviewed)

Data Path : X:\V6\2020\Apr20\040920\
Data File : V6040916.D
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 9 Apr 2020 4:19 pm
Operator : lmm
Sample : 52513-05 100uLMeOH/5mL
Misc : 100
ALS Vial : 16 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 09 20:07:04 2020
Quant Method : X:\V6\methods\V6VPH040320.M
Quant Title : VOA06 MA VPH
QLast Update : Fri Apr 03 18:09:08 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :

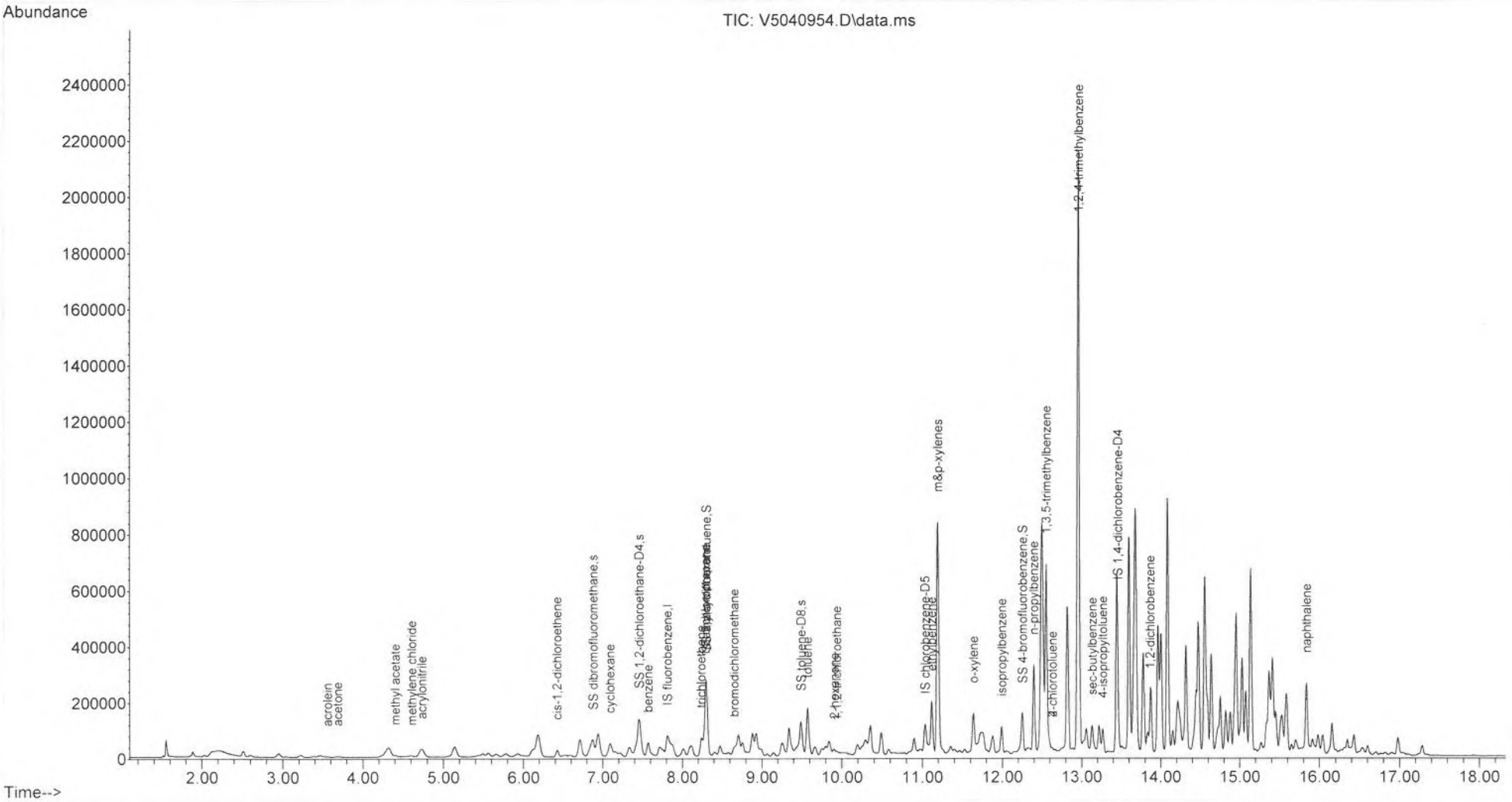




Quantitation Report ✓(QT Reviewed)

Data Path : X:\V5\2020\Apr20\040920\
Data File : V5040954.D
Acq On : 10 Apr 2020 9:36 am
Operator : lmm
Sample : 52513-08 100uLMeOH/5mL
Misc : 100
ALS Vial : 54 Sample Multiplier: 1

Quant Time: Apr 10 13:59:28 2020
Quant Method : X:\V5\methods\V58260FEB2420A.M
Quant Title : V5 Method 8260
QLast Update : Thu Apr 09 10:49:52 2020
Response via : Initial Calibration

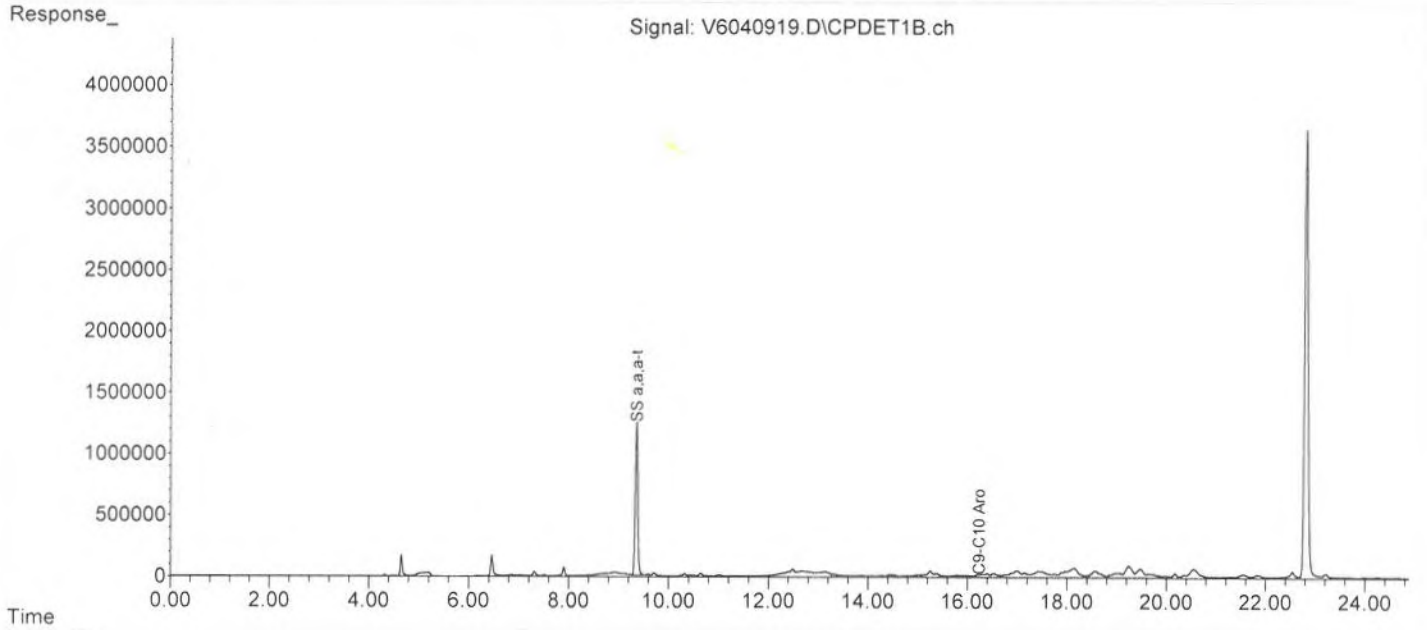


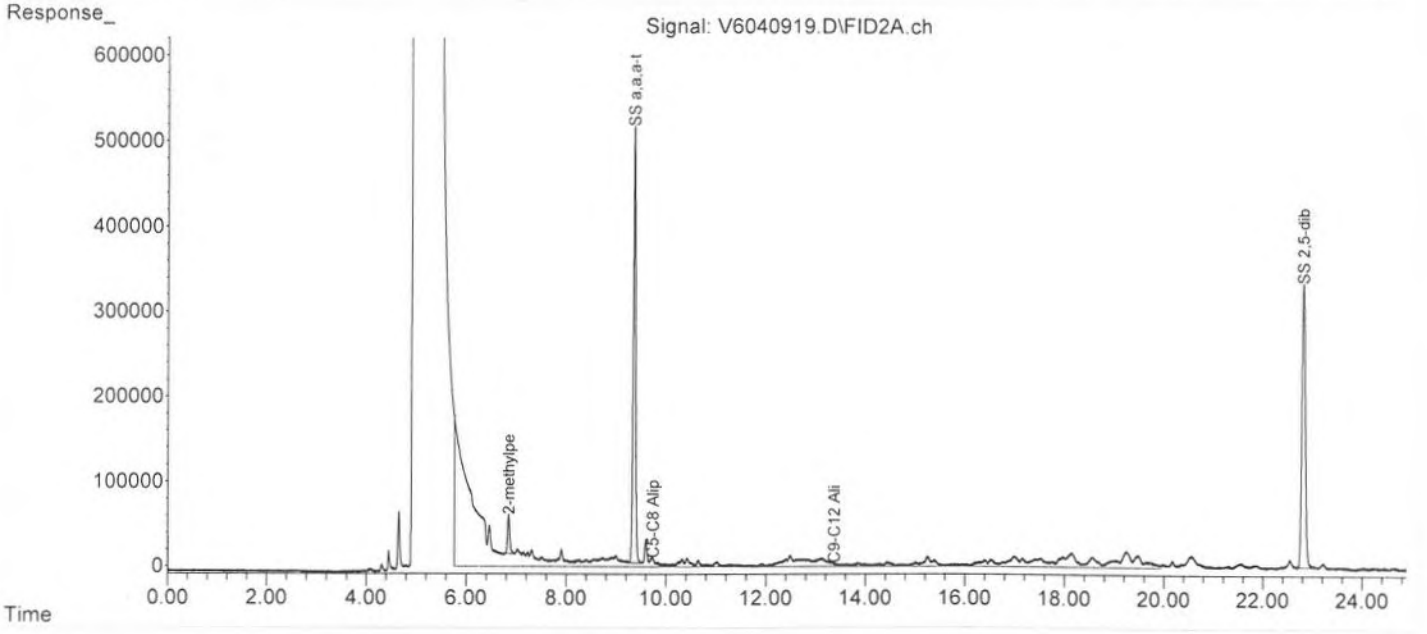
Quantitation Report ✓ (QT Reviewed)

Data Path : X:\V6\2020\Apr20\040920\
Data File : V6040919.D
Signal(s) : Signal #1: CPDET1B.ch Signal #2: FID2A.ch
Acq On : 9 Apr 2020 5:49 pm
Operator : lmm
Sample : 52513-14 100uLMeOH/5mL
Misc : 100
ALS Vial : 19 Sample Multiplier: 1

Integration File signal 1: autoint1.e
Integration File signal 2: autoint2.e
Quant Time: Apr 09 20:07:13 2020
Quant Method : X:\V6\methods\V6VPH040320.M
Quant Title : VOA06 MA VPH
QLast Update : Fri Apr 03 18:09:08 2020
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





AROMATIC HYDROCARBON BREAKTHROUGH CALCULATION

Method: MADEP EPH 2019 Rev 2.1

	lcs12630 Aliphatic Breakthrough (%)	Acceptance Criteria	Date of Analysis
naphthalene	0.6%	<5.0%	4/9/2020
2-methylnaphthalene	0.2%	<5.0%	4/9/2020

	lcsd12630 Aliphatic Breakthrough (%)	Acceptance Criteria	Date of Analysis
naphthalene	0.4%	<5.0%	4/9/2020
2-methylnaphthalene	0.2%	<5.0%	4/9/2020

Absolute Resource associates
124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

52513

Company Name: WESTON & SAMPSON
Company Address: 55 WALKERS BROOK DR READING MA
Report To: SARAH DESTEFANO & JILL MURPHY
Phone #: 1800 SAMPSON
Invoice to: ~~DE~~ SARAH DESTEFANO
Email: DESTEFANOS@WSEINC.COM
PO #: ~~CED~~ FRAMINGHAM BROWNFIELDS

Project Name: CEDAR WOODS
Project #: 21
Project Location: NH (MA) ME VT
Accreditation Required? N/Y:
Protocol: RCRA MCP SDWA NPDES NHDES DOD
Reporting Limits: QAPP EPA DW GW-1 S-1 Other
Quote # N/A
☐ NH Reimbursement Pricing

ANALYSIS REQUEST

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	Sampling: DATE	TIME	SAMPLER
525131-01	SB-104(0-3')			X							4/7/20	0845	
-02	SB-104(8-10')			X						X		0855	
-03 HOLD	SB-107(0-1')			X								0945	
-04	SB-107(0-3')			X						X		1000	
-05	SB-107(10-11')			X						X		1020	
-06 HOLD	SB-108(0-1')			X								1045	
-07	SB-108(0-3')			X								1050	
-08	SB-108(6-9')			X						X		1100	
-09 HOLD	SB-109(0-1')			X								1130	
-10	SB-109(0-3')			X								1140	
-11	SB-109(5-8')			X						X		1145	

Analysis	525131-01	-02	-03 HOLD	-04	-05	-06 HOLD	-07	-08	-09 HOLD	-10	-11
* ☒ VOC 8260 ☐ VOC 8260 NHDES ☐ VOC 8021VT	X							X HOLD 4/7/20			
☐ VOC 624.1 ☐ VOC BTEX MtBE only											
** ☒ VPH MADEP ☐ GRO 8015 ☐ 1,4-Dioxane		X		X	X						X
☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List:											
☐ TPH ☐ DRO 8015 ☒ EPH MADEP ☐ TPH Fingerprint	X	X	X	X	X	X	X	X	X	X	X
☐ 8270PAH ☐ 8270ABN ☐ 625.1 ☐ EDB			X	X	X	X	X	X	X	X	X
☐ 8082 PCB ☐ 8081 Pesticides ☐ 608.3 Pest/PCB											
☐ O&G 1664 ☐ Mineral O&G 1664											
☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity ☐ Apparent Color											
☐ TSS ☐ TDS ☐ TS ☐ TVS ☐ Alkalinity ☐ Acidity											
☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Hardness											
☒ Total Metals-list: MCP 14 METALS	X	X	X	X	X	X	X	X	X	X	X
☐ Dissolved Metals-list:											
☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON ☐ TOC ☐ Ferrous Iron											
☐ T-Phosphorus ☐ Bacteria P/A ☐ Bacteria MPN ☐ Enterococci											
☐ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P ☐ Phenols											
☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride											
☐ Corrosivity ☐ Ignitibility/FP											
☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide											
Subcontract: ☐ Grain Size ☐ Herbicides ☐ Asbestos ☐ PFAS											
Cr IV		X		X				X			X
Grab (G) or Composite (C)											

TAT REQUESTED
Priority (24 hr)* ☐
Expedited (48 hr)* ☐
Standard ☐
(10 Business Days)
*Date Needed 5 DAY

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS
* VOCs & VPH
** VPH WITH TARGET VOCs

REPORTING INSTRUCTIONS ☒ PDF (e-mail address) MURPHYJ@WSEINC.COM
☐ HARD COPY REQUIRED ☒ EDD

RECEIVED ON ICE ☒ YES ☐ NO
TEMPERATURE 2 °C

CUSTODY RECORD
QSD-01 Revision 11/06/19

	Relinquished by Sampler:	Date	Time	Received by:	Date	Time
		4/7/20	1500		4-7	3:00
	Relinquished by:	Date	Time	Received by:	Date	Time
		4/7	16:00			
	Relinquished by:	Date	Time	Received by Laboratory:	Date	Time
					4/7/20	16:00

PAGE 2 OF 2

Absolute Resource associates

124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

52513

Lab ID here

Company Name:

Company Address: SEE PAGE 1

Report To:

Phone #:

Invoice to:

Email: SEE PAGE 1

PO #:

Project Name:

Project #: SEE PAGE 1

Project Location: NH MA ME VT ______

Accreditation Required? N/Y: ______

Protocol: RCRA SDWA NPDES (MCP) NHDES DOD

Reporting Limits: QAPP GW-1 (S-1) EPA DW Other______

Quote # N/A

❑ NH Reimbursement Pricing

ANALYSIS REQUEST

Analysis columns: ☒ VOC 8260 ❑ VOC 8260 NHDES ❑ VOC 8260 MADEP * | ❑ VOC 624.1 ❑ VOC BTEX MtBE, only ❑ VOC 8021VT | ☒ VPH MADEP ❑ GRO 8015 ❑ 1,4-Dioxane ** | ❑ VOC 524.2 ❑ VOC 524.2 NH List ❑ Gases-List: | ❑ TPH ❑ DRO 8015 ☒ EPH MADEP ❑ TPH Fingerprint | ❑ 8270PAH ❑ 8270ABN ❑ 625.1 ❑ EDB | ❑ 8082 PCB ❑ 8081 Pesticides ❑ 608.3 Pest/PCB | ❑ O&G 1664 ❑ Mineral O&G 1664 | ❑ pH ❑ BOD ❑ Conductivity ❑ Turbidity ❑ Apparent Color | ❑ TSS ❑ TDS ❑ TS ❑ TVS ❑ Alkalinity ❑ Acidity | ❑ RCRA Metals ❑ Priority Pollutant Metals ❑ TAL Metals ❑ Hardness | ☒ Total Metals-list: MCP 14 METALS | ❑ Dissolved Metals-list: | ❑ Ammonia ❑ COD ❑ TKN ❑ TN ❑ TON ❑ TOC ❑ Ferrous Iron | ❑ T-Phosphorus ❑ Bacteria P/A ❑ Bacteria MPN ❑ Enterococci | ❑ Cyanide ❑ Sulfide ❑ Nitrate + Nitrite ❑ Ortho P ❑ Phenols | ❑ Nitrate ❑ Nitrite ❑ Chloride ❑ Sulfate ❑ Bromide ❑ Fluoride | ❑ Corrosivity ❑ Ignitibility/FP | ❑ TCLP Metals ❑ TCLP VOC ❑ TCLP SVOC ❑ TCLP Pesticide | Subcontract: ❑ Grain Size ❑ Herbicides ❑ Asbestos ❑ PFAS | Cr III | Grab (G) or Composite (C)

Lab Sample ID (Lab Use Only)	Field ID	# Containers	Water	Solid	Other	HCl	HNO3	H2SO4	NaOH	MeOH	Date	Time	Sampler	VOC 8260	VPH MADEP	EPH MADEP	Total Metals (MCP 14)	Cr III	Grab/Composite
52513-12 HOLD	SB-110(0-1')			X							4/7/20	12:45				X	X		
-13	SB-110(0-3')			X							↓	~~12:55~~ 12:50 (AD HE 4/7/20)				X	X		
-14	SB-110(5-8')			X							↓	12:55			X	X	X	X	
-15 HOLD	SB-112(0-1')			X							↓	13:15				X	X		
-16	SB-112(0-3')			X							↓	13:20				X	X		
-17	SB-112(5-8')			X							↓	13:25			X	X	X	X	
~~18~~	MS-1			X							↓	10:15							
~~19~~	MSD-1			X							↓	↓							
-18 ~~20~~	DUP-1			X						X	↓	—			X	X	X		
-19 ~~21~~	TRIP BLANK										—	—		X					

4/7/20 AD HE

TAT REQUESTED
Priority (24 hr)* ❑
Expedited (48 hr)* ❑
Standard ❑
(10 Business Days)
*Date Needed 5 DAY

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS
* VOCs & VPH EXCEPT FOR TRIP BLANK
** VPH WITH TARGET VOCs

REPORTING INSTRUCTIONS ❑ PDF (e-mail address) SEE PAGE 1
❑ HARD COPY REQUIRED ❑ EDD

RECEIVED ON ICE ☒YES ❑NO
TEMPERATURE 2 °C

CUSTODY RECORD

Relinquished by	Date	Time	Received by	Date	Time
Relinquished by Sampler: [signature]	4/7/20	1500	Received by: [signature]	4-7	3:00
Relinquished by: [signature]	4-7	16:00	Received by:		
Relinquished by:			Received by Laboratory: [signature]	4/7/20	1600

QSD-01 Revision 11/06/19

Laboratory Report

Absolute Resource associates
124 Heritage Avenue Portsmouth NH 03801

Jill Murphy
Weston & Sampson
55 Walkers Brook Drive
Reading, MA 01867

PO Number: Framingham Brownfields
Job ID: 52537
Date Received: 4/8/20

Project: Cedar Woods 2180311

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below. The reported results apply to the sample(s) in the condition as received at the time the laboratory took custody. This report shall not be reproduced except in full and with approval from the laboratory. The liability of ARA is limited to the cost of the requested analyses, unless otherwise agreed upon in writing.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

Aaron DeWees
Chief Operating Officer

Date of Approval: 4/20/2020
Total number of pages: 44

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH902		

Project ID: Cedar Woods 2180311

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SB-111 (0-1')	Solid	4/8/2020 9:10	52537-001	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				Zinc in solids by 6020
SB-111 (0-3')	Solid	4/8/2020 9:12	52537-002	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Field Specified Laboratory Duplicate
				Field Specified Matrix Spike
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				Zinc in solids by 6020

Project ID: Cedar Woods 2180311

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SB-111 (4-7')	Solid	4/8/2020 9:15	52537-003	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Hexavalent Chromium in solids by SW3060A7196A
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				ORP in solids by ASTM-1498-08
				pH in solids by SW9045C
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				VPH in solids by MA DEP Method
				Zinc in solids by 6020
SB-113 (0-3')	Solid	4/8/2020 9:30	52537-004	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				Zinc in solids by 6020

Project ID: Cedar Woods 2180311

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SB-113 (5-8')	Solid	4/8/2020 9:40	52537-005	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Hexavalent Chromium in solids by SW3060A7196A
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				ORP in solids by ASTM-1498-08
				pH in solids by SW9045C
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				VPH in solids by MA DEP Method
				Zinc in solids by 6020
SB-115 (0-3')	Solid	4/8/2020 10:10	52537-006	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				Zinc in solids by 6020

Project ID: Cedar Woods 2180311

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SB-115 (5-8')	Solid	4/8/2020 10:20	52537-007	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Hexavalent Chromium in solids by SW3060A7196A
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				ORP in solids by ASTM-1498-08
				pH in solids by SW9045C
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				VPH in solids by MA DEP Method
				Zinc in solids by 6020
SB-114 (0-3')	Solid	4/8/2020 10:30	52537-008	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				VPH in solids by MA DEP Method
				Zinc in solids by 6020

Project ID: Cedar Woods 2180311

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SB-114 (5-8')	Solid	4/8/2020 10:50	52537-009	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Hexavalent Chromium in solids by SW3060A7196A
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				ORP in solids by ASTM-1498-08
				pH in solids by SW9045C
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				Zinc in solids by 6020
DUP-2	Solid	4/8/2020 0:00	52537-010	
				Antimony in solids by 6020
				Arsenic in solids by 6020
				Barium in solids by 6020
				Beryllium in solids by 6020
				Cadmium in solids by 6020
				Chromium in solids by 6020
				Combo: 14 MA MCP Metals
				EPH in solids by MADEP Method
				Lead in solids by 6020
				Mercury in solids by 7471
				Nickel in solids by 6020
				Selenium in solids by 6020
				Silver in solids by 6020
				Solid Digestion for ICP Analysis
				Thallium in solids by 6020
				Vanadium in solids by 6020
				VPH in solids by MA DEP Method
				Zinc in solids by 6020
Trip Blank	Solid	4/8/2020 0:00	52537-011	
				VPH in solids by MA DEP Method

Project ID: Cedar Woods 2180311

Job ID: 52537

Sample#: 52537-003

Sample ID: SB-111 (4-7')

Matrix: Solid Percent Dry: 79.9% Results expressed on a dry weight basis.

Samples prepared in methanol at a ratio of 0.67 mL MeOH/g soil.

Received on ice at 1˚C, in satisfactory condition.

Sampled: 4/8/20 9:15

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Unadjusted C5-C8 Aliphatics	< 5.4	5.4	ug/g	1	LMM	4/9/20	12628	4/9/20	19:19	MA VPH
Unadjusted C9-C12 Aliphatics	< 5.4	5.4	ug/g	1	LMM	4/9/20	12628	4/9/20	19:19	MA VPH
methyl t-butyl ether (MTBE)	< 0.11	0.11	ug/g	1	LMM	4/9/20	12628	4/9/20	19:19	MA VPH
benzene	< 0.11	0.11	ug/g	1	LMM	4/9/20	12628	4/9/20	19:19	MA VPH
toluene	< 0.11	0.11	ug/g	1	LMM	4/9/20	12628	4/9/20	19:19	MA VPH
ethylbenzene	< 0.11	0.11	ug/g	1	LMM	4/9/20	12628	4/9/20	19:19	MA VPH
m&p-xylenes	< 0.11	0.11	ug/g	1	LMM	4/9/20	12628	4/9/20	19:19	MA VPH
o-xylene	< 0.11	0.11	ug/g	1	LMM	4/9/20	12628	4/9/20	19:19	MA VPH
naphthalene	**0.30**	0.27	ug/g	1	LMM	4/9/20	12628	4/9/20	19:19	MA VPH
C5-C8 Aliphatics	< 5.4	5.4	ug/g	1	LMM	4/9/20	12628	4/9/20	19:19	MA VPH
C9-C12 Aliphatics	< 5.4	5.4	ug/g	1	LMM	4/9/20	12628	4/9/20	19:19	MA VPH
C9-C10 Aromatics	< 5.4	5.4	ug/g	1	LMM	4/9/20	12628	4/9/20	19:19	MA VPH
Surrogate Recovery		**Limits**								
2,5-dibromotoluene as Aromatic SUR	**107**	70-130	%	1	LMM	4/9/20	12628	4/9/20	19:19	MA VPH
2,5-dibromotoluene as Aliphatic SUR	**108**	70-130	%	1	LMM	4/9/20	12628	4/9/20	19:19	MA VPH
a,a,a-trifluorotoluene SUR	**67** *	70-130	%	1	LMM	4/9/20	12628	4/9/20	19:19	MA VPH

**** This surrogate showed recovery outside the acceptance limits.***

Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in that range.

C9-C12 Aliphatic Hydrocarbons exclude concentration of target analytes eluting in that range AND C9-C10 Aromatics.

Project ID: Cedar Woods 2180311

Job ID: 52537

Sample#: 52537-005

Sample ID: SB-113 (5-8')

Matrix: Solid Percent Dry: 87.2% Results expressed on a dry weight basis.

Samples prepared in methanol at a ratio of 0.66 mL MeOH/g soil.

Received on ice at 1˚C, in satisfactory condition.

Sampled: 4/8/20 9:40

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Unadjusted C5-C8 Aliphatics	< 4.5	4.5	ug/g	1	LMM	4/9/20	12628	4/9/20	19:49	MA VPH
Unadjusted C9-C12 Aliphatics	< 4.5	4.5	ug/g	1	LMM	4/9/20	12628	4/9/20	19:49	MA VPH
methyl t-butyl ether (MTBE)	< 0.090	0.090	ug/g	1	LMM	4/9/20	12628	4/9/20	19:49	MA VPH
benzene	< 0.090	0.090	ug/g	1	LMM	4/9/20	12628	4/9/20	19:49	MA VPH
toluene	< 0.090	0.090	ug/g	1	LMM	4/9/20	12628	4/9/20	19:49	MA VPH
ethylbenzene	< 0.090	0.090	ug/g	1	LMM	4/9/20	12628	4/9/20	19:49	MA VPH
m&p-xylenes	< 0.090	0.090	ug/g	1	LMM	4/9/20	12628	4/9/20	19:49	MA VPH
o-xylene	< 0.090	0.090	ug/g	1	LMM	4/9/20	12628	4/9/20	19:49	MA VPH
naphthalene	< 0.23	0.23	ug/g	1	LMM	4/9/20	12628	4/9/20	19:49	MA VPH
C5-C8 Aliphatics	< 4.5	4.5	ug/g	1	LMM	4/9/20	12628	4/9/20	19:49	MA VPH
C9-C12 Aliphatics	< 4.5	4.5	ug/g	1	LMM	4/9/20	12628	4/9/20	19:49	MA VPH
C9-C10 Aromatics	< 4.5	4.5	ug/g	1	LMM	4/9/20	12628	4/9/20	19:49	MA VPH
Surrogate Recovery		**Limits**								
2,5-dibromotoluene as Aromatic SUR	**99**	70-130	%	1	LMM	4/9/20	12628	4/9/20	19:49	MA VPH
2,5-dibromotoluene as Aliphatic SUR	**100**	70-130	%	1	LMM	4/9/20	12628	4/9/20	19:49	MA VPH
a,a,a-trifluorotoluene SUR	**68** *	70-130	%	1	LMM	4/9/20	12628	4/9/20	19:49	MA VPH

**** This surrogate showed recovery outside the acceptance limits.***

Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in that range.

C9-C12 Aliphatic Hydrocarbons exclude concentration of target analytes eluting in that range AND C9-C10 Aromatics.

Project ID: Cedar Woods 2180311
Job ID: 52537
Sample#: 52537-007
Sample ID: SB-115 (5-8')
Matrix: Solid Percent Dry: 66.1% Results expressed on a dry weight basis.
Samples prepared in methanol at a ratio of 0.63 mL MeOH/g soil.
Received on ice at 1˚C, in satisfactory condition.
Sampled: 4/8/20 10:20

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Unadjusted C5-C8 Aliphatics	< 7.3	7.3	ug/g	1	LMM	4/9/20	12628	4/9/20	20:19	MA VPH
Unadjusted C9-C12 Aliphatics	< 7.3	7.3	ug/g	1	LMM	4/9/20	12628	4/9/20	20:19	MA VPH
methyl t-butyl ether (MTBE)	< 0.15	0.15	ug/g	1	LMM	4/9/20	12628	4/9/20	20:19	MA VPH
benzene	< 0.15	0.15	ug/g	1	LMM	4/9/20	12628	4/9/20	20:19	MA VPH
toluene	< 0.15	0.15	ug/g	1	LMM	4/9/20	12628	4/9/20	20:19	MA VPH
ethylbenzene	< 0.15	0.15	ug/g	1	LMM	4/9/20	12628	4/9/20	20:19	MA VPH
m&p-xylenes	< 0.15	0.15	ug/g	1	LMM	4/9/20	12628	4/9/20	20:19	MA VPH
o-xylene	< 0.15	0.15	ug/g	1	LMM	4/9/20	12628	4/9/20	20:19	MA VPH
naphthalene	< 0.37	0.37	ug/g	1	LMM	4/9/20	12628	4/9/20	20:19	MA VPH
C5-C8 Aliphatics	< 7.3	7.3	ug/g	1	LMM	4/9/20	12628	4/9/20	20:19	MA VPH
C9-C12 Aliphatics	< 7.3	7.3	ug/g	1	LMM	4/9/20	12628	4/9/20	20:19	MA VPH
C9-C10 Aromatics	< 7.3	7.3	ug/g	1	LMM	4/9/20	12628	4/9/20	20:19	MA VPH
Surrogate Recovery		**Limits**								
2,5-dibromotoluene as Aromatic SUR	**108**	70-130	%	1	LMM	4/9/20	12628	4/9/20	20:19	MA VPH
2,5-dibromotoluene as Aliphatic SUR	**108**	70-130	%	1	LMM	4/9/20	12628	4/9/20	20:19	MA VPH
a,a,a-trifluorotoluene SUR	**86**	70-130	%	1	LMM	4/9/20	12628	4/9/20	20:19	MA VPH

Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in that range.
C9-C12 Aliphatic Hydrocarbons exclude concentration of target analytes eluting in that range AND C9-C10 Aromatics.

Project ID: Cedar Woods 2180311

Job ID: 52537

Sample#: 52537-008

Sample ID: SB-114 (0-3')

Matrix: Solid Percent Dry: 93.7% Results expressed on a dry weight basis.

Samples prepared in methanol at a ratio of 0.67 mL MeOH/g soil.

Received on ice at 1˚C, in satisfactory condition.

Sampled: 4/8/20 10:30

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Unadjusted C5-C8 Aliphatics	< 3.9	3.9	ug/g	1	LMM	4/9/20	12628	4/9/20	20:49	MA VPH
Unadjusted C9-C12 Aliphatics	< 3.9	3.9	ug/g	1	LMM	4/9/20	12628	4/9/20	20:49	MA VPH
methyl t-butyl ether (MTBE)	< 0.078	0.078	ug/g	1	LMM	4/9/20	12628	4/9/20	20:49	MA VPH
benzene	< 0.078	0.078	ug/g	1	LMM	4/9/20	12628	4/9/20	20:49	MA VPH
toluene	< 0.078	0.078	ug/g	1	LMM	4/9/20	12628	4/9/20	20:49	MA VPH
ethylbenzene	< 0.078	0.078	ug/g	1	LMM	4/9/20	12628	4/9/20	20:49	MA VPH
m&p-xylenes	< 0.078	0.078	ug/g	1	LMM	4/9/20	12628	4/9/20	20:49	MA VPH
o-xylene	< 0.078	0.078	ug/g	1	LMM	4/9/20	12628	4/9/20	20:49	MA VPH
naphthalene	< 0.20	0.20	ug/g	1	LMM	4/9/20	12628	4/9/20	20:49	MA VPH
C5-C8 Aliphatics	< 3.9	3.9	ug/g	1	LMM	4/9/20	12628	4/9/20	20:49	MA VPH
C9-C12 Aliphatics	< 3.9	3.9	ug/g	1	LMM	4/9/20	12628	4/9/20	20:49	MA VPH
C9-C10 Aromatics	< 3.9	3.9	ug/g	1	LMM	4/9/20	12628	4/9/20	20:49	MA VPH
Surrogate Recovery		**Limits**								
2,5-dibromotoluene as Aromatic SUR	**100**	70-130	%	1	LMM	4/9/20	12628	4/9/20	20:49	MA VPH
2,5-dibromotoluene as Aliphatic SUR	**100**	70-130	%	1	LMM	4/9/20	12628	4/9/20	20:49	MA VPH
a,a,a-trifluorotoluene SUR	**79**	70-130	%	1	LMM	4/9/20	12628	4/9/20	20:49	MA VPH

Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in that range.

C9-C12 Aliphatic Hydrocarbons exclude concentration of target analytes eluting in that range AND C9-C10 Aromatics.

Project ID: Cedar Woods 2180311
Job ID: 52537
Sample#: 52537-010
Sample ID: DUP-2
Matrix: Solid Percent Dry: 85.6% Results expressed on a dry weight basis.
Samples prepared in methanol at a ratio of 0.63 mL MeOH/g soil.
Received on ice at 1˚C, in satisfactory condition.
Sampled: 4/8/20 0:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Unadjusted C5-C8 Aliphatics	< 4.5	4.5	ug/g	1	LMM	4/9/20	12628	4/9/20	21:19	MA VPH
Unadjusted C9-C12 Aliphatics	< 4.5	4.5	ug/g	1	LMM	4/9/20	12628	4/9/20	21:19	MA VPH
methyl t-butyl ether (MTBE)	< 0.090	0.090	ug/g	1	LMM	4/9/20	12628	4/9/20	21:19	MA VPH
benzene	< 0.090	0.090	ug/g	1	LMM	4/9/20	12628	4/9/20	21:19	MA VPH
toluene	< 0.090	0.090	ug/g	1	LMM	4/9/20	12628	4/9/20	21:19	MA VPH
ethylbenzene	< 0.090	0.090	ug/g	1	LMM	4/9/20	12628	4/9/20	21:19	MA VPH
m&p-xylenes	< 0.090	0.090	ug/g	1	LMM	4/9/20	12628	4/9/20	21:19	MA VPH
o-xylene	< 0.090	0.090	ug/g	1	LMM	4/9/20	12628	4/9/20	21:19	MA VPH
naphthalene	< 0.23	0.23	ug/g	1	LMM	4/9/20	12628	4/9/20	21:19	MA VPH
C5-C8 Aliphatics	< 4.5	4.5	ug/g	1	LMM	4/9/20	12628	4/9/20	21:19	MA VPH
C9-C12 Aliphatics	< 4.5	4.5	ug/g	1	LMM	4/9/20	12628	4/9/20	21:19	MA VPH
C9-C10 Aromatics	< 4.5	4.5	ug/g	1	LMM	4/9/20	12628	4/9/20	21:19	MA VPH
Surrogate Recovery		**Limits**								
2,5-dibromotoluene as Aromatic SUR	**100**	70-130	%	1	LMM	4/9/20	12628	4/9/20	21:19	MA VPH
2,5-dibromotoluene as Aliphatic SUR	**101**	70-130	%	1	LMM	4/9/20	12628	4/9/20	21:19	MA VPH
a,a,a-trifluorotoluene SUR	**54** *	70-130	%	1	LMM	4/9/20	12628	4/9/20	21:19	MA VPH

**** This surrogate showed recovery outside the acceptance limits.***

Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in that range.

C9-C12 Aliphatic Hydrocarbons exclude concentration of target analytes eluting in that range AND C9-C10 Aromatics.

Project ID: Cedar Woods 2180311

Job ID: 52537

Sample#: 52537-011

Sample ID: Trip Blank

Matrix: Solid

Samples prepared in methanol within a 1:1 ratio +/- 25% mL MeOH/g soil

Received on ice at 1˚C, in satisfactory condition.

Sampled: 4/8/20 0:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Unadjusted C5-C8 Aliphatics	< 5.0	5.0	ug/g	1	LMM	4/9/20	12628	4/9/20	12:19	MA VPH
Unadjusted C9-C12 Aliphatics	< 5.0	5.0	ug/g	1	LMM	4/9/20	12628	4/9/20	12:19	MA VPH
methyl t-butyl ether (MTBE)	< 0.10	0.10	ug/g	1	LMM	4/9/20	12628	4/9/20	12:19	MA VPH
benzene	< 0.10	0.10	ug/g	1	LMM	4/9/20	12628	4/9/20	12:19	MA VPH
toluene	< 0.10	0.10	ug/g	1	LMM	4/9/20	12628	4/9/20	12:19	MA VPH
ethylbenzene	< 0.10	0.10	ug/g	1	LMM	4/9/20	12628	4/9/20	12:19	MA VPH
m&p-xylenes	< 0.10	0.10	ug/g	1	LMM	4/9/20	12628	4/9/20	12:19	MA VPH
o-xylene	< 0.10	0.10	ug/g	1	LMM	4/9/20	12628	4/9/20	12:19	MA VPH
naphthalene	< 0.25	0.25	ug/g	1	LMM	4/9/20	12628	4/9/20	12:19	MA VPH
C5-C8 Aliphatics	< 5.0	5.0	ug/g	1	LMM	4/9/20	12628	4/9/20	12:19	MA VPH
C9-C12 Aliphatics	< 5.0	5.0	ug/g	1	LMM	4/9/20	12628	4/9/20	12:19	MA VPH
C9-C10 Aromatics	< 5.0	5.0	ug/g	1	LMM	4/9/20	12628	4/9/20	12:19	MA VPH
Surrogate Recovery		**Limits**								
2,5-dibromotoluene as Aromatic SUR	**104**	70-130	%	1	LMM	4/9/20	12628	4/9/20	12:19	MA VPH
2,5-dibromotoluene as Aliphatic SUR	**104**	70-130	%	1	LMM	4/9/20	12628	4/9/20	12:19	MA VPH
a,a,a-trifluorotoluene SUR	**84**	70-130	%	1	LMM	4/9/20	12628	4/9/20	12:19	MA VPH

Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.

C5-C8 Aliphatic Hydrocarbons exclude the concentration of target analytes eluting in that range.

C9-C12 Aliphatic Hydrocarbons exclude concentration of target analytes eluting in that range AND C9-C10 Aromatics.

Project ID: Cedar Woods 2180311
Job ID: 52537
Sample#: 52537-001
Sample ID: SB-111 (0-1')
Matrix: Solid Percent Dry: 91.8% Results expressed on a dry weight basis.
Sampled: 4/8/20 9:10

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.20	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	20:30	MA EPH
2-methylnaphthalene	< 0.20	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	20:30	MA EPH
phenanthrene	**0.57**	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	20:30	MA EPH
acenaphthene	< 0.20	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	20:30	MA EPH
acenaphthylene	< 0.20	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	20:30	MA EPH
fluorene	< 0.20	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	20:30	MA EPH
anthracene	< 0.20	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	20:30	MA EPH
fluoranthene	**2.2**	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	20:30	MA EPH
pyrene	**1.9**	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	20:30	MA EPH
benzo(a)anthracene	**1.5**	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	20:30	MA EPH
chrysene	**1.8**	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	20:30	MA EPH
benzo(b)fluoranthene	**2.3**	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	20:30	MA EPH
benzo(k)fluoranthene	**1.7**	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	20:30	MA EPH
benzo(a)pyrene	**2.0**	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	20:30	MA EPH
indeno(1,2,3-cd)pyrene	**1.7**	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	20:30	MA EPH
dibenzo(a,h)anthracene	**0.51**	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	20:30	MA EPH
benzo(g,h,i)perylene	**2.0**	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	20:30	MA EPH
Unadjusted C11-C22 Aromatics	**80**	20	ug/g	1	DBV	4/15/20	12658	4/16/20	8:30	MA EPH
C9-C18 Aliphatics	< 20	20	ug/g	1	DBV	4/15/20	12658	4/16/20	8:30	MA EPH
C19-C36 Aliphatics	**85**	20	ug/g	1	DBV	4/15/20	12658	4/16/20	8:30	MA EPH
C11-C22 Aromatics	**62**	20	ug/g	1	DBV	4/15/20	12658	4/16/20	8:30	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**44**	40-140	%	1	DBV	4/15/20	12658	4/16/20	8:30	MA EPH
o-terphenyl SUR	**48**	40-140	%	1	DBV	4/15/20	12658	4/16/20	8:30	MA EPH
2-fluorobiphenyl SUR	**67**	40-140	%	1	DBV	4/15/20	12658	4/16/20	8:30	MA EPH
2-bromonaphthalene SUR	**61**	40-140	%	1	DBV	4/15/20	12658	4/16/20	8:30	MA EPH

Project ID: Cedar Woods 2180311
Job ID: 52537
Sample#: 52537-002
Sample ID: SB-111 (0-3')
Matrix: Solid Percent Dry: 82.2% Results expressed on a dry weight basis.
Sampled: 4/8/20 9:12

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:28	MA EPH
2-methylnaphthalene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:28	MA EPH
phenanthrene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:28	MA EPH
acenaphthene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:28	MA EPH
acenaphthylene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:28	MA EPH
fluorene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:28	MA EPH
anthracene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:28	MA EPH
fluoranthene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:28	MA EPH
pyrene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:28	MA EPH
benzo(a)anthracene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:28	MA EPH
chrysene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:28	MA EPH
benzo(b)fluoranthene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:28	MA EPH
benzo(k)fluoranthene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:28	MA EPH
benzo(a)pyrene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:28	MA EPH
indeno(1,2,3-cd)pyrene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:28	MA EPH
dibenzo(a,h)anthracene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:28	MA EPH
benzo(g,h,i)perylene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:28	MA EPH
Unadjusted C11-C22 Aromatics	< 19	19	ug/g	1	DBV	4/15/20	12658	4/16/20	3:23	MA EPH
C9-C18 Aliphatics	< 19	19	ug/g	1	DBV	4/15/20	12658	4/16/20	3:23	MA EPH
C19-C36 Aliphatics	**40**	19	ug/g	1	DBV	4/15/20	12658	4/16/20	3:23	MA EPH
C11-C22 Aromatics	< 19	19	ug/g	1	DBV	4/15/20	12658	4/16/20	3:23	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**43**	40-140	%	1	DBV	4/15/20	12658	4/16/20	3:23	MA EPH
o-terphenyl SUR	**49**	40-140	%	1	DBV	4/15/20	12658	4/16/20	3:23	MA EPH
2-fluorobiphenyl SUR	**74**	40-140	%	1	DBV	4/15/20	12658	4/16/20	3:23	MA EPH
2-bromonaphthalene SUR	**69**	40-140	%	1	DBV	4/15/20	12658	4/16/20	3:23	MA EPH

Project ID: Cedar Woods 2180311
Job ID: 52537
Sample#: 52537-003
Sample ID: SB-111 (4-7')
Matrix: Solid Percent Dry: 79.9% Results expressed on a dry weight basis.
Sampled: 4/8/20 9:15

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	**0.35**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	22:00	MA EPH
2-methylnaphthalene	**0.22**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	22:00	MA EPH
phenanthrene	**5.1**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	22:00	MA EPH
acenaphthene	**0.24**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	22:00	MA EPH
acenaphthylene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	22:00	MA EPH
fluorene	**0.43**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	22:00	MA EPH
anthracene	**1.3**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	22:00	MA EPH
fluoranthene	**8.5**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	22:00	MA EPH
pyrene	**6.7**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	22:00	MA EPH
benzo(a)anthracene	**4.1**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	22:00	MA EPH
chrysene	**4.4**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	22:00	MA EPH
benzo(b)fluoranthene	**3.9**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	22:00	MA EPH
benzo(k)fluoranthene	**3.4**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	22:00	MA EPH
benzo(a)pyrene	**4.1**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	22:00	MA EPH
indeno(1,2,3-cd)pyrene	**2.7**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	22:00	MA EPH
dibenzo(a,h)anthracene	**0.95**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	22:00	MA EPH
benzo(g,h,i)perylene	**3.0**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	22:00	MA EPH
Unadjusted C11-C22 Aromatics	**250**	97	ug/g	5	DBV	4/15/20	12658	4/16/20	7:56	MA EPH
C9-C18 Aliphatics	< 97	97	ug/g	5	DBV	4/15/20	12658	4/16/20	7:56	MA EPH
C19-C36 Aliphatics	**340**	97	ug/g	5	DBV	4/15/20	12658	4/16/20	7:56	MA EPH
C11-C22 Aromatics	**200**	97	ug/g	5	DBV	4/15/20	12658	4/16/20	7:56	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**53**	40-140	%	5	DBV	4/15/20	12658	4/16/20	7:56	MA EPH
o-terphenyl SUR	**56**	40-140	%	5	DBV	4/15/20	12658	4/16/20	7:56	MA EPH
2-fluorobiphenyl SUR	**71**	40-140	%	5	DBV	4/15/20	12658	4/16/20	7:56	MA EPH
2-bromonaphthalene SUR	**62**	40-140	%	5	DBV	4/15/20	12658	4/16/20	7:56	MA EPH

Project ID: Cedar Woods 2180311
Job ID: 52537
Sample#: 52537-004
Sample ID: SB-113 (0-3')
Matrix: Solid Percent Dry: 81.1% Results expressed on a dry weight basis.
Sampled: 4/8/20 9:30

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	20:00	MA EPH
2-methylnaphthalene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	20:00	MA EPH
phenanthrene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	20:00	MA EPH
acenaphthene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	20:00	MA EPH
acenaphthylene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	20:00	MA EPH
fluorene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	20:00	MA EPH
anthracene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	20:00	MA EPH
fluoranthene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	20:00	MA EPH
pyrene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	20:00	MA EPH
benzo(a)anthracene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	20:00	MA EPH
chrysene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	20:00	MA EPH
benzo(b)fluoranthene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	20:00	MA EPH
benzo(k)fluoranthene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	20:00	MA EPH
benzo(a)pyrene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	20:00	MA EPH
indeno(1,2,3-cd)pyrene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	20:00	MA EPH
dibenzo(a,h)anthracene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	20:00	MA EPH
benzo(g,h,i)perylene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	20:00	MA EPH
Unadjusted C11-C22 Aromatics	**99**	19	ug/g	1	DBV	4/15/20	12658	4/16/20	7:22	MA EPH
C9-C18 Aliphatics	< 97	97	ug/g	5	DBV	4/15/20	12658	4/16/20	7:22	MA EPH
C19-C36 Aliphatics	**450**	97	ug/g	5	DBV	4/15/20	12658	4/16/20	7:22	MA EPH
C11-C22 Aromatics	**97**	19	ug/g	1	DBV	4/15/20	12658	4/16/20	7:22	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**52**	40-140	%	5	DBV	4/15/20	12658	4/16/20	7:22	MA EPH
o-terphenyl SUR	**55**	40-140	%	1	DBV	4/15/20	12658	4/16/20	7:22	MA EPH
2-fluorobiphenyl SUR	**70**	40-140	%	1	DBV	4/15/20	12658	4/16/20	7:22	MA EPH
2-bromonaphthalene SUR	**64**	40-140	%	1	DBV	4/15/20	12658	4/16/20	7:22	MA EPH

Project ID: Cedar Woods 2180311
Job ID: 52537
Sample#: 52537-005
Sample ID: SB-113 (5-8')
Matrix: Solid Percent Dry: 87.2% Results expressed on a dry weight basis.
Sampled: 4/8/20 9:40

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:58	MA EPH
2-methylnaphthalene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:58	MA EPH
phenanthrene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:58	MA EPH
acenaphthene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:58	MA EPH
acenaphthylene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:58	MA EPH
fluorene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:58	MA EPH
anthracene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:58	MA EPH
fluoranthene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:58	MA EPH
pyrene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:58	MA EPH
benzo(a)anthracene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:58	MA EPH
chrysene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:58	MA EPH
benzo(b)fluoranthene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:58	MA EPH
benzo(k)fluoranthene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:58	MA EPH
benzo(a)pyrene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:58	MA EPH
indeno(1,2,3-cd)pyrene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:58	MA EPH
dibenzo(a,h)anthracene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:58	MA EPH
benzo(g,h,i)perylene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	17:58	MA EPH
Unadjusted C11-C22 Aromatics	< 19	19	ug/g	1	DBV	4/15/20	12658	4/16/20	3:57	MA EPH
C9-C18 Aliphatics	< 19	19	ug/g	1	DBV	4/15/20	12658	4/16/20	3:57	MA EPH
C19-C36 Aliphatics	< 19	19	ug/g	1	DBV	4/15/20	12658	4/16/20	3:57	MA EPH
C11-C22 Aromatics	< 19	19	ug/g	1	DBV	4/15/20	12658	4/16/20	3:57	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**52**	40-140	%	1	DBV	4/15/20	12658	4/16/20	3:57	MA EPH
o-terphenyl SUR	**61**	40-140	%	1	DBV	4/15/20	12658	4/16/20	3:57	MA EPH
2-fluorobiphenyl SUR	**72**	40-140	%	1	DBV	4/15/20	12658	4/16/20	3:57	MA EPH
2-bromonaphthalene SUR	**66**	40-140	%	1	DBV	4/15/20	12658	4/16/20	3:57	MA EPH

Project ID: Cedar Woods 2180311
Job ID: 52537
Sample#: 52537-006
Sample ID: SB-115 (0-3')
Matrix: Solid Percent Dry: 89.3% Results expressed on a dry weight basis.
Sampled: 4/8/20 10:10

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	18:29	MA EPH
2-methylnaphthalene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	18:29	MA EPH
phenanthrene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	18:29	MA EPH
acenaphthene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	18:29	MA EPH
acenaphthylene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	18:29	MA EPH
fluorene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	18:29	MA EPH
anthracene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	18:29	MA EPH
fluoranthene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	18:29	MA EPH
pyrene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	18:29	MA EPH
benzo(a)anthracene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	18:29	MA EPH
chrysene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	18:29	MA EPH
benzo(b)fluoranthene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	18:29	MA EPH
benzo(k)fluoranthene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	18:29	MA EPH
benzo(a)pyrene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	18:29	MA EPH
indeno(1,2,3-cd)pyrene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	18:29	MA EPH
dibenzo(a,h)anthracene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	18:29	MA EPH
benzo(g,h,i)perylene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	18:29	MA EPH
Unadjusted C11-C22 Aromatics	< 19	19	ug/g	1	DBV	4/15/20	12658	4/16/20	5:06	MA EPH
C9-C18 Aliphatics	< 19	19	ug/g	1	DBV	4/15/20	12658	4/16/20	5:06	MA EPH
C19-C36 Aliphatics	< 19	19	ug/g	1	DBV	4/15/20	12658	4/16/20	5:06	MA EPH
C11-C22 Aromatics	< 19	19	ug/g	1	DBV	4/15/20	12658	4/16/20	5:06	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**53**	40-140	%	1	DBV	4/15/20	12658	4/16/20	5:06	MA EPH
o-terphenyl SUR	**63**	40-140	%	1	DBV	4/15/20	12658	4/16/20	5:06	MA EPH
2-fluorobiphenyl SUR	**69**	40-140	%	1	DBV	4/15/20	12658	4/16/20	5:06	MA EPH
2-bromonaphthalene SUR	**62**	40-140	%	1	DBV	4/15/20	12658	4/16/20	5:06	MA EPH

Project ID: Cedar Woods 2180311
Job ID: 52537
Sample#: 52537-007
Sample ID: SB-115 (5-8')
Matrix: Solid Percent Dry: 66.1% Results expressed on a dry weight basis.
Sampled: 4/8/20 10:20

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	**0.26**	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	21:00	MA EPH
2-methylnaphthalene	< 0.20	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	21:00	MA EPH
phenanthrene	**2.2**	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	21:00	MA EPH
acenaphthene	< 0.20	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	21:00	MA EPH
acenaphthylene	< 0.20	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	21:00	MA EPH
fluorene	**0.20**	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	21:00	MA EPH
anthracene	**0.33**	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	21:00	MA EPH
fluoranthene	**3.3**	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	21:00	MA EPH
pyrene	**3.5**	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	21:00	MA EPH
benzo(a)anthracene	**1.6**	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	21:00	MA EPH
chrysene	**1.9**	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	21:00	MA EPH
benzo(b)fluoranthene	**1.8**	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	21:00	MA EPH
benzo(k)fluoranthene	**1.4**	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	21:00	MA EPH
benzo(a)pyrene	**1.7**	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	21:00	MA EPH
indeno(1,2,3-cd)pyrene	**1.2**	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	21:00	MA EPH
dibenzo(a,h)anthracene	**0.38**	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	21:00	MA EPH
benzo(g,h,i)perylene	**1.5**	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	21:00	MA EPH
Unadjusted C11-C22 Aromatics	**96**	20	ug/g	1	DBV	4/15/20	12658	4/16/20	6:14	MA EPH
C9-C18 Aliphatics	< 20	20	ug/g	1	DBV	4/15/20	12658	4/16/20	6:14	MA EPH
C19-C36 Aliphatics	**57**	20	ug/g	1	DBV	4/15/20	12658	4/16/20	6:14	MA EPH
C11-C22 Aromatics	**75**	20	ug/g	1	DBV	4/15/20	12658	4/16/20	6:14	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**55**	40-140	%	1	DBV	4/15/20	12658	4/16/20	6:14	MA EPH
o-terphenyl SUR	**65**	40-140	%	1	DBV	4/15/20	12658	4/16/20	6:14	MA EPH
2-fluorobiphenyl SUR	**71**	40-140	%	1	DBV	4/15/20	12658	4/16/20	6:14	MA EPH
2-bromonaphthalene SUR	**64**	40-140	%	1	DBV	4/15/20	12658	4/16/20	6:14	MA EPH

Project ID: Cedar Woods 2180311
Job ID: 52537
Sample#: 52537-008
Sample ID: SB-114 (0-3')
Matrix: Solid Percent Dry: 93.7% Results expressed on a dry weight basis.
Sampled: 4/8/20 10:30

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	21:30	MA EPH
2-methylnaphthalene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	21:30	MA EPH
phenanthrene	**4.1**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	21:30	MA EPH
acenaphthene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	21:30	MA EPH
acenaphthylene	**0.77**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	21:30	MA EPH
fluorene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	21:30	MA EPH
anthracene	**0.61**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	21:30	MA EPH
fluoranthene	**9.3**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	21:30	MA EPH
pyrene	**11**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	21:30	MA EPH
benzo(a)anthracene	**4.9**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	21:30	MA EPH
chrysene	**5.7**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	21:30	MA EPH
benzo(b)fluoranthene	**3.6**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	21:30	MA EPH
benzo(k)fluoranthene	**3.4**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	21:30	MA EPH
benzo(a)pyrene	**4.4**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	21:30	MA EPH
indeno(1,2,3-cd)pyrene	**2.7**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	21:30	MA EPH
dibenzo(a,h)anthracene	**0.78**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	21:30	MA EPH
benzo(g,h,i)perylene	**3.4**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	21:30	MA EPH
Unadjusted C11-C22 Aromatics	**270**	19	ug/g	1	DBV	4/15/20	12658	4/16/20	5:40	MA EPH
C9-C18 Aliphatics	< 19	19	ug/g	1	DBV	4/15/20	12658	4/16/20	5:40	MA EPH
C19-C36 Aliphatics	**40**	19	ug/g	1	DBV	4/15/20	12658	4/16/20	5:40	MA EPH
C11-C22 Aromatics	**220**	19	ug/g	1	DBV	4/15/20	12658	4/16/20	5:40	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**49**	40-140	%	1	DBV	4/15/20	12658	4/16/20	5:40	MA EPH
o-terphenyl SUR	**65**	40-140	%	1	DBV	4/15/20	12658	4/16/20	5:40	MA EPH
2-fluorobiphenyl SUR	**68**	40-140	%	1	DBV	4/15/20	12658	4/16/20	5:40	MA EPH
2-bromonaphthalene SUR	**63**	40-140	%	1	DBV	4/15/20	12658	4/16/20	5:40	MA EPH

Project ID: Cedar Woods 2180311
Job ID: 52537
Sample#: 52537-009
Sample ID: SB-114 (5-8')
Matrix: Solid Percent Dry: 68.7% Results expressed on a dry weight basis.
Sampled: 4/8/20 10:50

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	19:29	MA EPH
2-methylnaphthalene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	19:29	MA EPH
phenanthrene	**0.54**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	19:29	MA EPH
acenaphthene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	19:29	MA EPH
acenaphthylene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	19:29	MA EPH
fluorene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	19:29	MA EPH
anthracene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	19:29	MA EPH
fluoranthene	**0.77**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	19:29	MA EPH
pyrene	**0.69**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	19:29	MA EPH
benzo(a)anthracene	**0.33**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	19:29	MA EPH
chrysene	**0.38**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	19:29	MA EPH
benzo(b)fluoranthene	**0.29**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	19:29	MA EPH
benzo(k)fluoranthene	**0.31**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	19:29	MA EPH
benzo(a)pyrene	**0.37**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	19:29	MA EPH
indeno(1,2,3-cd)pyrene	**0.25**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	19:29	MA EPH
dibenzo(a,h)anthracene	< 0.19	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	19:29	MA EPH
benzo(g,h,i)perylene	**0.34**	0.19	ug/g	1	CL	4/15/20	12658	4/15/20	19:29	MA EPH
Unadjusted C11-C22 Aromatics	**38**	19	ug/g	1	DBV	4/15/20	12658	4/16/20	6:48	MA EPH
C9-C18 Aliphatics	< 19	19	ug/g	1	DBV	4/15/20	12658	4/16/20	6:48	MA EPH
C19-C36 Aliphatics	**55**	19	ug/g	1	DBV	4/15/20	12658	4/16/20	6:48	MA EPH
C11-C22 Aromatics	**33**	19	ug/g	1	DBV	4/15/20	12658	4/16/20	6:48	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**52**	40-140	%	1	DBV	4/15/20	12658	4/16/20	6:48	MA EPH
o-terphenyl SUR	**65**	40-140	%	1	DBV	4/15/20	12658	4/16/20	6:48	MA EPH
2-fluorobiphenyl SUR	**72**	40-140	%	1	DBV	4/15/20	12658	4/16/20	6:48	MA EPH
2-bromonaphthalene SUR	**66**	40-140	%	1	DBV	4/15/20	12658	4/16/20	6:48	MA EPH

Project ID: Cedar Woods 2180311
Job ID: 52537
Sample#: 52537-010
Sample ID: DUP-2
Matrix: Solid Percent Dry: 85.6% Results expressed on a dry weight basis.
Sampled: 4/8/20 0:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
naphthalene	< 0.20	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	18:59	MA EPH
2-methylnaphthalene	< 0.20	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	18:59	MA EPH
phenanthrene	< 0.20	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	18:59	MA EPH
acenaphthene	< 0.20	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	18:59	MA EPH
acenaphthylene	< 0.20	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	18:59	MA EPH
fluorene	< 0.20	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	18:59	MA EPH
anthracene	< 0.20	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	18:59	MA EPH
fluoranthene	< 0.20	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	18:59	MA EPH
pyrene	< 0.20	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	18:59	MA EPH
benzo(a)anthracene	< 0.20	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	18:59	MA EPH
chrysene	< 0.20	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	18:59	MA EPH
benzo(b)fluoranthene	< 0.20	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	18:59	MA EPH
benzo(k)fluoranthene	< 0.20	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	18:59	MA EPH
benzo(a)pyrene	< 0.20	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	18:59	MA EPH
indeno(1,2,3-cd)pyrene	< 0.20	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	18:59	MA EPH
dibenzo(a,h)anthracene	< 0.20	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	18:59	MA EPH
benzo(g,h,i)perylene	< 0.20	0.20	ug/g	1	CL	4/15/20	12658	4/15/20	18:59	MA EPH
Unadjusted C11-C22 Aromatics	< 20	20	ug/g	1	DBV	4/15/20	12658	4/16/20	4:31	MA EPH
C9-C18 Aliphatics	< 20	20	ug/g	1	DBV	4/15/20	12658	4/16/20	4:31	MA EPH
C19-C36 Aliphatics	< 20	20	ug/g	1	DBV	4/15/20	12658	4/16/20	4:31	MA EPH
C11-C22 Aromatics	< 20	20	ug/g	1	DBV	4/15/20	12658	4/16/20	4:31	MA EPH
Surrogate Recovery		**Limits**								
1-chloro-octadecane SUR	**43**	40-140	%	1	DBV	4/15/20	12658	4/16/20	4:31	MA EPH
o-terphenyl SUR	**49**	40-140	%	1	DBV	4/15/20	12658	4/16/20	4:31	MA EPH
2-fluorobiphenyl SUR	**70**	40-140	%	1	DBV	4/15/20	12658	4/16/20	4:31	MA EPH
2-bromonaphthalene SUR	**63**	40-140	%	1	DBV	4/15/20	12658	4/16/20	4:31	MA EPH

Project ID: Cedar Woods 2180311

Job ID: 52537

Sample#: 52537-001

Sample ID: SB-111 (0-1')

Matrix: Solid Percent Dry: 91.8% Results expressed on a dry weight basis.

Sampled: 4/8/20 9:10

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Antimony	**0.45**	0.34	ug/g	5	AGN	4/10/20	12634	4/11/20	4:25	SW3051A6020A
Arsenic	< 1.7	1.7	ug/g	5	AGN	4/10/20	12634	4/11/20	4:25	SW3051A6020A
Barium	**51**	3.4	ug/g	5	AGN	4/10/20	12634	4/11/20	4:25	SW3051A6020A
Beryllium	< 0.34	0.34	ug/g	5	AGN	4/10/20	12634	4/11/20	4:25	SW3051A6020A
Cadmium	< 0.34	0.34	ug/g	5	AGN	4/10/20	12634	4/11/20	4:25	SW3051A6020A
Chromium	**12**	3.4	ug/g	5	AGN	4/10/20	12634	4/11/20	4:25	SW3051A6020A
Lead	**21**	1.7	ug/g	5	AGN	4/10/20	12634	4/14/20	23:40	SW3051A6020A
Mercury	< 0.14	0.14	ug/g	1	AGN	4/9/20	12632	4/15/20	12:50	SW7471B
Nickel	**11**	3.4	ug/g	5	AGN	4/10/20	12634	4/11/20	4:25	SW3051A6020A
Selenium	< 3.4	3.4	ug/g	5	AGN	4/10/20	12634	4/11/20	4:25	SW3051A6020A
Silver	< 1.7	1.7	ug/g	5	AGN	4/10/20	12634	4/11/20	4:25	SW3051A6020A
Thallium	< 0.34	0.34	ug/g	5	AGN	4/10/20	12634	4/11/20	4:25	SW3051A6020A
Vanadium	**19**	3.4	ug/g	5	AGN	4/10/20	12634	4/11/20	4:25	SW3051A6020A
Zinc	**42**	3.4	ug/g	5	AGN	4/10/20	12634	4/14/20	23:40	SW3051A6020A

Sample#: 52537-002

Sample ID: SB-111 (0-3')

Matrix: Solid Percent Dry: 82.2% Results expressed on a dry weight basis.

Sampled: 4/8/20 9:12

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Analysis Time	Reference
Antimony	**29**	0.48	ug/g	5	AGN	4/10/20	12634	4/14/20	23:50	SW3051A6020A
Arsenic	**12**	2.4	ug/g	5	AGN	4/10/20	12634	4/14/20	23:50	SW3051A6020A
Barium	**260** M	4.8	ug/g	5	AGN	4/10/20	12634	4/11/20	4:33	SW3051A6020A
M = The recovery for the matrix spike was 133%. The acceptance criteria is 75-125%.										
Beryllium	< 0.48	0.48	ug/g	5	AGN	4/10/20	12634	4/11/20	4:33	SW3051A6020A
Cadmium	**3.8** DM	0.48	ug/g	5	AGN	4/10/20	12634	4/14/20	23:50	SW3051A6020A
D = The RPD for the matrix spike duplicate was outside the 20% acceptance range. M = The recovery for the matrix spike was 192%. The acceptance criteria is 75-125%.										
Chromium	**43**	4.8	ug/g	5	AGN	4/10/20	12634	4/11/20	4:33	SW3051A6020A
Lead	**630** M	2.4	ug/g	5	AGN	4/10/20	12634	4/14/20	23:50	SW3051A6020A
M = The recovery for the matrix spike was 196%. The acceptance criteria is 75-125%.										
Mercury	**0.26**	0.18	ug/g	1	AGN	4/14/20	12647	4/16/20	16:10	SW7471B
Nickel	**52**	4.8	ug/g	5	AGN	4/10/20	12634	4/11/20	4:33	SW3051A6020A
Selenium	< 4.8 M	4.8	ug/g	5	AGN	4/10/20	12634	4/11/20	4:33	SW3051A6020A
M = The recovery for the matrix spike was 72%. The acceptance criteria is 75-125%.										
Silver	**4.5**	2.4	ug/g	5	AGN	4/10/20	12634	4/11/20	4:33	SW3051A6020A
Thallium	< 0.48	0.48	ug/g	5	AGN	4/10/20	12634	4/11/20	4:33	SW3051A6020A
Vanadium	**12**	4.8	ug/g	5	AGN	4/10/20	12634	4/11/20	4:33	SW3051A6020A
Zinc	**1500**	4.8	ug/g	5	AGN	4/10/20	12634	4/14/20	23:50	SW3051A6020A

Project ID: Cedar Woods 2180311

Job ID: 52537

Sample#: 52537-003

Sample ID: SB-111 (4-7')

Matrix: Solid Percent Dry: 79.9% Results expressed on a dry weight basis.

Sampled: 4/8/20 9:15

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	**4.6**	0.40	ug/g	5	AGN	4/10/20	12634	4/15/20	0:18	SW3051A6020A
Arsenic	**8.2**	2.0	ug/g	5	AGN	4/10/20	12634	4/15/20	0:18	SW3051A6020A
Barium	**80**	4.0	ug/g	5	AGN	4/10/20	12634	4/11/20	4:59	SW3051A6020A
Beryllium	**0.44**	0.40	ug/g	5	AGN	4/10/20	12634	4/11/20	4:59	SW3051A6020A
Cadmium	**0.70**	0.40	ug/g	5	AGN	4/10/20	12634	4/15/20	0:18	SW3051A6020A
Chromium	**13**	4.0	ug/g	5	AGN	4/10/20	12634	4/11/20	4:59	SW3051A6020A
Lead	**460**	2.0	ug/g	5	AGN	4/10/20	12634	4/15/20	0:18	SW3051A6020A
Mercury	< 0.16	0.16	ug/g	1	AGN	4/9/20	12632	4/15/20	12:52	SW7471B
Nickel	**18**	4.0	ug/g	5	AGN	4/10/20	12634	4/11/20	4:59	SW3051A6020A
Selenium	< 4.0	4.0	ug/g	5	AGN	4/10/20	12634	4/11/20	4:59	SW3051A6020A
Silver	< 2.0	2.0	ug/g	5	AGN	4/10/20	12634	4/11/20	4:59	SW3051A6020A
Thallium	**0.40**	0.40	ug/g	5	AGN	4/10/20	12634	4/11/20	4:59	SW3051A6020A
Vanadium	**14**	4.0	ug/g	5	AGN	4/10/20	12634	4/11/20	4:59	SW3051A6020A
Zinc	**330**	4.0	ug/g	5	AGN	4/10/20	12634	4/15/20	0:18	SW3051A6020A

Sample#: 52537-004

Sample ID: SB-113 (0-3')

Matrix: Solid Percent Dry: 81.1% Results expressed on a dry weight basis.

Sampled: 4/8/20 9:30

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	< 0.56	0.56	ug/g	5	AGN	4/10/20	12634	4/15/20	0:55	SW3051A6020A
Arsenic	**3.7**	2.8	ug/g	5	AGN	4/10/20	12634	4/15/20	0:55	SW3051A6020A
Barium	**48**	5.6	ug/g	5	AGN	4/10/20	12634	4/11/20	5:07	SW3051A6020A
Beryllium	**0.69**	0.56	ug/g	5	AGN	4/10/20	12634	4/11/20	5:07	SW3051A6020A
Cadmium	< 0.56	0.56	ug/g	5	AGN	4/10/20	12634	4/11/20	5:07	SW3051A6020A
Chromium	**15**	5.6	ug/g	5	AGN	4/10/20	12634	4/11/20	5:07	SW3051A6020A
Lead	**36**	2.8	ug/g	5	AGN	4/10/20	12634	4/15/20	0:55	SW3051A6020A
Mercury	< 0.16	0.16	ug/g	1	AGN	4/9/20	12632	4/15/20	12:54	SW7471B
Nickel	< 5.6	5.6	ug/g	5	AGN	4/10/20	12634	4/11/20	5:07	SW3051A6020A
Selenium	< 5.6	5.6	ug/g	5	AGN	4/10/20	12634	4/11/20	5:07	SW3051A6020A
Silver	< 2.8	2.8	ug/g	5	AGN	4/10/20	12634	4/11/20	5:07	SW3051A6020A
Thallium	< 0.56	0.56	ug/g	5	AGN	4/10/20	12634	4/11/20	5:07	SW3051A6020A
Vanadium	**16**	5.6	ug/g	5	AGN	4/10/20	12634	4/11/20	5:07	SW3051A6020A
Zinc	**43**	5.6	ug/g	5	AGN	4/10/20	12634	4/15/20	0:55	SW3051A6020A

Project ID: Cedar Woods 2180311

Job ID: 52537

Sample#: 52537-005

Sample ID: SB-113 (5-8')

Matrix: Solid Percent Dry: 87.2% Results expressed on a dry weight basis.

Sampled: 4/8/20 9:40

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	< 0.42	0.42	ug/g	5	AGN	4/10/20	12634	4/11/20	5:15	SW3051A6020A
Arsenic	< 2.1	2.1	ug/g	5	AGN	4/10/20	12634	4/11/20	5:15	SW3051A6020A
Barium	**26**	4.2	ug/g	5	AGN	4/10/20	12634	4/11/20	5:15	SW3051A6020A
Beryllium	< 0.42	0.42	ug/g	5	AGN	4/10/20	12634	4/11/20	5:15	SW3051A6020A
Cadmium	< 0.42	0.42	ug/g	5	AGN	4/10/20	12634	4/11/20	5:15	SW3051A6020A
Chromium	**5.7**	4.2	ug/g	5	AGN	4/10/20	12634	4/11/20	5:15	SW3051A6020A
Lead	**3.2**	2.1	ug/g	5	AGN	4/10/20	12634	4/15/20	1:04	SW3051A6020A
Mercury	< 0.15	0.15	ug/g	1	AGN	4/9/20	12632	4/15/20	12:56	SW7471B
Nickel	**6.2**	4.2	ug/g	5	AGN	4/10/20	12634	4/11/20	5:15	SW3051A6020A
Selenium	< 4.2	4.2	ug/g	5	AGN	4/10/20	12634	4/11/20	5:15	SW3051A6020A
Silver	< 2.1	2.1	ug/g	5	AGN	4/10/20	12634	4/11/20	5:15	SW3051A6020A
Thallium	< 0.42	0.42	ug/g	5	AGN	4/10/20	12634	4/11/20	5:15	SW3051A6020A
Vanadium	**7.8**	4.2	ug/g	5	AGN	4/10/20	12634	4/11/20	5:15	SW3051A6020A
Zinc	**18**	4.2	ug/g	5	AGN	4/10/20	12634	4/15/20	1:04	SW3051A6020A

Sample#: 52537-006

Sample ID: SB-115 (0-3')

Matrix: Solid Percent Dry: 89.3% Results expressed on a dry weight basis.

Sampled: 4/8/20 10:10

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	< 0.40	0.40	ug/g	5	AGN	4/10/20	12634	4/11/20	5:49	SW3051A6020A
Arsenic	**2.6**	2.0	ug/g	5	AGN	4/10/20	12634	4/11/20	5:49	SW3051A6020A
Barium	**30**	4.0	ug/g	5	AGN	4/10/20	12634	4/11/20	5:49	SW3051A6020A
Beryllium	**0.56**	0.40	ug/g	5	AGN	4/10/20	12634	4/11/20	5:49	SW3051A6020A
Cadmium	< 0.40	0.40	ug/g	5	AGN	4/10/20	12634	4/11/20	5:49	SW3051A6020A
Chromium	**8.0**	4.0	ug/g	5	AGN	4/10/20	12634	4/11/20	5:49	SW3051A6020A
Lead	**14**	2.0	ug/g	5	AGN	4/10/20	12634	4/15/20	1:14	SW3051A6020A
Mercury	< 0.13	0.13	ug/g	1	AGN	4/9/20	12632	4/15/20	12:57	SW7471B
Nickel	**5.4**	4.0	ug/g	5	AGN	4/10/20	12634	4/11/20	5:49	SW3051A6020A
Selenium	< 4.0	4.0	ug/g	5	AGN	4/10/20	12634	4/11/20	5:49	SW3051A6020A
Silver	< 2.0	2.0	ug/g	5	AGN	4/10/20	12634	4/11/20	5:49	SW3051A6020A
Thallium	< 0.40	0.40	ug/g	5	AGN	4/10/20	12634	4/11/20	5:49	SW3051A6020A
Vanadium	**11**	4.0	ug/g	5	AGN	4/10/20	12634	4/11/20	5:49	SW3051A6020A
Zinc	**28**	4.0	ug/g	5	AGN	4/10/20	12634	4/15/20	1:14	SW3051A6020A

Project ID: Cedar Woods 2180311

Job ID: 52537

Sample#: 52537-007

Sample ID: SB-115 (5-8')

Matrix: Solid Percent Dry: 66.1% Results expressed on a dry weight basis.

Sampled: 4/8/20 10:20

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	**1.7**	0.64	ug/g	5	AGN	4/10/20	12634	4/15/20	1:23	SW3051A6020A
Arsenic	**8.3**	3.2	ug/g	5	AGN	4/10/20	12634	4/11/20	5:57	SW3051A6020A
Barium	**94**	6.4	ug/g	5	AGN	4/10/20	12634	4/11/20	5:57	SW3051A6020A
Beryllium	< 0.64	0.64	ug/g	5	AGN	4/10/20	12634	4/11/20	5:57	SW3051A6020A
Cadmium	< 0.64	0.64	ug/g	5	AGN	4/10/20	12634	4/11/20	5:57	SW3051A6020A
Chromium	**15**	6.4	ug/g	5	AGN	4/10/20	12634	4/11/20	5:57	SW3051A6020A
Lead	**330**	3.2	ug/g	5	AGN	4/10/20	12634	4/15/20	1:23	SW3051A6020A
Mercury	< 0.21	0.21	ug/g	1	AGN	4/14/20	12647	4/16/20	16:16	SW7471B
Nickel	**9.9**	6.4	ug/g	5	AGN	4/10/20	12634	4/11/20	5:57	SW3051A6020A
Selenium	< 6.4	6.4	ug/g	5	AGN	4/10/20	12634	4/11/20	5:57	SW3051A6020A
Silver	< 3.2	3.2	ug/g	5	AGN	4/10/20	12634	4/11/20	5:57	SW3051A6020A
Thallium	< 0.64	0.64	ug/g	5	AGN	4/10/20	12634	4/11/20	5:57	SW3051A6020A
Vanadium	**16**	6.4	ug/g	5	AGN	4/10/20	12634	4/11/20	5:57	SW3051A6020A
Zinc	**210**	6.4	ug/g	5	AGN	4/10/20	12634	4/15/20	1:23	SW3051A6020A

Sample#: 52537-008

Sample ID: SB-114 (0-3')

Matrix: Solid Percent Dry: 93.7% Results expressed on a dry weight basis.

Sampled: 4/8/20 10:30

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	< 0.48	0.48	ug/g	5	AGN	4/10/20	12634	4/11/20	6:05	SW3051A6020A
Arsenic	< 2.4	2.4	ug/g	5	AGN	4/10/20	12634	4/11/20	6:05	SW3051A6020A
Barium	**17**	4.8	ug/g	5	AGN	4/10/20	12634	4/11/20	6:05	SW3051A6020A
Beryllium	< 0.48	0.48	ug/g	5	AGN	4/10/20	12634	4/11/20	6:05	SW3051A6020A
Cadmium	< 0.48	0.48	ug/g	5	AGN	4/10/20	12634	4/11/20	6:05	SW3051A6020A
Chromium	< 4.8	4.8	ug/g	5	AGN	4/10/20	12634	4/11/20	6:05	SW3051A6020A
Lead	**21**	2.4	ug/g	5	AGN	4/10/20	12634	4/15/20	1:32	SW3051A6020A
Mercury	< 0.15	0.15	ug/g	1	AGN	4/14/20	12647	4/16/20	16:18	SW7471B
Nickel	< 4.8	4.8	ug/g	5	AGN	4/10/20	12634	4/11/20	6:05	SW3051A6020A
Selenium	< 4.8	4.8	ug/g	5	AGN	4/10/20	12634	4/11/20	6:05	SW3051A6020A
Silver	< 2.4	2.4	ug/g	5	AGN	4/10/20	12634	4/11/20	6:05	SW3051A6020A
Thallium	< 0.48	0.48	ug/g	5	AGN	4/10/20	12634	4/11/20	6:05	SW3051A6020A
Vanadium	< 4.8	4.8	ug/g	5	AGN	4/10/20	12634	4/11/20	6:05	SW3051A6020A
Zinc	**40**	4.8	ug/g	5	AGN	4/10/20	12634	4/15/20	1:32	SW3051A6020A

Project ID: Cedar Woods 2180311

Job ID: 52537

Sample#: 52537-009

Sample ID: SB-114 (5-8')

Matrix: Solid Percent Dry: 68.7% Results expressed on a dry weight basis.

Sampled: 4/8/20 10:50

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	**0.66**	0.59	ug/g	5	AGN	4/10/20	12634	4/15/20	1:42	SW3051A6020A
Arsenic	< 15	15	ug/g	25	AGN	4/10/20	12634	4/16/20	14:46	SW3051A6020A
Barium	**210**	5.9	ug/g	5	AGN	4/10/20	12634	4/11/20	6:14	SW3051A6020A
Beryllium	< 0.59	0.59	ug/g	5	AGN	4/10/20	12634	4/15/20	1:42	SW3051A6020A
Cadmium	< 0.59	0.59	ug/g	5	AGN	4/10/20	12634	4/11/20	6:14	SW3051A6020A
Chromium	< 29	29	ug/g	25	AGN	4/10/20	12634	4/16/20	14:46	SW3051A6020A
Lead	**270**	2.9	ug/g	5	AGN	4/10/20	12634	4/15/20	1:42	SW3051A6020A
Mercury	< 0.21	0.21	ug/g	1	AGN	4/14/20	12647	4/16/20	16:19	SW7471B
Nickel	< 29	29	ug/g	25	AGN	4/10/20	12634	4/16/20	14:46	SW3051A6020A
Selenium	< 29	29	ug/g	25	AGN	4/10/20	12634	4/16/20	14:46	SW3051A6020A
Silver	< 2.9	2.9	ug/g	5	AGN	4/10/20	12634	4/11/20	6:14	SW3051A6020A
Thallium	< 0.59	0.59	ug/g	5	AGN	4/10/20	12634	4/11/20	6:14	SW3051A6020A
Vanadium	< 29	29	ug/g	25	AGN	4/10/20	12634	4/16/20	14:46	SW3051A6020A
Zinc	**340**	29	ug/g	25	AGN	4/10/20	12634	4/16/20	14:46	SW3051A6020A

Sample#: 52537-010

Sample ID: DUP-2

Matrix: Solid Percent Dry: 85.6% Results expressed on a dry weight basis.

Sampled: 4/8/20 0:00

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Antimony	< 0.44	0.44	ug/g	5	AGN	4/10/20	12634	4/11/20	6:22	SW3051A6020A
Arsenic	< 2.2	2.2	ug/g	5	AGN	4/10/20	12634	4/11/20	6:22	SW3051A6020A
Barium	**26**	4.4	ug/g	5	AGN	4/10/20	12634	4/11/20	6:22	SW3051A6020A
Beryllium	< 0.44	0.44	ug/g	5	AGN	4/10/20	12634	4/11/20	6:22	SW3051A6020A
Cadmium	< 0.44	0.44	ug/g	5	AGN	4/10/20	12634	4/11/20	6:22	SW3051A6020A
Chromium	**6.3**	4.4	ug/g	5	AGN	4/10/20	12634	4/11/20	6:22	SW3051A6020A
Lead	**3.4**	2.2	ug/g	5	AGN	4/10/20	12634	4/15/20	1:51	SW3051A6020A
Mercury	< 0.14	0.14	ug/g	1	AGN	4/14/20	12647	4/16/20	16:21	SW7471B
Nickel	**5.9**	4.4	ug/g	5	AGN	4/10/20	12634	4/11/20	6:22	SW3051A6020A
Selenium	< 4.4	4.4	ug/g	5	AGN	4/10/20	12634	4/11/20	6:22	SW3051A6020A
Silver	< 2.2	2.2	ug/g	5	AGN	4/10/20	12634	4/11/20	6:22	SW3051A6020A
Thallium	< 0.44	0.44	ug/g	5	AGN	4/10/20	12634	4/11/20	6:22	SW3051A6020A
Vanadium	**8.3**	4.4	ug/g	5	AGN	4/10/20	12634	4/11/20	6:22	SW3051A6020A
Zinc	**18**	4.4	ug/g	5	AGN	4/10/20	12634	4/15/20	1:51	SW3051A6020A

Project ID: Cedar Woods 2180311
Job ID: 52537

Sample#: 52537-003
Sample ID: SB-111 (4-7')
Matrix: Solid Percent Dry: 79.9% Results expressed on a dry weight basis.
Sampled: 4/8/20 9:15

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Chromium, Hexavalent	**1.7**	0.48	ug/g	1	SFM		2001871	4/10/20	11:30	SW3060A7196A
Oxidation Reduction Potential	**230**		mV	1	WAS		2001852	4/9/20	6:15	ASTM1498-08
pH	**7.3**		pH	1	WAS		2001855	4/9/20	5:57	SW9045C

Sample#: 52537-005
Sample ID: SB-113 (5-8')
Matrix: Solid Percent Dry: 87.2% Results expressed on a dry weight basis.
Sampled: 4/8/20 9:40

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Chromium, Hexavalent	< 0.40	0.40	ug/g	1	SFM		2001871	4/10/20	11:30	SW3060A7196A
Oxidation Reduction Potential	**230**		mV	1	WAS		2001852	4/9/20	6:33	ASTM1498-08
pH	**8.2**		pH	1	WAS		2001855	4/9/20	6:04	SW9045C

Sample#: 52537-007
Sample ID: SB-115 (5-8')
Matrix: Solid Percent Dry: 66.1% Results expressed on a dry weight basis.
Sampled: 4/8/20 10:20

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Chromium, Hexavalent	< 0.59	0.59	ug/g	1	SFM		2001871	4/10/20	11:30	SW3060A7196A
Oxidation Reduction Potential	**160**		mV	1	WAS		2001852	4/9/20	7:00	ASTM1498-08
pH	**7.0**		pH	1	WAS		2001855	4/9/20	6:08	SW9045C

Sample#: 52537-009
Sample ID: SB-114 (5-8')
Matrix: Solid Percent Dry: 68.7% Results expressed on a dry weight basis.
Sampled: 4/8/20 10:50

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Chromium, Hexavalent	< 0.59 M	0.59	ug/g	1	SFM		2001871	4/10/20	11:30	SW3060A7196A
M = The percent recovery in the matrix spike was outside acceptance criteria. See case narrative.										
Oxidation Reduction Potential	**200**		mV	1	WAS		2001852	4/9/20	7:08	ASTM1498-08
pH	**8.1**		pH	1	WAS		2001855	4/9/20	6:15	SW9045C

Quality Control Report

124 Heritage Avenue Unit 16
Portsmouth, NH 03801
www.absoluteresourceassociates.com

MassDEP Analytical Protocol Certification Form

Laboratory Name: Absolute Resource Associates	Project #: 2180311
Project Location: Massachusetts	RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s): 52537

Matrices: ☐ Groundwater/Surface Water ☑ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A ☐	7470/7471 Hg CAM III B ☑	MassDEP VPH (GC/PID/FID) CAM IV A ☑	8082 PCB CAM V A ☐	9014 Total Cyanide/PAC CAM VI A ☐	6860 Perchlorate CAM VIII B ☐
8270 SVOC CAM II B ☐	7010 Metals CAM III C ☐	MassDEP VPH (GC/MS) CAM IV C ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☑	MassDEP APH CAM IX A ☐
6010 Metals CAM III A ☐	6020 Metals CAM III D ☑	MassDEP EPH CAM IV B ☑	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	VPH, EPH, APH, and TO-15 only a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☑ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No[1]

***Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	☐ Yes ☑ No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☑ Yes ☐ No[1]

[1]*All negative responses must be addressed in an attached laboratory narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, is accurate and complete.

Signature: _____ **Position:** Chief Operating Officer

Printed Name: Aaron DeWees **Date:** 4/20/20

Sample Integrity Table

Parameter	Method	Matrix	Minimum Volume	Recommended Container(s)	Required Preservation	Holding Time
Volatile Organics	EPA 8260	Aqueous	40mL	2 x 40mL VOA Vials with Teflon lined septa	Cool to ≤6°C 1:1 HCl to pH <2	14 Days
Volatile Organics	EPA 8260	Solid	40mL	1 x 40mL VOA Vial with 10mLs Methanol and 1 unpreserved container for percent moisture	Cool to ≤6°C Methanol	14 Days
Semivolatile Organics	EPA 8270	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Semivolatile Organics	EPA 8270	Solid	20g	4oz Amber Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
Organochlorine Pesticides	EPA 8081	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Organochlorine Pesticides	EPA 8081	Solid	20g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
PCBs	EPA 8082	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	365 Days
PCBs	EPA 8082	Solid	20g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	365 Days
Herbicides (subcontracted)	EPA 8151	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Herbicides (subcontracted)	EPA 8151	Solid	30g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
MA DEP VPH	MADEP VPH	Aqueous	40mL	2 x 40mL VOA Vials with Teflon lined septa	Cool to ≤6°C 1:1 HCl to pH <2	14 Days
MA DEP VPH	MADEP VPH	Solid	40mL	1 x 40mL VOA Vial with 10mLs Methanol and 1 unpreserved container for percent moisture	Cool to ≤6°C Methanol	28 Days
MA DEP EPH	MADEP EPH	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C 1:1 HCl to pH <2	14 Days
MA DEP EPH	MADEP EPH	Solid	30g	4oz Amber Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
Total Metals	EPA 6010	Aqueous	100mL	250mL Polyethylene Bottle	1:1 HNO_3 to pH <2	180 Days
Dissolved Metals	EPA 6010	Aqueous	100mL	250mL Polyethylene Bottle	Filter First 1:1 HNO_3 to pH <2	180 Days
Total Metals	EPA 6010	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	180 Days
Total Mercury (may be combined with Total Metals)	EPA 7470	Aqueous	100mL	125mL Polyethylene Bottle	1:1 HNO_3 to pH <2	28 Days
Total Mercury (may be combined with Total Metals)	EPA 7471	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	28 Days
Chromium, Hexavalent	EPA 7196	Aqueous	100mL	125mL Polyethylene Bottle	Cool to ≤6°C (NH4)2SO4 buffer	28 Days
Chromium, Hexavalent (subcontract)	EPA 7196	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	30 Days
Cyanide, Total	EPA 9014	Aqueous	125mL	125mL Polyethylene Bottle	Cool to ≤6°C 1:1 NaOH to pH >8	14 Days
Cyanide, Total	EPA 9014	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days

Absolute Resource Associates
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Portsmouth, NH 03801
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Absolute Resource associates

Case Narrative
Lab # 52537

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, between 0 and 6 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines.
As noted on the result page, the VPH samples did not meet the 1:1 +/-25% methanol to soil ratio.

Calibration

SVOC: See the included table for a list of compounds quantitated by quadratic equation.

Method Blank

No exceptions noted.

Surrogate Recoveries

VPH: Samples 52537-003, -005, and -010 had a recovery for a,a,a-trifluorotoluene that was low and outside acceptance limits.

Laboratory Control Sample Results

VOC: The LCSD2001516 did not meet the acceptance criteria for t-butanol (TBA). Since <10% of the compounds were outside of the acceptance criteria, reanalysis is not required.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results

Metals: The percent recovery in the MS/D of 52537-002 for barium (133%), cadmium (192%), lead (196 and 138%) and selenium (72 and 74%) were outside the acceptance criteria of 75-125%. The RPD for cadmium was 63% which was outside the acceptance limit of 20%. All other batch QC was within acceptance.

Chromium, Hexavalent: The matrix spike/duplicate for 52537-009 did not meet the acceptance criteria. The percent recovery was acceptable in the associated CRM/CRMD. The results for the ORP and pH analysis show the samples exhibits a reducing nature therefore resulting in poor spike recovery. The sample has been qualified accordingly.

Other

VPH: The trap used for VPH analysis is a Tekmar STRATUM Purge Trap 9. The column used for VPH analysis is a Restek Rtx-502.2, 105m, 0.53mmID, and 3um df.

MassDEP Analytical Protocol Certification Form Questions A through I

No explanation is needed for Questions A through I answered in the affirmative.
Question G: The CAM protocol reporting limits were not achieved for this project due to dilutions necessary for sample analysis. Box G is "No."
Question H: See surrogate section above. Box H is "No."

Quantitation by Quadratic Equation
Lab # 52537

SVOC: Quantitation of the following compounds was based on a quadratic equation:

2-methylnaphthalene
benzo(k)fluoranthene
indeno(1,2,3-cd)pyrene
dibenzo(a,h)anthracene
benzo(g,h,i)perylene

GLOSSARY

%R	Percent Recovery
BLK	Blank (Method Blank, Preparation Blank)
CCB	Continuing Calibration Blank
CCV	Continuing Calibration Verification
CRM	Certified Reference Material (associated with solid Metals samples)
CRMD	Certified Reference Material Duplicate (associated with solid Metals samples)
Dil'n	Dilution
DL	Detection Limit
DUP	Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection
LOQ	Limit of Quantitation
MB	Methanol Blank (associated with solid VOC samples)
MLCS	Methanol Laboratory Control Sample (associated with solid VOC samples)
MLCSD	Methanol Laboratory Control Sample Duplicate (associated with solid VOC samples)
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PB	Preparation Blank
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference
SUR	Surrogate

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
MA VPH	MB12628	Unadjusted C5-C8 Aliphatics		<	5.0	ug/g						
		Unadjusted C9-C12 Aliphatics		<	5.0	ug/g						
		methyl t-butyl ether (MTBE)		<	0.10	ug/g						
		benzene		<	0.10	ug/g						
		toluene		<	0.10	ug/g						
		ethylbenzene		<	0.10	ug/g						
		m&p-xylenes		<	0.10	ug/g						
		o-xylene		<	0.10	ug/g						
		naphthalene		<	0.25	ug/g						
		C5-C8 Aliphatics		<	5.0	ug/g						
		C9-C12 Aliphatics		<	5.0	ug/g						
		C9-C10 Aromatics		<	5.0	ug/g						
		2,5-dibromotoluene as Aromatic SUR			113	%			70	130		
		2,5-dibromotoluene as Aliphatic SUR			112	%			70	130		
		a,a,a-trifluorotoluene SUR			90	%			70	130		
MA VPH	MLCS12628	Unadjusted C5-C8 Aliphatics			14	ug/g	15	93	70	130		
		Unadjusted C9-C12 Aliphatics			13	ug/g	15	89	70	130		
		methyl t-butyl ether (MTBE)			4.6	ug/g	5	92	70	130		
		benzene			4.8	ug/g	5	97	70	130		
		toluene			4.8	ug/g	5	95	70	130		
		ethylbenzene			4.8	ug/g	5	96	70	130		
		m&p-xylenes			9.7	ug/g	10	97	70	130		
		o-xylene			4.8	ug/g	5	96	70	130		
		naphthalene			5.0	ug/g	5	100	70	130		
		C5-C8 Aliphatics		<	5.0	ug/g			70	130		
		C9-C12 Aliphatics		<	5.0	ug/g			70	130		
		C9-C10 Aromatics			5.1	ug/g	5	102	70	130		
		2,5-dibromotoluene as Aromatic SUR			111	%			70	130		
		2,5-dibromotoluene as Aliphatic SUR			112	%			70	130		
		a,a,a-trifluorotoluene SUR			86	%			70	130		
MA VPH	MLCSD12628	Unadjusted C5-C8 Aliphatics			14	ug/g	15	93	70	130	0	25
		Unadjusted C9-C12 Aliphatics			14	ug/g	15	90	70	130	2	25
		methyl t-butyl ether (MTBE)			4.7	ug/g	5	93	70	130	1	25
		benzene			4.9	ug/g	5	99	70	130	2	25
		toluene			4.9	ug/g	5	98	70	130	3	25
		ethylbenzene			4.9	ug/g	5	99	70	130	3	25
		m&p-xylenes			10.0	ug/g	10	100	70	130	3	25
		o-xylene			4.9	ug/g	5	99	70	130	2	25
		naphthalene			5.1	ug/g	5	102	70	130	2	25
		C5-C8 Aliphatics		<	5.0	ug/g			70	130		25
		C9-C12 Aliphatics		<	5.0	ug/g			70	130		25
		C9-C10 Aromatics			5.2	ug/g	5	103	70	130	1	25
		2,5-dibromotoluene as Aromatic SUR			99	%			70	130		
		2,5-dibromotoluene as Aliphatic SUR			100	%			70	130		
		a,a,a-trifluorotoluene SUR			90	%			70	130		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
MA EPH	BLK12658	naphthalene		<	0.20	ug/g						
		2-methylnaphthalene		<	0.20	ug/g						
		phenanthrene		<	0.20	ug/g						
		acenaphthene		<	0.20	ug/g						
		acenaphthylene		<	0.20	ug/g						
		fluorene		<	0.20	ug/g						
		anthracene		<	0.20	ug/g						
		fluoranthene		<	0.20	ug/g						
		pyrene		<	0.20	ug/g						
		benzo(a)anthracene		<	0.20	ug/g						
		chrysene		<	0.20	ug/g						
		benzo(b)fluoranthene		<	0.20	ug/g						
		benzo(k)fluoranthene		<	0.20	ug/g						
		benzo(a)pyrene		<	0.20	ug/g						
		indeno(1,2,3-cd)pyrene		<	0.20	ug/g						
		dibenzo(a,h)anthracene		<	0.20	ug/g						
		benzo(g,h,i)perylene		<	0.20	ug/g						
		Unadjusted C11-C22 Aromatics		<	20	ug/g						
		C9-C18 Aliphatics		<	20	ug/g						
		C19-C36 Aliphatics		<	20	ug/g						
		C11-C22 Aromatics		<	20	ug/g						
		1-chloro-octadecane SUR			44	%			40	140		
		o-terphenyl SUR			48	%			40	140		
		2-fluorobiphenyl SUR			64	%			40	140		
		2-bromonaphthalene SUR			59	%			40	140		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
MA EPH	LCS12658	naphthalene			2.7	ug/g	6	45	40	140		
		2-methylnaphthalene			2.8	ug/g	6	47	40	140		
		phenanthrene			3.2	ug/g	6	54	40	140		
		acenaphthene			2.6	ug/g	6	43	40	140		
		acenaphthylene			2.5	ug/g	6	42	40	140		
		fluorene			2.8	ug/g	6	46	40	140		
		anthracene			3.2	ug/g	6	53	40	140		
		fluoranthene			3.4	ug/g	6	57	40	140		
		pyrene			3.3	ug/g	6	55	40	140		
		benzo(a)anthracene			3.3	ug/g	6	54	40	140		
		chrysene			3.3	ug/g	6	54	40	140		
		benzo(b)fluoranthene			3.1	ug/g	6	51	40	140		
		benzo(k)fluoranthene			3.1	ug/g	6	51	40	140		
		benzo(a)pyrene			3.1	ug/g	6	52	40	140		
		indeno(1,2,3-cd)pyrene			3.8	ug/g	6	63	40	140		
		dibenzo(a,h)anthracene			3.8	ug/g	6	64	40	140		
		benzo(g,h,i)perylene			3.9	ug/g	6	64	40	140		
		Unadjusted C11-C22 Aromatics			60	ug/g	102	59	40	140		
		C9-C18 Aliphatics		<	20	ug/g	36	45	40	140		
		C19-C36 Aliphatics			43	ug/g	48	91	40	140		
		C11-C22 Aromatics		<	20	ug/g			40	140		
		1-chloro-octadecane SUR			47	%			40	140		
		o-terphenyl SUR			54	%			40	140		
		2-fluorobiphenyl SUR			73	%			40	140		
		2-bromonaphthalene SUR			69	%			40	140		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
MA EPH	LCSD12658	naphthalene			2.9	ug/g	6	48	40	140	7	25
		2-methylnaphthalene			3.0	ug/g	6	50	40	140	7	25
		phenanthrene			3.4	ug/g	6	57	40	140	7	25
		acenaphthene			2.7	ug/g	6	45	40	140	4	25
		acenaphthylene			2.7	ug/g	6	44	40	140	6	25
		fluorene			2.9	ug/g	6	49	40	140	6	25
		anthracene			3.4	ug/g	6	56	40	140	6	25
		fluoranthene			3.6	ug/g	6	61	40	140	6	25
		pyrene			3.5	ug/g	6	59	40	140	7	25
		benzo(a)anthracene			3.6	ug/g	6	60	40	140	9	25
		chrysene			3.6	ug/g	6	59	40	140	9	25
		benzo(b)fluoranthene			3.5	ug/g	6	58	40	140	12	25
		benzo(k)fluoranthene			3.4	ug/g	6	57	40	140	10	25
		benzo(a)pyrene			3.4	ug/g	6	57	40	140	10	25
		indeno(1,2,3-cd)pyrene			4.1	ug/g	6	68	40	140	8	25
		dibenzo(a,h)anthracene			4.1	ug/g	6	69	40	140	8	25
		benzo(g,h,i)perylene			4.2	ug/g	6	70	40	140	9	25
		Unadjusted C11-C22 Aromatics			63	ug/g	102	62	40	140	4	25
		C9-C18 Aliphatics		<	20	ug/g	36	44	40	140	2	25
		C19-C36 Aliphatics			44	ug/g	48	91	40	140	0	25
		C11-C22 Aromatics		<	20	ug/g			40	140		25
		1-chloro-octadecane SUR			46	%			40	140		
		o-terphenyl SUR			54	%			40	140		
		2-fluorobiphenyl SUR			69	%			40	140		
		2-bromonaphthalene SUR			64	%			40	140		

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3051A6020A	BLK12634	Silver		<	2.5	ug/g						
		Arsenic		<	2.5	ug/g						
		Barium		<	5.0	ug/g						
		Beryllium		<	0.50	ug/g						
		Cadmium		<	0.50	ug/g						
		Chromium		<	5.0	ug/g						
		Nickel		<	5.0	ug/g						
		Lead		<	2.5	ug/g						
		Antimony		<	0.50	ug/g						
		Selenium		<	5.0	ug/g						
		Thallium		<	0.50	ug/g						
		Vanadium		<	5.0	ug/g						
		Zinc		<	5.0	ug/g						
SW3051A6020A	CRM12634	Silver			44.4	ug/g	53.8		31.9	59.7		
		Arsenic			169	ug/g	219		129	240		
		Barium			582	ug/g	788		509	867		
		Beryllium			201	ug/g	247		160	272		
		Cadmium			145	ug/g	175		111	192		
		Chromium			286	ug/g	375		223	414		
		Nickel			248	ug/g	318		193	358		
		Lead			239	ug/g	321		207	353		
		Antimony			81.0	ug/g	159		15.9	180		
		Selenium			102	ug/g	145		78.5	160		
		Thallium			81.9	ug/g	98.6		53.7	111		
		Vanadium			186	ug/g	267		168	294		
		Zinc			234	ug/g	311		190	352		
SW3051A6020A	CRMD12634	Silver			46.5	ug/g	53.8		31.9	59.7	4	20
		Arsenic			178	ug/g	219		129	240	5	20
		Barium			597	ug/g	788		509	867	3	20
		Beryllium			205	ug/g	247		160	272	2	20
		Cadmium			151	ug/g	175		111	192	4	20
		Chromium			291	ug/g	375		223	414	2	20
		Nickel			251	ug/g	318		193	358	1	20
		Lead			245	ug/g	321		207	353	3	20
		Antimony			82.8	ug/g	159		15.9	180	2	20
		Selenium			106	ug/g	145		78.5	160	4	20
		Thallium			85.1	ug/g	98.6		53.7	111	4	20
		Vanadium			188	ug/g	267		168	294	1	20
		Zinc			237	ug/g	311		190	352	1	20

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD		RPD Limit
SW3051A6020A	MS12634	Silver	52537-002		130	ug/g	133	97		75	125			
		Arsenic	52537-002		240	ug/g	266	87		75	125			
		Barium	52537-002		550	ug/g	266	109		75	125			
		Beryllium	52537-002		260	ug/g	266	99		75	125			
		Cadmium	52537-002		280	ug/g	266	103		75	125			
		Chromium	52537-002		290	ug/g	266	91		75	125			
		Nickel	52537-002		270	ug/g	266	83		75	125			
		Lead	52537-002		1200	ug/g	266.7	196	*	75	125			
		Antimony	52537-002		310	ug/g	266	105		75	125			
		Selenium	52537-002		190	ug/g	266	72	*	75	125			
		Thallium	52537-002		120	ug/g	133	89		75	125			
		Vanadium	52537-002		250	ug/g	266	91		75	125			
		Zinc	52537-002		1800	ug/g	266.7	107		75	125			
SW3051A6020A	MSD12634	Silver	52537-002		140	ug/g	138	98		75	125	5		20
		Arsenic	52537-002		250	ug/g	276	87		75	125	3		20
		Barium	52537-002		630	ug/g	276	133	*	75	125	13		20
		Beryllium	52537-002		280	ug/g	276	101		75	125	6		20
		Cadmium	52537-002		540	ug/g	276	192	*	75	125	63	*	20
		Chromium	52537-002		300	ug/g	276	92		75	125	5		20
		Nickel	52537-002		300	ug/g	276	91		75	125	10		20
		Lead	52537-002		1000	ug/g	276.4	138	*	75	125	13		20
		Antimony	52537-002		320	ug/g	276	106		75	125	4		20
		Selenium	52537-002		200	ug/g	276	74	*	75	125	6		20
		Thallium	52537-002		130	ug/g	138	93		75	125	8		20
		Vanadium	52537-002		260	ug/g	276	91		75	125	3		20
		Zinc	52537-002		2000	ug/g	276.4	187		75	125	12		20
SW7471B	BLK12632	Mercury		<	0.14	ug/g								
SW7471B	CRM12632	Mercury			0.226	ug/g	0.221			0.0908	0.351			
SW7471B	CRMD12632	Mercury			0.216	ug/g	0.221			0.0908	0.351	4		35
SW7471B	MS12632	Mercury	52513-004		0.65	ug/g	0.405	12	*	80	120			
SW7471B	MSD12632	Mercury	52513-004		0.86	ug/g	0.405	64	*	80	120	28		35
SW7471B	BLK12647	Mercury		<	0.14	ug/g								
SW7471B	CRM12647	Mercury			0.198	ug/g	0.221			0.0908	0.351			
SW7471B	CRMD12647	Mercury			0.203	ug/g	0.221			0.0908	0.351	2		35
SW7471B	MS12647	Mercury	52537-002		0.58	ug/g	0.389	82		80	120			
SW7471B	MSD12647	Mercury	52537-002		0.61	ug/g	0.374	95		80	120	6		35

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R		Limits		RPD	RPD Limit
SW3060A7196A	CRM2001871	Chromium, Hexavalent			110	ug/g	260			93.3	350		
SW3060A7196A	CRMD2001871	Chromium, Hexavalent			100	ug/g	260			93.3	350		30
SW3060A7196A	DUP2001871	Chromium, Hexavalent	52498-013	<	0.48	ug/g							20
SW3060A7196A	MS2001871	Chromium, Hexavalent	52513-004	<	0.50	ug/g	25.01	1	*	75	125		
SW3060A7196A	MS2001871	Chromium, Hexavalent	52537-009	<	0.55	ug/g	27.25	1	*	75	125		
SW3060A7196A	MSD2001871	Chromium, Hexavalent	52513-004	<	0.49	ug/g	24.43	1	*	75	125	25	20
SW3060A7196A	MSD2001871	Chromium, Hexavalent	52537-009	<	0.55	ug/g	27.35	1	*	75	125	63	20
SW3060A7196A	PB2001871	Chromium, Hexavalent		<	0.40	ug/g							
SW9045C	DUP2001855	pH	52537-003		7.2	pH							

AROMATIC HYDROCARBON BREAKTHROUGH CALCULATION

Method: MADEP EPH 2019 Rev 2.1

	lcs12658 Aliphatic Breakthrough (%)	Acceptance Criteria	Date of Analysis
naphthalene	0.6%	<5.0%	4/16/2020
2-methylnaphthalene	0.1%	<5.0%	4/16/2020

	lcsd12658 Aliphatic Breakthrough (%)	Acceptance Criteria	Date of Analysis
naphthalene	0.9%	<5.0%	4/16/2020
2-methylnaphthalene	0.1%	<5.0%	4/16/2020

Absolute Resource associates
124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

52537

Company Name: WESTON & SAMPSON
Company Address: 55 WALKERS BROOK DR READING, MA
Report To: SARAH DESTEFANO & JILL MURPHY
Phone #: 1 800 SAMPSON
Invoice to: SARAH DESTEFANO
Email: DESTEFANOS@WSEINC.COM
PO #: FRAMINGHAM BROWNFIELDS

Project Name: CEDAR WOODS
Project #: 2180311
Project Location: NH (MA) ME VT
Accreditation Required? N/Y:
Protocol: RCRA SDWA NPDES (MCP) NHDES DOD
Reporting Limits: QAPP GW-1 (S-1) EPA DW Other
Quote # N/A
☐ NH Reimbursement Pricing

ANALYSIS REQUEST

☐ VOC 8260 ☐ VOC 8260 NHDES ☐ VOC 8260 MADEP
☐ VOC 624.1 ☐ VOC BTEX MtBE, only ☐ VOC 8021VT
☒ VPH MADEP ☐ GRO 8015 ☐ 1,4-Dioxane *
☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List:
☐ TPH ☐ DRO 8015 ☒ EPH MADEP ☐ TPH Fingerprint
☐ 8270PAH ☐ 8270ABN ☐ 625.1 ☐ EDB
☐ 8082 PCB ☐ 8081 Pesticides ☐ 608.3 Pest/PCB
☐ O&G 1664 ☐ Mineral O&G 1664
☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity ☐ Apparent Color
☐ TSS ☐ TDS ☐ TS ☐ TVS ☐ Alkalinity ☐ Acidity
☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Hardness
☒ Total Metals-list: MCP 14 METALS
☐ Dissolved Metals-list:
☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON ☐ TOC ☐ Ferrous Iron
☐ T-Phosphorus ☐ Bacteria P/A ☐ Bacteria MPN ☐ Enterococci
☐ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P ☐ Phenols
☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride
☐ Corrosivity ☐ Ignitibility/FP
☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide
Subcontract: ☐ Grain Size ☐ Herbicides ☐ Asbestos ☐ PFAS
Cr III + Cr VI 4/8/20 MPM
Grab (G) or Composite (C)

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	Sampling: DATE	TIME	SAMPLER	Grab (G) or Composite (C)
52537-01	SB-111(0-1')			X							4/8/20	0910	MPM MPM	G
-02	SB-111(0-3')			X								0912		
-03	SB-111(4-7')			X						X		0915		
-04	SB-113(0-3')			X								0920		
-05	SB-113(5-8')			X						X		0940		
-06	SB-115(0-3')			X								1010		
-07	SB-115(5-8')			X						X		1020		
-08	SB-114(0-3')			X						X		1030		
-09	SB-114(5-8')			X								1050		
	MS-2 **			X								0917		
	MSD-2 **			X								0917		

TAT REQUESTED
Priority (24 hr)* ☐
Expedited (48 hr)* ☐
Standard ☐
(10 Business Days)
*Date Needed 5 DAY

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS
* VPH w/ TARGET VOCs
** ASSOCIATED w/ SAMPLE SB-111 (0-3) (0-3 / 5) pu Jill 4/9/20 g

REPORTING INSTRUCTIONS ☒ PDF (e-mail address) MURPHYJ@WSEINC.COM
☐ HARD COPY REQUIRED ☒ EDD

RECEIVED ON ICE ☒ YES ☐ NO
TEMPERATURE 1 °C

CUSTODY RECORD
QSD-01 Revision 11/06/19

	Relinquished by Sampler:	Date	Time	Received by:	Date	Time
1	Margaret Murphy	4/8/2020	1300		4-8	1 PM
2	Relinquished by:	4-8	16:32	Received by:	Date	Time
3	Relinquished by:	Date	Time	Received by Laboratory:	4/8/20	16.32

PAGE 2 OF 2

Absolute Resource associates

124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

52537

Company Name:	Project Name:
	Project #: SEE PAGE 1
Company Address:	Project Location: NH (MA) ME VT ____
	Accreditation Required? N/Y: ____
Report To: SEE PAGE 1	Protocol: RCRA SDWA NPDES (MCP) NHDES DOD
Phone #:	Reporting Limits: QAPP GW-1 (S-1) EPA DW Other____
Invoice to:	Quote # N/A
Email:	
PO #:	❑ NH Reimbursement Pricing

ANALYSIS REQUEST

Analysis columns (left to right):

1. ☒ VOC 8260 ❑ VOC 8260 NHDES ❑ VOC 8260 MADEP
2. ❑ VOC 624.1 ❑ VOC BTEX MtBE, only ❑ VOC 8021VT
3. ☒ VPH MADEP ❑ GRO 8015 ❑ 1,4-Dioxane *
4. ❑ VOC 524.2 ❑ VOC 524.2 NH List ❑ Gases-List:
5. ❑ TPH ❑ DRO 8015 ☒ EPH MADEP ❑ TPH Fingerprint
6. ❑ 8270PAH ❑ 8270ABN ❑ 625.1 ❑ EDB
7. ❑ 8082 PCB ❑ 8081 Pesticides ❑ 608.3 Pest/PCB
8. ❑ O&G 1664 ❑ Mineral O&G 1664
9. ❑ pH ❑ BOD ❑ Conductivity ❑ Turbidity ❑ Apparent Color
10. ❑ TSS ❑ TDS ❑ TS ❑ TVS ❑ Alkalinity ❑ Acidity
11. ❑ RCRA Metals ❑ Priority Pollutant Metals ❑ TAL Metals ❑ Hardness
12. ☒ Total Metals-list: MCP 14 METALS
13. ❑ Dissolved Metals-list:
14. ❑ Ammonia ❑ COD ❑ TKN ❑ TN ❑ TON ❑ TOC ❑ Ferrous Iron
15. ❑ T-Phosphorus ❑ Bacteria P/A ❑ Bacteria MPN ❑ Enterococci
16. ❑ Cyanide ❑ Sulfide ❑ Nitrate + Nitrite ❑ Ortho P ❑ Phenols
17. ❑ Nitrate ❑ Nitrite ❑ Chloride ❑ Sulfate ❑ Bromide ❑ Fluoride
18. ❑ Corrosivity ❑ Ignitibility/FP
19. ❑ TCLP Metals ❑ TCLP VOC ❑ TCLP SVOC ❑ TCLP Pesticide
20. Subcontract: ❑ Grain Size ❑ Herbicides ❑ Asbestos ❑ PFAS
21. ~~CR III~~ MDM 4/8/20 CR VI
22. (blank)
23. (blank)
24. Grab (G) or Composite (C)

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	WATER	SOLID	OTHER	HCl	HNO_3	H_2SO_4	NaOH	MeOH	DATE	TIME	SAMPLER	Analyses requested
52537-10	DUP-2			X						X	4/8/20	—	MDM	X VPH MADEP; X EPH MADEP; X Total Metals (MCP 14 METALS)
	~~FIELD~~ MDM 4/8/20													
-11	TRIP BLANK		X								4/8/20	—	-	X VOC 8260

MDM 4/8/20

TAT REQUESTED		
Priority (24 hr)* ❑	See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.	SPECIAL INSTRUCTIONS: * VPH w/ TARGET VOCs
Expedited (48 hr)* ❑		
Standard ❑ (10 Business Days)	REPORTING INSTRUCTIONS ☒ PDF (e-mail address) SEE PAGE 1	RECEIVED ON ICE ☒YES ❑NO
*Date Needed 5 DAY	❑ HARD COPY REQUIRED ☒ EDD____	TEMPERATURE 1 °C

CUSTODY RECORD	Date	Time		Date	Time
Relinquished by Sampler: [signature]	4/8/2020	1300	Received by: [signature]	4-8	1pm
Relinquished by: [signature]	4-8	16:32	Received by:		
Relinquished by:			Received by Laboratory: [signature]	4/8/20	16:32

QSD-01 Revision 11/06/19

Laboratory Report

Absolute Resource associates
124 Heritage Avenue Portsmouth NH 03801

Jill Murphy
Weston & Sampson
55 Walkers Brook Drive
Reading, MA 01867

PO Number: Framingham Brownfields
Job ID: 53042 & 53078
Date Received: 5/15/20

Project: Cedar Woods 21

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below. The reported results apply to the sample(s) in the condition as received at the time the laboratory took custody. This report shall not be reproduced except in full and with approval from the laboratory. The liability of ARA is limited to the cost of the requested analyses, unless otherwise agreed upon in writing.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

Aaron DeWees
Chief Operating Officer

Date of Approval: 6/1/2020
Total number of pages: 14

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH902		

Project ID: Cedar Woods 21

Sample Association Table

Field ID	Matrix	Date-Time Sampled	Lab#	Analysis
SB-107 (0-1')	Solid	4/7/2020 9:45	53042-001	
				Lead in solids by 6020
				Solids Digestion for ICPMS Analysis
SB-108 (0-1')	Solid	4/7/2020 10:45	53042-002	
				Lead in solids by 6020
				Solids Digestion for ICPMS Analysis
SB-109 (0-1')	Solid	4/7/2020 11:30	53042-003	
				Lead in solids by 6020
				Solids Digestion for ICPMS Analysis
SB-110 (0-1')	Solid	4/7/2020 12:45	53042-004	
				Lead in solids by 6020
				Solids Digestion for ICPMS Analysis
SB-112 (0-1')	Solid	4/7/2020 13:15	53042-005	
				Lead in solids by 6020
				Solids Digestion for ICPMS Analysis
SB-106 (0-1')	Solid	4/6/2020 9:20	53078-001	
				Lead in solids by 6020
				Solids Digestion for ICPMS Analysis
SB-102 (0-1')	Solid	4/6/2020 11:30	53078-002	
				Lead in solids by 6020
				Solids Digestion for ICPMS Analysis

Absolute Resource associates

Project ID: Cedar Woods 21
Job ID: 53042

Sample#: 53042-001
Sample ID: SB-107 (0-1')
Matrix: Solid Percent Dry: 87.3% Results expressed on a dry weight basis.
Sampled: 4/7/20 9:45

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Lead	**67**	2.7	ug/g	5	EEB	5/26/20	12797	5/28/20	19:41	SW3051A6020A

Sample#: 53042-002
Sample ID: SB-108 (0-1')
Matrix: Solid Percent Dry: 75.8% Results expressed on a dry weight basis.
Sampled: 4/7/20 10:45

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Lead	**900**	3.1	ug/g	5	EEB	5/26/20	12797	5/28/20	19:49	SW3051A6020A

Sample#: 53042-003
Sample ID: SB-109 (0-1')
Matrix: Solid Percent Dry: 81.6% Results expressed on a dry weight basis.
Sampled: 4/7/20 11:30

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Lead	**790**	3.0	ug/g	5	EEB	5/26/20	12797	5/28/20	19:57	SW3051A6020A

Sample#: 53042-004
Sample ID: SB-110 (0-1')
Matrix: Solid Percent Dry: 91.6% Results expressed on a dry weight basis.
Sampled: 4/7/20 12:45

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Lead	**11**	2.7	ug/g	5	EEB	5/26/20	12797	5/28/20	20:06	SW3051A6020A

Sample#: 53042-005
Sample ID: SB-112 (0-1')
Matrix: Solid Percent Dry: 93.3% Results expressed on a dry weight basis.
Sampled: 4/7/20 13:15

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Lead	**25**	2.6	ug/g	5	EEB	5/26/20	12797	5/28/20	20:14	SW3051A6020A

Project ID: Cedar Woods 2180311
Job ID: 53078

Sample#: 53078-001
Sample ID: SB-106 (0-1')
Matrix: Solid Percent Dry: 87.9% Results expressed on a dry weight basis.
Sampled: 4/6/20 9:20

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Lead	**68**	2.3	ug/g	5	EEB	5/26/20	12797	5/29/20	18:14	SW3051A6020A

Sample#: 53078-002
Sample ID: SB-102 (0-1')
Matrix: Solid Percent Dry: 94.4% Results expressed on a dry weight basis.
Sampled: 4/6/20 11:30

Parameter	Result	Reporting Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Lead	**73**	2.5	ug/g	5	EEB	5/26/20	12797	5/29/20	18:22	SW3051A6020A

Quality Control Report

124 Heritage Avenue Unit 16
Portsmouth, NH 03801
www.absoluteresourceassociates.com

MassDEP Analytical Protocol Certification Form

Laboratory Name: Absolute Resource Associates	Project #: 2180311
Project Location: Massachusetts	RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s): 53042&53078

Matrices: ☐ Groundwater/Surface Water ☑ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A ☐	7470/7471 Hg CAM III B ☐	MassDEP VPH (GC/PID/FID) CAM IV A ☐	8082 PCB CAM V A ☐	9014 Total Cyanide/PAC CAM VI A ☐	6860 Perchlorate CAM VIII B ☐
8270 SVOC CAM II B ☐	7010 Metals CAM III C ☐	MassDEP VPH (GC/MS) CAM IV C ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
6010 Metals CAM III A ☐	6020 Metals CAM III D ☑	MassDEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	VPH, EPH, APH, and TO-15 only a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No[1]

***Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	☐ Yes ☑ No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☑ No[1]

[1] *All negative responses must be addressed in an attached laboratory narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, is accurate and complete.

Signature: _____ **Position:** Chief Operating Officer

Printed Name: Aaron DeWees **Date:** 6/1/20

Sample Integrity Table

Parameter	Method	Matrix	Minimum Volume	Recommended Container(s)	Required Preservation	Holding Time
Volatile Organics	EPA 8260	Aqueous	40mL	2 x 40mL VOA Vials with Teflon lined septa	Cool to ≤6°C 1:1 HCl to pH <2	14 Days
Volatile Organics	EPA 8260	Solid	40mL	1 x 40mL VOA Vial with 10mLs Methanol and 1 unpreserved container for percent moisture	Cool to ≤6°C Methanol	14 Days
Semivolatile Organics	EPA 8270	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Semivolatile Organics	EPA 8270	Solid	20g	4oz Amber Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
Organochlorine Pesticides	EPA 8081	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Organochlorine Pesticides	EPA 8081	Solid	20g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
PCBs	EPA 8082	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	365 Days
PCBs	EPA 8082	Solid	20g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	365 Days
Herbicides (subcontracted)	EPA 8151	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C	7 Days
Herbicides (subcontracted)	EPA 8151	Solid	30g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
MA DEP VPH	MADEP VPH	Aqueous	40mL	2 x 40mL VOA Vials with Teflon lined septa	Cool to ≤6°C 1:1 HCl to pH <2	14 Days
MA DEP VPH	MADEP VPH	Solid	40mL	1 x 40mL VOA Vial with 10mLs Methanol and 1 unpreserved container for percent moisture	Cool to ≤6°C Methanol	28 Days
MA DEP EPH	MADEP EPH	Aqueous	1L	1L Amber Glass Bottle w/Teflon liner	Cool to ≤6°C 1:1 HCl to pH <2	14 Days
MA DEP EPH	MADEP EPH	Solid	30g	4oz Amber Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days
Total Metals	EPA 6010	Aqueous	100mL	250mL Polyethylene Bottle	1:1 HNO_3 to pH <2	180 Days
Dissolved Metals	EPA 6010	Aqueous	100mL	250mL Polyethylene Bottle	Filter First 1:1 HNO_3 to pH <2	180 Days
Total Metals	EPA 6010	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	180 Days
Total Mercury (may be combined with Total Metals)	EPA 7470	Aqueous	100mL	125mL Polyethylene Bottle	1:1 HNO_3 to pH <2	28 Days
Total Mercury (may be combined with Total Metals)	EPA 7471	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	28 Days
Chromium, Hexavalent	EPA 7196	Aqueous	100mL	125mL Polyethylene Bottle	Cool to ≤6°C (NH4)2SO4 buffer	28 Days
Chromium, Hexavalent (subcontract)	EPA 7196	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	30 Days
Cyanide, Total	EPA 9014	Aqueous	125mL	125mL Polyethylene Bottle	Cool to ≤6°C 1:1 NaOH to pH >8	14 Days
Cyanide, Total	EPA 9014	Solid	15g	4oz Glass Jar w/Teflon liner	Cool to ≤6°C	14 Days

Absolute Resource Associates
124 Heritage Avenue Unit 16
Portsmouth, NH 03801
www.absoluteresourceassociates.com

Absolute Resource associates

Case Narrative
Lab # 53042 & 53078

Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, between 0 and 6 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines.

Calibration

No exceptions noted.

Method Blank

No exceptions noted.

Surrogate Recoveries

Not applicable.

Laboratory Control Sample Results

No exceptions noted.

Matrix Spike/Matrix Spike Duplicate/Duplicate Results

Not requested for this project.

Other

No other exceptions noted.

MassDEP Analytical Protocol Certification Form Questions A through I

No explanation is needed for Questions A through I answered in the affirmative.
Question G: The CAM protocol reporting limits were not achieved for this project due to dilutions necessary for sample analysis. Box G is "No."
Question H: A solid MS/D was not specified. Box H is "No."
Question I: Metals: The MCP required metals were not requested by the customer. Box I is "No."

GLOSSARY

%R	Percent Recovery
BLK	Blank (Method Blank, Preparation Blank)
CCB	Continuing Calibration Blank
CCV	Continuing Calibration Verification
CRM	Certified Reference Material (associated with solid Metals samples)
CRMD	Certified Reference Material Duplicate (associated with solid Metals samples)
Dil'n	Dilution
DL	Detection Limit
DUP	Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection
LOQ	Limit of Quantitation
MB	Methanol Blank (associated with solid VOC samples)
MLCS	Methanol Laboratory Control Sample (associated with solid VOC samples)
MLCSD	Methanol Laboratory Control Sample Duplicate (associated with solid VOC samples)
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PB	Preparation Blank
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference
SUR	Surrogate

- QC Report -

Method	QC ID	Parameter	Associated Sample		Result	Units	Amt Added	%R	Limits		RPD	RPD Limit
SW3051A6020A	BLK12797	Lead		<	2.5	ug/g						
SW3051A6020A	CRM12797	Lead			175	ug/g	248		152	273		
SW3051A6020A	CRMD12797	Lead			180	ug/g	248		152	273	3	20
SW3051A6020A	MS12797	Lead	53062-009		380	ug/g	235	107	75	125		
SW3051A6020A	MSD12797	Lead	53062-009		350	ug/g	227	98	75	125	8	20

Absolute Resource associates

124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

53042

Company Name: WESTON & SAMPSON
Company Address: 55 WALKERS BROOK DR READING MA
Report To: SARAH DESTEFANO & JILL MURPHY
Phone #: LEGO SAMPSON
Invoice to: ~~DE~~ SARAH DESTEFANO
Email: DESTEFANOS@WSEINC COM
PO #: ~~CED~~ FRAMINGHAM BROWNFIELD

Project Name: CEDAR WOODS
Project #: 21
Project Location: NH (MA) ME VT
Accreditation Required? N/Y:
Protocol: RCRA (MCP) SDWA NPDES NHDES DOD
Reporting Limits: QAPP GW-1 (S-1) EPA DW Other
Quote # N/A
☐ NH Reimbursement Pricing

ANALYSIS REQUEST

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	Sampling: DATE	TIME	SAMPLER
53042	525/311 SB-104(0-3')			X							4/7/20	0845	
-02	SB-104(8-10')			X						X		0855	
-01 -03 HOLD	SB-107(0-1')			X								0945	
-04	SB-107(0-3')			X						X		1000	
-05	SB-107(10-11')			X						X		1020	
-02 -06 HOLD	SB-108(0-1')			X								1045	
-07	SB-108(0-3')			X								1050	
-08	SB-108(6-9')			X						X		1100	
-03 -09 HOLD	SB-109(0-1')			X								1130	
-10	SB-109(0-3')			X								1140	
-11	SB-109(5-8')			X						X		1145	

Analysis	1	2	3	4	5	6	7	8	9	10	11
* VOC 8260	X									X	
☐ VOC 8260 NHDES											
☐ VOC 8260 MADEP											
☐ VOC 624.1											
☐ VOC BTEX MBE only											
☐ VOC 8021VT											
** VPH MADEP			X								X
☐ GRO 8015											
☐ 1,4-Dioxane											
☐ VOC 524.2 NH List											
☐ Gases-List											
☐ VOC 524.2											
☐ TPH											
☐ DRO 8015											
~~☐~~ EPH MADEP	X	X	X	X	X	X	X	X	X	X	X
☐ TPH Fingerprint											
☐ 8270PAH											
☐ 625.1											
☐ EDB											
☐ 8082 PCB											
☐ 8081 Pesticides											
☐ 608.3 Pest/PCB											
☐ 0&G 1664											
☐ Mineral 0&G 1664											
☐ pH											
☐ BOD											
☐ Conductivity											
☐ Turbidity											
☐ Apparent Color											
☐ TSS											
☐ TDS											
☐ TVS											
☐ Alkalinity											
☐ Acidity											
☐ RCRA Metals											
☐ Priority Pollutant Metals											
☐ TAL Metals											
☐ Hardness											
☐ Total Metals-list: MCP 14 METALS	X	X	X	X	X	X	X	X	X	X	X
☐ Dissolved Metals-list:											
☐ Ammonia											
☐ COD											
☐ TKN											
☐ TN											
☐ TOC											
☐ TON											
☐ Ferrous Iron											
☐ T-Phosphorus											
☐ Bacteria P/A											
☐ Bacteria MPN											
☐ Enterococci											
☐ Cyanide											
☐ Sulfide											
☐ Nitrate + Nitrite											
☐ Ortho P											
☐ Phenols											
☐ Nitrate											
☐ Nitrite											
☐ Chloride											
☐ Sulfate											
☐ Bromide											
☐ Fluoride											
☐ Corrosivity											
☐ Ignitability, FP											
☐ TCLP Metals											
☐ TCLP VOC											
☐ TCLP SVOC											
☐ TCLP Pesticide											
Subcontract: ☐ Grain Size											
☐ Herbicides											
☐ Asbestos											
☐ PFAS											
Cr IV											
Lead Only per J. Spencer 5/15/20		X		X		X		X		X	
Grab (G) or Composite (C)											

TAT REQUESTED
Priority (24 hr)* ☐
Expedited (48 hr)* ☐
Standard ☐ (10 Business Days)
*Date Needed: 5 DAY

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS
* VOCs & VPH
** VPH WITH TARGET VOCs

REPORTING INSTRUCTIONS ☑ PDF (e-mail address) MURPHYJ@WSEINC COM
☐ HARD COPY REQUIRED ☐ EDD

RECEIVED ON ICE ☐ YES ☐ NO
TEMPERATURE 2 °C

CUSTODY RECORD
QSD-01 Revision 11/06/19

	Relinquished by/Sampler:	Date	Time	Received by:	Date	Time
1		4/7/20	1500		4-7	3:00
2	Relinquished by:	4/7	16:00	Received by:		
3	Relinquished by:	Date	Time	Received by Laboratory:	4/9/20	16:00

Relogged 5/15/2020 per J. Spencer

PAGE 2 OF 2

Absolute Resource associates

124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

52513

Company Name:

Company Address: SEE PAGE 1

Report To:

Phone #:

Invoice to: SEE PAGE 1

Email: SEE PAGE 1

PO #:

Project Name:

Project #: SEE PAGE 1

Project Location: NH MA ME VT

Accreditation Required? N/Y:

Protocol: RCRA SDWA NPDES (MCP) NHDES DOD

Reporting Limits: QAPP GW-1 (S-1) EPA DW Other

Quote # N/A

☐ NH Reimbursement Pricing

ANALYSIS REQUEST

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	Matrix: SOLID	Matrix: OTHER	Preservation: HCl	Preservation: HNO_3	Preservation: H_2SO_4	Preservation: NaOH	Preservation: MeOH	Sampling: DATE	Sampling: TIME	Sampling: SAMPLER	☒ VOC 8260 ☐ VOC 8260 NHDES ☐ VOC 8260 MADEP *	☐ VOC 624.1 ☐ VOC BTEX MIBE only ☐ VOC 8021VT	☒ VPH MADEP ☐ GRO 8015 ☐ 1,4-Dioxane **	☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List	☐ TPH ☐ DRO 8015 ☒ EPH MADEP ☐ TPH Fingerprint	☐ 8270PAH ☐ 8270ABN ☐ 625.1 ☐ EDB	☐ 8082 PCB ☐ 8081 Pesticides ☐ 608.3 Pest/PCB	☐ O&G 1664 ☐ Mineral O&G 1664	☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity ☐ Apparent Color	☐ TSS ☐ TDS ☐ TS ☐ TVS ☐ Alkalinity ☐ Acidity	☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Hardness	☒ Total Metals-list: MCP 14 METALS	☐ Dissolved Metals-list:	☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON ☐ TOC ☐ Ferrous Iron	☐ T-Phosphorus ☐ Bacteria P/A ☐ Bacteria MPN ☐ Enterococci	☐ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P ☐ Phenols	☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride	☐ Corrosivity ☐ Ignitability/FP	☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide	Subcontract: ☐ Grain Size ☐ Herbicides ☐ Asbestos ☐ PFAS	C-IV			Grab (G) or Composite (C)
52513-12 HOLD	SB-110(0-1')			X							4/7/20	12:45						X							X												
-13	SB-110(0-3')			X							↓	~~12:55~~ 12:50 (HE 4/7/20)						X							X												
-14	SB-110(5-8')			X							↓	12:55				X		X							X									X			
-15 HOLD	SB-112(0-1')			X							↓	13:15						X							X												
-16	SB-112(0-3')			X							↓	13:20						X							X												
-17	SB-112(5-8')			X							↓	13:25				X		X							X									X			
~~18~~	MS-1			X							↓	10:15																									
~~19~~	MSD-1			X							↓	↓																									
-18 ~~20~~	DUP-1			X						X	↓	—				X		X							X												
-19 ~~21~~	TRIP BLANK										—	—		X																							

4/7/20 HD HE

TAT REQUESTED
Priority (24 hr)* ☐
Expedited (48 hr)* ☐
Standard (10 Business Days) ☐
*Date Needed 5 DAY

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS
* VOCs & VPH EXCEPT FOR TRIP BLANK
** VPH WITH TARGET VOCs

REPORTING INSTRUCTIONS ☐ PDF (e-mail address) SEE PAGE 1
☐ HARD COPY REQUIRED ☐ EDD

RECEIVED ON ICE ☒ YES ☐ NO
TEMPERATURE 2 °C

CUSTODY RECORD		Date	Time		Date	Time
	Relinquished by Sampler: [signature]	4/7/20	1500	Received by: [signature]	4-7	300
	Relinquished by: [signature]	4-7	1600	Received by:		
	Relinquished by:			Received by Laboratory: [signature]	4/7/20	1600

QSD-01 Revision 11/06/19

Absolute Resource associates

124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

53078

Company Name: WESTON & SAMPSON
Company Address: 55 WALKERS BROOK DR READING, MA
Report To: SARAH DESTEFANO & JILL MURPHY
Phone #: 1800 SAMPSON
Invoice to: SARAH DESTEFANO
Email: DESTEFANOS@WSEINC.COM
PO #: FRAMINGHAM BROWNFIELDS

Project Name: CEDAR WOODS
Project #: 2180311
Project Location: NH (MA) ME VT
Accreditation Required? N/Y: Y
Protocol: RCRA SDWA NPDES (MCP) NHDES DOD
Reporting Limits: GAPP UCMR GW-1 (S-1) EPA DW Other
Quote # N/A
☐ NH Reimbursement Pricing

ANALYSIS REQUEST

☐ VOC 8260 MADEP ☐ VOC 8260 NHDES ☐ VOC 8021VT ☐ VOC BTEX MtBE only ☐ VOC 624.1 ☐ VOC 524.2 NH List ☐ Gases-List: ☐ 1,4-Dioxane * ☐ VPH MADEP ☐ GRO 8015 ☐ VOC 524.2 ☐ TPH ☐ DRO 8015 ☐ EPH MADEP ☐ TPH Fingerprint ☐ 8270PAH ☐ 8270SIM ☐ 625.1 ☐ EDB ☐ 8082 PCB ☐ 8081 Pesticides ☐ 608.3 Pest/PCB ☐ O&G 1664 ☐ Mineral O&G 1664 ☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity ☐ Apparent Color ☐ TSS ☐ TDS ☐ TS ☐ TVS ☐ Alkalinity ☐ Acidity ☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Hardness ☐ Total Metals-list: MCP 14 METALS ☐ Dissolved Metals-list: ☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON ☐ TOC ☐ Ferrous Iron ☐ T-Phosphorus ☐ Bacteria P/A ☐ Bacteria MPN ☐ Enterococci ☐ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P ☐ Phenols ☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride ☐ Corrosivity ☐ Ignitibility/FP ☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide Subcontract ☐ Grain Size ☐ Herbicides ☐ Asbestos ☐ PFAS HEXAVALENT CHROMIUM (CR IV) * Total Pb per J. Spencer 5/20/20

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO3	H2SO4	NaOH	MeOH	HG	Sampling: DATE	TIME	SAMPLER	Grab (G) or Composite (C)
524495-01 HOLD	SB-106(0-1')			X		X				X		4/6/20	0920		G
-02	SB-106(0-3')			X						X			0940		
-03	SB-106(5-8')			X						X			1000		
-04	SB-106(3-4')			X						X			0930		
-05	SB-105(0-3')			X						X			1040		
-06	SB-105(5-8')			X						X			1100		
-07	SB-102(0-3')			X						X			1145		
-08 HOLD	SB-102(0-1')			X						X			1130		
-09	SB-102(11-14')			X						X			1140		
-10	SB-101(0-3')			X						X			1255		
-11	SB-101(9-12')			X						X			1305		

TAT REQUESTED
Priority (24 hr)* ☐
Expedited (48 hr)* ☐
Standard ☐ (10 Business Days)
*Date Needed 5-DAY

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS
* VPH W/ TARGET VOCs

REPORTING INSTRUCTIONS ☒ PDF (e-mail address) murphyj@wseinc.com
☐ HARD COPY REQUIRED ☒ EDD

RECEIVED ON ICE ☒ YES ☐ NO
TEMPERATURE 0 °C

CUSTODY RECORD
QSD-01 Revision 11/06/19

	Relinquished by Sampler:	Date	Time	Received by:	Date	Time
		4/6/20	1240		4-6	1:41
	Relinquished by:	Date	Time	Received by:	Date	Time
		4-6	15:43			
	Relinquished by:	Date	Time	Received by Laboratory:	Date	Time
					4/6/20	15:43

Relogged per J. Spencer 5/20/20 SAA

PAGE 2 of 2

Absolute Resource associates

124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST ~~52498~~

Company Name:
Company Address: SEE PAGE
Report To: 1 OF 2
Phone #:
Invoice to:
Email:
PO #:

Project Name:
Project #:
Project Location: NH MA ME VT
Accreditation Required? N/Y:
Protocol: RCRA SDWA NPDES MCP NHDES DOD
Reporting Limits: QAPP GW-1 S-1 EPA DW Other
Quote #
❑ NH Reimbursement Pricing

ANALYSIS REQUEST

Lab Sample ID (Lab Use Only)	Field ID	# Containers	Matrix	Preservation Method	Date	Time	Sampler	Analyses	Grab (G) or Composite (C)
52498-12	SB-103 (0-3')		Solid	MeOH	4/6/20	1220		~~VPH MADEP~~ MDM 4/6/20; MCP 14 Metals; ~~Hexavalent Chromium (CR IV)~~ MDM 4/6/20	G
-13	SB-103 (3-5')		Solid	MeOH	4/6/20	1220		~~VPH MADEP~~ MDM 4/6/20; MCP 14 Metals; Hexavalent Chromium (CR IV)	G
-14	SB-103 (7-10')		Solid	MeOH	4/6/20	1225		VPH MADEP; MCP 14 Metals	G
-15	TRIP BLANK		Solid	MeOH	4/6/20			VOC 8260	

TAT REQUESTED
Priority (24 hr)* ❑
Expedited (48 hr)* ❑
Standard (10 Business Days) ❑
*Date Needed 5-DAY

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS
*VPH W/ TARGET VOCS

REPORTING INSTRUCTIONS ☒ PDF (e-mail address)
❑ HARD COPY REQUIRED ☒ EDD

RECEIVED ON ICE ☒ YES ❑ NO
TEMPERATURE 0 °C

CUSTODY RECORD

Relinquished by	Date	Time	Received by	Date	Time
Relinquished by Sampler: [signature]	4/6/20	1340	Received by: [signature]	4-6	1:40
Relinquished by: [signature]	4-6	1543	Received by:		
Relinquished by:			Received by Laboratory: [signature]	4/6/20	1543

QSD-01 Revision 11/06/19

Laboratory Report

Absolute Resource associates
124 Heritage Avenue Portsmouth NH 03801

Joe Spencer
Weston & Sampson
55 Walkers Brook Drive
Reading, MA 01867

PO Number: None
Job ID: 53399
Date Received: 6/16/20

Project: Cedar Woods

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below. The reported results apply to the sample(s) in the condition as received at the time the laboratory took custody. This report shall not be reproduced except in full and with approval from the laboratory. The liability of ARA is limited to the cost of the requested analyses, unless otherwise agreed upon in writing.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

Aaron DeWees
Chief Operating Officer

Date of Approval: 6/29/2020
Total number of pages: 3

Absolute Resource Associates Certifications

New Hampshire	1732	Massachusetts	M-NH902
Maine	NH902		

Project ID: Cedar Woods
Job ID: 53399
Sample #: 53399-001
Sample ID: IDW-1
Matrix: TCLP Extract
Sampled: 6/15/20 9:35
TCLP: 6/22/20

Parameter	Result	Reporting Limit	TCLP Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Arsenic	< 0.050	0.050	5	mg/L	1	AGN	6/23/20	12891	6/23/20	18:00	SW1311 SW3005A6020A
Barium	**0.39**	0.10	100	mg/L	1	EEB	6/23/20	12891	6/25/20	20:00	SW1311 SW3005A6020A
Cadmium	**0.023**	0.010	1	mg/L	1	AGN	6/23/20	12891	6/23/20	18:00	SW1311 SW3005A6020A
Chromium	< 0.10	0.10	5	mg/L	1	AGN	6/23/20	12891	6/23/20	18:00	SW1311 SW3005A6020A
Lead	**0.36**	0.050	5	mg/L	1	AGN	6/23/20	12891	6/23/20	18:00	SW1311 SW3005A6020A
Mercury	< 0.0020	0.0020	0.2	mg/L	1	EEB	6/23/20	12880	6/23/20	16:28	SW1311 SW7470A
Selenium	< 0.10	0.10	1	mg/L	1	AGN	6/23/20	12891	6/23/20	18:00	SW1311 SW3005A6020A
Silver	< 0.050	0.050	5	mg/L	1	AGN	6/23/20	12891	6/23/20	18:00	SW1311 SW3005A6020A

Sample #: 53399-002
Sample ID: IDW-2
Matrix: Water
Sampled: 6/15/20 9:40
TCLP: 6/22/20

Parameter	Result	Reporting Limit	TCLP Limit	Units	Instr Dil'n Factor	Analyst	Prep Date	Batch	Analysis Date	Time	Reference
Arsenic	**0.0088**	0.0050	5	mg/L	1	EEB	6/23/20	12891	6/25/20	20:25	SW1311 SW3005A6020A
Barium	**0.33**	0.010	100	mg/L	1	EEB	6/23/20	12891	6/25/20	20:25	SW1311 SW3005A6020A
Cadmium	**0.0018**	0.0010	1	mg/L	1	AGN	6/23/20	12891	6/23/20	18:25	SW1311 SW3005A6020A
Chromium	**0.050**	0.010	5	mg/L	1	EEB	6/23/20	12891	6/25/20	20:25	SW1311 SW3005A6020A
Lead	**0.31**	0.0050	5	mg/L	1	AGN	6/23/20	12891	6/23/20	18:25	SW1311 SW3005A6020A
Mercury	**0.00024**	0.0002	0.2	mg/L	1	EEB	6/23/20	12880	6/23/20	16:33	SW1311 SW7470A
Selenium	< 0.010	0.010	1	mg/L	1	AGN	6/23/20	12891	6/23/20	18:25	SW1311 SW3005A6020A
Silver	< 0.0050	0.0050	5	mg/L	1	AGN	6/23/20	12891	6/23/20	18:25	SW1311 SW3005A6020A

Absolute Resource associates

Absolute Resource associates
124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST 53399

Company Name: WESTON & SAMPSON
Company Address: 55 WHEELERS BROOK DR
Report To: JOE SPENCER
Phone #: 781 443 2779
Invoice to: JOE SPENCER
Email: spencerj@wsginc.com
PO #:

Project Name: CEDAR WOODS
Project #:
Project Location: NH MA ME VT
Accreditation Required? N/Y:
Protocol: RCRA SDWA NPDES MCP NHDES DOD
Reporting Limits: QAPP GW-1 S-1 EPA DW Other RCRA TCLP
Quote #
☐ NH Reimbursement Pricing

ANALYSIS REQUEST

Lab Sample ID (Lab Use Only)	Field ID	# CONTAINERS	Matrix: WATER	SOLID	OTHER	Preservation Method: HCl	HNO_3	H_2SO_4	NaOH	MeOH	Sampling: DATE	TIME	SAMPLER
53399-01	IDW-1			X							6/15/20	0935	JRS
02	IDW-2		X				X				6/15/20	0940	JRS

☐ VOC 8260 ☐ VOC 8260 NHDES ☐ VOC 8260 MADEP
☐ VOC 624 ☐ VOC BTEX MtBE, only ☐ VOC 8021VT
☐ VPH MADEP ☐ GRO 8015 ☐ 1,4-Dioxane
☐ VOC 524.2 ☐ VOC 524.2 NH List ☐ Gases-List:
☐ TPH ☐ DRO 8015 ☐ EPH MADEP ☐ TPH Fingerprint
☐ 8270PAH ☐ 8270ABN ☐ 625 ☐ EDB
☐ 8082 PCB ☐ 8081 Pesticides ☐ 608 Pest/PCB
☐ O&G 1664 ☐ Mineral O&G SM5520F
☐ pH ☐ BOD ☐ Conductivity ☐ Turbidity ☐ Apparent Color
☐ TSS ☐ TDS ☐ TS ☐ TVS ☐ Alkalinity ☐ Acidity
☐ RCRA Metals ☐ Priority Pollutant Metals ☐ TAL Metals ☐ Hardness
☐ Total Metals-list:
☐ Dissolved Metals-list:
☐ Ammonia ☐ COD ☐ TKN ☐ TN ☐ TON ☐ TOC
☐ T-Phosphorus ☐ Phenols ☐ Bacteria P/A ☐ Bacteria MPN
☐ Cyanide ☐ Sulfide ☐ Nitrate + Nitrite ☐ Ortho P
☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride
☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP
☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide
Subcontract: ☐ Grain Size ☐ Herbicides ☐ Formaldehyde ☐ PFC
Grab (G) or Composite (C)

TAT REQUESTED
Priority (24 hr)* ☐
Expedited (48 hr)* ☐
Standard ☐
(10 Business Days)
*Date Needed 6/26

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS
2°C rec @ ARA

REPORTING INSTRUCTIONS ☑ PDF (e-mail address) spencerj@wsginc.com
☐ HARD COPY REQUIRED ☑ EDD

RECEIVED ON ICE ☑ YES ☐ NO
TEMPERATURE 2.0 °C

CUSTODY RECORD
QSD-01 Revision 10/04/17

	Relinquished by Sampler:	Date	Time	Received by:	Date	Time
		6/16/20	1200		6/16/20	1230
	Relinquished by:	Date	Time	Received by:	Date	Time
	Relinquished by:	Date	Time	Received by Laboratory:	Date	Time
		6/16/20	1320		6/16/20	13:20