Underground Storage Tank (UST) Closure Assessment

Former Seville Dyeing Co.

229 First Avenue

Woonsocket, Rhode Island

PREPARED FOR

RI DEM

235 Promenade Street
Providence, RI 02908

PREPARED BY

vhb

1 Cedar Street, Suite 400
Providence, RI 02903

May 2022

Table of Contents

Figures

Appendices

1

Introduction

Vanasse Hangen Brustlin, Inc. (VHB) was retained by the Rhode Island Department of Environmental Management (RIDEM) to provide environmental services through the Targeted Brownfields Assessment (TBA) Program for the removal and subsequent subsurface investigation of a 20,000-gallon steel Underground Storage Tank (UST) historically used for the storage of No. 6 fuel oil at the former Seville Dyeing Company property located at 229 First Avenue in Woonsocket, Rhode Island (the "Site"). The Site is further identified as Lot 118 on the City of Woonsocket Assessor's Plat 6. The UST subject to this closure and subsurface investigation was formerly located within a concrete bunker that abuts the western property boundary of the Site adjacent to First Avenue. A Site Locus map is included as **Figure 1** and a Site Detail is included as **Figure 2**.

The Site is associated with UST Facility No. UST-3479 in the Rhode Island UST Management Program. The UST was installed in 1981 for heating oil at the former Seville Dyeing Company, Inc. (Seville), identified as 225 First Street at the time. On April 29, 1985 RIDEM received a proposal pertaining to a leak in the 20,000-gallon UST from Cutter Protective Company and on May 23, 1985, RIDEM issued a letter to Seville requesting a written report relative to the leak, the removal of all product, installation of a tank protective relining and a precision test after repairs were completed. As a result, the correspondences summarized in **Section 1.1** were provided relative to the UST.

GZA GeoEnvironmental, Inc. and others have conducted various assessment, investigation, and remediation activities at the Site and associated 117 First Avenue property including a Phase I Environmental Site Assessment (ESA) dated September 4, 2018, a Site Investigation Report (SIR) dated April 24, 2019 and a Remedial Action Work Plan dated February 2020. VHB understands that Fuss & O'Neill, Inc. is also conducting investigation/remedial activities at the Site. However, these investigation/remediation activities are being conducted under the RIDEM Site Remediation Program (Site No. SR-39-1211A and B) and VHB's investigations pertain only to the closure of the 20,000-gallon UST under RIDEM's UST Management Program.

The contractor selected to perform the UST removal was Strategic Environmental Servies of Sutton, Massachusetts (Strategic Environmental). Matthew Mazzone and Tyler Phillips of VHB were present for the UST removal events. Joseph Cunningham and Rachel Simpson of RIDEM were on-Site on the day the tank was removed from the bunker. Upon removal of the UST from the bunker on September 1, 2021, free product was observed in the bottom of the excavation. Due to the depth of the excavation and the proximity of the excavation to the adjacent roadway, the excavation was backfilled. The UST by the UST Management Program assigned Leaking UST (LUST) Case #3975-ST to the Site. VHB conducted a subsurface investigation to evaluate the nature and extent of fuel oil impacts in February 2022.

The UST Closure Application as signed by Bianca Policastro, Director of Planning and Development for the City of Woonsocket, and Mark Mantecalvo, the captain of the City of Woonsocket Fire Department is included in **Appendix A**. The current owner is identified as Seville Associates, c/o Robert Picotti Jr., however, previous attempts to reach the owner have failed and the City has control over the property via tax lien. This UST Closure Report was completed using the RIDEM UST Closure Assessment Guidelines as Revised May 2019. A UST Closure Report Checklist is included in **Appendix B**.

2

Site Description and UST Removal Activities

2.1 Background Condition of the Site

The Site comprises 4.3 acres of vacant land in a primarily residential area of Woonsocket, Rhode Island. The Site was historically a textile/mercantile mill complex identified as the Seville Dyeing Company and Enterprise Dye Works. Enterprise Dye Works conducted textile manufacturing operations at the Site from the late 1800s until about 1928. Ownership of the property appears to have transferred to Seville Dyeing Company in around 1928. Seville Dyeing Company operated at the textile mill until 2011, when a fire substantially damaged the Site buildings. Demolition of the mill structures occurred in 2011 through 2012 and the Site is currently vacant. The majority of this parcel currently contains remnant building foundations related to the Seville Dyeing Company and former Enterprise Dye Works mill buildings. The building footprints are primarily located along First Avenue (i.e., the southwestern portion of the Site). Properties in the immediate vicinity of the Site are primarily residential and the Blackstone River abuts the Site to the east. The UST, the subject of this report, was located within a concrete bunker structure abutting the western property boundary of the Site adjacent to First Avenue.

Groundwater at the Site is classified as GB according to the publicly accessible RIDEM Environmental Resource Map (ERM). According to the RIDEM, groundwater classified as GB applies to groundwater resources which may not be suitable for human consumption without treatment due to known or presumed degradation. Groundwater of this classification shall be of a quality that does not threaten public health or the environment; adversely impact current or future uses of property, groundwater, or surface water; or violate any surface water quality standards or surrounding groundwater quality standards.

Additionally, the Facility is not in the vicinity of any sole-source aquifers or wellhead protection areas (WPA); the nearest sole-source aquifer or WPA is a non-community WPA located 0.9 miles west of the Site. There are no known sources of potable water (i.e., groundwater supply wells) on the properties abutting the Site and abutting properties are connected to public water. The nearest surface water body is the Blackstone River, which abuts the Site to the east. The Blackstone River is located approximately 150 feet from the UST bunker.

The area surrounding the Site is generally residential in nature. Due to the depth of groundwater from the nearby residences in the vicinity of the UST, (approximately 15-25-feet below grade), the direction of groundwater flow (away from the residences, the lack of residential and/or public drinking water wells in the area, and the non-volatile nature of No. 6 oil, it is not expected that nearby residences would be potential receptors. There are no

known impacts to surrounding utilities or storm drains. However, there are likely on-Site utilities that may provide a preferential pathway for the migration of No. 6 oil.

2.2 Description of UST

The subject of this UST closure and subsequent investigation was a single-walled steel UST with an approximate capacity of 20,000 gallons. The UST was installed in 1981 for the storage of No. 6 heating oil at the former Seville Dyeing Company, Inc., identified as 225 First Street at the time. On April 29, 1985 RIDEM received a proposal pertaining to a leak in the 20,000-gallon UST from Cutter Protective Company and on May 23, 1985, RIDEM issued a letter to Seville requesting a written report relative to the leak, the removal of all product, installation of a tank protective relining and a precision test after repairs were completed. As a result, the following correspondences were issued pertaining to the UST:

- In 2003, a UST Certificate of Registration was issued to Seville, now identified as 229 First Avenue, for the 20,000-gallon UST;
- March 1, 2011, an Abandoned UST Inspection Report indicated that the Fire Chief was aware of one UST at the Site, however the manway could not be opened due to debris resulting from the fire;
- May 24, 2011, an Abandoned UST Letter of Deficiency (Facility ID No. 3479) was prepared by RIDEM for the UST;
- September 20, 2013, RIDEM issued an Abandoned UST letter (Facility ID No. 3479) stating no tank tightness or corrosion protection test results had been received by RIDEM and the UST had been unregistered since 2003. Joseph Cunningham (RIDEM) sent certified mailed letters to Robert Piccotti Jr. (owner) regarding to UST #3479; the postmaster indicted "unable to forward"; and
- September 29, 2014, a Notice of Violation (NOV) was issued for 229 First Avenue due to the UST which was no longer in use, requiring closure/removal of the UST, a Site investigation and a Corrective Action Plan.

The approximate former UST location is shown on **Figure 2** and the UST features are summarized below:

UST Summary

UST ID#	Volume and Type	Stored Material	Depth to Tank Bottom	Tank Dimensions (Ø x L)	Tank Installation Date	Method of Closure	Tank Removal Date
001	20,000-gallon steel	No. 6 Heating Oil	15' (approximate)	10.5-12'* x 30'	1981	Removal	September 1, 2021

*The UST was noted to be oval in shape and therefore had a variable diameter.

Piping from the UST is presumed to have travelled overground from the tank bunker to the former mill buildings. At the time of the UST removal, the pipes had been cut at the bunker wall. Four lengths of piping (presumed to be supply and return pipes) were present extending from the top of the tank to the bunker wall. The tank fill was located approximately 2 feet east of the western edge of the UST, along First Avenue.

2.3 Work Conducted Prior to UST Removal

Tank cleaning was conducted by Strategic Environmental under contract to the city of Woonsocket on August 2 through August 5, 2021. VHB personnel were not present during tank cleaning. During cleaning of the tank, 392 gallons of oily water and sludge were managed for off-Site disposal at Tredebe Treatment of Stoughton, Massachusetts under a Uniform Hazardous Waste Manifest. Additionally, a total of 13,988 gallons of non-hazardous wastewater were removed from the tank and managed for off-Site disposal at Globalcycle in Taunton, Massachusetts on August 2, 2021 under two separate non-hazardous waste manifests.

VHB mobilized to the Site with Strategic Environmental on August 31, 2021 to begin tank removal activities. VHB personnel gauged two monitoring wells prior to excavation of the tank. Both monitoring wells were located within the limits of the concrete bunker. One monitoring well was located just to the north of the UST, and one monitoring well was located just to the south. The depth of each of the wells was approximately 15 feet below the bunker grade. The northerly monitoring well contained approximately 8 inches of viscous black free product, which could not be bailed due to its viscosity. Groundwater was not encountered in either of the two monitoring wells. VHB informed Joseph Cunningham and Rachel Simpson of RIDEM of the free product discovered in the monitoring well.

Strategic Environmental removed the asphalt and soil overlaying the UST. VHB noted evidence of a fuel oil release beneath the tank supply and return piping at the eastern edge of the bunker. Soil beneath the piping was stained black in color and exhibited a petroleum odor. Stained soil was segregated into a separate stockpile atop poly sheeting. Stained soil was also noted in the direct vicinity of the tank fill pipe along the western tank edge. The soil was combined with the stained soil atop poly sheeting. The tank was fully uncovered at the end of the day on August 31, 2021, and the suspected petroleum-impacted soil was covered by poly sheeting for overnight storage.

2.4 UST Removal Activities

UST removal activities were conducted on September 1, 2021. The UST removals were attended by Joseph Cunningham and Rachel Simpson of RIDEM. Strategic Environmental removed the tank using a crane and the tank was placed atop poly sheeting at the bottom of the bunker for inspection. VHB personnel inspected the tank and noted severe corrosion and pitting on all sides of the tank. Multiple holes ranging in size from 1/8-inch to ½-inch in diameter were noted along the bottom and northern end of the tank. Photos taken during inspection of the two tanks are included in **Appendix A**.

Inspection of the excavation following tank removal revealed black stained soil and free product in the area beneath the tank. The free product appeared to be highly viscous, and it could not be determined based on the visual inspection whether the free product was contained by the surrounding retaining walls. VHB considered multiple options for free product recovery at the time that the excavation was open. However, due to Site limitations and the depth to the product, VHB, in consultation with RIDEM, decided that backfilling the excavation would be necessary to avoid a leaving a large open excavation near residences and the roadway. Therefore, the decision was made to backfill the excavation while a plan for additional investigation and remediation of the release was developed. The stained soil from the tank piping and fill area was used to backfill just above the observed free product until a depth of approximately 12 feet below grade. The transition between contaminated and presumed uncontaminated material was demarcated with poly sheeting.

The UST was loaded onto a flatbed trailer and transported to Allied Recycling Service of Walpole, Massachusetts for disposal. A copy of the tank disposal receipt is provided in **Appendix C.**

2.5 Soil Screening and Sampling

Soil removed from the area surrounding the tanks during excavation can be generally classified using the Burmeister soil classification system as tan to brown fine to medium sand with some sub-angular gravel and trace urban debris including brick, asphalt, and wood. Petroleum staining and odor was noted in some areas surrounding the UST as described in **Section 2.4.** No groundwater was encountered during the UST removal. Groundwater is expected to be present at approximately 20-25 feet below the surface of the bunker (the bunker surface is located approximately 15 feet above surrounding grade) based on depth to groundwater measurements in nearby monitoring wells. Soil samples from the sidewalls of the excavation were screened using a Dexsil Petroflag ® screening toil for Total Petroleum Hydrocarbons (TPH). A total of eight (8) samples from the excavation sidewalls were screened using the Petroflag ®, with resultant concentrations of petroleum hydrocarbons ranging from non-detect (ND) through 273 ppm. Each of the eight (8) screening results was below the applicable RIDEM Industrial Direct Exposure Criteria.

Due to the presence of free product at the base of the excavation, soil samples from the bottom of the excavation were not collected. Additionally, the samples obtained from the sidewalls of the excavation were not submitted for laboratory analysis. A Limited Site Investigation (LSI) was conducted in lieu of excavation soil sampling as discussed in **Section 3**.

3

Limited Site Investigation

3.1 Soil Boring/Monitoring Well Installation and Soil Sampling

VHB commenced drilling at the Site on February 17 and 18, 2022 and oversaw the advancement of five soil boring locations identified as VHB-1, VHB-2, VHB-3, VHB-4/4A and VHB-5 via hollow stem auger by Technical Drilling Services of Sterling, Massachusetts. Each boring was generally advanced to a depth of 15 to 20 feet below grade to intercept the groundwater table or until refusal was encountered. Two 2-inch and two 4-inch monitoring wells were installed in four of the boring locations (VHB-1, VHB-2, VHB-3, VHB-4/4A). VHB generally collected one soil sample via stainless-steel split-spoon at 5-foot intervals. Based on field observations and the results of soil screening via photoionization detector (PID) and on-Site sampling via PetroFlag TPH Analyzer, VHB selected and submitted a total of 17 soil samples for laboratory analysis. One sample was also submitted as a duplicate of VHB-3 (10-12'), identified as VHB-3-X for TPH analysis.

The soil samples were containerized in laboratory-provided glassware and transported to ESS Laboratories (ESS) in Cranston, Rhode Island under standard chain-of-custody protocol for analysis of total petroleum hydrocarbons (TPH) via method 8100M. Soil boring logs detailing soil characteristics by interval, depth of refusal, PID screening, etc. are included as **Appendix D.**

Refusal was encountered at VHB-1 at approximately 15 feet below the surface of the bunker. This depth approximately corresponds with the deepest observable point of the excavation during the UST removal. At the time of the UST removal, it could not be confirmed whether the bunker had a concrete bottom. However, the fact that refusal was encountered at approximately 15 feet indicates that the bunker may have a concrete bottom which could slow the migration of fuel oil to the surrounding soil and groundwater.

3.2 Groundwater Sampling

VHB conducted groundwater sampling via low-flow methodologies from all four of the newly installed wells on February 23, 2022. VHB also gauged the wells for both light and dense non-aqueous phase liquid (NAPL). No measurable NAPL was identified in any of the wells during monitoring well gauging with an oil/water interface probe. VHB-2 was noted to have a petroleum sheen atop the water column during bailing. Additionally, a sheen

was observed on the groundwater purged from the well during sampling at VHB-2 and VHB-4A. The groundwater at VHB-2 Although petroleum/gasoline-like odors, globules and other observations indicative of petroleum were observed. The depth to groundwater ranged from 3.29 feet (VHB-3) to 7.06 feet below grade (VHB-4A). Water was detected at 12.20' below grade at VHB-1, which is located approximately 15 feet higher in elevation than the surrounding monitoring wells. Based on the difference in elevation from surrounding wells, it is believed that the water sampled from VHB-1 is representative of rainwater that has accumulated in the bunker.

Groundwater samples obtained from each of the four monitoring wells were containerized in laboratory-provided glassware, then transported to ESS under standard chain-of-custody protocol for analysis of TPH. The boring logs, which include monitoring well construction diagrams are included as **Appendix D.**

3.3 Soil Analytical Results

Soil analytical results were compared to the RIDEM Method 1 Residential Direct Exposure Criteria (RDEC), the Industrial/Commercial Direct Exposure Criteria (I/CDEC) and the applicable GB Leachability Criteria (GB-LC). Please refer to the attached **Table 1** for a full summary of the results in comparison with the RIDEM criteria and **Figure 2** for a visual representation of the approximate boring locations. Of the seventeen (17) samples submitted, two (2) were reported in exceedance of the Method 1 criteria as summarized below.

Summary of Soil Exceedances

Soil Samples		RIDEM Method 1 Exceedances		
Boring ID	Interval (ft.)	RDEC (500 ppm)	I/CDEC (2,500 ppm)	GB-LC (2,500 ppm)
VHB-1	10-12	1,620 mg/kg		
VHB-1	13-15	31,400 mg/kg		
VHB-4	5-7	7,020 mg/kg		

No other samples were reported in exceedance of the Method 1 criteria. A copy of the soil laboratory analytical report is provided for reference as **Appendix D**.

3.4 Groundwater Analytical Results

Groundwater analytical results were compared to the applicable RIDEM Method 1 GB Groundwater Objectives. Please refer to the attached **Table 2** for a full summary of the results in comparison with the RIDEM criteria and **Figure 2** for a visual representation of the approximate well locations. While no RIDEM GB Groundwater Objective exists for TPH, concentrations ranged from 1,080 ug/L (VHB-3) to 23,700 ug/L (VHB-1). A copy of the laboratory groundwater analytical report is provided for reference as **Appendix E**. Although a relative wellhead elevation survey at the Site was not conducted, the estimated groundwater flow direction is expected to flow to the east toward the Blackstone River.

The results of groundwater sampling indicate that detectable petroleum hydrocarbons are present downgradient of the UST bunker. The concentrations generally appear to decrease at the southern edge of the bunker and are higher to the east and southeast of the bunker. The high concentration of TPH detected at VHB-1 are consistent with the observation of free product in this area during the UST removal.

3.5 Investigation Derived Waste

VHB generated one (1) 55-gallon drum of soil cuttings and purged groundwater each during Site investigations. VHB engaged Clean Harbors Environmental Services (Clean Harbors) to pick-up and transport the drums for disposal at a licensed facility. To facilitate disposal of the drums, VHB collected additional soil and groundwater samples from each drum for volatile organic compounds (VOCs) and RCRA-8 metals on March 10, 2022 as requested by Clean Harbors.

VHB provided Clean Harbors with background information regarding the Site, as well as the laboratory data VHB collected for TPH during Site investigations and the results of the VOC and RCRA-8 metals analysis. A copy of the laboratory report for disposal (VOCs and RCRA-8 metals) is provided for reference as **Appendix F**. Clean Harbors collected the drums from the Site for transportation to Spring Grove Resource Recovery, Inc. in Cincinnati, Ohio on April 26, 2022. A copy of the non-hazardous waste manifest and the letter authorizing Clean Harbors to sign the manifest on behalf of the City of Woonsocket (generator) are provided as **Appendix G**.

4

Quality Assurance and Quality Control Evaluation

VHB submitted a Site-Specific Environmental Protection Agency (EPA) Brownfields Quality Assurance Project Plan (QAPP) dated August 16, 2021 to the RIDEM, intended to outline quality assurance and control and VHB's EPA-approved Standard Operating Procedures (SOPs) to be followed during the UST closure at the Site. Sine the UST closure necessitated additional investigations pertaining to the former UST, VHB subsequently submitted an updated Site-Specific QAPP for the Limited Site Investigation dated February 15, 2022.

Sample jars and bottles were ordered directly from ESS Laboratories (ESS) of Cranston, Rhode Island and were delivered to VHB's office in Providence, Rhode Island. All sample bottles were labeled with the following information prior to sample collection:

- Sample Identification;
- Date;
- Collection Time;
- Project Name;
- Preservatives (if any); and
- Analyses requested.

During the UST closure and Site investigation, protective nitrile gloves were worn during soil and groundwater sampling activities and were changed in between soil sampling intervals to prevent cross-contamination between samples. Soil samples were collected directly from the stainless-steel spoon of the hollow stem auger drill rig and placed directly into the laboratory prepared sampling jars. Duplicate soil and groundwater samples, trip blanks and temperature blanks were collected/analyzed as required based on the Site-Specific QAPP. Once sealed, the jars were immediately placed into coolers on ice. Samples remained on ice or placed into a refrigerator or frozen (if applicable) until delivered to ESS under standard Chain of Custody protocol for analysis.

On the days of groundwater sampling, protective gloves were changed between each monitoring well to prevent cross-contamination between samples. Prior to sampling, wells were developed via VHBs EPA-approved SOPs and allowed adequate time for recharge prior to sampling. Groundwater was pumped through a YSI multi-meter via low-flow methodologies to monitor various parameters (i.e. pH, temperature, conductivity, oxidation-reduction potential, dissolved oxygen, and turbidity). Once the parameters stabilized, tubing was disconnected from the YSI and samples were collected directly from the polyethylene tubing and pumped directly into the laboratory prepared sampling jars using a peristaltic pump. Samples remained on ice until delivery to ESS under standard Chain of Custody protocol for analysis.

5

Conclusions and Recommendations

- One 20,000-gallon Underground Storage Tank (UST) was removed from the former Seville Dyeing Company property located at 229 First Avenue in Woonsocket, Rhode Island on September 1, 2021. During the removal of the UST, VHB personnel determined that a release had occurred based on the visual observation of stained soil exhibiting a petroleum odor, the presence of free product at the bottom of the excavation, and severe corrosion including multiple holes in the UST observed following removal. The quantity of fuel oil released is not known at this time.
- Stained soil in the vicinity of the tank piping and fill port was stockpiled separately during the tank removal atop poly sheeting and was covered by poly sheeting overnight. This soil was used to backfill just above the observed free product until a depth of approximately 12 feet below grade. The transition between contaminated and presumed uncontaminated material was demarcated with poly sheeting.
- A Limited Subsurface Investigation (LSI) was conducted to evaluate the nature and extent of contamination at the Site resulting from the LUST. In total, five soil borings were advanced until refusal was met. A total of seventeen (17) soil samples were submitted for laboratory analysis of Total Petroleum Hydrocarbons (TPH). Of the seventeen (17) soil samples submitted, two (2) were reported in exceedance of the RIDEM Method 1 Criteria.
- The four groundwater monitoring wells were sampled using low-flow methodology for TPH. Concentrations ranged from 1,080 ug/L (VHB-3) to 23,700 ug/L (VHB-1). Note that no RIDEM GB Groundwater Objective exists for TPH. A copy of the laboratory groundwater analytical report is provided for reference as **Appendix E**.
- VHB recommends remedial actions including a formal LUST site assessment and removal of the impacted soil and free product observed during the UST removal. These remedial actions should be implemented promptly in order to mitigate the migration of fuel oil from the bunker.

6

Verification and Signatures

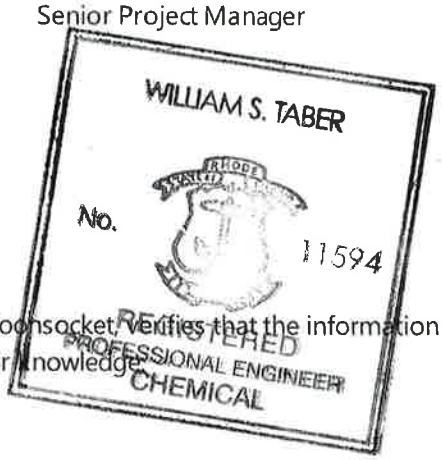
We hereby certify that the information contained within this report is accurate to the best of our knowledge:

Prepared by:

Matt Mazzone, EIT

Registered PE who Supervised Preparation of the Report:

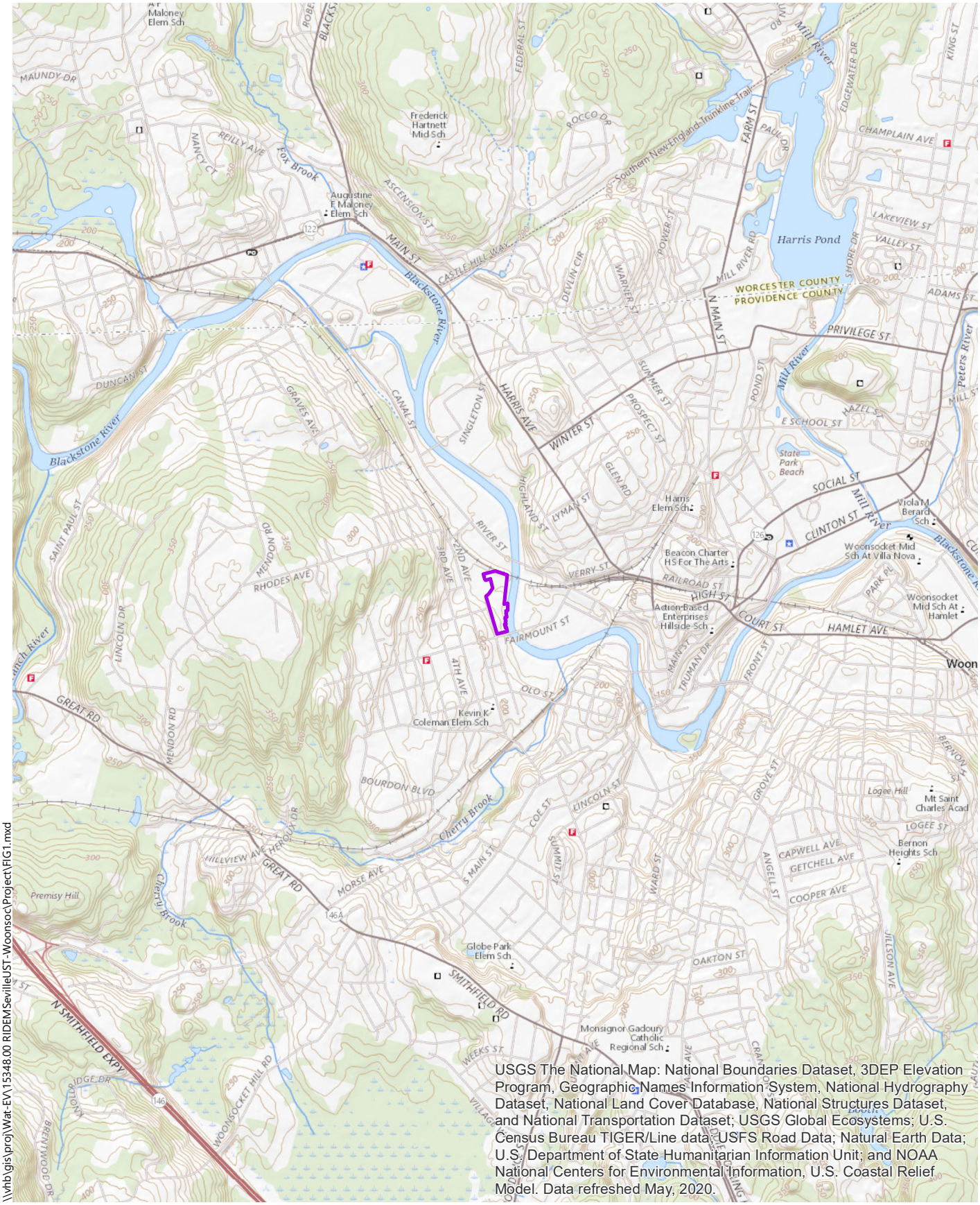
William S. Taber, PE
Senior Project Manager



Michael Debroisse, a representative of the City of Woonsocket, verifies that the information in this report is complete and accurate to the best of their knowledge.

Michael Debroisse
Planning and Development
City of Woonsocket

Figures



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed May, 2020.

\\vhb\gis\proj\Wat-EV\15348.00 RIDEMSevilleUST-Woonsoc\Project\FIG1.mxd

0 750 1500 3000 Feet

Former Seville Dyeing Co. | 229 First Ave. Woonsocket, RI

Legend

Site Parcel Boundary

Site Locus Map

Source: USGS Topo

\\vhb\gis\proj\Wat-EV\15348.00 RIDEMSevilleUST-Woonsoc\Project\FIG2.mxd

0 50 100 200 Feet

Former Seville Dyeing Co. | 229 First Ave. Woonsocket, RI

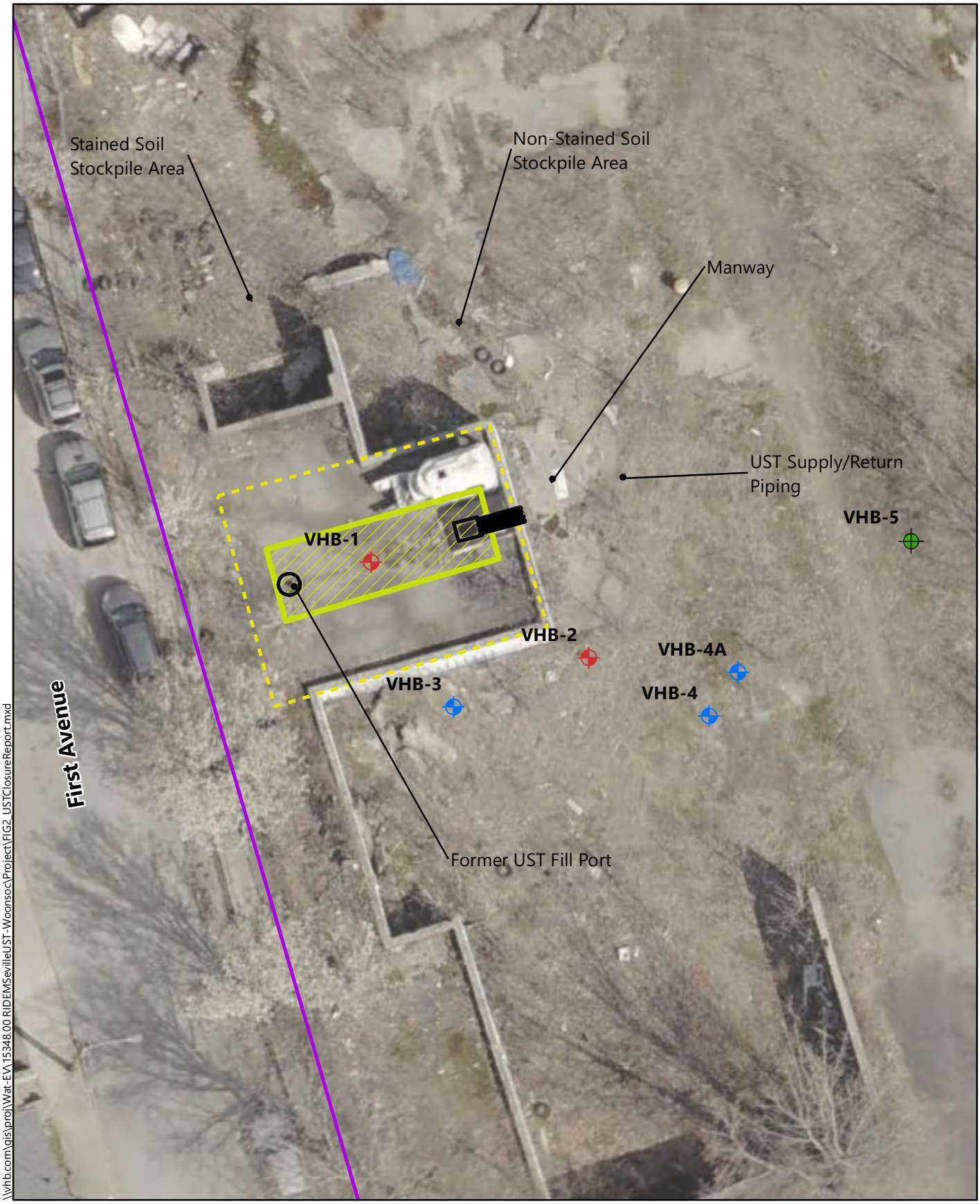
Legend

Approximate UST Bunker Location

Site Parcel Boundary

Site Detail Map

Source: RIDEM Aerial Photo, April 2020



\\vhb.com\gis\proj\Wat-EVA\15348.00 RIDEMSevilleUST-WoonsocQ\Project\FIG2_USTClosureReport.mxd

0 12.5 25 50 Feet

Former Seville Dyeing Co. | 229 First Ave. Woonsocket, RI

Former UST Location
Approximate UST Bunker Location
Site Parcel Boundary

Soil Borings / Monitoring Wells

4-Inch Recovery Well
2-Inch Monitoring Well
Soil Boring

Site Detail Map

Source: RIDEM Aerial Photo, April 2020

Appendix A
UST Closure Application

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

August 17, 2021

UST OWNER
SEVILLE ASSOCIATES
229 FIRST AVE, P.O. BOX 1209
WOONSOCKET, RI 02895

RE: Underground Storage Tank Closure; Facility ID#3479
FORMER SEVILLE DYEING CO., INC., 229 FIRST AVE, WOONSOCKET RI 02895

Dear UST OWNER:

The Office of Land Revitalization & Sustainable Materials Management has reviewed the "Permanent Closure Application For Underground Storage Tank(s)" for the above-referenced property. The following UST(s) are approved to be closed on Tuesday, August 31, 2021:

UST ID#	VOLUME	STORED MATERIAL	METHOD OF CLOSURE	ACTION REQUIRED
001	20000	Heating Oil No.6	Remove from Ground	Closure Assessment Required

All USTs are to be removed and handled as described in the closure application. This approval letter along with a copy of the UST Closure Application must accompany the tank(s) during transit to the proper disposal facility.

IF ANY CONTAMINATION IS FOUND IN THE VICINITY OF OR AROUND THE SUBJECT UST(S), IMMEDIATE NOTIFICATION TO THIS OFFICE IS REQUIRED (401-222-2797).

This closure requires the submittal of a closure assessment report prepared by an environmental consultant with appropriate certifications within 30 days. The consultant must be present during all closure activities to properly conduct the closure assessment. Failure to have a consultant present as required by the UST regulations will result in cancellation and rescheduling of the closure. A closure certificate will not be issued until the above documentation has been received, reviewed, and approved by this inspector.

You or your representative must contact the DEM inspector, JOSEPH CUNNINGHAM, on the day of the UST closure to confirm the inspection time. The inspector can be reached at (401) 222-2797, extension 7137 (office number) or 401-473 -6896 (field mobile phone).

Sincerely,

Kevin Gillen

Kevin Gillen, Supervising Engineer
UST Management Program
Office of Land Revitalization & Sustainable Materials Management

cc: William Taber, VHB
BOB MADDOCK, STRATEGIC ENVIRONMENTAL SERVICES, INC.

TRANSMITTAL

1 Cedar Street
Suite 400
Providence, RI 02903-1023
Telephone (401) 272-8100
Fax (401) 277-8400
www.vhb.com

Date: 8/12/2021	**VHB Project No.:** 15348.00

Re: Permanent Closure Application for UST
Former Seville Dyeing Co./Seville Associates
Woonsocket, RI 02895
RIDEM UST Facility ID #: 03479

To: Joseph Cunningham,
RIDEM – Office of LRSMM – UST Division
235 Promenade Street
Providence, Rhode Island 02908

We are sending you: ☒ Attached ☐ Under Separate cover via Regular Mail the following items:

☐ Shop drawings ☐ Prints ☐ Plans ☐ DVDs ☐ Specifications ☐ Copy of Letter ☐ ChgOd
☐ Other

Copies	Date	No.	Description
1	08/12/2021		UST Closure Application and Check for $75 Closure Fee

These are transmitted as checked below:

☒ For approval
☐ For your use
☐ As requested
☐ For review and comment
☐ Returned prints on loan to VHB
☐ Approved as submitted
☐ Approved as noted
☐ Return for corrections
☐ For bids due
☐ Resubmit ____ Copies for approval
☐ Submit ____ Copies for distribution
☐ Return ____ Corrected prints

REMARKS: E-copy of Application and VHB Check #1205 was submitted via email on 8/12/2021.
Requested Date of UST Removal is 8/30/2021 or 8/31/2021. Timely review and approval is greatly appreciated. Thank you.

Copy to: Rachel Simpson – RIDEM Office of LRSMM (email)
Frank Vogel – RIDEM _ UST Division (email)
Kevin Proft - City of Woonsocket (email)

By: Peter Grivers, P.E., LSP – VHB, Inc.

Rhode Island Department of Environmental Management
Office of Land Revitalization and Sustainable Materials Management
Underground Storage Tank (UST) Division

For DEM use Only
Approved: _____
Total $ Received: _____
Date Received: _____
Check #: _____
Received By: _____

Permanent Closure Application for Underground Storage Tanks

I. Facility Information

Application Date:

Facility Name: Former Seville Dyeing Company/Seville Associates

Facility Address: 229 First Avenue City: Woonsocket Zip: 02895

⚠ Facility Address must match what is recorded with the City or Town's Tax Assessor's Office

DEM UST Facility ID #: 03479 DEM LUST Facility ID #: Plat # Map # 6A Lot # 118

Is this facility a known or suspected leaking underground storage tank site? ○ Yes ◉ No ○ Unknown

Facility Contact: Kevin Proft Title: City of Woonsocket - City Planner

Phone # 401-767-1418 E-mail: kproft@woonsocketri.org

Facility Type: ○ Gas Station ○ Residential (1, 2 or 3 Family) ○ Residential (> 3 Family) ◉ Commercial/Industrial ○ Local/State/Federal Government

II. Tank Owner Information

Name: Seville Associates c/o Robert Picciotti Jr. Title:

Address: 30 Woodward Avenue City: Narragansett State: RI Zip Code: 02882

Phone #: Unknown E-Mail: Unknown

III. Property Owner Information

☒ Same as Tank Owner ☐ Same as Facility

Owner Name: Title:

Address: City: State: Zip Code:

Phone #: E-Mail:

IV. Firm/Contractor To Perform Closure

Name of Firm/Contractor: Strategic Environmental Services, Inc.

Primary Contact: Bob Maddock Title: Project Manager

Phone #: 508-757-7782 E-Mail: bmaddock@strategic-es.com

Mailing Address: 362 Putnam Hill Road City: Sutton State: MA Zip Code: 01590

Who is the primary point of contact for this closure?
☐ Tank Owner as listed in Section II ☐ Property Owner as listed in Section III ☐ Other (specify)
☐ Firm/Contractor Listed in Section IV ☒ Environmental Consultant Listed in Section V

Why is this UST system being permanently closed? Tank is abandoned and no longer in service.

V. Firm/Consultant To Perform Closure Assessment

Is a Closure Assessment Required for this UST Closure? (See Rule 1.15) (•) Yes ( ) No ⚠ If Yes, Section V must be completed

If no, do you choose to obtain one? ( ) Yes ( ) No

Name of Firm Conducting Assessment: VHB, Inc.

Name of Consultant: William Taber Title: Project Engineer

Phone #: 617-607-2171 E-Mail: wtaber@vhb.com

Mailing Address: 101 Walnut St. - P.O. Box 9151 City: Watertown State: MA Zip Code: 02472-4026

Qualifications:
(•) Professional Engineer (PE) License — Licensing State: Rhode Island — License #: 0011593
( ) Certified Professional Geologist — Licensing State: — License #:
( ) Registered Professional Geologist — Licensing State: — License #:

⚠ The environmental consultant listed above must be the one who reviews and signs the Closure Assessment Report

VI. Fees

	Number of Tanks	Fee per Tank	Total
Closure Fee	1	x $75.00	75
Registration Fee*		x $100.00	

Total Amount Due: $75.00

* Registration fee is not required for residential (1, 2 or 3 unit) heating oil tanks <1,100 gallons, government agencies, and non-profit fire districts. For all other tanks, a registration fee is required with this application unless the tank is already registered with the UST program

⚠ All overdue annual UST Registration Fees are required to be paid prior to closure. Closure Certificates will not be issued until all fees have been paid in full

VII. Description of UST(s) and Product Piping to be Closed:

What is being removed in this closure? (•) UST(s) Only ( ) Product Pipeline Only ( ) UST(s) and Product Pipeline

USTs to be Removed

UST #	Installation Date	Date Last Used	Volume	Construction Material	Construction Type	Stored Material
1	7/31/1981	prior to 3/2011	20,000	Unknown	Unknown	Heating Fuel

Piping to be Removed

Piping System #	Piping System Type	Installation Date	Construction Material	Construction Type	Included in Closure?
1					( ) Yes ( ) No
2					( ) Yes ( ) No
3					( ) Yes ( ) No

Will any product or vapor pipelines remain on the property after this closure? ( ) Yes (•) No

VIII. Site Figure

See Attached Site Plan from GZA Site Investigation Report dated April 2019 for illustration of UST Location.

Scale: 1" = ___ ft

Include location of ALL USTs and piping, including those not being removed. Clearly label all tanks with UST # and approximate size. Include dispensers, canopies, nearby structures, utilities, and other pertinent features or obstacles.

NOTE: This Map is from GZA's Site Investigation Report dated April 2019, and is being attached to the UST Closure Application solely for the purpose of providing an illustration of the approximate UST location relative to the property.

All other information included on this map should not be relied upon as current or relevent to the closure application.

IX. Closure Type

(•) Standard Removal
( ) Closure in Place

If a Standard Removal (i.e., tank is removed from the ground) is selected, skip the remaining questions in this section and continue to Section X. If Closure in Place has been selected, this section must be completed in full.

Requests for Closure in Place require the following supplemental documentation:

☐ A Request Letter clearly describing the conditions or obstructions present that support the request for a closure in place (e.g., excavation would damage a nearby foundation, etc.). Include a description of the subsurface sampling plan (if subsurface investigation is proposed).

☐ A Site Figure to scale showing tank location, obstructions and clearance distances. Include proposed subsurface sampling locations (if subsurface investigation is proposed).

☐ Photographs depicting the tank area and obstructions

Which method is proposed for required ancillary testing? (•) Closure Assessment Report ( ) Tank and Line Tightness (heating oil tanks only)

Requests for closure in place are handled on a case-by-case basis. Approval will not be granted where there is no readily apparent limitation to removal of the tank(s). A closure-in-place will require a site investigation along with submittal of a closure assessment report. In the case of heating oil tanks, a passing tightness test performed immediately before the closure in place may be used instead.

X. Closure Information

Where will the Tank(s) be cleaned? (•) On-Site ( ) Off-Site (provide location):

Specify cleaning method: UST has been cleaned. Residual water was pumped out and sludges manually removed/drummed.

Entering any UST is considered confined space entry and is regulated by multiple State and Federal agencies and requires special training, equipment and personnel. It is your responsibility to ensure that the contractors hired meet these requirements, as DEM does not regulate, or take any responsibility or liability for damages, injury, or death associated with confined space entry into a UST

What will happen to the tank(s)? (•) Rendered unfit for use and disposed ( ) Re-used (Must comply with the UST regulations)

If unfit, provide name and address of disposal facility: State Line Scrap Co. at 136 Bacon St., Attleboro, MA (or other approved facility TBD)

If tank(s) will be re-used, provide the name, address, and phone number of the individual to whom the re-used tank(s) will be registered:

Describe how the tank(s) will be emptied prior to excavation: Residual water was removed via pumping/suction using vacuum truck

Describe how residues remaining in the tank(s) will be managed: Sludges were manually removed and placed in drums staged on-Site pending characterization and off-Site disposal

Describe how the tanks(s) will be vented and openings made (if necessary): Inerted with dry ice and cold cutting as necessary

Describe how the tank(s) will be removed from the excavation: Via lifting by excavator/crane

Describe the instruments used to verify that the tank(s) has been properly vented: 4-gas meter for % LEL

The contents of the tank must be sampled using a LEL meter at a minimum of three different points within the tank before declaring it inerted. If the tank is to remain open to the atmosphere, it must be periodically re-sampled to ensure it remains below the LEL

Has the tank(s) ever held a non-petroleum hazardous material?: ○ Yes ◉ No

If Yes, Specify:

Upon completion of this closure, how many UST(s) will be present at the property? 0

Upon completion of this closure, will any product piping or vent piping be present at the property? ○ Yes ◉ No

Will any new UST(s) be installe6d at this site? ○ Yes ◉ No

Have all UST registration fees been paid in full? ◉ Yes ○ No

Are there any Letters of Non-Compliance (LNC) or Notices of Violation (NOV) active for this site? ○ Yes ◉ No

ⓘ Installation of new UST(s), piping, or other components require a separate application and approval process! Contact us at (401) 222-2797 for more information.

XI. Waste Disposal

How will sludges and wastes generated during the cleaning process be disposed of? 392 Gallons of sludge waste was transported to Tradebe Treatment Recycling in Stoughton, MA on 8/6/21 under hazardous waste manifest #: 020677491JJK (see attached).

⚠ Firms transporting tank sludge, waste and/or tank(s) that require further cleaning must be permitted by DEM as Hazardous Waste Transporters.

Name of Waste Hauler: Boston Green Fuel Company DEM Permit #: 921

Street Address: 102 Charles Eldridge Rd. City: Lakeville State: MA

XII. Notification of Local Fire Department(s)

The authorized signature of the local fire department below indicates that the local fire officials have been notified that you are planning to close an underground storage tank(s) at the above location. You must also notify the local fire department of the scheduled closure date after you have confirmed this date with DEM.

Name of Fire Department: Woonsocket Fire Department Phone #: 401-765-2500; Ext. 6657

Printed Name of Official: Mark Montecalvo Title: Captain

Signature: Capt. Mark Montecalvo Date: 8/11/21

⚠ The local fire department must be informed of, and give prior approval to, any cutting of UST(s), including cutting access holes for entry

ⓘ Additional notifications and approvals may be required in some jurisdictions. It is highly recommended that applicants check with the local town/city government to determine if any additional notifications or approvals are required.

XIII. Certification By Tank Owner

⚠ This application MUST be signed by the registered UST or Facility OWNER only. If the registered owner is unable to sign legal documents, you must provide legally binding documentation which clearly gives permission for the undersigned to represent the owner.

I certify under penalty of law that this application and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. I understand that all records pertaining to the closure are required to be maintained in perpetuity. I understand that any changes to this application must receive explicit approval from RI DEM, and failure to adhere to the methods listed in this application may result in substantial administrative penalties. I have contacted my local fire department, town or city government, and utilities and have obtained necessary permits or permissions, and fulfilled all requirements. I understand DEM does not regulate site safety and it is my responsibility to ensure that all contractors and other parties involved are properly licensed, insured, and capable of performing activities in a safe and responsible manner consistent with local, State, and Federal law. I understand that DEM inspectors may, at their discretion, notify other regulatory authorities, including, but not limited to, OSHA, RI Fire Marshall, fire chief where the closure is occuring, and the RI Dept of Labor and Training. I understand that in the event of environmental releases, property damage, injury, or death, I may be liable as owner of the property. Based on reasonable inquiry and due diligence, the information submitted therein is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

* Owner Name (Please Print): Bianca Policastro Owner Phone: 401-767-9237

* Owner Signature: BP Date Signed: 8/12/2021

Last Updated 4/1/2020

* City of Woonsocket has control over the property via a tax lien, and Bianca Policastro (Director of Planning and Development) is signing this Application on behlaf of the City. The absentee property owner is Seville Associates, c/o Robert Piccotti Jr. Previous attempts to reach the owner at the address on record with the City have failed.

VANASSE HANGEN BRUSTLIN, INC.
1 CEDAR STREET, STE 400
PROVIDENCE, RI 02903

REMITTANCE ADVICE
15348.00

5-7017/2110

1205

PAY Seventy-Five and 00/100 DOLLARS

CHECK AMOUNT

DATE	TO THE ORDER OF	DESCRIPTION	CHECK NO.	
7/6/21	DEM - office of Mgmt. Services 235 Promenade St. Providence, RI 02908	NOT permanent closure fee	1205	$ 75.00

VOID AFTER 90 DAYS

Citizens Bank®

McBee® One-Writes

⑈001205⑈ ⑆211070175⑆ 133948054 6⑈

90642340

Please print or type. Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: RIP0000038729
2. Page 1 of: 1
3. Emergency Response Phone: 8005677455
4. Manifest Tracking Number: 020677491 JJK

GENERATOR

5. Generator's Name and Mailing Address
CITY OF WOONSOCKET
169 MAIN ST
WOONSOCKET RI 02895
Generator's Phone: 401 3284555

Generator's Site Address (if different than mailing address)
CITY OF WOONSOCKET
117 FIRST AVE
WOONSOCKET RI 02895

6. Transporter 1 Company Name: BOSTON GREEN FUEL COMPANY
U.S. EPA ID Number: MAC300098550

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
TRADEBE TREATMENT RECYCLING OF STOUGHTO
441-R CANTON STREET
STOUGHTON MA 02072
Facility's Phone: 781 297-3530
U.S. EPA ID Number: MAD062179890

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
	1. STATE REGULATED LIQUID WASTE NOT DOT REGULATED (OILY WATER)(MA99)	001	TT	392	G	MA99	RQ14	
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information: 1)(L) PROFILE: P002908004LHLM ERG#128
croberts@denlube.com

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Kevin Pratt, City Planner, City of Woonsocket
Signature: K Pratt
Month: 8 Day: 5 Year: 21

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: IRWIN - CLU?
Signature:
Month: 8 Day: 5 Year: 21

Transporter 2 Printed/Typed Name
Signature
Month: Day: Year:

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H135			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Kristen Marinelli
Signature:
Month: 8 Day: 6 Year: 21

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete. **TRANSPORTER COPY**

Appendix B
UST Closure Report Checklist

UST Closure Assessment Report Checklist

Office of Land Revitalization and Sustainable Materials Maanagement

Complete this form in its entirety and include with all Closure Assessment Reports. This checklist is intended to aid in the submission process and ensure reports contain all of the information required in Rules 1.14(D)(10)(b) and (c). This form does not replace the closure assessment report, and it is intended for submission to RIDEM only.

Facility Name:	Former Seville Dyeing Company / Seville Associates	UST Facility ID#:	UST-3479
Facility Address:	229 First Avenue	LUST Case #:	3975-ST
City/Town:	Woonsocket	Closure Date:	Sep 1, 2021

Name of DEM Project Manager or Inspector: Joseph Cunningham

Directions: For each requirement listed below, enter the page number where the relevant information can be found in the Closure Assessment Report. Failure to include page numbers may delay review and approval. If an item is not applicable, simply state that it is not applicable in the comments field and provide an explanation in the Closure Assessment Report.

Included?	Rule Description	Page #	Comments
☑	A background description of the site including location, use of the facility, and a summary of any available tank and line leak detection results [Rule 1.14(D) (10)(b)(1)]	3	Continued onto Page 4.
☑	A locus map using the U.S. Geological Survey 7.5 minute quadrangle map [Rule 1.14(D)(10)(b)(2)]	-	Figure 1
☑	A detailed site plan showing the location of all former or existing USTs, piping, dispensers, buildings, utilities, monitoring wells, drinking water wells, soil screening locations, soil sampling locations and any other pertinent site features [Rule 1.14 (D)(10)(b)(3)]	-	Figure 2 and Figure 3
☑	Descriptions of all USTs closed including size, construction type, depth to tank bottom, age and stored material [Rule 1.14(D)(10) (b)(4)]	4	UST Summary Table
☑	A description of the condition of the USTs and piping including extent of corrosion, identification of any holes and any other indication of leakage [Rule 1.14(D)(10)(b)(5)]	5	Photographs provided in Appendix E.
☑	A description of the soil conditions in the excavation zone such as soil classification, gradation, extent of compaction and any other notable physical characteristics [Rule 1.14(D)(10)(b)(7)]	6	Section 2.5
☑	A description of soil contamination, including visual and olfactory observations, field screening and laboratory analytical methods used and all results [Rule 1.14 (D)(10)(b)(8)]	-	Pages 6-9
☑	A description of groundwater encountered in the excavation zone including depth to water and appearance with respect to the presence of any sheen or free product [Rule1.14(D)(10)(b)(9)]	-	Sections 3.2 and 3.4.
☑	A description of groundwater obtained from monitoring or observation wells, where present, including any gauging results [Rule 1.14(D)(10) (b)(10)]	-	Sections 3.2 and 3.4. Pages 7-8
☑	Identification of the DEM groundwater classification at the site and surrounding areas, the availability of public water and presence of private or public wells [Rule 1.14(D)(10) (b)(11)]	3	Section 2.1.

Included?	Rule Description	Page #	Comments
☑	Any potential receptors such as, but not limited to, surface waters, basements, storm drains, sewer lines or other utilities where contamination is identified [Rule 1.14(D)(10)(b)(12)]	3	Section 2.1
☑	Description of the management of all excavated contaminated soil, including proper cover while stockpiled on-site and documentation of proper disposal [Rule 1.14(D)(10)(b)(13)]	5	Section 2.4.
☑	Documentation of proper disposal of the tank(s) and the residual sludge material [Rule 1.14(D)(10)(b)(14)]	C	Appendix C
☑	Any other information or documentation required to complete the closure assessment [Rule 1.14(D)(10)(b)(15)]	-	Summaries of supplemental groundwater/soil analytical results provided.
☑	Conclusions as to whether a release has occurred and recommendations for further investigation and/or remediation. [Rule 1.14(D)(10)(b)(16)]	10	Section 5
☑	A statement signed by the registered professional engineer, or the certified professional geologist, or the registered professional geologist, who prepared the report or who directly supervised preparation of the report, certifying the accuracy of the information contained in the report [Rule 1.14(D)(10)(c)(1)]	12	Section 6
☑	Photographic documentation of the condition of each tank removed [Rule 1.14(D)(10)(b)(6)]	E	Appendix E
☑	A statement signed by the facility owner that the report is complete and accurate. [Rule 1.14(D)(10)(c)(2)]	12	See note on Page 12

Prepared by:

Company Name: VHB

Mailing Address: 1 Cedar Street

City/Town: Providence State: Rhode Island

Phone #: E-mail: wtaber@vhb.com

Contact Name: William Taber, PE

Signature: William S. Taber Submission Date: 5/16/2022

Appendix C
UST Removal Documentation

The Commonwealth of Massachusetts

Department of Fire Services – Office of the State Fire Marshal

RECEIPT OF DISPOSAL OF UNDERGROUND STEEL STORAGE TANK FORMERLY CONTAINING FLAMMABLE LIQUIDS

NAME AND ADDRESS OF APPROVED TANK YARD: Allied Recycling Center, Inc.
1901 Main Street
Walpole, MA 02081

Approved Tank Yard Number: 0015

Tank Yard Ledger Number (527 CMR 1.00:66.21.7.8.2): 2021-0155

I certify under penalty of law that I have personally examined the underground steel storage tank delivered to this "approved tank yard" by (firm, corporation or partnership) Strategic Env.
and accepted same in conformance with 527 CMR 1.00:66.21.7.7 Provisions for Approving Underground Steel Storage Tank Dismantling Yards. A valid permit was issued by the head of the LOCAL fire department FDID# N/A
to transport this tank to this yard.

Name and official title of approved tank yard owner or owners authorized representative:

Signature: _____ Title: Scale Date signed: 9/9/21

TANK DATA:	TANK REMOVED FROM:
Gallons: 20,000	No. and Street: 229 First St
Previous contents: Fuel Oil	City and Town: Woonsocket, RI
Diameter:	Fire Dept. Permit #:
Length:	Notes:
Date Received: 9/1/21	
Serial # (if available):	
Tank I.D. # (Form FP-290):	

EACH TANK MUST HAVE A RECEIPT OF DISPOSAL

Owner/Operator is responsible for notifying the Department of Environmental Protection:

Department of Environmental Protection
Bureau of Waste Prevention - UST Program
Boston, MA 02112

This signed receipt of disposal must be returned to the head of the local fire department.

90642340

Please print or type. Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: RIP0000038729
2. Page 1 of: 1
3. Emergency Response Phone: 8005677455
4. Manifest Tracking Number: 020677491 JJK

GENERATOR

5. Generator's Name and Mailing Address
CITY OF WOONSOCKET
169 MAIN ST
WOONSOCKET RI 02895
Generator's Phone: 401 3284555

Generator's Site Address (if different than mailing address)
CITY OF WOONSOCKET
117 FIRST AVE
WOONSOCKET RI 02895

6. Transporter 1 Company Name: BOSTON GREEN FUEL COMPANY
U.S. EPA ID Number: MAC300098550

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
TRADEBE TREATMENT RECYCLING OF STOUGHTO
441-R CANTON STREET
STOUGHTON MA 02072
Facility's Phone: 781 297-3530
U.S. EPA ID Number: MAD062179890

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
	1. STATE REGULATED LIQUID WASTE NOT DOT REGULATED (OILY WATER)(MA99)	001	TT	392	G	MA99	RQ14	
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information: 1)(L) PROFILE: P002908004LHLM ERG#128
croberts@denlube.com

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Kevin Pratt, City Planner, City of Woonsocket
Signature: K Pratt
Month: 8 Day: 5 Year: 21

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: IRWIN - CLU?
Signature:
Month: 8 Day: 5 Year: 21

Transporter 2 Printed/Typed Name
Signature
Month: Day: Year:

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H135			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Kristen Marinelli
Signature:
Month: 8 Day: 6 Year: 21

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete. **TRANSPORTER COPY**

Appendix D
Soil Boring Logs

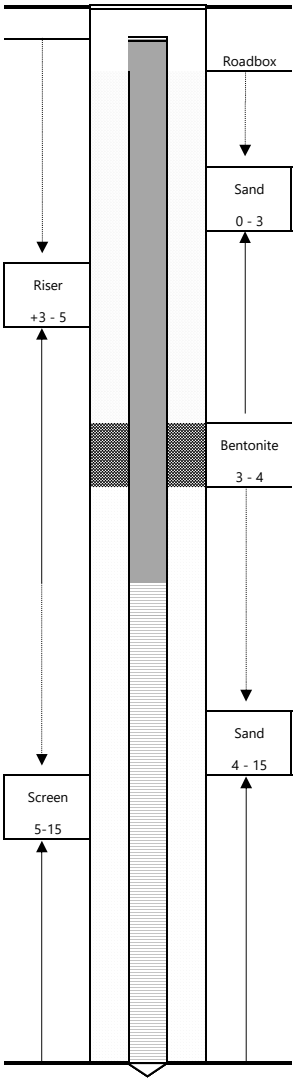
CLIENT:	RIDEM
PROJECT:	Seville Dye
PROJECT #:	15348.00
DIGSAFE:	20220605113
DRILLER:	Technical Drilling Services
DRILLING DATE:	2/18/2022
DRILLING METHOD:	Cont.
SAMPLING METHOD:	Grab
PRE-CLEAR DEPTH:	N/A
LOGGED BY:	TJP

LOCATION ID:	**VHB-1**
ESTIMATED DEPTH TO WATER (ft.):	Dry
TOTAL BORING DEPTH (ft.):	15
BOTTOM OF WELL DEPTH (ft.):	15
PVC DIAMETER, SLOT:	4
RISER LENGTH (ft.):	8
SCREEN LENGTH (ft.):	10
FINISH:	Standpipe
REFUSAL ENCOUNTERED:	15

NOTES/SKETCH:

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)	SOIL DESCRIPTION
		- / - / - / -			Augered down to 10', all backfill until that point
10-12		4 / 4 / 6 / 4	11	9.1	Brown fine to medium SAND, Silt, loose, non-plastic, petroleum-like odor, some black stains throughout, dry
12-15		- / - / - / -	N/A	139.4	PULLED OFF OF AUGER Black fine SAND, Silt, some medium sands, strong petroleum-like odor, highly saturated in oil

WELL CONSTRUCTION (ft.)



SOIL DESCRIPTIONS:

1) PRIMARY GRAIN SIZE
(BOULDERS, COBBLES,GRAVEL, SAND (COARSE, FINE) SILT, CLAY)
2) SECONDARY GRAIN SIZE
(TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)
4) MOISTURE (WET, MOIST, DRY)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)
6) ANGULARITY
(V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
7) COLOR (GREY, BROWN, etc.)
8) STRUCTURES, STAINING, ALTERATION
(LAMINATED, BEDDED, IRON STAINED, ETC.)
9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY,CHANNEL DEPOSIT, etc.)

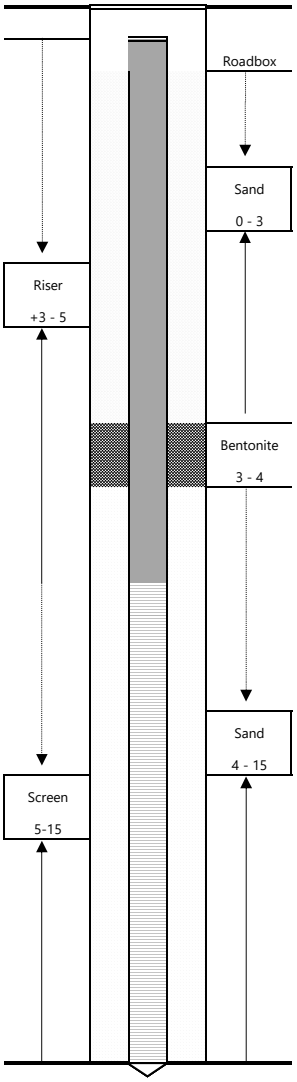
CLIENT:	RIDEM
PROJECT:	Seville Dye
PROJECT #:	15348.00
DIGSAFE:	20220605113
DRILLER:	Technical Drilling Services
DRILLING DATE:	2/17/2022
DRILLING METHOD:	Cont.
SAMPLING METHOD:	Grab
PRE-CLEAR DEPTH:	N/A
LOGGED BY:	TJP

LOCATION ID:	**VHB-2**
ESTIMATED DEPTH TO WATER (ft.):	9
TOTAL BORING DEPTH (ft.):	15
BOTTOM OF WELL DEPTH (ft.):	15
PVC DIAMETER, SLOT:	4
RISER LENGTH (ft.):	8
SCREEN LENGTH (ft.):	10
FINISH:	Standpipe
REFUSAL ENCOUNTERED:	15.5

NOTES/SKETCH:

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)	SOIL DESCRIPTION
0-2		6 12 13 11	14	0.4	Brown, fine to medium SAND, Silt, loose, non-plastic, no odor, orange stains throughout, few rocks
5-7		20 11 13 11	4	0.3	Brown, fine to medium SAND, Silt, loose, non-plastic, slight petroleum-like odor, orange stains throughout, rock at bottom
10-12		9 10 14 15	15	1.4	Tan medium to coarse SAND, some fine Sand, silt, loose, non-plastic, some sheening, slight petroleum-like odor, saturated
15-17		8 120/4" - -	7	0.2	Grey SILT, fine Sand, loose, non-plastic, no stain, slight petroluem-like odor, saturated, weathered rock at bottom of spoon

WELL CONSTRUCTION (ft.)



SOIL DESCRIPTIONS:

1) PRIMARY GRAIN SIZE
(BOULDERS, COBBLES,GRAVEL, SAND (COARSE, FINE) SILT, CLAY)
2) SECONDARY GRAIN SIZE
(TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)
4) MOISTURE (WET, MOIST, DRY)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)
6) ANGULARITY
(V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
7) COLOR (GREY, BROWN, etc.)
8) STRUCTURES, STAINING, ALTERATION
(LAMINATED, BEDDED, IRON STAINED, ETC.)
9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY,CHANNEL DEPOSIT, etc.)

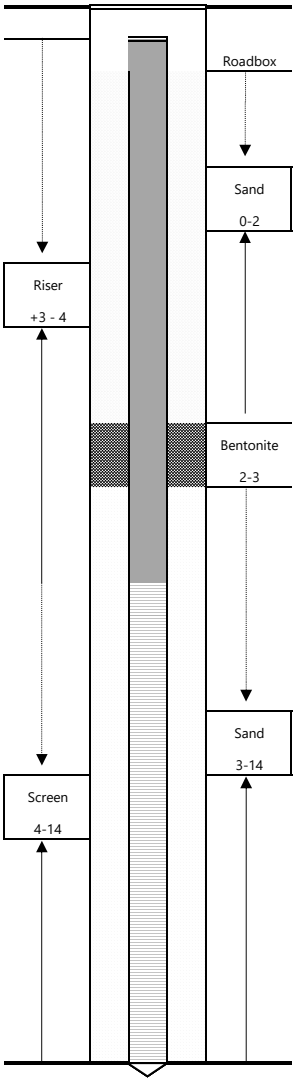
CLIENT:	RIDEM
PROJECT:	Seville Dye
PROJECT #:	15348.00
DIGSAFE:	20220605113
DRILLER:	Technical Drilling Services
DRILLING DATE:	2/17/2022
DRILLING METHOD:	Cont.
SAMPLING METHOD:	Grab
PRE-CLEAR DEPTH:	N/A
LOGGED BY:	TJP

LOCATION ID:	**VHB-3**
ESTIMATED DEPTH TO WATER (ft.):	9
TOTAL BORING DEPTH (ft.):	14
BOTTOM OF WELL DEPTH (ft.):	14
PVC DIAMETER, SLOT:	2
RISER LENGTH (ft.):	7
SCREEN LENGTH (ft.):	10
FINISH:	Standpipe
REFUSAL ENCOUNTERED:	14

NOTES/SKETCH:

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)	SOIL DESCRIPTION
0-2		6 6 15 16	15	1.1	Tan, grey fine to medium SAND, Silt, loose, non-plastic, no odor/stain, brick at bottom
5-7		4 4 5 5	1	0.6	ROCK, wood, plastic, black staining, no odor, wet
10-12		2 37 120/2" -	7	6.1	5" Black fine to medium SAND, Silt, loose, non-plastic, no odor, black stains, wet 2" CONCRETE
15-17		120/3" - - -	4	3.4	Grey SILT, fine Sand, medium density, low plasticity, no odor/stain, wet, weathered rock in bottom of spoon

WELL CONSTRUCTION (ft.)



SOIL DESCRIPTIONS:

1) PRIMARY GRAIN SIZE
(BOULDERS, COBBLES,GRAVEL, SAND (COARSE, FINE) SILT, CLAY)
2) SECONDARY GRAIN SIZE
(TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)
4) MOISTURE (WET, MOIST, DRY)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)
6) ANGULARITY
(V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
7) COLOR (GREY, BROWN, etc.)
8) STRUCTURES, STAINING, ALTERATION
(LAMINATED, BEDDED, IRON STAINED, ETC.)
9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY,CHANNEL DEPOSIT, etc.)

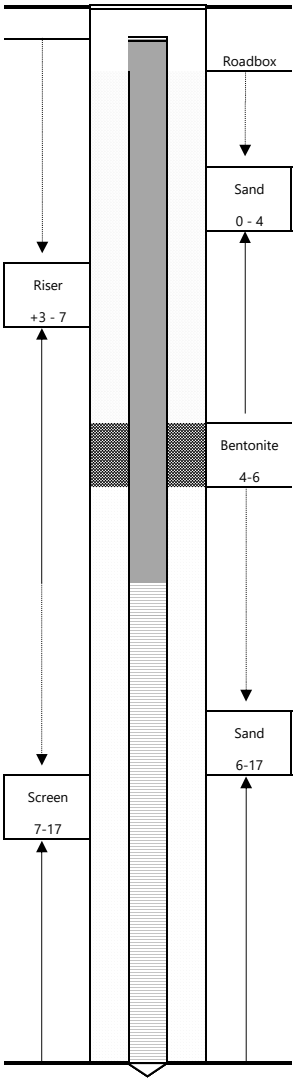
CLIENT:	RIDEM
PROJECT:	Seville Dye
PROJECT #:	15348.00
DIGSAFE:	20220605113
DRILLER:	Technical Drilling Services
DRILLING DATE:	2/17/2022
DRILLING METHOD:	Cont.
SAMPLING METHOD:	Grab
PRE-CLEAR DEPTH:	N/A
LOGGED BY:	TJP

LOCATION ID:	**VHB-4/VHB-4A**
ESTIMATED DEPTH TO WATER (ft.):	9
TOTAL BORING DEPTH (ft.):	17
BOTTOM OF WELL DEPTH (ft.):	17
PVC DIAMETER, SLOT:	2
RISER LENGTH (ft.):	10
SCREEN LENGTH (ft.):	10
FINISH:	Standpipe
REFUSAL ENCOUNTERED:	7.5, offset, then 17

NOTES/SKETCH:
offset 5' East towards river, rename VHB-4A

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)	SOIL DESCRIPTION
0-2	VHB-4	9 34 21 19	17	0.4	10" Brown fine to medium SAND, Silt, loose, non-plastic, no odor, orange staining throughout 7" CONCRETE
5-7	VHB-4	9 7 9 8	17	42.4	3" CONCRETE 11" Tan coarse SAND, medium Sand, loose, non-plastic, no odor/stain 3" Black fine to medium SAND, Silt, loose, non-plastic, black stains, petroleum-;like odor, dry
10-12	VHB-4A	11 15 15 16	12	35.8	Grey SILT, fine Sand, medium density, low plasticity, no odor/stain, wet
15-17	VHB-4A	17 198 13 120/5"	12	2.9	Grey SILT, fine Sand, medium density, low plasticity, no odor/stain, wet, weathered rock in bottom of spoon

WELL CONSTRUCTION (ft.)



SOIL DESCRIPTIONS:

1) PRIMARY GRAIN SIZE
(BOULDERS, COBBLES,GRAVEL, SAND (COARSE, FINE) SILT, CLAY)
2) SECONDARY GRAIN SIZE
(TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)
4) MOISTURE (WET, MOIST, DRY)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)
6) ANGULARITY
(V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
7) COLOR (GREY, BROWN, etc.)
8) STRUCTURES, STAINING, ALTERATION
(LAMINATED, BEDDED, IRON STAINED, ETC.)
9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY,CHANNEL DEPOSIT, etc.)

TEST BORING/MONITORING WELL LOG

CLIENT:	RIDEM
PROJECT:	Seville Dye
PROJECT #:	15348.00
DIGSAFE:	20220605113
DRILLER:	Technical Drilling Services
DRILLING DATE:	2/18/2022
DRILLING METHOD:	Cont.
SAMPLING METHOD:	Grab
PRE-CLEAR DEPTH:	N/A
LOGGED BY:	TJP

LOCATION ID:	**VHB-5**
ESTIMATED DEPTH TO WATER (ft.):	N/A
TOTAL BORING DEPTH (ft.):	11.5
BOTTOM OF WELL DEPTH (ft.):	N/A
PVC DIAMETER, SLOT:	N/A
RISER LENGTH (ft.):	N/A
SCREEN LENGTH (ft.):	N/A
FINISH:	N/A
REFUSAL ENCOUNTERED:	11.5

NOTES/SKETCH:
At refusal, all white rock, could not advance spoon at 15'

DEPTH (ft.)	LAB SAMPLE	BLOWS (per 6-in)	RECOVERY (in.)	PID (ppmV)	SOIL DESCRIPTION	WELL CONSTRUCTION (ft.)
0-2		2 9 14 21	19	0.2	Brown fine to medium SAND, Silt, rock, vegetation, loose, non-plastic, no stain, organic-like odor, brick, ceramics, dry	
5-7		9 7 6 5	6	0.2	Brown fine to medium SAND, Silt, loose, non-plastic, no odor/stain, wet, rock in tip of spoon	
10-12		8 41 100/1" -	10	1.3	Grey ROCK, some fine Sand, silt, dry	

SOIL DESCRIPTIONS:

1) PRIMARY GRAIN SIZE	6) ANGULARITY
(BOULDERS, COBBLES,GRAVEL, SAND (COARSE, FINE) SILT, CLAY)	(V. ANGULAR, ANG, SUB ANG, SUB ROUNDED, ROUNDED, WELL ROUNDED)
2) SECONDARY GRAIN SIZE	7) COLOR (GREY, BROWN, etc.)
(TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%)	8) STRUCTURES, STAINING, ALTERATION
3) PLASTICITY (VERY HIGH, HIGH, MED., LOW, SLIGHT, NON-PLASTIC)	(LAMINATED, BEDDED, IRON STAINED, ETC.)
4) MOISTURE (WET, MOIST, DRY)	9) ODORS/ORGANIC CONTENT (PETROLEUM, SEPTIC)
5) DENSITY (LOOSE, MEDIUM DENSE, HARD)	10) GEOLOGICAL INTERPRETATION (I.E. FILL/TILL, GLACIAL CLAY,CHANNEL DEPOSIT, etc.)

Appendix E
Photographic Log

Photography Log

PROJECT NUMBER

15348.00

CLIENT

Rhode Island Department of Environmental Management

235 Promenade Street

Providence, RI 02908

LOCATION

Former Seville Dyeing Co.

229 First Avenue

Woonsocket, RI

NO. 1 / 8.31.2021 7:38 AM

DESCRIPTION

Interface probe covered in oil following gauging of a monitoring well located along the northern edge of the UST, within the concrete bunker.

NO. 2 / 8.31.2021 8:17 AM

DESCRIPTION

UST bunker as depicted from First Avenue to the west prior to excavation of the tank.

NO. 3 / 8.31.2021 11:00 AM

DESCRIPTION

Fuel oil supply and return piping located at the eastern edge of the UST bunker. Stained soil is depicted beneath the piping run.

NO. 4 / 8.31.2021 11:17 AM

DESCRIPTION

Eastern edge of the UST excavation showing the pipe penetrations and wall of the bunker.

NO. 5 / 8.31.2021 12:32 PM

DESCRIPTION

Photo of the UST during excavation depicted from the west looking eastward. A hole in the top of the UST can be observed in the foreground of the photo. This hole appears to have been accidentally created by the excavator bucket during tank excavation.

NO. 6 / 8.31.2021 1:14 PM

DESCRIPTION

Stained soil located to the north of the bunker. Stained soils were presumed to be impacted by fuel oil and were stockpiled atop poly sheeting.

NO. 7 / 8.31.2021 2:07 PM

DESCRIPTION

Fill port area along the western edge of the tank. Stained soil was observed surrounding the fill port.

NO. 8 / 8.31.2021 3:09 PM

DESCRIPTION

UST as depicted from the west looking eastward prior to removal from the excavation.

NO. 9 / 8.31.2021 3:09 PM

DESCRIPTION

Photo of the UST excavation. The UST is depicted in the left side of the photo. In the center of the photo the western wall of the bunker is shown. Beyond the bunker wall is a sidewalk followed by First Avenue.

NO. 10 / 8.31.2021 3:21 PM

DESCRIPTION

Stockpiled soil covered by poly sheeting at the end of the first day of UST removal activities.

NO. 11 / 9.1.2021 8:32 AM

DESCRIPTION

UST bunker as depicted from the surrounding area. Note that the bunker is located approximately 15′ higher than surrounding grade. The pipe penetrations can be seen through the center of the bunker wall.

NO. 12 / 9.1.2021 11:12 AM

DESCRIPTION

Rigging the UST for removal from the excavation.

NO. 15 / 9.1.2021 11:23 AM

DESCRIPTION

UST following removal from the excavation. Note corrosion throughout the surface of the UST. Also note oil staining along near sidewall of UST.

NO. 16 / 9.1.2021 11:23 AM

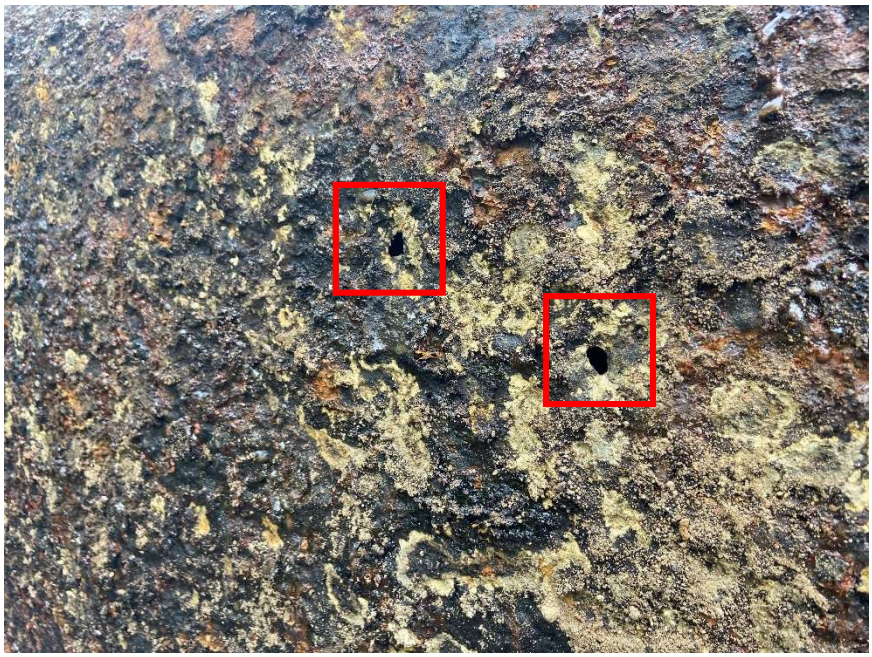
DESCRIPTION

UST following removal from the excavation. Note corrosion throughout the surface of the UST. Also note oil staining along near sidewall of UST.

NO. 17 / 9.1.2021 11:29 AM

DESCRIPTION

Close up of UST surface. Note severe corrosion and pitting. Pinhole in UST has been highlighted.



NO. 18 / 9.1.2021 11:30 AM

DESCRIPTION

Close up of UST surface. Note severe corrosion and pitting. Pinhole in UST has been highlighted.

NO. 19 / 9.1.2021 12:00 PM

DESCRIPTION

UST excavation following removal of the tank. Note product at bottom of excavation and stained soil along eastern sidewall. The depth of the product shown in this photo is approximately 15′ below the bunker grade.

NO. 20 / 9.1.2021 1:07 PM

DESCRIPTION

Excavation during backfilling. Stained soils were placed into the excavation first to avoid cross-contamination of soil presumed to be clean.

NO. 21 / 9.1.2021 1:38 PM

DESCRIPTION

Installing poly sheeting to demarcate stained soil from soil presumed to be clean.

NO. 22 / 9.8.2021 1:51 PM

DESCRIPTION

Depiction of the bunker from First Avenue following backfilling and restoration.

NO. 23 / 9.1.2021 1:38 PM

DESCRIPTION

Groundwater bailed from VHB-2 depicting an oily sheen atop the water column

NO. 24 / 9.1.2021 1:38 PM

DESCRIPTION

Purged groundwater from VHB-2 depicting oily globules sheen atop the purged liquid.

NO. 25 / 9.8.2021 1:51 PM

DESCRIPTION

Depiction of groundwater bailed from VHB-4A.

NO. 26 / 9.8.2021 1:51 PM

DESCRIPTION

Purged groundwater from VHB-4A depicting an oily sheen atop the purged liquid.

Appendix F
Laboratory Analytical Reports

CERTIFICATE OF ANALYSIS

Tyler Phillips
Vanasse Hangen Brustlin, Inc.
1 Cedar Street Suite 400
Providence, RI 02903

RE: Seville Dye Woonsocket RI (15348.00)
ESS Laboratory Work Order Number: 22B0615

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

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 3:42 pm, Mar 01, 2022

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

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

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22B0615

SAMPLE RECEIPT

The following samples were received on February 18, 2022 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
22B0615-01	VHB-1 10-12 ft	Soil	8100M
22B0615-02	VHB-1 13-15 ft	Soil	8100M
22B0615-03	VHB-2 0-2 ft	Soil	8100M
22B0615-04	VHB-2 5-7 ft	Soil	8100M
22B0615-05	VHB-2 10-12 ft	Soil	8100M
22B0615-06	VHB-2 15-17 ft	Soil	8100M
22B0615-07	VHB-3 0-2 ft	Soil	8100M
22B0615-08	VHB-3 5-7 ft	Soil	8100M
22B0615-09	VHB-3 10-12 ft	Soil	8100M
22B0615-10	VHB-3 14-16 ft	Soil	8100M
22B0615-11	VHB-4 0-2ft	Soil	8100M
22B0615-12	VHB-4 5-7ft	Soil	8100M
22B0615-13	VHB-4A 10-12ft	Soil	8100M
22B0615-14	VHB-4A 15-17ft	Soil	8100M
22B0615-15	VHB-5 0-2ft	Soil	8100M
22B0615-16	VHB-5 5-7ft	Soil	8100M
22B0615-17	VHB-5 10-12ft	Soil	8100M
22B0615-18	VHB-3-X	Soil	8100M

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22B0615

PROJECT NARRATIVE

No unusual observations noted.

End of Project Narrative.

DATA USABILITY LINKS

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

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22B0615

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

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

Prep Methods

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

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

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: VHB-1 10-12 ft
Date Sampled: 02/18/22 09:28
Percent Solids: 93
Initial Volume: 20
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 22B0615
ESS Laboratory Sample ID: 22B0615-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TLW
Prepared: 2/18/22 17:10

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**1620** (405)		8100M		10	02/24/22 21:14	D2B0458	DB21808

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*106 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: VHB-1 13-15 ft
Date Sampled: 02/18/22 10:00
Percent Solids: 93
Initial Volume: 20.1
Final Volume: 2
Extraction Method: 3546

ESS Laboratory Work Order: 22B0615
ESS Laboratory Sample ID: 22B0615-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TLW
Prepared: 2/18/22 17:10

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**31400** (806)		8100M		10	02/24/22 21:48	D2B0456	DB21808

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*117 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: VHB-2 0-2 ft
Date Sampled: 02/17/22 11:53
Percent Solids: 90
Initial Volume: 19.5
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 22B0615
ESS Laboratory Sample ID: 22B0615-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TLW
Prepared: 2/18/22 17:10

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**258** (85.8)		8100M		2	02/24/22 21:48	D2B0458	DB21808

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*106 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: VHB-2 5-7 ft
Date Sampled: 02/17/22 12:09
Percent Solids: 83
Initial Volume: 19.6
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 22B0615
ESS Laboratory Sample ID: 22B0615-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TLW
Prepared: 2/18/22 17:10

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**194** (92.2)		8100M		2	02/24/22 22:22	D2B0458	DB21808

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*104 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: VHB-2 10-12 ft
Date Sampled: 02/17/22 12:52
Percent Solids: 86
Initial Volume: 20.5
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 22B0615
ESS Laboratory Sample ID: 22B0615-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TLW
Prepared: 2/18/22 17:10

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	ND (42.7)		8100M		1	02/24/22 20:06	D2B0456	DB21808

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*86 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: VHB-2 15-17 ft
Date Sampled: 02/17/22 13:09
Percent Solids: 79
Initial Volume: 20.1
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 22B0615
ESS Laboratory Sample ID: 22B0615-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TLW
Prepared: 2/18/22 17:10

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	ND (47.4)		8100M		1	02/24/22 20:40	D2B0456	DB21808

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*99 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: VHB-3 0-2 ft
Date Sampled: 02/17/22 10:35
Percent Solids: 90
Initial Volume: 20.5
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 22B0615
ESS Laboratory Sample ID: 22B0615-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TLW
Prepared: 2/18/22 17:10

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**104** (81.6)		8100M		2	02/24/22 22:56	D2B0458	DB21808

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*93 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: VHB-3 5-7 ft
Date Sampled: 02/17/22 10:47
Percent Solids: 88
Initial Volume: 20.3
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 22B0615
ESS Laboratory Sample ID: 22B0615-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TLW
Prepared: 2/18/22 17:10

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**100** (84.3)		8100M		2	02/24/22 23:30	D2B0458	DB21808

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*111 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: VHB-3 10-12 ft
Date Sampled: 02/17/22 10:58
Percent Solids: 85
Initial Volume: 19.9
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 22B0615
ESS Laboratory Sample ID: 22B0615-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TLW
Prepared: 2/18/22 17:30

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**365** (44.3)		8100M		1	02/24/22 18:57	D2B0458	DB21845

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*89 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: VHB-3 14-16 ft
Date Sampled: 02/17/22 11:15
Percent Solids: 76
Initial Volume: 20.1
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 22B0615
ESS Laboratory Sample ID: 22B0615-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TLW
Prepared: 2/18/22 17:30

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	ND (48.8)		8100M		1	02/24/22 21:14	D2B0456	DB21845

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*91 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: VHB-4 0-2ft
Date Sampled: 02/17/22 08:36
Percent Solids: 89
Initial Volume: 20.1
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 22B0615
ESS Laboratory Sample ID: 22B0615-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TLW
Prepared: 2/18/22 17:30

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**241** (42.1)		8100M		1	02/24/22 19:32	D2B0458	DB21845

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

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: VHB-4 5-7ft
Date Sampled: 02/17/22 08:47
Percent Solids: 93
Initial Volume: 20.1
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 22B0615
ESS Laboratory Sample ID: 22B0615-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TLW
Prepared: 2/18/22 17:30

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**7020** (403)		8100M		10	02/23/22 18:47	D2B0410	DB21845

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*114 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: VHB-4A 10-12ft
Date Sampled: 02/17/22 09:20
Percent Solids: 86
Initial Volume: 19.4
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 22B0615
ESS Laboratory Sample ID: 22B0615-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TLW
Prepared: 2/18/22 17:30

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**111** (45.2)		8100M		1	02/23/22 19:22	D2B0410	DB21845

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

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: VHB-4A 15-17ft
Date Sampled: 02/17/22 09:35
Percent Solids: 86
Initial Volume: 19.8
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 22B0615
ESS Laboratory Sample ID: 22B0615-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TLW
Prepared: 2/18/22 17:30

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	ND (44.2)		8100M		1	02/23/22 19:55	D2B0410	DB21845

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*89 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: VHB-5 0-2ft
Date Sampled: 02/18/22 10:45
Percent Solids: 88
Initial Volume: 20.1
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 22B0615
ESS Laboratory Sample ID: 22B0615-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TLW
Prepared: 2/18/22 17:30

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**175** (84.8)		8100M		2	02/23/22 20:30	D2B0410	DB21845

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

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: VHB-5 5-7ft
Date Sampled: 02/18/22 10:58
Percent Solids: 73
Initial Volume: 19.9
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 22B0615
ESS Laboratory Sample ID: 22B0615-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TLW
Prepared: 2/18/22 17:30

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**328** (103)		8100M		2	02/23/22 21:04	D2B0410	DB21845

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*94 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: VHB-5 10-12ft
Date Sampled: 02/18/22 11:10
Percent Solids: 90
Initial Volume: 20.1
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 22B0615
ESS Laboratory Sample ID: 22B0615-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TLW
Prepared: 2/18/22 17:30

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**237** (83.1)		8100M		2	02/23/22 21:38	D2B0410	DB21845

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*86 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: VHB-3-X
Date Sampled: 02/17/22 10:41
Percent Solids: 90
Initial Volume: 20.5
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 22B0615
ESS Laboratory Sample ID: 22B0615-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TLW
Prepared: 2/18/22 17:30

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**323** (81.4)		8100M		2	02/23/22 22:13	D2B0410	DB21845

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*90 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22B0615

Quality Control Data

8100M Total Petroleum Hydrocarbons

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch DB21808 - 3546										
Blank										
Decane (C10)	ND	0.2	mg/kg wet							
Docosane (C22)	ND	0.2	mg/kg wet							
Dodecane (C12)	ND	0.2	mg/kg wet							
Eicosane (C20)	ND	0.2	mg/kg wet							
Hexacosane (C26)	ND	0.2	mg/kg wet							
Hexadecane (C16)	ND	0.2	mg/kg wet							
Nonadecane (C19)	ND	0.2	mg/kg wet							
Nonane (C9)	ND	0.2	mg/kg wet							
Octacosane (C28)	ND	0.2	mg/kg wet							
Octadecane (C18)	ND	0.2	mg/kg wet							
Tetracosane (C24)	ND	0.2	mg/kg wet							
Tetradecane (C14)	ND	0.2	mg/kg wet							
Total Petroleum Hydrocarbons	ND	37.5	mg/kg wet							
Triacontane (C30)	ND	0.2	mg/kg wet							
Surrogate: O-Terphenyl	*4.15*		mg/kg wet	*5.000*		*83*	*40-140*			
LCS										
Decane (C10)	1.7	0.2	mg/kg wet	2.500		67	40-140			
Docosane (C22)	2.0	0.2	mg/kg wet	2.500		78	40-140			
Dodecane (C12)	1.7	0.2	mg/kg wet	2.500		69	40-140			
Eicosane (C20)	1.9	0.2	mg/kg wet	2.500		77	40-140			
Hexacosane (C26)	1.9	0.2	mg/kg wet	2.500		75	40-140			
Hexadecane (C16)	1.8	0.2	mg/kg wet	2.500		73	40-140			
Nonadecane (C19)	1.8	0.2	mg/kg wet	2.500		73	40-140			
Nonane (C9)	1.4	0.2	mg/kg wet	2.500		58	30-140			
Octacosane (C28)	1.8	0.2	mg/kg wet	2.500		71	40-140			
Octadecane (C18)	1.8	0.2	mg/kg wet	2.500		74	40-140			
Tetracosane (C24)	1.7	0.2	mg/kg wet	2.500		69	40-140			
Tetradecane (C14)	1.8	0.2	mg/kg wet	2.500		70	40-140			
Total Petroleum Hydrocarbons	24.9	37.5	mg/kg wet	35.00		71	40-140			
Triacontane (C30)	1.8	0.2	mg/kg wet	2.500		70	40-140			
Surrogate: O-Terphenyl	*3.87*		mg/kg wet	*5.000*		*77*	*40-140*			
LCS Dup										
Decane (C10)	1.6	0.2	mg/kg wet	2.500		64	40-140	5	25	
Docosane (C22)	1.9	0.2	mg/kg wet	2.500		76	40-140	2	25	
Dodecane (C12)	1.6	0.2	mg/kg wet	2.500		66	40-140	5	25	
Eicosane (C20)	1.9	0.2	mg/kg wet	2.500		75	40-140	2	25	
Hexacosane (C26)	1.8	0.2	mg/kg wet	2.500		74	40-140	2	25	
Hexadecane (C16)	1.7	0.2	mg/kg wet	2.500		70	40-140	4	25	
Nonadecane (C19)	1.8	0.2	mg/kg wet	2.500		71	40-140	2	25	
Nonane (C9)	1.4	0.2	mg/kg wet	2.500		55	30-140	4	25	
Octacosane (C28)	1.7	0.2	mg/kg wet	2.500		70	40-140	2	25	
Octadecane (C18)	1.8	0.2	mg/kg wet	2.500		72	40-140	3	25	

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22B0615

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8100M Total Petroleum Hydrocarbons										
Batch DB21808 - 3546										
Tetracosane (C24)	1.7	0.2	mg/kg wet	2.500		68	40-140	2	25	
Tetradecane (C14)	1.7	0.2	mg/kg wet	2.500		67	40-140	5	25	
Total Petroleum Hydrocarbons	24.1	37.5	mg/kg wet	35.00		69	40-140	3	25	
Triacontane (C30)	1.7	0.2	mg/kg wet	2.500		69	40-140	2	25	
Surrogate: O-Terphenyl	*3.69*		mg/kg wet	*5.000*		*74*	*40-140*			
Batch DB21845 - 3546										
Blank										
Decane (C10)	ND	0.2	mg/kg wet							
Docosane (C22)	ND	0.2	mg/kg wet							
Dodecane (C12)	ND	0.2	mg/kg wet							
Eicosane (C20)	ND	0.2	mg/kg wet							
Hexacosane (C26)	ND	0.2	mg/kg wet							
Hexadecane (C16)	ND	0.2	mg/kg wet							
Nonadecane (C19)	ND	0.2	mg/kg wet							
Nonane (C9)	ND	0.2	mg/kg wet							
Octacosane (C28)	ND	0.2	mg/kg wet							
Octadecane (C18)	ND	0.2	mg/kg wet							
Tetracosane (C24)	ND	0.2	mg/kg wet							
Tetradecane (C14)	ND	0.2	mg/kg wet							
Total Petroleum Hydrocarbons	ND	37.5	mg/kg wet							
Triacontane (C30)	ND	0.2	mg/kg wet							
Surrogate: O-Terphenyl	*3.75*		mg/kg wet	*5.000*		*75*	*40-140*			
LCS										
Decane (C10)	1.9	0.2	mg/kg wet	2.500		76	40-140			
Docosane (C22)	2.0	0.2	mg/kg wet	2.500		80	40-140			
Dodecane (C12)	1.9	0.2	mg/kg wet	2.500		78	40-140			
Eicosane (C20)	2.0	0.2	mg/kg wet	2.500		80	40-140			
Hexacosane (C26)	2.0	0.2	mg/kg wet	2.500		79	40-140			
Hexadecane (C16)	2.0	0.2	mg/kg wet	2.500		81	40-140			
Nonadecane (C19)	2.0	0.2	mg/kg wet	2.500		79	40-140			
Nonane (C9)	1.7	0.2	mg/kg wet	2.500		67	30-140			
Octacosane (C28)	1.9	0.2	mg/kg wet	2.500		75	40-140			
Octadecane (C18)	2.0	0.2	mg/kg wet	2.500		80	40-140			
Tetracosane (C24)	1.8	0.2	mg/kg wet	2.500		71	40-140			
Tetradecane (C14)	2.0	0.2	mg/kg wet	2.500		79	40-140			
Total Petroleum Hydrocarbons	27.2	37.5	mg/kg wet	35.00		78	40-140			
Triacontane (C30)	1.9	0.2	mg/kg wet	2.500		74	40-140			
Surrogate: O-Terphenyl	*4.16*		mg/kg wet	*5.000*		*83*	*40-140*			
LCS Dup										
Decane (C10)	1.8	0.2	mg/kg wet	2.500		74	40-140	3	25	
Docosane (C22)	2.0	0.2	mg/kg wet	2.500		78	40-140	3	25	
Dodecane (C12)	1.9	0.2	mg/kg wet	2.500		76	40-140	3	25	

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22B0615

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8100M Total Petroleum Hydrocarbons										
Batch DB21845 - 3546										
Eicosane (C20)	2.0	0.2	mg/kg wet	2.500		78	40-140	3	25	
Hexacosane (C26)	1.9	0.2	mg/kg wet	2.500		76	40-140	4	25	
Hexadecane (C16)	2.0	0.2	mg/kg wet	2.500		79	40-140	2	25	
Nonadecane (C19)	1.9	0.2	mg/kg wet	2.500		76	40-140	4	25	
Nonane (C9)	1.6	0.2	mg/kg wet	2.500		64	30-140	4	25	
Octacosane (C28)	1.8	0.2	mg/kg wet	2.500		72	40-140	4	25	
Octadecane (C18)	1.9	0.2	mg/kg wet	2.500		78	40-140	2	25	
Tetracosane (C24)	1.7	0.2	mg/kg wet	2.500		69	40-140	3	25	
Tetradecane (C14)	1.9	0.2	mg/kg wet	2.500		77	40-140	2	25	
Total Petroleum Hydrocarbons	26.3	37.5	mg/kg wet	35.00		75	40-140	4	25	
Triacontane (C30)	1.8	0.2	mg/kg wet	2.500		71	40-140	4	25	
Surrogate: O-Terphenyl	*4.02*		mg/kg wet	*5.000*		*80*	*40-140*			

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI ESS Laboratory Work Order: 22B0615

Notes and Definitions

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

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22B0615

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

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

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

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

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

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

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

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

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

ESS Laboratory Sample and Cooler Receipt Checklist

Client: VHB - Vanasse Hangen Brustlin, Inc - KPB

Shipped/Delivered Via: Client

ESS Project ID: 22B0615
Date Received: 2/18/2022
Project Due Date: 2/28/2022
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: -5.4 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

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

Sample Receiving Notes:

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

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	259644	Yes	N/A	Yes	8 oz jar	NP	
2	259645	Yes	N/A	Yes	8 oz jar	NP	
3	259646	Yes	N/A	Yes	8 oz jar	NP	
4	259647	Yes	N/A	Yes	8 oz jar	NP	
5	259648	Yes	N/A	Yes	8 oz jar	NP	
6	259649	Yes	N/A	Yes	8 oz jar	NP	
7	259650	Yes	N/A	Yes	8 oz jar	NP	
8	259651	Yes	N/A	Yes	8 oz jar	NP	
9	259652	Yes	N/A	Yes	8 oz jar	NP	
10	259653	Yes	N/A	Yes	8 oz jar	NP	
11	259654	Yes	N/A	Yes	8 oz jar	NP	
12	259655	Yes	N/A	Yes	8 oz jar	NP	
13	259656	Yes	N/A	Yes	8 oz jar	NP	
14	259657	Yes	N/A	Yes	8 oz jar	NP	
15	259658	Yes	N/A	Yes	8 oz jar	NP	
16	259659	Yes	N/A	Yes	8 oz jar	NP	

ESS Laboratory Sample and Cooler Receipt Checklist

Client: VHB - Vanasse Hangen Brustlin, Inc - KPB

ESS Project ID: 22B0615
Date Received: 2/18/2022

17	259660	Yes	N/A	Yes	8 oz jar	NP
18	259661	Yes	N/A	Yes	8 oz jar	NP

2nd Review

Were all containers scanned into storage/lab? Initials BL

Are barcode labels on correct containers? Yes / No

Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA

Are all Hex Chrome stickers attached? Yes / No / NA

Are all QC stickers attached? Yes / No / NA

Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: Taylor Davis Date & Time: 2/18/22 1458

Reviewed By: Date & Time: 2/18/22 1501

ESS Laboratory
185 Frances Avenue
Cranston, RI 02921
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab # 22B0615 | Page 1 of 2

Turn Time ☐ >5 ☐ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ Same Day

Regulatory State: RI   Criteria: RIDEM Method 1

Is this project for any of the following?: ☐ CT RCP ☐ MA MCP ☐ RGP ☐ Permit ☐ 401 WQ

ELECTRONIC DELIVERABLES (Final Reports are PDF)

☒ Limit Checker ☐ State Forms ☐ EQuIS
☒ Excel ☐ Hard Copy ☐ Enviro Data
☐ CLP-Like Package ☐ Other (Specify) →

CLIENT INFORMATION

Client: VHB
Address: 1 Cedar St. Suite 400
Providence, RI 02903
Phone: 401.935.9085
Email Distribution List: Tyler P, Fred 3, Peter G

PROJECT INFORMATION

Project Name: Seville Dye
Project Location: Woonsocket RI
Project Number: 15348.00
Project Manager: Peter G
Bill to: ap@vhb.com
PO#: 15348.00
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

REQUESTED ANALYSES: TPH 8100

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	TPH 8100
1	2/18/22	0928	Grab	Soil	VHB-1 (10-12')	X
2	↓	1000	↓	↓	VHB-1 (13-15')	X
3	2/17/22	1153	↓	↓	VHB-2 (0-2')	X
4	↓	1209	↓	↓	VHB-2 (5-7')	X
5	↓	1252	↓	↓	VHB-2 (10-12')	X
6	↓	1309	↓	↓	VHB-2 (15-17')	X
7	↓	1035	↓	↓	VHB-3 (0-2')	X
8	↓	1047	↓	↓	VHB-3 (5-7')	X
9	↓	1058	↓	↓	VHB-3 (10-12')	X
10	↓	1115	↓	↓	VHB-3 (14-16')	X

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

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

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

Sampled by: TSP

Chain needs to be filled out neatly and completely for on time delivery.

Laboratory Use Only
Cooler Temperature (°C): ~5.4 ice

Comments: * Please specify "Other" preservative and containers types in this space
Temp Blank in cooler
Thanks! :)

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

Dissolved Filtration ☐ Lab Filter

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
[signature]	2/18/22	1422	[signature]				

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)

2 3

CHAIN OF CUSTODY

185 Frances Avenue
Cranston, RI 02910
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

ESS Lab # 2280615 | Page 2 of 3

Turn Time (Days) ☐ > 5 ☒ 3 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ Same Day

Regulatory State: RI Criteria: RIDEM Method 1

Is this project for any of the following?: ☐ CT RCP ☐ MA MCP ☐ RGP ☐ Permit ☐ 401 WQ

ELECTRONIC DELIVERABLES (Final Reports are PDF)
☒ Limit Checker ☐ State Forms ☐ EQuIS
☒ Excel ☐ Hard Copy ☐ Enviro Data
☐ CLP-Like Package ☐ Other (Specify) →

CLIENT INFORMATION

Client: VHB
Address: 1 Cedar St. Suite 400
Providence, RI 02903
Phone: 401. 935. 9035
Email Distribution List: Tyler ? Peter G Fred B

PROJECT INFORMATION

Project Name: Seville Dye
Project Location: Woonsocket, RI
Project Number: 15348.00
Project Manager: Peter G
Bill to:
PO#: 15348.00
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

REQUESTED ANALYSES

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	TPH - 8100	Total Number of Bottles
11	2/17/22	0836	Grab	Soil	VHB-4 (0-2')	X	1
12	〃	0847	〃	〃	VHB-4 (5-7')	X	1
13	〃	0920	〃	〃	VHB-4A (10-12')	X	1
14	—	0935	〃	〃	VHB-4A (15-17')	X	1
15	2/18/22	1045	〃	〃	VHB-5 (0-2')	X	1
16	〃	1058	〃	〃	VHB-5 (5-7')	X	1
17	—	1110	〃	〃	VHB-5 (10-12')	X	1
18	2/17/22	1041	—	—	VHB-3-X	X	1

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

Sampled by : TSP

Chain needs to be filled out neatly and completely for on time delivery.

Laboratory Use Only
Cooler Temperature (°C): -5.4 ice

Comments: * Please specify "Other" preservative and containers types in this space
Thanks (11

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

Dissolved Filtration
☐ Lab Filter

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
[signature]	2/18/22	1422	[signature]				
Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)

CERTIFICATE OF ANALYSIS

Peter Grivers
Vanasse Hangen Brustlin, Inc.
1 Cedar Street Suite 400
Providence, RI 02903

RE: Seville Dye Woonsocket RI (15348)
ESS Laboratory Work Order Number: 22B0774

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

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 3:48 pm, Mar 03, 2022

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

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

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22B0774

SAMPLE RECEIPT

The following samples were received on February 24, 2022 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
22B0774-01	VHB-3	Ground Water	8100M
22B0774-02	VHB-2	Ground Water	8100M
22B0774-03	VHB-4A	Ground Water	8100M
22B0774-04	VHB-1	Ground Water	8100M
22B0774-05	VHB-X	Ground Water	8100M

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22B0774

PROJECT NARRATIVE

8100M Total Petroleum Hydrocarbons

D2B0455-CCV5 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
Nonadecane (C19) (27% @ 20%)

D2B0457-CCV4 **Continuing Calibration %Diff/Drift is below control limit (CD-).**

D2B0457-CCV5 **Continuing Calibration %Diff/Drift is below control limit (CD-).**
Triacontane (C30) (23% @ 20%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

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

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22B0774

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

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

Prep Methods

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

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

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: VHB-3
Date Sampled: 02/23/22 11:00
Percent Solids: N/A
Initial Volume: 1000
Final Volume: 1
Extraction Method: 3510C

ESS Laboratory Work Order: 22B0774
ESS Laboratory Sample ID: 22B0774-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: TLW
Prepared: 2/25/22 13:45

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**1.08** (0.20)		8100M		1	02/25/22 20:21	D2B0455	DB22505

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*83 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: VHB-2
Date Sampled: 02/23/22 12:40
Percent Solids: N/A
Initial Volume: 1010
Final Volume: 1
Extraction Method: 3510C

ESS Laboratory Work Order: 22B0774
ESS Laboratory Sample ID: 22B0774-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: TLW
Prepared: 2/25/22 13:45

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**1.82** (0.20)		8100M		1	02/25/22 20:55	D2B0455	DB22505

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*91 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: VHB-4A
Date Sampled: 02/23/22 13:50
Percent Solids: N/A
Initial Volume: 1030
Final Volume: 1
Extraction Method: 3510C

ESS Laboratory Work Order: 22B0774
ESS Laboratory Sample ID: 22B0774-03
Sample Matrix: Ground Water
Units: mg/L
Analyst: TLW
Prepared: 2/25/22 13:45

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**1.52** (0.19)		8100M		1	02/25/22 21:29	D2B0455	DB22505

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*89 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: VHB-1
Date Sampled: 02/23/22 15:20
Percent Solids: N/A
Initial Volume: 1070
Final Volume: 1
Extraction Method: 3510C

ESS Laboratory Work Order: 22B0774
ESS Laboratory Sample ID: 22B0774-04
Sample Matrix: Ground Water
Units: mg/L
Analyst: TLW
Prepared: 2/25/22 13:45

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**23.7** (0.19)		8100M		1	02/25/22 22:37	D2B0455	DB22505

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*127 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: VHB-X
Date Sampled: 02/23/22 11:20
Percent Solids: N/A
Initial Volume: 1030
Final Volume: 1
Extraction Method: 3510C

ESS Laboratory Work Order: 22B0774
ESS Laboratory Sample ID: 22B0774-05
Sample Matrix: Ground Water
Units: mg/L
Analyst: TLW
Prepared: 2/25/22 13:45

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**0.98** (0.19)		8100M		1	02/25/22 19:46	D2B0455	DB22505

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*86 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22B0774

Quality Control Data

8100M Total Petroleum Hydrocarbons

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch DB22505 - 3510C										
Blank										
Decane (C10)	ND	0.005	mg/L							
Docosane (C22)	ND	0.005	mg/L							
Dodecane (C12)	ND	0.005	mg/L							
Eicosane (C20)	ND	0.005	mg/L							
Hexacosane (C26)	ND	0.005	mg/L							
Hexadecane (C16)	ND	0.005	mg/L							
Nonadecane (C19)	ND	0.005	mg/L							
Nonane (C9)	ND	0.005	mg/L							
Octacosane (C28)	ND	0.005	mg/L							
Octadecane (C18)	ND	0.005	mg/L							
Tetracosane (C24)	ND	0.005	mg/L							
Tetradecane (C14)	ND	0.005	mg/L							
Total Petroleum Hydrocarbons	ND	0.20	mg/L							
Triacontane (C30)	ND	0.005	mg/L							
Surrogate: O-Terphenyl	*0.0855*		mg/L	*0.1000*		*85*	*40-140*			
LCS										
Decane (C10)	0.038	0.005	mg/L	0.05000		77	40-140			
Docosane (C22)	0.045	0.005	mg/L	0.05000		90	40-140			
Dodecane (C12)	0.041	0.005	mg/L	0.05000		83	40-140			
Eicosane (C20)	0.045	0.005	mg/L	0.05000		89	40-140			
Hexacosane (C26)	0.044	0.005	mg/L	0.05000		89	40-140			
Hexadecane (C16)	0.044	0.005	mg/L	0.05000		89	40-140			
Nonadecane (C19)	0.044	0.005	mg/L	0.05000		87	40-140			
Nonane (C9)	0.032	0.005	mg/L	0.05000		64	30-140			
Octacosane (C28)	0.042	0.005	mg/L	0.05000		83	40-140			
Octadecane (C18)	0.044	0.005	mg/L	0.05000		88	40-140			
Tetracosane (C24)	0.040	0.005	mg/L	0.05000		81	40-140			
Tetradecane (C14)	0.042	0.005	mg/L	0.05000		85	40-140			
Total Petroleum Hydrocarbons	0.596	0.20	mg/L	0.7000		85	40-140			
Triacontane (C30)	0.038	0.005	mg/L	0.05000		77	40-140			
Surrogate: O-Terphenyl	*0.0890*		mg/L	*0.1000*		*89*	*40-140*			
LCS Dup										
Decane (C10)	0.039	0.005	mg/L	0.05000		78	40-140	1	25	
Docosane (C22)	0.046	0.005	mg/L	0.05000		91	40-140	1	25	
Dodecane (C12)	0.041	0.005	mg/L	0.05000		83	40-140	0.1	25	
Eicosane (C20)	0.045	0.005	mg/L	0.05000		90	40-140	1	25	
Hexacosane (C26)	0.045	0.005	mg/L	0.05000		90	40-140	1	25	
Hexadecane (C16)	0.045	0.005	mg/L	0.05000		90	40-140	1	25	
Nonadecane (C19)	0.044	0.005	mg/L	0.05000		88	40-140	1	25	
Nonane (C9)	0.033	0.005	mg/L	0.05000		65	30-140	2	25	
Octacosane (C28)	0.042	0.005	mg/L	0.05000		85	40-140	2	25	
Octadecane (C18)	0.045	0.005	mg/L	0.05000		89	40-140	1	25	

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22B0774

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8100M Total Petroleum Hydrocarbons										
Batch DB22505 - 3510C										
Tetracosane (C24)	0.041	0.005	mg/L	0.05000		81	40-140	1	25	
Tetradecane (C14)	0.043	0.005	mg/L	0.05000		86	40-140	2	25	
Total Petroleum Hydrocarbons	0.607	0.20	mg/L	0.7000		87	40-140	2	25	
Triacontane (C30)	0.040	0.005	mg/L	0.05000		79	40-140	3	25	
Surrogate: O-Terphenyl	*0.0886*		mg/L	*0.1000*		*89*	*40-140*			

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22B0774

Notes and Definitions

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

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22B0774

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

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

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

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

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

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

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

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

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

ESS Laboratory Sample and Cooler Receipt Checklist

Client: VHB - Vanasse Hangen Brustlin, Inc - KPB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 22B0774
Date Received: 2/24/2022
Project Due Date: 3/3/2022
Days for Project: 5 Day

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

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

Sample Receiving Notes:

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

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	260791	Yes	N/A	Yes	1L Amber	NP	
1	260792	Yes	N/A	Yes	1L Amber	NP	
2	260793	Yes	N/A	Yes	1L Amber	NP	
2	260794	Yes	N/A	Yes	1L Amber	NP	
3	260795	Yes	N/A	Yes	1L Amber	NP	
3	260796	Yes	N/A	Yes	1L Amber	NP	
4	260798	Yes	N/A	Yes	1L Amber	NP	
5	260799	Yes	N/A	Yes	1L Amber	NP	
5	260800	Yes	N/A	Yes	1L Amber	NP	

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

ESS Laboratory Sample and Cooler Receipt Checklist

Client: VHB - Vanasse Hangen Brustlin, Inc - KPB

ESS Project ID: 22B0774
Date Received: 2/24/2022

Completed By: Jaylin Davis Date & Time: 2/24/22 1733

Reviewed By: Date & Time: 2/24/22 1754

185 Frances Avenue
Cranston, RI 02910
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab # 220774 | Page 1 of 1

Turn Time (Days) ☐ > 5 ☒ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ Same Day

Regulatory State: RI Criteria: RIDEM Method 1

Is this project for any of the following?:
☐ CT RCP ☐ MA MCP ☐ RGP ☐ Permit ☐ 401 WQ

ELECTRONIC DELIVERABLES (Final Reports are PDF)
☒ Limit Checker ☐ State Forms ☐ EQuIS
☐ Excel ☒ ~~Hard Copy~~ ☐ Enviro Data
☐ CLP-Like Package ☐ Other (Specify) →

CLIENT INFORMATION

Client: VHB
Address: 1 Capital St. Suite 400
Providence RI
Phone: 401-272-8100
Email Distribution List: fbevans, pjenkins@vhb.com

PROJECT INFORMATION

Project Name: former Saville Dye
Project Location: Woonsocket RI
Project Number: 15348.00
Project Manager: Peter Jenkins / Fred Bevans
Bill to: ~~VHB~~ RIDEM
PO#:
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

REQUESTED ANALYSES

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	TPH	Total Number of Bottles
1	2/23/22	11:30	Grab	GW	VHB-3	X	2
2	"	12:40	"	"	VHB-2	X	2
3	"	13:50	"	"	VHB-4A	X	2
4	"	15:20	"	"	*VHB-1	X	1
5	"	11:20	"	"	VHB-X	X	2

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

Sampled by : FTB

Chain needs to be filled out neatly and completely for on time delivery.

Laboratory Use Only
Cooler Temperature (°C): 2.1 1C

Comments: * Please specify "Other" preservative and containers types in this space
* limited Sample Volume (1-1L Amber) / acc- Standard Label

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

Dissolved Filtration
☐ Lab Filter

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
	2/23/22	16:25	2/24/22 9:05		2/24/22	18:46	
Relinquished by (Signature)	**Date**	**Time**	**Received by (Signature)**	**Relinquished by (Signature)**	**Date**	**Time**	**Received by (Signature)**

CERTIFICATE OF ANALYSIS

Fred Bevans
Vanasse Hangen Brustlin, Inc.
1 Cedar Street Suite 400
Providence, RI 02903

RE: Seville Dye Woonsocket RI (15348)
ESS Laboratory Work Order Number: 22C0383

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

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 3:52 pm, Mar 17, 2022

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

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

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22C0383

SAMPLE RECEIPT

The following samples were received on March 10, 2022 for the analyses specified on the enclosed Chain of Custody Record.

Low Level VOA vials were frozen by ESS Laboratory on March 10, 2022 at 17:04.

Lab Number	Sample Name	Matrix	Analysis
22C0383-01	Disp-S-1	Soil	6010C, 7471B, 8260B Low
22C0383-02	Disp-S-2	Soil	6010C, 6020A, 7471B, 8260B Low
22C0383-03	Trip Blank	Solid	8260B Low

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22C0383

PROJECT NARRATIVE

5035/8260B Volatile Organic Compounds / Low Level

22C0383-01 **Surrogate recovery(ies) outside of criteria. Reextraction/Reanalysis confirms results (SC).**
1,2-Dichloroethane-d4 (132% @ 70-130%)

D2C0269-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
Bromomethane (46% @ 30%)

DC21201-BSD1 **Relative percent difference for duplicate is outside of criteria (D+).**
Acetone (34% @ 25%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

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

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22C0383

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

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

Prep Methods

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

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

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: Disp-S-1
Date Sampled: 03/10/22 15:30
Percent Solids: 86

ESS Laboratory Work Order: 22C0383
ESS Laboratory Sample ID: 22C0383-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**5.56** (1.11)		6010C		1	KJK	03/15/22 22:51	5.22	100	DC21548
Barium	**21.4** (1.11)		6010C		1	KJK	03/15/22 22:51	5.22	100	DC21548
Cadmium	ND (0.22)		6010C		1	KJK	03/15/22 22:51	5.22	100	DC21548
Chromium	**12.8** (0.44)		6010C		1	KJK	03/15/22 22:51	5.22	100	DC21548
Lead	**4.49** (2.22)		6010C		1	KJK	03/15/22 22:51	5.22	100	DC21548
Mercury	ND (0.012)		7471B		1	YIV	03/15/22 12:48	1.95	40	DC21461
Selenium	ND (2.22)		6010C		1	KJK	03/15/22 22:51	5.22	100	DC21548
Silver	ND (0.89)		6010C		4	KJK	03/16/22 16:09	5.22	100	DC21548

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: Disp-S-1
Date Sampled: 03/10/22 15:30
Percent Solids: 86
Initial Volume: 9
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 22C0383
ESS Laboratory Sample ID: 22C0383-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
1,1,1-Trichloroethane	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
1,1,2,2-Tetrachloroethane	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
1,1,2-Trichloroethane	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
1,1-Dichloroethane	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
1,1-Dichloroethene	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
1,1-Dichloropropene	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
1,2,3-Trichlorobenzene	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
1,2,3-Trichloropropane	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
1,2,4-Trichlorobenzene	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
1,2,4-Trimethylbenzene	**0.0046** (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
1,2-Dibromo-3-Chloropropane	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
1,2-Dibromoethane	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
1,2-Dichlorobenzene	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
1,2-Dichloroethane	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
1,2-Dichloropropane	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
1,3,5-Trimethylbenzene	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
1,3-Dichlorobenzene	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
1,3-Dichloropropane	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
1,4-Dichlorobenzene	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
1,4-Dioxane	ND (0.0644)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
1-Chlorohexane	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
2,2-Dichloropropane	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
2-Butanone	ND (0.0322)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
2-Chlorotoluene	**0.0056** (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
2-Hexanone	ND (0.0322)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
4-Chlorotoluene	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
4-Isopropyltoluene	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
4-Methyl-2-Pentanone	ND (0.0322)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Acetone	ND (0.0322)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Benzene	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Bromobenzene	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: Disp-S-1
Date Sampled: 03/10/22 15:30
Percent Solids: 86
Initial Volume: 9
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 22C0383
ESS Laboratory Sample ID: 22C0383-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Bromodichloromethane	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Bromoform	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Bromomethane	ND (0.0064)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Carbon Disulfide	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Carbon Tetrachloride	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Chlorobenzene	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Chloroethane	ND (0.0064)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Chloroform	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Chloromethane	ND (0.0064)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
cis-1,2-Dichloroethene	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
cis-1,3-Dichloropropene	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Dibromochloromethane	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Dibromomethane	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Dichlorodifluoromethane	ND (0.0064)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Diethyl Ether	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Di-isopropyl ether	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Ethyl tertiary-butyl ether	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Ethylbenzene	**0.0054** (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Hexachlorobutadiene	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Isopropylbenzene	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Methyl tert-Butyl Ether	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Methylene Chloride	ND (0.0161)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Naphthalene	**0.0260** (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
n-Butylbenzene	**0.0048** (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
n-Propylbenzene	**0.0051** (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
sec-Butylbenzene	**0.0038** (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Styrene	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
tert-Butylbenzene	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Tertiary-amyl methyl ether	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Tetrachloroethene	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Tetrahydrofuran	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: Disp-S-1
Date Sampled: 03/10/22 15:30
Percent Solids: 86
Initial Volume: 9
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 22C0383
ESS Laboratory Sample ID: 22C0383-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
trans-1,2-Dichloroethene	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
trans-1,3-Dichloropropene	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Trichloroethene	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Trichlorofluoromethane	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Vinyl Acetate	ND (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Vinyl Chloride	ND (0.0064)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Xylene O	**0.0047** (0.0032)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Xylene P,M	ND (0.0064)		8260B Low		1	03/12/22 22:53	D2C0253	DC21201
Xylenes (Total)	ND (0.00644)		8260B Low		1	03/12/22 22:53		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*132 %*	*SC*	*70-130*
Surrogate: 4-Bromofluorobenzene	*88 %*		*70-130*
Surrogate: Dibromofluoromethane	*112 %*		*70-130*
Surrogate: Toluene-d8	*98 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: Disp-S-2
Date Sampled: 03/10/22 15:40
Percent Solids: 85

ESS Laboratory Work Order: 22C0383
ESS Laboratory Sample ID: 22C0383-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**5.30** (1.15)		6010C		1	KJK	03/15/22 22:53	5.1	100	DC21548
Barium	**22.0** (1.15)		6010C		1	KJK	03/15/22 22:53	5.1	100	DC21548
Cadmium	ND (0.23)		6010C		1	KJK	03/15/22 22:53	5.1	100	DC21548
Chromium	**11.0** (0.46)		6010C		1	KJK	03/15/22 22:53	5.1	100	DC21548
Lead	**4.82** (2.31)		6010C		1	KJK	03/15/22 22:53	5.1	100	DC21548
Mercury	ND (0.011)		7471B		1	YIV	03/15/22 12:51	2.1	40	DC21461
Selenium	ND (0.23)		6020A		1	NAR	03/16/22 16:04	5.1	100	DC21548
Silver	ND (0.92)		6010C		4	KJK	03/16/22 16:18	5.1	100	DC21548

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: Disp-S-2
Date Sampled: 03/10/22 15:40
Percent Solids: 85
Initial Volume: 9.5
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 22C0383
ESS Laboratory Sample ID: 22C0383-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
1,1,1-Trichloroethane	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
1,1,2,2-Tetrachloroethane	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
1,1,2-Trichloroethane	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
1,1-Dichloroethane	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
1,1-Dichloroethene	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
1,1-Dichloropropene	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
1,2,3-Trichlorobenzene	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
1,2,3-Trichloropropane	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
1,2,4-Trichlorobenzene	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
1,2,4-Trimethylbenzene	**0.0059** (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
1,2-Dibromo-3-Chloropropane	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
1,2-Dibromoethane	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
1,2-Dichlorobenzene	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
1,2-Dichloroethane	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
1,2-Dichloropropane	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
1,3,5-Trimethylbenzene	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
1,3-Dichlorobenzene	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
1,3-Dichloropropane	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
1,4-Dichlorobenzene	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
1,4-Dioxane	ND (0.0620)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
1-Chlorohexane	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
2,2-Dichloropropane	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
2-Butanone	ND (0.0310)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
2-Chlorotoluene	**0.0062** (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
2-Hexanone	ND (0.0310)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
4-Chlorotoluene	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
4-Isopropyltoluene	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
4-Methyl-2-Pentanone	ND (0.0310)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Acetone	ND (0.0310)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Benzene	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Bromobenzene	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: Disp-S-2
Date Sampled: 03/10/22 15:40
Percent Solids: 85
Initial Volume: 9.5
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 22C0383
ESS Laboratory Sample ID: 22C0383-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Bromodichloromethane	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Bromoform	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Bromomethane	ND (0.0062)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Carbon Disulfide	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Carbon Tetrachloride	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Chlorobenzene	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Chloroethane	ND (0.0062)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Chloroform	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Chloromethane	ND (0.0062)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
cis-1,2-Dichloroethene	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
cis-1,3-Dichloropropene	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Dibromochloromethane	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Dibromomethane	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Dichlorodifluoromethane	ND (0.0062)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Diethyl Ether	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Di-isopropyl ether	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Ethyl tertiary-butyl ether	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Ethylbenzene	**0.0058** (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Hexachlorobutadiene	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Isopropylbenzene	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Methyl tert-Butyl Ether	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Methylene Chloride	ND (0.0155)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Naphthalene	**0.0244** (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
n-Butylbenzene	**0.0063** (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
n-Propylbenzene	**0.0062** (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
sec-Butylbenzene	**0.0049** (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Styrene	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
tert-Butylbenzene	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Tertiary-amyl methyl ether	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Tetrachloroethene	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Tetrahydrofuran	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: Disp-S-2
Date Sampled: 03/10/22 15:40
Percent Solids: 85
Initial Volume: 9.5
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 22C0383
ESS Laboratory Sample ID: 22C0383-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
trans-1,2-Dichloroethene	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
trans-1,3-Dichloropropene	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Trichloroethene	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Trichlorofluoromethane	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Vinyl Acetate	ND (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Vinyl Chloride	ND (0.0062)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Xylene O	**0.0050** (0.0031)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Xylene P,M	ND (0.0062)		8260B Low		1	03/12/22 23:18	D2C0253	DC21201
Xylenes (Total)	ND (0.00620)		8260B Low		1	03/12/22 23:18		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*130 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*86 %*		*70-130*
Surrogate: Dibromofluoromethane	*112 %*		*70-130*
Surrogate: Toluene-d8	*97 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: Trip Blank
Date Sampled: 03/10/22 15:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 22C0383
ESS Laboratory Sample ID: 22C0383-03
Sample Matrix: Solid
Units: mg/kg wet
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
1,1,1-Trichloroethane	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
1,1,2,2-Tetrachloroethane	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
1,1,2-Trichloroethane	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
1,1-Dichloroethane	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
1,1-Dichloroethene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
1,1-Dichloropropene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
1,2,3-Trichlorobenzene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
1,2,3-Trichloropropane	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
1,2,4-Trichlorobenzene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
1,2,4-Trimethylbenzene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
1,2-Dibromoethane	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
1,2-Dichlorobenzene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
1,2-Dichloroethane	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
1,2-Dichloropropane	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
1,3,5-Trimethylbenzene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
1,3-Dichlorobenzene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
1,3-Dichloropropane	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
1,4-Dichlorobenzene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
1,4-Dioxane	ND (0.100)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
1-Chlorohexane	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
2,2-Dichloropropane	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
2-Butanone	ND (0.0500)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
2-Chlorotoluene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
2-Hexanone	ND (0.0500)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
4-Chlorotoluene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
4-Isopropyltoluene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
4-Methyl-2-Pentanone	ND (0.0500)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Acetone	ND (0.0500)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Benzene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Bromobenzene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: Trip Blank
Date Sampled: 03/10/22 15:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 22C0383
ESS Laboratory Sample ID: 22C0383-03
Sample Matrix: Solid
Units: mg/kg wet
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Bromodichloromethane	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Bromoform	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Bromomethane	ND (0.0100)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Carbon Disulfide	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Carbon Tetrachloride	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Chlorobenzene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Chloroethane	ND (0.0100)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Chloroform	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Chloromethane	ND (0.0100)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
cis-1,2-Dichloroethene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
cis-1,3-Dichloropropene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Dibromochloromethane	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Dibromomethane	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Dichlorodifluoromethane	ND (0.0100)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Diethyl Ether	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Di-isopropyl ether	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Ethyl tertiary-butyl ether	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Ethylbenzene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Hexachlorobutadiene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Isopropylbenzene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Methyl tert-Butyl Ether	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Methylene Chloride	ND (0.0250)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Naphthalene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
n-Butylbenzene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
n-Propylbenzene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
sec-Butylbenzene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Styrene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
tert-Butylbenzene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Tertiary-amyl methyl ether	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Tetrachloroethene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Tetrahydrofuran	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: Trip Blank
Date Sampled: 03/10/22 15:40
Percent Solids: N/A
Initial Volume: 5
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 22C0383
ESS Laboratory Sample ID: 22C0383-03
Sample Matrix: Solid
Units: mg/kg wet
Analyst: MEK

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Toluene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
trans-1,2-Dichloroethene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
trans-1,3-Dichloropropene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Trichloroethene	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Trichlorofluoromethane	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Vinyl Acetate	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Vinyl Chloride	ND (0.0100)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Xylene O	ND (0.0050)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Xylene P,M	ND (0.0100)		8260B Low		1	03/12/22 15:11	D2C0253	DC21201
Xylenes (Total)	ND (0.0100)		8260B Low		1	03/12/22 15:11		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*116 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*92 %*		*70-130*
Surrogate: Dibromofluoromethane	*101 %*		*70-130*
Surrogate: Toluene-d8	*99 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22C0383

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals										
Batch DC21461 - 3050B										
Blank										
Mercury	ND	0.033	mg/kg wet							
LCS										
Mercury	9.51	2.96	mg/kg wet	11.00		86	80-120			
LCS Dup										
Mercury	9.75	3.09	mg/kg wet	11.00		89	80-120	3	20	
Batch DC21548 - 3050B										
Blank										
Arsenic	ND	2.50	mg/kg wet							
Barium	ND	2.50	mg/kg wet							
Cadmium	ND	0.50	mg/kg wet							
Chromium	ND	1.00	mg/kg wet							
Lead	ND	5.00	mg/kg wet							
Selenium	ND	5.00	mg/kg wet							
Silver	ND	0.50	mg/kg wet							
Blank										
Selenium	ND	0.50	mg/kg wet							
LCS										
Arsenic	88.8	9.26	mg/kg wet	93.10		95	80-120			
Barium	667	9.26	mg/kg wet	690.0		97	80-120			
Cadmium	280	1.85	mg/kg wet	301.0		93	80-120			
Chromium	312	3.70	mg/kg wet	326.0		96	80-120			
Lead	193	18.5	mg/kg wet	192.0		101	80-120			
Selenium	240	18.5	mg/kg wet	270.0		89	80-120			
Silver	61.7	1.85	mg/kg wet	63.70		97	80-120			
LCS										
Selenium	256	9.26	mg/kg wet	270.0		95	80-120			
LCS Dup										
Arsenic	82.6	8.62	mg/kg wet	93.10		89	80-120	7	20	
Barium	625	8.62	mg/kg wet	690.0		91	80-120	6	20	
Cadmium	261	1.72	mg/kg wet	301.0		87	80-120	7	20	
Chromium	290	3.45	mg/kg wet	326.0		89	80-120	7	20	
Lead	180	17.2	mg/kg wet	192.0		94	80-120	7	20	
Selenium	222	17.2	mg/kg wet	270.0		82	80-120	8	20	
Silver	57.3	1.72	mg/kg wet	63.70		90	80-120	7	20	
LCS Dup										
Selenium	255	8.62	mg/kg wet	270.0		94	80-120	0.4	30	
5035/8260B Volatile Organic Compounds / Low Level										
Batch DC21201 - 5035										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0050	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22C0383

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DC21201 - 5035										
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,2-Trichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethene	ND	0.0050	mg/kg wet							
1,1-Dichloropropene	ND	0.0050	mg/kg wet							
1,2,3-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,3-Trichloropropane	ND	0.0050	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,4-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/kg wet							
1,2-Dibromoethane	ND	0.0050	mg/kg wet							
1,2-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,2-Dichloroethane	ND	0.0050	mg/kg wet							
1,2-Dichloropropane	ND	0.0050	mg/kg wet							
1,3,5-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,3-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,3-Dichloropropane	ND	0.0050	mg/kg wet							
1,4-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,4-Dioxane	ND	0.100	mg/kg wet							
1-Chlorohexane	ND	0.0050	mg/kg wet							
2,2-Dichloropropane	ND	0.0050	mg/kg wet							
2-Butanone	ND	0.0500	mg/kg wet							
2-Chlorotoluene	ND	0.0050	mg/kg wet							
2-Hexanone	ND	0.0500	mg/kg wet							
4-Chlorotoluene	ND	0.0050	mg/kg wet							
4-Isopropyltoluene	ND	0.0050	mg/kg wet							
4-Methyl-2-Pentanone	ND	0.0500	mg/kg wet							
Acetone	ND	0.0500	mg/kg wet							
Benzene	ND	0.0050	mg/kg wet							
Bromobenzene	ND	0.0050	mg/kg wet							
Bromochloromethane	ND	0.0050	mg/kg wet							
Bromodichloromethane	ND	0.0050	mg/kg wet							
Bromoform	ND	0.0050	mg/kg wet							
Bromomethane	ND	0.0100	mg/kg wet							
Carbon Disulfide	ND	0.0050	mg/kg wet							
Carbon Tetrachloride	ND	0.0050	mg/kg wet							
Chlorobenzene	ND	0.0050	mg/kg wet							
Chloroethane	ND	0.0100	mg/kg wet							
Chloroform	ND	0.0050	mg/kg wet							
Chloromethane	ND	0.0100	mg/kg wet							
cis-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
cis-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Dibromochloromethane	ND	0.0050	mg/kg wet							
Dibromomethane	ND	0.0050	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
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ESS Laboratory Work Order: 22C0383

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DC21201 - 5035										
Dichlorodifluoromethane	ND	0.0100	mg/kg wet							
Diethyl Ether	ND	0.0050	mg/kg wet							
Di-isopropyl ether	ND	0.0050	mg/kg wet							
Ethyl tertiary-butyl ether	ND	0.0050	mg/kg wet							
Ethylbenzene	ND	0.0050	mg/kg wet							
Hexachlorobutadiene	ND	0.0050	mg/kg wet							
Isopropylbenzene	ND	0.0050	mg/kg wet							
Methyl tert-Butyl Ether	ND	0.0050	mg/kg wet							
Methylene Chloride	ND	0.0250	mg/kg wet							
Naphthalene	ND	0.0050	mg/kg wet							
n-Butylbenzene	ND	0.0050	mg/kg wet							
n-Propylbenzene	ND	0.0050	mg/kg wet							
sec-Butylbenzene	ND	0.0050	mg/kg wet							
Styrene	ND	0.0050	mg/kg wet							
tert-Butylbenzene	ND	0.0050	mg/kg wet							
Tertiary-amyl methyl ether	ND	0.0050	mg/kg wet							
Tetrachloroethene	ND	0.0050	mg/kg wet							
Tetrahydrofuran	ND	0.0050	mg/kg wet							
Toluene	ND	0.0050	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Trichloroethene	ND	0.0050	mg/kg wet							
Trichlorofluoromethane	ND	0.0050	mg/kg wet							
Vinyl Acetate	ND	0.0050	mg/kg wet							
Vinyl Chloride	ND	0.0100	mg/kg wet							
Xylene O	ND	0.0050	mg/kg wet							
Xylene P,M	ND	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0577*		mg/kg wet	*0.05000*		*115*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0457*		mg/kg wet	*0.05000*		*91*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0496*		mg/kg wet	*0.05000*		*99*	*70-130*			
Surrogate: Toluene-d8	*0.0492*		mg/kg wet	*0.05000*		*98*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	0.0503	0.0050	mg/kg wet	0.05000		101	70-130			
1,1,1-Trichloroethane	0.0542	0.0050	mg/kg wet	0.05000		108	70-130			
1,1,2,2-Tetrachloroethane	0.0514	0.0050	mg/kg wet	0.05000		103	70-130			
1,1,2-Trichloroethane	0.0522	0.0050	mg/kg wet	0.05000		104	70-130			
1,1-Dichloroethane	0.0538	0.0050	mg/kg wet	0.05000		108	70-130			
1,1-Dichloroethene	0.0587	0.0050	mg/kg wet	0.05000		117	70-130			
1,1-Dichloropropene	0.0522	0.0050	mg/kg wet	0.05000		104	70-130			
1,2,3-Trichlorobenzene	0.0541	0.0050	mg/kg wet	0.05000		108	70-130			
1,2,3-Trichloropropane	0.0450	0.0050	mg/kg wet	0.05000		90	70-130			
1,2,4-Trichlorobenzene	0.0542	0.0050	mg/kg wet	0.05000		108	70-130			
1,2,4-Trimethylbenzene	0.0554	0.0050	mg/kg wet	0.05000		111	70-130			
1,2-Dibromo-3-Chloropropane	0.0473	0.0050	mg/kg wet	0.05000		95	70-130			
1,2-Dibromoethane	0.0478	0.0050	mg/kg wet	0.05000		96	70-130			

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22C0383

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DC21201 - 5035										
1,2-Dichlorobenzene	0.0547	0.0050	mg/kg wet	0.05000		109	70-130			
1,2-Dichloroethane	0.0506	0.0050	mg/kg wet	0.05000		101	70-130			
1,2-Dichloropropane	0.0539	0.0050	mg/kg wet	0.05000		108	70-130			
1,3,5-Trimethylbenzene	0.0552	0.0050	mg/kg wet	0.05000		110	70-130			
1,3-Dichlorobenzene	0.0543	0.0050	mg/kg wet	0.05000		109	70-130			
1,3-Dichloropropane	0.0543	0.0050	mg/kg wet	0.05000		109	70-130			
1,4-Dichlorobenzene	0.0545	0.0050	mg/kg wet	0.05000		109	70-130			
1,4-Dioxane	0.926	0.100	mg/kg wet	1.000		93	70-130			
1-Chlorohexane	0.0488	0.0050	mg/kg wet	0.05000		98	70-130			
2,2-Dichloropropane	0.0580	0.0050	mg/kg wet	0.05000		116	70-130			
2-Butanone	0.229	0.0500	mg/kg wet	0.2500		91	70-130			
2-Chlorotoluene	0.0540	0.0050	mg/kg wet	0.05000		108	70-130			
2-Hexanone	0.236	0.0500	mg/kg wet	0.2500		94	70-130			
4-Chlorotoluene	0.0549	0.0050	mg/kg wet	0.05000		110	70-130			
4-Isopropyltoluene	0.0538	0.0050	mg/kg wet	0.05000		108	70-130			
4-Methyl-2-Pentanone	0.244	0.0500	mg/kg wet	0.2500		98	70-130			
Acetone	0.202	0.0500	mg/kg wet	0.2500		81	70-130			
Benzene	0.0538	0.0050	mg/kg wet	0.05000		108	70-130			
Bromobenzene	0.0559	0.0050	mg/kg wet	0.05000		112	70-130			
Bromochloromethane	0.0559	0.0050	mg/kg wet	0.05000		112	70-130			
Bromodichloromethane	0.0519	0.0050	mg/kg wet	0.05000		104	70-130			
Bromoform	0.0551	0.0050	mg/kg wet	0.05000		110	70-130			
Bromomethane	0.0626	0.0100	mg/kg wet	0.05000		125	70-130			
Carbon Disulfide	0.0594	0.0050	mg/kg wet	0.05000		119	70-130			
Carbon Tetrachloride	0.0567	0.0050	mg/kg wet	0.05000		113	70-130			
Chlorobenzene	0.0547	0.0050	mg/kg wet	0.05000		109	70-130			
Chloroethane	0.0607	0.0100	mg/kg wet	0.05000		121	70-130			
Chloroform	0.0530	0.0050	mg/kg wet	0.05000		106	70-130			
Chloromethane	0.0547	0.0100	mg/kg wet	0.05000		109	70-130			
cis-1,2-Dichloroethene	0.0554	0.0050	mg/kg wet	0.05000		111	70-130			
cis-1,3-Dichloropropene	0.0524	0.0050	mg/kg wet	0.05000		105	70-130			
Dibromochloromethane	0.0515	0.0050	mg/kg wet	0.05000		103	70-130			
Dibromomethane	0.0539	0.0050	mg/kg wet	0.05000		108	70-130			
Dichlorodifluoromethane	0.0485	0.0100	mg/kg wet	0.05000		97	70-130			
Diethyl Ether	0.0567	0.0050	mg/kg wet	0.05000		113	70-130			
Di-isopropyl ether	0.0558	0.0050	mg/kg wet	0.05000		112	70-130			
Ethyl tertiary-butyl ether	0.0581	0.0050	mg/kg wet	0.05000		116	70-130			
Ethylbenzene	0.0546	0.0050	mg/kg wet	0.05000		109	70-130			
Hexachlorobutadiene	0.0533	0.0050	mg/kg wet	0.05000		107	70-130			
Isopropylbenzene	0.0551	0.0050	mg/kg wet	0.05000		110	70-130			
Methyl tert-Butyl Ether	0.0598	0.0050	mg/kg wet	0.05000		120	70-130			
Methylene Chloride	0.0496	0.0250	mg/kg wet	0.05000		99	70-130			
Naphthalene	0.0552	0.0050	mg/kg wet	0.05000		110	70-130			
n-Butylbenzene	0.0521	0.0050	mg/kg wet	0.05000		104	70-130			
n-Propylbenzene	0.0546	0.0050	mg/kg wet	0.05000		109	70-130			

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22C0383

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DC21201 - 5035										
sec-Butylbenzene	0.0524	0.0050	mg/kg wet	0.05000		105	70-130			
Styrene	0.0494	0.0050	mg/kg wet	0.05000		99	70-130			
tert-Butylbenzene	0.0556	0.0050	mg/kg wet	0.05000		111	70-130			
Tertiary-amyl methyl ether	0.0521	0.0050	mg/kg wet	0.05000		104	70-130			
Tetrachloroethene	0.0461	0.0050	mg/kg wet	0.05000		92	70-130			
Tetrahydrofuran	0.0446	0.0050	mg/kg wet	0.05000		89	70-130			
Toluene	0.0541	0.0050	mg/kg wet	0.05000		108	70-130			
trans-1,2-Dichloroethene	0.0576	0.0050	mg/kg wet	0.05000		115	70-130			
trans-1,3-Dichloropropene	0.0489	0.0050	mg/kg wet	0.05000		98	70-130			
Trichloroethene	0.0517	0.0050	mg/kg wet	0.05000		103	70-130			
Trichlorofluoromethane	0.0537	0.0050	mg/kg wet	0.05000		107	70-130			
Vinyl Acetate	0.0530	0.0050	mg/kg wet	0.05000		106	70-130			
Vinyl Chloride	0.0614	0.0100	mg/kg wet	0.05000		123	70-130			
Xylene O	0.0496	0.0050	mg/kg wet	0.05000		99	70-130			
Xylene P,M	0.102	0.0100	mg/kg wet	0.1000		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0536*		mg/kg wet	*0.05000*		*107*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0506*		mg/kg wet	*0.05000*		*101*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0509*		mg/kg wet	*0.05000*		*102*	*70-130*			
Surrogate: Toluene-d8	*0.0508*		mg/kg wet	*0.05000*		*102*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	0.0498	0.0050	mg/kg wet	0.05000		100	70-130	1	25	
1,1,1-Trichloroethane	0.0533	0.0050	mg/kg wet	0.05000		107	70-130	2	25	
1,1,2,2-Tetrachloroethane	0.0518	0.0050	mg/kg wet	0.05000		104	70-130	0.8	25	
1,1,2-Trichloroethane	0.0524	0.0050	mg/kg wet	0.05000		105	70-130	0.3	25	
1,1-Dichloroethane	0.0526	0.0050	mg/kg wet	0.05000		105	70-130	2	25	
1,1-Dichloroethene	0.0575	0.0050	mg/kg wet	0.05000		115	70-130	2	25	
1,1-Dichloropropene	0.0516	0.0050	mg/kg wet	0.05000		103	70-130	1	25	
1,2,3-Trichlorobenzene	0.0537	0.0050	mg/kg wet	0.05000		107	70-130	0.7	25	
1,2,3-Trichloropropane	0.0460	0.0050	mg/kg wet	0.05000		92	70-130	2	25	
1,2,4-Trichlorobenzene	0.0538	0.0050	mg/kg wet	0.05000		108	70-130	0.9	25	
1,2,4-Trimethylbenzene	0.0548	0.0050	mg/kg wet	0.05000		110	70-130	1	25	
1,2-Dibromo-3-Chloropropane	0.0497	0.0050	mg/kg wet	0.05000		99	70-130	5	25	
1,2-Dibromoethane	0.0481	0.0050	mg/kg wet	0.05000		96	70-130	0.6	25	
1,2-Dichlorobenzene	0.0544	0.0050	mg/kg wet	0.05000		109	70-130	0.7	25	
1,2-Dichloroethane	0.0507	0.0050	mg/kg wet	0.05000		101	70-130	0.2	25	
1,2-Dichloropropane	0.0525	0.0050	mg/kg wet	0.05000		105	70-130	3	25	
1,3,5-Trimethylbenzene	0.0543	0.0050	mg/kg wet	0.05000		109	70-130	2	25	
1,3-Dichlorobenzene	0.0540	0.0050	mg/kg wet	0.05000		108	70-130	0.6	25	
1,3-Dichloropropane	0.0538	0.0050	mg/kg wet	0.05000		108	70-130	1	25	
1,4-Dichlorobenzene	0.0540	0.0050	mg/kg wet	0.05000		108	70-130	0.9	25	
1,4-Dioxane	0.954	0.100	mg/kg wet	1.000		95	70-130	3	20	
1-Chlorohexane	0.0481	0.0050	mg/kg wet	0.05000		96	70-130	2	25	
2,2-Dichloropropane	0.0566	0.0050	mg/kg wet	0.05000		113	70-130	2	25	
2-Butanone	0.263	0.0500	mg/kg wet	0.2500		105	70-130	14	25	
2-Chlorotoluene	0.0532	0.0050	mg/kg wet	0.05000		106	70-130	1	25	

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22C0383

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DC21201 - 5035										
2-Hexanone	0.270	0.0500	mg/kg wet	0.2500		108	70-130	14	25	
4-Chlorotoluene	0.0538	0.0050	mg/kg wet	0.05000		108	70-130	2	25	
4-Isopropyltoluene	0.0531	0.0050	mg/kg wet	0.05000		106	70-130	1	25	
4-Methyl-2-Pentanone	0.257	0.0500	mg/kg wet	0.2500		103	70-130	5	25	
Acetone	0.284	0.0500	mg/kg wet	0.2500		114	70-130	34	25	D+
Benzene	0.0532	0.0050	mg/kg wet	0.05000		106	70-130	1	25	
Bromobenzene	0.0547	0.0050	mg/kg wet	0.05000		109	70-130	2	25	
Bromochloromethane	0.0550	0.0050	mg/kg wet	0.05000		110	70-130	2	25	
Bromodichloromethane	0.0517	0.0050	mg/kg wet	0.05000		103	70-130	0.4	25	
Bromoform	0.0554	0.0050	mg/kg wet	0.05000		111	70-130	0.5	25	
Bromomethane	0.0609	0.0100	mg/kg wet	0.05000		122	70-130	3	25	
Carbon Disulfide	0.0583	0.0050	mg/kg wet	0.05000		117	70-130	2	25	
Carbon Tetrachloride	0.0557	0.0050	mg/kg wet	0.05000		111	70-130	2	25	
Chlorobenzene	0.0536	0.0050	mg/kg wet	0.05000		107	70-130	2	25	
Chloroethane	0.0597	0.0100	mg/kg wet	0.05000		119	70-130	2	25	
Chloroform	0.0527	0.0050	mg/kg wet	0.05000		105	70-130	0.5	25	
Chloromethane	0.0543	0.0100	mg/kg wet	0.05000		109	70-130	0.7	25	
cis-1,2-Dichloroethene	0.0552	0.0050	mg/kg wet	0.05000		110	70-130	0.4	25	
cis-1,3-Dichloropropene	0.0521	0.0050	mg/kg wet	0.05000		104	70-130	0.5	25	
Dibromochloromethane	0.0513	0.0050	mg/kg wet	0.05000		103	70-130	0.3	25	
Dibromomethane	0.0540	0.0050	mg/kg wet	0.05000		108	70-130	0.3	25	
Dichlorodifluoromethane	0.0478	0.0100	mg/kg wet	0.05000		96	70-130	1	25	
Diethyl Ether	0.0568	0.0050	mg/kg wet	0.05000		114	70-130	0.2	25	
Di-isopropyl ether	0.0554	0.0050	mg/kg wet	0.05000		111	70-130	0.6	25	
Ethyl tertiary-butyl ether	0.0576	0.0050	mg/kg wet	0.05000		115	70-130	0.8	25	
Ethylbenzene	0.0537	0.0050	mg/kg wet	0.05000		107	70-130	2	25	
Hexachlorobutadiene	0.0525	0.0050	mg/kg wet	0.05000		105	70-130	2	25	
Isopropylbenzene	0.0543	0.0050	mg/kg wet	0.05000		109	70-130	1	25	
Methyl tert-Butyl Ether	0.0600	0.0050	mg/kg wet	0.05000		120	70-130	0.4	25	
Methylene Chloride	0.0495	0.0250	mg/kg wet	0.05000		99	70-130	0.2	25	
Naphthalene	0.0557	0.0050	mg/kg wet	0.05000		111	70-130	0.9	25	
n-Butylbenzene	0.0513	0.0050	mg/kg wet	0.05000		103	70-130	2	25	
n-Propylbenzene	0.0536	0.0050	mg/kg wet	0.05000		107	70-130	2	25	
sec-Butylbenzene	0.0517	0.0050	mg/kg wet	0.05000		103	70-130	1	25	
Styrene	0.0485	0.0050	mg/kg wet	0.05000		97	70-130	2	25	
tert-Butylbenzene	0.0547	0.0050	mg/kg wet	0.05000		109	70-130	2	25	
Tertiary-amyl methyl ether	0.0519	0.0050	mg/kg wet	0.05000		104	70-130	0.2	25	
Tetrachloroethene	0.0491	0.0050	mg/kg wet	0.05000		98	70-130	6	25	
Tetrahydrofuran	0.0468	0.0050	mg/kg wet	0.05000		94	70-130	5	25	
Toluene	0.0534	0.0050	mg/kg wet	0.05000		107	70-130	1	25	
trans-1,2-Dichloroethene	0.0566	0.0050	mg/kg wet	0.05000		113	70-130	2	25	
trans-1,3-Dichloropropene	0.0489	0.0050	mg/kg wet	0.05000		98	70-130	0.04	25	
Trichloroethene	0.0506	0.0050	mg/kg wet	0.05000		101	70-130	2	25	
Trichlorofluoromethane	0.0529	0.0050	mg/kg wet	0.05000		106	70-130	2	25	
Vinyl Acetate	0.0518	0.0050	mg/kg wet	0.05000		104	70-130	2	25	

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22C0383

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DC21201 - 5035										
Vinyl Chloride	0.0608	0.0100	mg/kg wet	0.05000		122	70-130	0.9	25	
Xylene O	0.0487	0.0050	mg/kg wet	0.05000		97	70-130	2	25	
Xylene P,M	0.100	0.0100	mg/kg wet	0.1000		100	70-130	2	25	
Surrogate: 1,2-Dichloroethane-d4	*0.0541*		mg/kg wet	*0.05000*		*108*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0503*		mg/kg wet	*0.05000*		*101*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0510*		mg/kg wet	*0.05000*		*102*	*70-130*			
Surrogate: Toluene-d8	*0.0509*		mg/kg wet	*0.05000*		*102*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22C0383

Notes and Definitions

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

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22C0383

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

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

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

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

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

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

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

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

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

ESS Laboratory Sample and Cooler Receipt Checklist

Client: VHB - Vanasse Hangen Brustlin, Inc - KPB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 22C0383
Date Received: 3/10/2022
Project Due Date: 3/17/2022
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: -1.8 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

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

13. Are the samples properly preserved? Yes / No
    a. If metals preserved upon receipt: Date: Time: By:
    b. Low Level VOA vials frozen: Date: 3/10/22 Time: 1704 By: TD

Sample Receiving Notes:

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

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	265392	Yes	N/A	Yes	VOA Vial	DI Water	
1	265393	Yes	N/A	Yes	VOA Vial	DI Water	
1	265398	Yes	N/A	Yes	VOA Vial	MeOH	
1	265401	Yes	N/A	Yes	8 oz jar	NP	
2	265394	Yes	N/A	Yes	VOA Vial	DI Water	
2	265395	Yes	N/A	Yes	VOA Vial	DI Water	
2	265399	Yes	N/A	Yes	VOA Vial	MeOH	
2	265402	Yes	N/A	Yes	8 oz jar	NP	
3	265396	Yes	N/A	Yes	VOA Vial	DI Water	
3	265400	Yes	N/A	Yes	VOA Vial	MeOH	

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

ESS Laboratory Sample and Cooler Receipt Checklist

Client: VHB - Vanasse Hangen Brustlin, Inc - KPB

ESS Project ID: 22C0383

Date Received: 3/10/2022

Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: [signature] Date & Time: 3.10.22 1655

Reviewed By: [signature] Date & Time: 3/10/22 1704

CHAIN OF CUSTODY

185 Frances Avenue
Cranston, RI 02921
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

ESS Lab # 220383 | Page 1 of 1

Turn Time: ☐ >5 ☒ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ Same Day

Regulatory State: RI Criteria:

Is this project for any of the following?: ☐ CT RCP ☐ MA MCP ☐ RGP ☐ Permit ☐ 401 WQ

ELECTRONIC DELIVERABLES (Final Reports are PDF)

☒ Limit Checker ☐ State Forms ☐ EQuIS
☒ Excel ☐ Hard Copy ☐ Enviro Data
☐ CLP-Like Package ☐ Other (Specify) →

CLIENT INFORMATION

Client: VHB
Address: 1 Cedar St. Suite 400
Providence, RI 02903
Phone: 401.935.9035
Email Distribution List:

PROJECT INFORMATION

Project Name: Seville Dye
Project Location: Woonsocket, RI
Project Number: 15348.00
Project Manager: Fred Severs
Bill to:
PO#: 15348.00
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

REQUESTED ANALYSES

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	VOC	RCRA-8 metals	Total Number of Bottles
1	3/10/22	1530	Comp	Soil	Disp-S-1	x	x	
2		1540	"	"	Disp-S-2	x	x	
3					Trip Blank	x		

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

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

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

Sampled by: JSP

Chain needs to be filled out neatly and completely for on time delivery.

Laboratory Use Only
Cooler Temperature (°C): -1.4 ice

Comments: * Please specify "Other" preservative and containers types in this space
Please run TCLP over 20x rule. Thanks! JSP

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

Dissolved Filtration: ☐ Lab Filter

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
	3/10/22	1633					
Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)

CERTIFICATE OF ANALYSIS

Tyler Phillips
Vanasse Hangen Brustlin, Inc.
1 Cedar Street Suite 400
Providence, RI 02903

RE: Seville Dye Woonsocket RI (15348)
ESS Laboratory Work Order Number: 22C0384

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

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 2:15 pm, Mar 17, 2022

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

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

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22C0384

SAMPLE RECEIPT

The following samples were received on March 10, 2022 for the analyses specified on the enclosed Chain of Custody Record.

Lab Number	Sample Name	Matrix	Analysis
22C0384-01	Disp-GW-1	Ground Water	6010C, 7010, 7470A, 8260B
22C0384-02	Disp-GW-2	Ground Water	6010C, 7010, 7470A, 8260B
22C0384-03	Trip Blank	Aqueous	8260B

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22C0384

PROJECT NARRATIVE

8260B Volatile Organic Compounds

DC21123-BS1 **Blank Spike recovery is below lower control limit (B-).**
1,2-Dibromo-3-Chloropropane (68% @ 70-130%)

DC21123-BSD1 **Blank Spike recovery is below lower control limit (B-).**
1,2-Dibromo-3-Chloropropane (65% @ 70-130%), Bromoform (69% @ 70-130%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

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

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22C0384

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

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

Prep Methods

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

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

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: Disp-GW-1
Date Sampled: 03/10/22 15:10
Percent Solids: N/A

ESS Laboratory Work Order: 22C0384
ESS Laboratory Sample ID: 22C0384-01
Sample Matrix: Ground Water
Units: ug/L

Extraction Method: 3005A/200.7

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	ND (2.5)		7010		1	KJK	03/11/22 14:59	50	25	DC21113
Barium	**89.9** (25.0)		6010C		1	KJK	03/11/22 15:18	50	25	DC21113
Cadmium	ND (2.5)		6010C		1	KJK	03/11/22 15:18	50	25	DC21113
Chromium	ND (10.0)		6010C		1	KJK	03/11/22 15:18	50	25	DC21113
Lead	ND (10.0)		6010C		1	KJK	03/11/22 15:18	50	25	DC21113
Mercury	ND (0.20)		7470A		1	YIV	03/11/22 16:12	20	40	DC21126
Selenium	ND (25.0)		6010C		1	KJK	03/11/22 15:18	50	25	DC21113
Silver	ND (5.0)		6010C		1	KJK	03/11/22 15:18	50	25	DC21113

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: Disp-GW-1
Date Sampled: 03/10/22 15:10
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 22C0384
ESS Laboratory Sample ID: 22C0384-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	03/11/22 18:55	D2C0230	DC21123
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
1,1-Dichloroethane	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
1,1-Dichloroethene	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
1,1-Dichloropropene	ND (0.0020)		8260B		1	03/11/22 18:55	D2C0230	DC21123
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	03/11/22 18:55	D2C0230	DC21123
1,2-Dibromoethane	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
1,2-Dichloroethane	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
1,2-Dichloropropane	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
1,3-Dichloropropane	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
1,4-Dioxane - Screen	ND (0.500)		8260B		1	03/11/22 18:55	D2C0230	DC21123
1-Chlorohexane	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
2,2-Dichloropropane	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
2-Butanone	ND (0.0100)		8260B		1	03/11/22 18:55	D2C0230	DC21123
2-Chlorotoluene	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
2-Hexanone	ND (0.0100)		8260B		1	03/11/22 18:55	D2C0230	DC21123
4-Chlorotoluene	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
4-Isopropyltoluene	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
4-Methyl-2-Pentanone	ND (0.0100)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Acetone	**0.0186** (0.0100)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Benzene	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Bromobenzene	ND (0.0020)		8260B		1	03/11/22 18:55	D2C0230	DC21123

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: Disp-GW-1
Date Sampled: 03/10/22 15:10
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 22C0384
ESS Laboratory Sample ID: 22C0384-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Bromodichloromethane	ND (0.0006)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Bromoform	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Bromomethane	ND (0.0020)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Carbon Disulfide	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Carbon Tetrachloride	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Chlorobenzene	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Chloroethane	ND (0.0020)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Chloroform	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Chloromethane	ND (0.0020)		8260B		1	03/11/22 18:55	D2C0230	DC21123
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Dibromochloromethane	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Dibromomethane	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Dichlorodifluoromethane	ND (0.0020)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Diethyl Ether	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Di-isopropyl ether	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Ethylbenzene	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Hexachlorobutadiene	ND (0.0006)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Hexachloroethane	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Isopropylbenzene	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Methyl tert-Butyl Ether	**0.0149** (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Methylene Chloride	ND (0.0020)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Naphthalene	**0.0011** (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
n-Butylbenzene	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
n-Propylbenzene	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
sec-Butylbenzene	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Styrene	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
tert-Butylbenzene	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Tertiary-amyl methyl ether	**0.0011** (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Tetrachloroethene	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: Disp-GW-1
Date Sampled: 03/10/22 15:10
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 22C0384
ESS Laboratory Sample ID: 22C0384-01
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Toluene	**0.0016** (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Trichloroethene	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Trichlorofluoromethane	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Vinyl Acetate	ND (0.0050)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Vinyl Chloride	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Xylene O	ND (0.0010)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Xylene P,M	ND (0.0020)		8260B		1	03/11/22 18:55	D2C0230	DC21123
Xylenes (Total)	ND (0.00200)		8260B		1	03/11/22 18:55		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*103 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*93 %*		*70-130*
Surrogate: Dibromofluoromethane	*98 %*		*70-130*
Surrogate: Toluene-d8	*101 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: Disp-GW-2
Date Sampled: 03/10/22 15:00
Percent Solids: N/A

ESS Laboratory Work Order: 22C0384
ESS Laboratory Sample ID: 22C0384-02
Sample Matrix: Ground Water
Units: ug/L

Extraction Method: 3005A/200.7

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	ND (2.5)		7010		1	KJK	03/11/22 15:05	50	25	DC21113
Barium	**85.4** (25.0)		6010C		1	KJK	03/11/22 15:20	50	25	DC21113
Cadmium	ND (2.5)		6010C		1	KJK	03/11/22 15:20	50	25	DC21113
Chromium	ND (10.0)		6010C		1	KJK	03/11/22 15:20	50	25	DC21113
Lead	ND (10.0)		6010C		1	KJK	03/11/22 15:20	50	25	DC21113
Mercury	ND (0.20)		7470A		1	YIV	03/11/22 16:14	20	40	DC21126
Selenium	ND (25.0)		6010C		1	KJK	03/11/22 15:20	50	25	DC21113
Silver	ND (5.0)		6010C		1	KJK	03/11/22 15:20	50	25	DC21113

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: Disp-GW-2
Date Sampled: 03/10/22 15:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 22C0384
ESS Laboratory Sample ID: 22C0384-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	03/11/22 19:21	D2C0230	DC21123
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
1,1-Dichloroethane	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
1,1-Dichloroethene	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
1,1-Dichloropropene	ND (0.0020)		8260B		1	03/11/22 19:21	D2C0230	DC21123
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	03/11/22 19:21	D2C0230	DC21123
1,2-Dibromoethane	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
1,2-Dichloroethane	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
1,2-Dichloropropane	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
1,3-Dichloropropane	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
1,4-Dioxane - Screen	ND (0.500)		8260B		1	03/11/22 19:21	D2C0230	DC21123
1-Chlorohexane	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
2,2-Dichloropropane	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
2-Butanone	ND (0.0100)		8260B		1	03/11/22 19:21	D2C0230	DC21123
2-Chlorotoluene	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
2-Hexanone	ND (0.0100)		8260B		1	03/11/22 19:21	D2C0230	DC21123
4-Chlorotoluene	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
4-Isopropyltoluene	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
4-Methyl-2-Pentanone	ND (0.0100)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Acetone	**0.0194** (0.0100)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Benzene	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Bromobenzene	ND (0.0020)		8260B		1	03/11/22 19:21	D2C0230	DC21123

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: Disp-GW-2
Date Sampled: 03/10/22 15:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 22C0384
ESS Laboratory Sample ID: 22C0384-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Bromodichloromethane	ND (0.0006)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Bromoform	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Bromomethane	ND (0.0020)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Carbon Disulfide	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Carbon Tetrachloride	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Chlorobenzene	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Chloroethane	ND (0.0020)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Chloroform	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Chloromethane	ND (0.0020)		8260B		1	03/11/22 19:21	D2C0230	DC21123
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Dibromochloromethane	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Dibromomethane	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Dichlorodifluoromethane	ND (0.0020)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Diethyl Ether	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Di-isopropyl ether	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Ethylbenzene	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Hexachlorobutadiene	ND (0.0006)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Hexachloroethane	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Isopropylbenzene	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Methyl tert-Butyl Ether	**0.0148** (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Methylene Chloride	ND (0.0020)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Naphthalene	**0.0011** (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
n-Butylbenzene	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
n-Propylbenzene	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
sec-Butylbenzene	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Styrene	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
tert-Butylbenzene	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Tertiary-amyl methyl ether	**0.0010** (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Tetrachloroethene	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: Disp-GW-2
Date Sampled: 03/10/22 15:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 22C0384
ESS Laboratory Sample ID: 22C0384-02
Sample Matrix: Ground Water
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Toluene	**0.0016** (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Trichloroethene	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Trichlorofluoromethane	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Vinyl Acetate	ND (0.0050)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Vinyl Chloride	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Xylene O	ND (0.0010)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Xylene P,M	ND (0.0020)		8260B		1	03/11/22 19:21	D2C0230	DC21123
Xylenes (Total)	ND (0.00200)		8260B		1	03/11/22 19:21		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*102 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*93 %*		*70-130*
Surrogate: Dibromofluoromethane	*98 %*		*70-130*
Surrogate: Toluene-d8	*100 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: Trip Blank
Date Sampled: 03/10/22 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 22C0384
ESS Laboratory Sample ID: 22C0384-03
Sample Matrix: Aqueous
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
1,1,1-Trichloroethane	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
1,1,2,2-Tetrachloroethane	ND (0.0005)		8260B		1	03/11/22 12:24	D2C0230	DC21123
1,1,2-Trichloroethane	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
1,1-Dichloroethane	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
1,1-Dichloroethene	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
1,1-Dichloropropene	ND (0.0020)		8260B		1	03/11/22 12:24	D2C0230	DC21123
1,2,3-Trichlorobenzene	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
1,2,3-Trichloropropane	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
1,2,4-Trichlorobenzene	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
1,2,4-Trimethylbenzene	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B		1	03/11/22 12:24	D2C0230	DC21123
1,2-Dibromoethane	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
1,2-Dichlorobenzene	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
1,2-Dichloroethane	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
1,2-Dichloropropane	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
1,3,5-Trimethylbenzene	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
1,3-Dichlorobenzene	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
1,3-Dichloropropane	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
1,4-Dichlorobenzene	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
1,4-Dioxane - Screen	ND (0.500)		8260B		1	03/11/22 12:24	D2C0230	DC21123
1-Chlorohexane	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
2,2-Dichloropropane	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
2-Butanone	ND (0.0100)		8260B		1	03/11/22 12:24	D2C0230	DC21123
2-Chlorotoluene	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
2-Hexanone	ND (0.0100)		8260B		1	03/11/22 12:24	D2C0230	DC21123
4-Chlorotoluene	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
4-Isopropyltoluene	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
4-Methyl-2-Pentanone	ND (0.0100)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Acetone	ND (0.0100)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Benzene	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Bromobenzene	ND (0.0020)		8260B		1	03/11/22 12:24	D2C0230	DC21123

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: Trip Blank
Date Sampled: 03/10/22 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 22C0384
ESS Laboratory Sample ID: 22C0384-03
Sample Matrix: Aqueous
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromochloromethane	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Bromodichloromethane	ND (0.0006)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Bromoform	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Bromomethane	ND (0.0020)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Carbon Disulfide	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Carbon Tetrachloride	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Chlorobenzene	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Chloroethane	ND (0.0020)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Chloroform	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Chloromethane	ND (0.0020)		8260B		1	03/11/22 12:24	D2C0230	DC21123
cis-1,2-Dichloroethene	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
cis-1,3-Dichloropropene	ND (0.0004)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Dibromochloromethane	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Dibromomethane	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Dichlorodifluoromethane	ND (0.0020)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Diethyl Ether	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Di-isopropyl ether	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Ethyl tertiary-butyl ether	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Ethylbenzene	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Hexachlorobutadiene	ND (0.0006)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Hexachloroethane	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Isopropylbenzene	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Methyl tert-Butyl Ether	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Methylene Chloride	ND (0.0020)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Naphthalene	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
n-Butylbenzene	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
n-Propylbenzene	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
sec-Butylbenzene	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Styrene	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
tert-Butylbenzene	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Tertiary-amyl methyl ether	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Tetrachloroethene	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI
Client Sample ID: Trip Blank
Date Sampled: 03/10/22 00:00
Percent Solids: N/A
Initial Volume: 5
Final Volume: 5
Extraction Method: 5030B

ESS Laboratory Work Order: 22C0384
ESS Laboratory Sample ID: 22C0384-03
Sample Matrix: Aqueous
Units: mg/L
Analyst: MD

8260B Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Tetrahydrofuran	ND (0.0050)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Toluene	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
trans-1,2-Dichloroethene	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
trans-1,3-Dichloropropene	ND (0.0004)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Trichloroethene	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Trichlorofluoromethane	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Vinyl Acetate	ND (0.0050)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Vinyl Chloride	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Xylene O	ND (0.0010)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Xylene P,M	ND (0.0020)		8260B		1	03/11/22 12:24	D2C0230	DC21123
Xylenes (Total)	ND (0.00200)		8260B		1	03/11/22 12:24		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*102 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*93 %*		*70-130*
Surrogate: Dibromofluoromethane	*97 %*		*70-130*
Surrogate: Toluene-d8	*101 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22C0384

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals										
Batch DC21113 - 3005A/200.7										
Blank										
Barium	ND	25.0	ug/L							
Cadmium	ND	2.5	ug/L							
Chromium	ND	10.0	ug/L							
Lead	ND	10.0	ug/L							
Selenium	ND	25.0	ug/L							
Silver	ND	5.0	ug/L							
Blank										
Arsenic	ND	2.5	ug/L							
LCS										
Barium	261	25.0	ug/L	250.0		104	80-120			
Cadmium	126	2.5	ug/L	125.0		101	80-120			
Chromium	258	10.0	ug/L	250.0		103	80-120			
Lead	262	10.0	ug/L	250.0		105	80-120			
Selenium	506	25.0	ug/L	500.0		101	80-120			
Silver	128	5.0	ug/L	125.0		103	80-120			
LCS										
Arsenic	257	62.5	ug/L	250.0		103	80-120			
LCS Dup										
Barium	248	25.0	ug/L	250.0		99	80-120	5	20	
Cadmium	119	2.5	ug/L	125.0		95	80-120	6	20	
Chromium	248	10.0	ug/L	250.0		99	80-120	4	20	
Lead	248	10.0	ug/L	250.0		99	80-120	5	20	
Selenium	480	25.0	ug/L	500.0		96	80-120	5	20	
Silver	122	5.0	ug/L	125.0		97	80-120	5	20	
LCS Dup										
Arsenic	233	62.5	ug/L	250.0		93	80-120	10	20	
Batch DC21126 - 245.1/7470A										
Blank										
Mercury	ND	0.20	ug/L							
LCS										
Mercury	6.03	0.20	ug/L	6.042		100	80-120			
LCS Dup										
Mercury	6.37	0.20	ug/L	6.042		105	80-120	6	20	
8260B Volatile Organic Compounds										
Batch DC21123 - 5030B										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0010	mg/L							
1,1,1-Trichloroethane	ND	0.0010	mg/L							
1,1,2,2-Tetrachloroethane	ND	0.0005	mg/L							
1,1,2-Trichloroethane	ND	0.0010	mg/L							

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22C0384

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DC21123 - 5030B										
1,1-Dichloroethane	ND	0.0010	mg/L							
1,1-Dichloroethene	ND	0.0010	mg/L							
1,1-Dichloropropene	ND	0.0020	mg/L							
1,2,3-Trichlorobenzene	ND	0.0010	mg/L							
1,2,3-Trichloropropane	ND	0.0010	mg/L							
1,2,4-Trichlorobenzene	ND	0.0010	mg/L							
1,2,4-Trimethylbenzene	ND	0.0010	mg/L							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/L							
1,2-Dibromoethane	ND	0.0010	mg/L							
1,2-Dichlorobenzene	ND	0.0010	mg/L							
1,2-Dichloroethane	ND	0.0010	mg/L							
1,2-Dichloropropane	ND	0.0010	mg/L							
1,3,5-Trimethylbenzene	ND	0.0010	mg/L							
1,3-Dichlorobenzene	ND	0.0010	mg/L							
1,3-Dichloropropane	ND	0.0010	mg/L							
1,4-Dichlorobenzene	ND	0.0010	mg/L							
1,4-Dioxane - Screen	ND	0.500	mg/L							
1-Chlorohexane	ND	0.0010	mg/L							
2,2-Dichloropropane	ND	0.0010	mg/L							
2-Butanone	ND	0.0100	mg/L							
2-Chlorotoluene	ND	0.0010	mg/L							
2-Hexanone	ND	0.0100	mg/L							
4-Chlorotoluene	ND	0.0010	mg/L							
4-Isopropyltoluene	ND	0.0010	mg/L							
4-Methyl-2-Pentanone	ND	0.0100	mg/L							
Acetone	ND	0.0100	mg/L							
Benzene	ND	0.0010	mg/L							
Bromobenzene	ND	0.0020	mg/L							
Bromochloromethane	ND	0.0010	mg/L							
Bromodichloromethane	ND	0.0006	mg/L							
Bromoform	ND	0.0010	mg/L							
Bromomethane	ND	0.0020	mg/L							
Carbon Disulfide	ND	0.0010	mg/L							
Carbon Tetrachloride	ND	0.0010	mg/L							
Chlorobenzene	ND	0.0010	mg/L							
Chloroethane	ND	0.0020	mg/L							
Chloroform	ND	0.0010	mg/L							
Chloromethane	ND	0.0020	mg/L							
cis-1,2-Dichloroethene	ND	0.0010	mg/L							
cis-1,3-Dichloropropene	ND	0.0004	mg/L							
Dibromochloromethane	ND	0.0010	mg/L							
Dibromomethane	ND	0.0010	mg/L							
Dichlorodifluoromethane	ND	0.0020	mg/L							
Diethyl Ether	ND	0.0010	mg/L							
Di-isopropyl ether	ND	0.0010	mg/L							

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22C0384

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DC21123 - 5030B										
Ethyl tertiary-butyl ether	ND	0.0010	mg/L							
Ethylbenzene	ND	0.0010	mg/L							
Hexachlorobutadiene	ND	0.0006	mg/L							
Hexachloroethane	ND	0.0010	mg/L							
Isopropylbenzene	ND	0.0010	mg/L							
Methyl tert-Butyl Ether	ND	0.0010	mg/L							
Methylene Chloride	ND	0.0020	mg/L							
Naphthalene	ND	0.0010	mg/L							
n-Butylbenzene	ND	0.0010	mg/L							
n-Propylbenzene	ND	0.0010	mg/L							
sec-Butylbenzene	ND	0.0010	mg/L							
Styrene	ND	0.0010	mg/L							
tert-Butylbenzene	ND	0.0010	mg/L							
Tertiary-amyl methyl ether	ND	0.0010	mg/L							
Tetrachloroethene	ND	0.0010	mg/L							
Tetrahydrofuran	ND	0.0050	mg/L							
Toluene	ND	0.0010	mg/L							
trans-1,2-Dichloroethene	ND	0.0010	mg/L							
trans-1,3-Dichloropropene	ND	0.0004	mg/L							
Trichloroethene	ND	0.0010	mg/L							
Trichlorofluoromethane	ND	0.0010	mg/L							
Vinyl Acetate	ND	0.0050	mg/L							
Vinyl Chloride	ND	0.0010	mg/L							
Xylene O	ND	0.0010	mg/L							
Xylene P,M	ND	0.0020	mg/L							
Surrogate: 1,2-Dichloroethane-d4	*0.0252*		mg/L	*0.02500*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0233*		mg/L	*0.02500*		*93*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0239*		mg/L	*0.02500*		*96*	*70-130*			
Surrogate: Toluene-d8	*0.0252*		mg/L	*0.02500*		*101*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	0.0087	0.0010	mg/L	0.01000		87	70-130			
1,1,1-Trichloroethane	0.0089	0.0010	mg/L	0.01000		89	70-130			
1,1,2,2-Tetrachloroethane	0.0093	0.0005	mg/L	0.01000		93	70-130			
1,1,2-Trichloroethane	0.0089	0.0010	mg/L	0.01000		89	70-130			
1,1-Dichloroethane	0.0097	0.0010	mg/L	0.01000		97	70-130			
1,1-Dichloroethene	0.0104	0.0010	mg/L	0.01000		104	70-130			
1,1-Dichloropropene	0.0095	0.0020	mg/L	0.01000		95	70-130			
1,2,3-Trichlorobenzene	0.0086	0.0010	mg/L	0.01000		86	70-130			
1,2,3-Trichloropropane	0.0085	0.0010	mg/L	0.01000		85	70-130			
1,2,4-Trichlorobenzene	0.0088	0.0010	mg/L	0.01000		88	70-130			
1,2,4-Trimethylbenzene	0.0091	0.0010	mg/L	0.01000		91	70-130			
1,2-Dibromo-3-Chloropropane	0.0068	0.0050	mg/L	0.01000		68	70-130			B-
1,2-Dibromoethane	0.0089	0.0010	mg/L	0.01000		89	70-130			
1,2-Dichlorobenzene	0.0092	0.0010	mg/L	0.01000		92	70-130			
1,2-Dichloroethane	0.0090	0.0010	mg/L	0.01000		90	70-130			

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22C0384

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DC21123 - 5030B										
1,2-Dichloropropane	0.0093	0.0010	mg/L	0.01000		93	70-130			
1,3,5-Trimethylbenzene	0.0094	0.0010	mg/L	0.01000		94	70-130			
1,3-Dichlorobenzene	0.0094	0.0010	mg/L	0.01000		94	70-130			
1,3-Dichloropropane	0.0094	0.0010	mg/L	0.01000		94	70-130			
1,4-Dichlorobenzene	0.0094	0.0010	mg/L	0.01000		94	70-130			
1,4-Dioxane - Screen	ND	0.500	mg/L	0.2000		0	0-332			
1-Chlorohexane	0.0085	0.0010	mg/L	0.01000		85	70-130			
2,2-Dichloropropane	0.0092	0.0010	mg/L	0.01000		92	70-130			
2-Butanone	0.0499	0.0100	mg/L	0.05000		100	70-130			
2-Chlorotoluene	0.0095	0.0010	mg/L	0.01000		95	70-130			
2-Hexanone	0.0449	0.0100	mg/L	0.05000		90	70-130			
4-Chlorotoluene	0.0094	0.0010	mg/L	0.01000		94	70-130			
4-Isopropyltoluene	0.0092	0.0010	mg/L	0.01000		92	70-130			
4-Methyl-2-Pentanone	0.0437	0.0100	mg/L	0.05000		87	70-130			
Acetone	0.0541	0.0100	mg/L	0.05000		108	70-130			
Benzene	0.0097	0.0010	mg/L	0.01000		97	70-130			
Bromobenzene	0.0094	0.0020	mg/L	0.01000		94	70-130			
Bromochloromethane	0.0098	0.0010	mg/L	0.01000		98	70-130			
Bromodichloromethane	0.0090	0.0006	mg/L	0.01000		90	70-130			
Bromoform	0.0070	0.0010	mg/L	0.01000		70	70-130			
Bromomethane	0.0100	0.0020	mg/L	0.01000		100	70-130			
Carbon Disulfide	0.0097	0.0010	mg/L	0.01000		97	70-130			
Carbon Tetrachloride	0.0090	0.0010	mg/L	0.01000		90	70-130			
Chlorobenzene	0.0095	0.0010	mg/L	0.01000		95	70-130			
Chloroethane	0.0107	0.0020	mg/L	0.01000		107	70-130			
Chloroform	0.0093	0.0010	mg/L	0.01000		93	70-130			
Chloromethane	0.0089	0.0020	mg/L	0.01000		89	70-130			
cis-1,2-Dichloroethene	0.0094	0.0010	mg/L	0.01000		94	70-130			
cis-1,3-Dichloropropene	0.0088	0.0004	mg/L	0.01000		88	70-130			
Dibromochloromethane	0.0082	0.0010	mg/L	0.01000		82	70-130			
Dibromomethane	0.0094	0.0010	mg/L	0.01000		94	70-130			
Dichlorodifluoromethane	0.0083	0.0020	mg/L	0.01000		83	70-130			
Diethyl Ether	0.0096	0.0010	mg/L	0.01000		96	70-130			
Di-isopropyl ether	0.0094	0.0010	mg/L	0.01000		94	70-130			
Ethyl tertiary-butyl ether	0.0091	0.0010	mg/L	0.01000		91	70-130			
Ethylbenzene	0.0092	0.0010	mg/L	0.01000		92	70-130			
Hexachlorobutadiene	0.0084	0.0006	mg/L	0.01000		84	70-130			
Hexachloroethane	0.0082	0.0010	mg/L	0.01000		82	70-130			
Isopropylbenzene	0.0095	0.0010	mg/L	0.01000		95	70-130			
Methyl tert-Butyl Ether	0.0090	0.0010	mg/L	0.01000		90	70-130			
Methylene Chloride	0.0094	0.0020	mg/L	0.01000		94	70-130			
Naphthalene	0.0080	0.0010	mg/L	0.01000		80	70-130			
n-Butylbenzene	0.0090	0.0010	mg/L	0.01000		91	70-130			
n-Propylbenzene	0.0095	0.0010	mg/L	0.01000		95	70-130			
sec-Butylbenzene	0.0091	0.0010	mg/L	0.01000		91	70-130			

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22C0384

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DC21123 - 5030B										
Styrene	0.0086	0.0010	mg/L	0.01000		86	70-130			
tert-Butylbenzene	0.0093	0.0010	mg/L	0.01000		93	70-130			
Tertiary-amyl methyl ether	0.0088	0.0010	mg/L	0.01000		88	70-130			
Tetrachloroethene	0.0082	0.0010	mg/L	0.01000		82	70-130			
Tetrahydrofuran	0.0099	0.0050	mg/L	0.01000		99	70-130			
Toluene	0.0096	0.0010	mg/L	0.01000		96	70-130			
trans-1,2-Dichloroethene	0.0100	0.0010	mg/L	0.01000		100	70-130			
trans-1,3-Dichloropropene	0.0079	0.0004	mg/L	0.01000		79	70-130			
Trichloroethene	0.0086	0.0010	mg/L	0.01000		86	70-130			
Trichlorofluoromethane	0.0100	0.0010	mg/L	0.01000		100	70-130			
Vinyl Acetate	0.0093	0.0050	mg/L	0.01000		93	70-130			
Vinyl Chloride	0.0117	0.0010	mg/L	0.01000		117	70-130			
Xylene O	0.0094	0.0010	mg/L	0.01000		94	70-130			
Xylene P,M	0.0188	0.0020	mg/L	0.02000		94	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0251*		mg/L	*0.02500*		*100*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0243*		mg/L	*0.02500*		*97*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0250*		mg/L	*0.02500*		*100*	*70-130*			
Surrogate: Toluene-d8	*0.0251*		mg/L	*0.02500*		*100*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	0.0086	0.0010	mg/L	0.01000		86	70-130	0.9	25	
1,1,1-Trichloroethane	0.0089	0.0010	mg/L	0.01000		89	70-130	0.2	25	
1,1,2,2-Tetrachloroethane	0.0092	0.0005	mg/L	0.01000		92	70-130	1	25	
1,1,2-Trichloroethane	0.0090	0.0010	mg/L	0.01000		90	70-130	1	25	
1,1-Dichloroethane	0.0096	0.0010	mg/L	0.01000		96	70-130	0.8	25	
1,1-Dichloroethene	0.0103	0.0010	mg/L	0.01000		103	70-130	0.9	25	
1,1-Dichloropropene	0.0094	0.0020	mg/L	0.01000		94	70-130	0.7	25	
1,2,3-Trichlorobenzene	0.0085	0.0010	mg/L	0.01000		85	70-130	2	25	
1,2,3-Trichloropropane	0.0082	0.0010	mg/L	0.01000		82	70-130	3	25	
1,2,4-Trichlorobenzene	0.0086	0.0010	mg/L	0.01000		86	70-130	2	25	
1,2,4-Trimethylbenzene	0.0092	0.0010	mg/L	0.01000		92	70-130	0.9	25	
1,2-Dibromo-3-Chloropropane	0.0065	0.0050	mg/L	0.01000		65	70-130	4	25	B-
1,2-Dibromoethane	0.0088	0.0010	mg/L	0.01000		88	70-130	1	25	
1,2-Dichlorobenzene	0.0091	0.0010	mg/L	0.01000		91	70-130	0.9	25	
1,2-Dichloroethane	0.0092	0.0010	mg/L	0.01000		92	70-130	2	25	
1,2-Dichloropropane	0.0094	0.0010	mg/L	0.01000		94	70-130	0.6	25	
1,3,5-Trimethylbenzene	0.0093	0.0010	mg/L	0.01000		93	70-130	0.7	25	
1,3-Dichlorobenzene	0.0094	0.0010	mg/L	0.01000		94	70-130	0	25	
1,3-Dichloropropane	0.0094	0.0010	mg/L	0.01000		94	70-130	0.5	25	
1,4-Dichlorobenzene	0.0094	0.0010	mg/L	0.01000		94	70-130	0.5	25	
1,4-Dioxane - Screen	ND	0.500	mg/L	0.2000		0	0-332	200	200	
1-Chlorohexane	0.0085	0.0010	mg/L	0.01000		85	70-130	0.7	25	
2,2-Dichloropropane	0.0091	0.0010	mg/L	0.01000		91	70-130	0.7	25	
2-Butanone	0.0499	0.0100	mg/L	0.05000		100	70-130	0.04	25	
2-Chlorotoluene	0.0095	0.0010	mg/L	0.01000		95	70-130	0	25	
2-Hexanone	0.0455	0.0100	mg/L	0.05000		91	70-130	1	25	

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22C0384

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DC21123 - 5030B										
4-Chlorotoluene	0.0094	0.0010	mg/L	0.01000		94	70-130	0.5	25	
4-Isopropyltoluene	0.0091	0.0010	mg/L	0.01000		91	70-130	0.2	25	
4-Methyl-2-Pentanone	0.0438	0.0100	mg/L	0.05000		88	70-130	0.2	25	
Acetone	0.0550	0.0100	mg/L	0.05000		110	70-130	2	25	
Benzene	0.0097	0.0010	mg/L	0.01000		97	70-130	0.2	25	
Bromobenzene	0.0095	0.0020	mg/L	0.01000		95	70-130	1	25	
Bromochloromethane	0.0095	0.0010	mg/L	0.01000		95	70-130	3	25	
Bromodichloromethane	0.0092	0.0006	mg/L	0.01000		92	70-130	1	25	
Bromoform	0.0069	0.0010	mg/L	0.01000		69	70-130	2	25	B-
Bromomethane	0.0103	0.0020	mg/L	0.01000		103	70-130	3	25	
Carbon Disulfide	0.0096	0.0010	mg/L	0.01000		96	70-130	2	25	
Carbon Tetrachloride	0.0090	0.0010	mg/L	0.01000		90	70-130	0.3	25	
Chlorobenzene	0.0094	0.0010	mg/L	0.01000		94	70-130	0.1	25	
Chloroethane	0.0109	0.0020	mg/L	0.01000		109	70-130	2	25	
Chloroform	0.0094	0.0010	mg/L	0.01000		94	70-130	1	25	
Chloromethane	0.0085	0.0020	mg/L	0.01000		85	70-130	5	25	
cis-1,2-Dichloroethene	0.0095	0.0010	mg/L	0.01000		95	70-130	0.8	25	
cis-1,3-Dichloropropene	0.0088	0.0004	mg/L	0.01000		88	70-130	0.3	25	
Dibromochloromethane	0.0081	0.0010	mg/L	0.01000		81	70-130	1	25	
Dibromomethane	0.0093	0.0010	mg/L	0.01000		93	70-130	1	25	
Dichlorodifluoromethane	0.0079	0.0020	mg/L	0.01000		79	70-130	5	25	
Diethyl Ether	0.0100	0.0010	mg/L	0.01000		100	70-130	4	25	
Di-isopropyl ether	0.0094	0.0010	mg/L	0.01000		94	70-130	0.3	25	
Ethyl tertiary-butyl ether	0.0091	0.0010	mg/L	0.01000		91	70-130	0.2	25	
Ethylbenzene	0.0092	0.0010	mg/L	0.01000		92	70-130	0.4	25	
Hexachlorobutadiene	0.0082	0.0006	mg/L	0.01000		82	70-130	3	25	
Hexachloroethane	0.0081	0.0010	mg/L	0.01000		81	70-130	1	25	
Isopropylbenzene	0.0095	0.0010	mg/L	0.01000		95	70-130	0.4	25	
Methyl tert-Butyl Ether	0.0092	0.0010	mg/L	0.01000		92	70-130	2	25	
Methylene Chloride	0.0096	0.0020	mg/L	0.01000		96	70-130	1	25	
Naphthalene	0.0080	0.0010	mg/L	0.01000		80	70-130	0.6	25	
n-Butylbenzene	0.0090	0.0010	mg/L	0.01000		90	70-130	0.9	25	
n-Propylbenzene	0.0094	0.0010	mg/L	0.01000		94	70-130	0.3	25	
sec-Butylbenzene	0.0091	0.0010	mg/L	0.01000		91	70-130	0.3	25	
Styrene	0.0085	0.0010	mg/L	0.01000		85	70-130	1	25	
tert-Butylbenzene	0.0093	0.0010	mg/L	0.01000		93	70-130	0.6	25	
Tertiary-amyl methyl ether	0.0085	0.0010	mg/L	0.01000		85	70-130	3	25	
Tetrachloroethene	0.0092	0.0010	mg/L	0.01000		92	70-130	11	25	
Tetrahydrofuran	0.0102	0.0050	mg/L	0.01000		102	70-130	3	25	
Toluene	0.0096	0.0010	mg/L	0.01000		96	70-130	0.2	25	
trans-1,2-Dichloroethene	0.0103	0.0010	mg/L	0.01000		103	70-130	3	25	
trans-1,3-Dichloropropene	0.0078	0.0004	mg/L	0.01000		78	70-130	0.6	25	
Trichloroethene	0.0086	0.0010	mg/L	0.01000		86	70-130	0.2	25	
Trichlorofluoromethane	0.0103	0.0010	mg/L	0.01000		103	70-130	4	25	
Vinyl Acetate	0.0090	0.0050	mg/L	0.01000		90	70-130	4	25	

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22C0384

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8260B Volatile Organic Compounds										
Batch DC21123 - 5030B										
Vinyl Chloride	0.0105	0.0010	mg/L	0.01000		105	70-130	10	25	
Xylene O	0.0093	0.0010	mg/L	0.01000		93	70-130	0.7	25	
Xylene P,M	0.0188	0.0020	mg/L	0.02000		94	70-130	0.1	25	
Surrogate: 1,2-Dichloroethane-d4	*0.0252*		mg/L	*0.02500*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0241*		mg/L	*0.02500*		*96*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0250*		mg/L	*0.02500*		*100*	*70-130*			
Surrogate: Toluene-d8	*0.0250*		mg/L	*0.02500*		*100*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22C0384

Notes and Definitions

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

CERTIFICATE OF ANALYSIS

Client Name: Vanasse Hangen Brustlin, Inc.
Client Project ID: Seville Dye Woonsocket RI

ESS Laboratory Work Order: 22C0384

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

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

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

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

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

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

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

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

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

ESS Laboratory Sample and Cooler Receipt Checklist

Client: VHB - Vanasse Hangen Brustlin, Inc - KPB

Shipped/Delivered Via: Client

ESS Project ID: 22C0384
Date Received: 3/10/2022
Project Due Date: 3/17/2022
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: -1.8 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / NA
10. Were any analyses received outside of hold time? Yes / No

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

Sample Receiving Notes:

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

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	265403	Yes	No	Yes	VOA Vial	HCl	
1	265404	Yes	No	Yes	VOA Vial	HCl	
1	265405	Yes	No	Yes	VOA Vial	HCl	
1	265412	Yes	N/A	Yes	250 mL Poly	HNO3	
2	265406	Yes	No	Yes	VOA Vial	HCl	
2	265407	Yes	No	Yes	VOA Vial	HCl	
2	265408	Yes	No	Yes	VOA Vial	HCl	
2	265413	Yes	N/A	Yes	250 mL Poly	HNO3	
3	265411	Yes	No	Yes	VOA Vial	HCl	

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

ESS Laboratory Sample and Cooler Receipt Checklist

Client: VHB - Vanasse Hangen Brustlin, Inc - KPB

ESS Project ID: 22C0384
Date Received: 3/10/2022

Completed By: [signature] Date & Time: 3.10.22 1700

Reviewed By: [signature] Date & Time: 3/10/22 1705

185 Frances Avenue
Cranston, RI 02921
Phone: 401-461-7181
Fax: 401-461-4486
www.esslaboratory.com

CHAIN OF CUSTODY

ESS Lab # 22C0384 | Page 1 of 1

Turn Time: ☐ >5 ☒ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ Same Day

Regulatory State: RI **Criteria:**

Is this project for any of the following?: ☐ CT RCP ☐ MA MCP ☐ RGP ☐ Permit ☐ 401 WQ

ELECTRONIC DELIVERABLES (Final Reports are PDF)

☒ Limit Checker ☐ State Forms ☐ EQuIS
☒ Excel ☐ Hard Copy ☐ Enviro Data
☐ CLP-Like Package ☐ Other (Specify) →

CLIENT INFORMATION

Client: VHB
Address: 1 Cedar St. Suite 400
Providence, RI
Phone: 401.935.9035
Email Distribution List:

PROJECT INFORMATION

Project Name: Seville Dye
Project Location: Woonsocket
Project Number: 15348.00
Project Manager: Fred Bevis
Bill to:
PO#: 15348.00
Quote#:

Client acknowledges that sampling is compliant with all EPA / State regulatory programs

REQUESTED ANALYSES

ESS Lab ID	Collection Date	Collection Time	Sample Type	Sample Matrix	Sample ID	VOC	RCRA-8 Metals	Total Number of Bottles
1	3/10/22	1510	Grab	GW	Disp-GW-1	x	x	
2	1	1500	1	1	Disp-GW-2	x	x	
3					Trip Blank	x		

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

Sampled by: JSP JSP

Chain needs to be filled out neatly and completely for on time delivery.

Laboratory Use Only
Cooler Temperature (°C): -1.6 ice

Comments: * Please specify "Other" preservative and containers types in this space
Please run TCLP on results over 20x RL

All samples submitted are subject to ESS Laboratory's payment terms and conditions.

Dissolved Filtration
☐ Lab Filter

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
	3/10/22	1630					

Appendix G
Non-Hazardous Waste Manifest

Please print or type. Generator acknowledges that no material change has occurred either in the characteristics or in the process generating the material. Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	NONEREQUIRED	1	(800) 483-3718	017407251 FLE

GENERATOR

5. Generator's Name and Mailing Address
City of Woonsocket
1 Cedar St. Suite 400
Providence, RI 02903
Generator's Phone: (401)457-2029 ATTN:Kevin Proft

Generator's Site Address (if different than mailing address)
229 1st Ave
Woonsocket, RI 02895

6. Transporter 1 Company Name: Clean Harbors Environmental Services, Inc.
U.S. EPA ID Number: MAD039322250

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Spring Grove Resource Recovery Inc.
4879 Spring Grove Avenue
Cincinnati, OH 45232
Facility's Phone: (513) 681-5738
U.S. EPA ID Number: OHD000816629

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON DOT REGULATED. (GROUNDWATER)	001	DM	100	P	MAPP NONE
	2. NON DOT REGULATED. (SOIL)	001	DM	802	P	MAPP NONE
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1.CH2318280 1x55
2.CH2318276 1x55

Contract retained by generator confers agency authority on initial transporter to add or substitute additional transporters on generator's behalf for purposes of transportation efficiency, convenience, or safety

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Brian McElroy
Signature: Brian McElroy
Month 04 Day 27 Year 22

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Brian McElroy
Signature: Brian McElroy
Month 04 Day 27 Year 22
Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141	H141		

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Amanda Parent
Signature
Month 05 Day 13 Year 22

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

D1 2108501643 PPW

To whom it may concern:

Re: Designation of "Authorized Representative" (40CFR 260.10) Status for hazardous waste disposal services

By signing this document below, I hereby authorize Clean Harbors or its designee to act as my agent and as my "authorized representative" (as defined by the Resource Conservation and Recovery Act, codified in 40CFR 260.10) to prepare documents required for transportation and disposal of hazardous waste. Such services are to include, but are not limited to, performing analysis, making waste certifications and preparing documentation such as profiles, manifests, notifications and certifications of land disposal restrictions and other necessary documents.

I hereby certify that I have authority to execute this letter designating Clean Harbors to act as my authorized representative. I also understand that the City of Woonsocket remains fully liable under Federal and State hazardous waste regulations as the "generator" of the waste material

Signature: _____ Title: City Planner, City of Woonsocket

Printed Name: Kevin Proft Date: 4/18/22