



## **PHASE II LIMITED SUBSURFACE INVESTIGATION**

**ROBIN RUG MANUFACTURING FACILITY  
BRISTOL, RHODE ISLAND**

**TAX MAP 10, LOTS 42 and 60  
(Main Mill Parcels)  
125 Thames Street**

**TAX MAP 10, LOTS 32, 41, 43, 44, 61, 62, 68, 73, 74, 76  
(Parking Lot Parcels)  
125 Thames Street**

**TAX MAP 10, LOTS 49 and 50  
60 and 70 Thames Street**

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FOR

**BRADY-SULLIVAN PROPERTIES  
670 North Commercial Street  
Manchester, NH 03101**

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**BY  
NOBIS GROUP®**

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**Nobis Project No. 095560.260**

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**ROBIN RUG MANUFACTURING FACILITY**  
**125 THAMES STREET, BRISTOL, RHODE ISLAND**

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## **EXECUTIVE SUMMARY**

Nobis Engineering, Inc., dba Nobis Group® (Nobis) conducted a limited Phase II Limited Subsurface Investigation (Phase II) at the Robin Rug Manufacturing facility property (the subject property) located at 125 Thames Street in Bristol, Rhode Island. The subject property consists of fourteen (14) parcels of land totaling approximately 3.47± acres of developed commercial/industrial land located on the east and west sides of Thames Street between Church Street and Constitution Street. The subject property is located along the Bristol Harbor waterfront in a mixed-use area abutted by Maritime Welcome Center and Marina entrance, the Bristol Elks Club, a park, parking lots and several single-family and two-family residential properties.

The two main Mill parcels (Lots 10-42 and 10-60) were originally developed as a textile mill producing cottons and yarns, including operation of a dye house, in the late 1800s through the mid-1900s. In circa 1975, Robin Rug purchased the property who operated the mill to produce braided rugs. Residential properties at 60 and 70 Thames Street were historically residential and used as single or double-family homes. Prior to the 1960s, green houses were reportedly present on Lots 10-43 and 10-76. The Mill paved and gravel parking lots have historically been undeveloped, while the Church and Thames Parking Lot (lot 10-32) appears to have previously been developed as a residence, store, and boarding house.

The Phase II was conducted to assess the Recognized Environmental Conditions (RECs) which were identified in the ASTM Phase I ESA completed in April 2021 by Nobis (see Section 1.4.2). The Phase II was conducted to provide Brady Sullivan Properties with information on subsurface condition at the subject property in support of further due diligence and prior to potential acquisition and redevelopment of the Robin Rug facility into residential condominiums/apartments.

The Phase II field activities were performed between May 27 and June 30, 2021. The Phase II consisted of a limited subsurface investigation that included: development of existing groundwater monitoring wells, a geophysical survey, drilling of eleven (11) soil borings including installation of two (2) groundwater monitoring wells, excavation of sixteen (16) test pits, installation of four (4) soil vapor points in the basement of the mill building and sampling and analysis of various environmental media (soil, groundwater, soil vapor and wipe samples) and a well elevation survey. Samples were analyzed for a combination of analytes (i.e., VOCs, SVOCs, PAHs, RCRA eight metals, hexavalent chromium, pesticides, PCBs, and cyanide).

Based upon the findings of the limited Phase II, Nobis concludes the following:

- Subsurface soil consists of fill overlying native marine deposits consisting of alternating layers of sand, silt, and clay. Fill consists of fine to coarse sand with debris consisting of crushed stone/rock, concrete, brick, ash, slag, glass, plastic, and wire fragments. Fill is present in several area of the site, including west of the main mill, the central northern interior (SB-6/SB-7 area) and in the parking lots parcels east of Thames Street. Fill ranged in thickness from approximately 3 to 8 feet. The thickest amount of fill ( $\approx$ 8 feet) was encountered in TP-6 on Lot 10-43.
- Except for one reading (65 ppmV in TP-6), PID readings of TVOCs in soil were generally less than 1 ppmv in most locations. Petroleum odors were encountered at the groundwater table at 8 feet below grade (fbg) in TP-6 only. No dark brown or black-stained soils were encountered in the subsurface. No sheen or free product was encountered in groundwater monitoring locations.
- A UST, which was suspected to exist based upon GPR results, was not encountered during test pit explorations at TP-7 on Lot 10-76. The past and/or current use of the two unknown metal pipes in this location remains unclear. Lead was detected at 4,600 mg/kg at TP-7 in soil at a depth of 0 to 3.5 feet and is suspected to be related to the presence of ash.
- In soil, contaminants detected included primarily PAHs, TPH and metals (primarily arsenic and lead). The contaminants may be related to the presence of anthropogenic fill (placed by man) or pyrogenic fill (burn residue or produced by fire) and/or possibly by undocumented releases from historic mill activities and operations. Other contaminants such as VOCs, pesticides, PCBs, cyanide, and hexavalent chromium were reported at relatively low concentrations and/or not detected. Several constituents detected in soil exceed the Rhode Island Residential DEC and/or the Industrial/Commercial DEC. Exceedance of the DEC indicates that a potential increased risk to human health exists via the direct contact pathway.
- In groundwater, VOCs and TPH were not detected in groundwater samples from monitoring wells located on the Main Mill Building parcels (Lots 10-42 and 10-60) and or in NB-3 installed on parking lot parcel Lot 10-43. PAHs were detected at low concentrations in GZA-3 primarily located on the downgradient site of the subject property. Based upon the groundwater sampling data, groundwater quality does not appear to be significantly impacted and is consistent with groundwater quality in GB areas.

- In subslab soil vapor, VOCs are present at varying concentrations. VOCs reported include various types of gasoline related compounds and several CVOCs. Total VOC vapor concentrations (772.05 ug/m<sup>3</sup>) in SG-4 located beneath Mill Bldg#7 was much higher than in other locations. Most of the total VOC concentration in SG-4 soil vapor consisted of trichlorofluoromethane (Freon 11) and PCE. The State of Rhode Island does not have a stand-alone guidance dedicated to vapor intrusion and/or standards (like CTDEEP) or vapor screening values (like MassDEP). For comparison only, the PCE concentration of 260 ug/m<sup>3</sup> in SG-4 exceeds the MassDEP Subslab Soil Gas Screening Value for Residential Use. Per MassDEP guidance, this exceedance indicates that the vapor intrusion pathway may be of concern under future residential use conditions. However, the PCE soil vapor detection was in only 1 of 4 sample locations and was in portion of the main mill building proposed as open-air garage space (below first residential living floor). Additionally, PCE was not detected in either soil or groundwater and thus the presence of PCE in soil vapor may be indicative of background conditions and from an unknown off-site source. Thus, this single PCE soil vapor detection beneath the subslab is not considered to have an impact on proposed future use.
- In wipe samples, low to trace levels of PCBs are present. Wipe samples indicated that low level PCBs are associated with some elevator oils and in some stained concrete surfaces (from past spills) in the basement. Total PCB wipe concentrations were less than 1 ug/100 cm<sup>2</sup> which is below the reporting notification threshold per State of Rhode Island and federal (TSCA) requirement of 10 ug/100 cm<sup>2</sup>. However, wipe sampling is “qualitative” and only indicates that PCBs are present or absent on the surface and does not provide a “quantitative” measure or concentration of PCBs on the wiped surface. Additionally, as noted in the lab report, the PCB wipe analytical results were biased low.

Nobis provides the following recommendations:

1. Management of fill material is advised during future redevelopment of the property. Soils should be characterized in accordance with a soil management plan and in coordination with a qualified environmental professional.
2. Soil concentrations exceeding the RDEC and/or the I/C DEC (coupled with notification exemption criteria not met) constitutes a “release” in accordance with RIDEM Remediation Regulations (250-RICR-140-30-1). The release is required to be reported by a Responsible Party, which per the regulations is defined as the Property Owner. A summary of the results of soil exceedance to be reported to RIDEM are summarized in Table 8. Brady Sullivan should notify Mr. Russel Kairan, the property owner, of his

obligation to notify the RIDEM. Upon Brady Sullivan's notification to the Property Owner of this information (which triggers the Responsible Party's "discovery"), RIDEM should be made in writing (both hard copy and electronic via email) within 15 days.

## **1.0 – INTRODUCTION**

### **1.1 Purpose**

Nobis Engineering, Inc., dba Nobis Group® (Nobis) conducted a limited Phase II Limited Subsurface Investigation (Phase II) at the Robin Rug Manufacturing facility property (the subject property) located at 125 Thames Street in Bristol, Rhode Island. The Phase II was conducted to further assess the Recognized Environmental Conditions (RECs) which were identified in the ASTM Phase I ESA completed in April 2021 by Nobis (see Section 1.4.2). The Phase II was conducted to provide Brady Sullivan Property (the User as defined ASTM) information on subsurface condition at the subject property in support of further due diligence and prior to potential acquisition and redevelopment of the property. The Phase II is subject to the limitations described in Appendix A.

### **1.2 Site Description**

The target property is comprised of 14 parcels (collectively referred to as the “target property”) totaling approximately 3.47± acres of land and includes industrial, commercial, residential, parking lot and undeveloped land use. The location of the subject property is shown on Figure 1 - Locus Map. Pertinent site features are shown on Figure 2 – Site Plan.

The target property includes the Main Mill Building property (5 parcels) and 8 parcels located on adjacent Thames Street. These parcels are identified on the Town of Bristol Tax Map 10 as follows:

- *Robin Rug Mill Building Property* - includes parcels 10-42, 10-60, 10-61, 10-62, and 10-73. Robin Rug is a braided rug manufacturing facility. The building is made up of several interconnected buildings with industrial and commercial use.
- *Mill Parking Lots* - located on Thames Street east of the Mill Building and includes parcels 10-41, 10-44 and 10-68. These parcels are used as a parking lot for the mill.
- *Lot 10-32* – located at the corner of Church and Thames Street is a seasonal parking lot rented from the property owner by the Town of Bristol.
- *Lots 10-76, 10-43, and 10-74* - located between Hope Street and Thames Street and consists of a gravel parking lot.
- *Lot 10-49* – located at 60 Thames Street. This property is a single-family residence.
- *Lot 10-50* – located at 70 Thames Street. This property is a two-family residence.

The target property is located along the waterfront of Bristol Harbor within the Town's Waterfront Planned Unit Development zone. The target property is abutted by mostly residential properties (some commercial properties) to the north and east, by the Bristol Elks lodge to the southwest, and by the Maritime Welcome Center (former armory and community center) to the northwest. The parcels located east of Thames Street are in the Downtown and Residential R-6 zones.

### **1.3 Site History**

The Mill building was originally developed as a textile mill producing cottons and yarns in the late 1800s through the mid-1900s. Circa 1975, Robin Rug purchased the property and operated the mill to produce braided rugs. Residential properties at 60 and 70 Thames Street were historically residential and used as single or double-family homes. Prior to the 1960s, green houses were reportedly present on Lot 10-76. The Mill paved and gravel parking lots have historically been undeveloped, while the Church and Thames Parking Lot (lot 10-32) appears to have previously been developed as a residence, a store and boarding house.

### **1.4 Previous Investigations**

Two previous environmental assessments have been conducted at the subject property. The findings of these previous investigations in 1995 (by GZA GeoEnvironmental) and in 2021 (by Nobis) are summarized below.

#### **1.4.1 Phase I and II ESA, GZA 2005**

In 2005, GZA conducted a Phase I and II ESA at the subject property.<sup>1</sup> The GZA Phase I ESA identified historic uses of the mill buildings at 125 Thames Street as potential environmental concerns. The presence of floor staining, containers of hydraulic, lubricating and waste oil, and evidence of dye-stained areas were also noted as concerns. Two 20,000-gallon underground storage tanks (USTs) containing No. 6 heating oil were observed on the Site and were considered a REC in GZA's report. Closure of the two 20,000-gallon USTs was recommended.

The GZA report also noted 2,830 lbs. of oil-contaminated soil was removed from the boiler room (in Mill 5) in 1987. The soil was removed from a secondary container, along with the concrete cinder block berm, during the replacement of the 5,000-gallon No. 6 oil Above-Ground Storage Tank (AST). In 2021, Nobis clarified with the property owner that the "2,830 lbs. of oil-contaminated soil" was in fact not soil but rather oil-contaminated sand from inside a concrete

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<sup>1</sup> GZA GeoEnvironmental, Inc, 2005, Phase I and II Environmental Site Assessment, Robin Rug, Bristol, RI.

berm constructed around the then heating oil AST. The sand-filled berm was used as a form of secondary containment likely for overfills (Nobis, 2021, Phase I ESA).

GZA's Phase II included advancement of three (3) soil borings completed as groundwater monitoring wells (GZA-1, GZA-2 and GZA-3) to depths of approximately 15 feet below grade. The GZA borings/wells were advanced on the west side of the mill building in the locations shown on Figure 2. GZA also field screened soils and submitted soil and groundwater samples for lab analysis for VOCs and TPH. GZA described soils as consisting of fine sand, gravel, and some evidence of fill. GZA reported no visual or olfactory evidence of soil staining or gross petroleum contamination in GZA-1, GZA-2, or GZA-3. VOC field readings were below 5 ppmv and detected in only 3 of the 18 samples screened.

Groundwater sampling indicated water at 5 to 7 feet below grade and no presence of a sheen or free phase product. In groundwater, two compounds, methyl-tert butyl ether (MTBE) and naphthalene, were detected at low concentrations in two of the three wells. Total petroleum hydrocarbons (TPH) were detected between 470 and 850 microgram per liter (ug/L) below the Rhode Island Upper Concentration Limit for Category GB groundwater. There are no Method 1 GB Objectives for TPH. GZA also collected a water sample from inside the cistern located west of Building 2A (concrete holding tank) for VOC analysis. No VOCs were detected in the water from inside the cistern.

GZA's Phase I and II ESA included a preliminary survey for hazardous materials (asbestos and lead) which identified the probability of lead-based paint (LBP) within the manufacturing buildings and potential asbestos in pipe insulation and tiles within the offices.

#### **1.4.2 UST Removal, RIDEM 2005**

As part of the Phase I ESA, Nobis obtained copies of state file documents which confirmed permanent closure of the two 20,000-gallon No. 6 heating oil USTs. These USTs were in the northwest corner of Lot 10-41 adjacent to Thames Street. According to RIDEM records, the two USTs were removed from the ground in September 2005 and were transported to and disposed of at a scrap metal/recycling facility. Four (4) composite soil samples collected from the tank grave were analyzed for TPH by EPA method 8100. TPH in soil was not detected and below acceptable state limits. The tank graves were backfilled with soil provided by the property owner.

### 1.4.3

### Phase I ESA, Nobis 2021

In April 2021, Nobis conducted an ASTM Phase I ESA of the subject property for Brady Sullivan Properties in support of initial due diligence efforts prior to potential acquisition of the subject property. The 2021 Nobis Phase I identified nine (9) RECs, which included:

#### REC-1 - Historical Use as Textile Mill/Rug Manufacturing

The main mill complex has a long history of storage, usage of petroleum (mostly oils) and hazardous substances (chemicals including solvents and dyes containing metals) and residual wastes associated with textile manufacturing (cotton and wool) and later braided rug manufacturing. The property contains several pieces of original mill equipment (i.e., transformers) and other subsurface structures including a large cistern/water holding tank and trenches/floor drains associated with the dyeing areas. Petroleum and/or hazardous substances were stored and/or used in the transformer area, the electrical repair shop, machine shop, machine oil shop, boiler room and dye room.

#### REC-2 - Historical Gasoline USTs

A 1920 Sanborn Map shows a 1,200-gallon buried gasoline tank associated with a former structure that is now in the present-day location of Building 7/7A. A 1911 Sanborn Map shows a 230-gallon UST at the southwest corner of Building 7A associated with a former auto station. GZA's 2005 report indicates this tank may have been removed during prior construction. However, no documentation on these suspect UST removals is known.

#### REC-3 - Hydraulic Lift

A hydraulic lift is located in the sidewalk on the east side of Building #1 (Adjacent to Thames Street). Nobis observed an oil reservoir in the basement of Building #1 and stained concrete floors in this area.

#### REC-4- Chemical/Waste Drums

Drums containing suspect oils and waste oils were observed in several locations within the mill building. Two drums (one of which was leaking) were observed in the basement of Building 3 adjacent to out-of-use piping. The piping led to two former 20,000-gallon No. 6 oil UST on Lot 10-41 located east of Thames Street that were removed in September 2005. Cracks were observed in the concrete floor in this area and oil was observed on standing water located adjacent to the drums. Drums with a frozen water/No. 6 oil mixture were observed in the boiler room in Building 6. Several drums and 5-gallon buckets containing used lubricating oil were observed in good condition along the west side of Building 6. The concrete floor appeared to be in good condition

and had no overt evidence of cracking. Drums suspected to contain lubricant oil were observed in the basement of Building 7.

#### REC-5 – Floor Staining in Mill Basement

Considerable dark black-brown staining was observed over a large area on the concrete floor in the basement of Mill Building 7 & 7A. Concrete staining is indicative of past machinery or equipment oil releases.

#### REC-6 – Historical Oil Leaks from Cable Weighted Elevators in Mill Buildings

The mechanical workings of one of the five cable weighted elevators were observed; The mechanical area was in a room on the roof of Building 4. Reportedly 2 to 3 gallons of gear oil is contained in a gear box inside the room. It appeared that there was oil leaking when the elevators were in use. The mechanical workings in the room were observed to be stained with oil and a pan, presumably to catch drips, was filled with oil and observed beneath the gear box. The elevator shaft bottoms could not be observed for oil leakage and was considered a significant data gap.

#### REC-7 – Suspect PCB-Containing Transformers/Historical Transformer Room

Three (3) transformers were observed to be stored on the east side of the basement in Mill Building 1. Labels indicated they were made by General Electric and are dated from the early 1900s. Labels did not identify whether they contained PCB containing oil, but based on their age, they are suspected to contain PCB oil.

#### REC-8 –Former Continuous Dye Process Area

Two floor drains/trenches were observed in the continuous dyeing process room in Building 6 and in the New Dye House Building. After yarn was dyed it would go through dryer machines. Trenches would catch dye that dripped from yarn during drying. Effluent from the trenches reportedly went to the sanitary sewer for treatment by the wastewater treatment plant (WWTP). VOCs were reported in effluent wastewater collected at the site from 1990 through 2016 at the Bristol WWTP. The known conveyance of waste liquids associated with the continuous dyeing process area and containing VOCs through the series of concrete drainage trenches to the sanitary sewer constitutes a REC.

#### REC-9 – Older Stock Kettle Dye Room with Trenches/Floor Drains

One floor drain/trench associated with the old dye kettle room was observed in Building 5. The trench reportedly drained to a UST before being discharged to the sanitary sewer. The owner stated the trench would drain very slowly when connected directly to the sanitary sewer, so a UST was installed as a holding tank for the effluent from the dye kettle. Afterwards, water would flow from the trench into the UST and then discharge to the sanitary sewer. This revised setup allowed

the water in the trench area to drain more quickly and not slow down the dye process. The UST (holding tank) is reportedly located on the northwest exterior of Building 5. All effluent reportedly went to sanitary sewer and WWTP. VOCs were reported in effluent wastewater lab results from 1990 through 2016 observed at Bristol WWTP. The known conveyance of waste liquids containing VOCs through the series of concrete drainage trenches associated with the old kettle dye room constitutes a REC.

#### HREC-1 – Former No. 6 Oil USTs

Nobis also identified a Historical REC (HREC) associated with the target property which included: two (2) former 20,000-gallon No. 6 oil USTs on Lot 10-41 (HREC-1). These USTs were removed from the ground in 2012. Some stained soil was observed but soil sampling of the tank grave reported total petroleum hydrocarbons (TPH) was not detected (<20 mg/kg). No groundwater analysis was conducted. The USTs were not reported to be leaking USTs (LUSTs) and closure documents were submitted to the Rhode Island Department of Environmental Management (RIDEM). The property owner indicated to Nobis that the UST system pipe chases ran under Thames Street to the Mill Building were removed. Nobis identified that the subsurface beneath the pipes or coming into the building were not assessed. Nobis identified an oil leak in the basement of the Mill where the former UST piping entered the building (see REC-4)

#### Adjacent Off-Site HRECs

Nobis also identified two (2) off-site HRECs on adjacent properties known to have had petroleum releases. In 2010/2011, a petroleum release from a 2,275-gallon #2 heating oil LUST occurred at the Maritime Welcome Center (adjacent to Mill Lot 10-42). In 1985, a release from a 1,000-gallon gasoline LUST occurred at 315 Hope Street (adjacent to Lot 10-43). These off-site releases involved soil removal and were closed out with no further action by RIDEM. However, available sources did not indicate whether shallow groundwater was impacted.

#### Business Environmental Risks

Nobis also identified several business environmental risks (BERs) associated with: hazardous building materials, including but not limited to suspect asbestos and lead-based paint (BER-1), an old subsurface cistern (BER-2), flood zone designation (BER-3), unknown metal pipes and suspect UST on Lot 10-76 (BER-4), presence of fill located primarily on the west side of the mill (BER-5), former heating oil AST in Mill 6 (BER-6), and boiler room trenches in the former machine shop (BER-7).

## **2.0 – PHASE II FIELD ACTIVITIES**

The Phase II limited site investigation was performed in accordance with Nobis’s proposal dated March 29, 2021. The subsurface field investigation was conducted to assess for possible contamination in various Areas of Concern (AOCs) identified by the RECs. The subsurface investigation included: a geophysical survey, drilling of shallow borings and installation of groundwater monitoring wells, test pit excavations, groundwater elevation survey and chemical testing of soil, soil vapor and groundwater and wipe sampling for polychlorinated biphenyls (PCBs). Field activities were conducted under a Nobis Health and Safety Plan (HASP). Drilling activities were DigSafed as required by state law. Select drilling locations in adjacent streets were conducted in accordance with a street opening permit obtained from the City of Bristol. A description of the Phase II subsurface investigation, which were performed between May 27 and June 30, 2021, is summarized in this section.

### **2.1 Geophysical Survey and Results**

On May 27, 2021, Nobis oversaw a geophysical survey using ground penetrating radar (GPR) equipment of select locations performed by Geophysical Applications of Holliston, MA. Surveyed locations (total of 4) were selected based on proposed subsurface investigation locations related to areas of concern and potential historical utilities and/or USTs as identified in the Phase I ESA (Nobis, 2021). The four GPR survey areas are shown on Figure 2 and were as follows:

GPR Area 1 -the courtyard area within the Mill complex between Building #4, Building #6, and the new dye house, GPR Area 1 was surveyed to clear the area of underground utilities or other structures to assess subsurface conditions adjacent to the floor drain trenches located within the Mill (REC-8).

GPR Area 2 - the exterior corridor between Building #3 and Building #5. GPR Area 2 was surveyed to determine if historical utilities were present, based on the location of hydrants and manhole covers in the vicinity of soil borings proposed in the area to assess subsurface conditions related to the stock kettle dye room and associated UST (REC-9).

GPR Area 3 - the area around the unknown pipe stickups on Lot 10-76. GPR Area 3 was surveyed around the unknown pipe stickups to assess whether a potential buried UST was present.

GPR Area 4 - the concrete pad and roadway in the vicinity of proposed SB-1/NB-1 at the southwest corner of the Main Mill Building. Attempts were made to survey the interior of the Building #7A but reinforced rebar in the floor prevented GPR equipment from getting accurate readings. GPR Area 4

was surveyed to determine if subsurface utilities were present prior to installation of SB-1/NB-1 which was proposed to assess potential impacts relating to historical gasoline USTs (REC-2).

A copy of Geophysical Application's GPR survey report is provided in Appendix B. The results of Geophysical Applications GPR survey was used to better select drilling locations (to avoid subsurface utilities) and to further explore certain areas for presence of subsurface structures. The GPR survey findings were as follows:

- In GPR Area 1, two locations for location of SB-4 were cleared for drilling. Drilling was able to proceed in this location without additional equipment.
- In GPR Area 2, the GPR survey identified the building's fire suppression system which contained many subsurface linear objects present in the vicinity of SB-6 and SB-7. The use of air vacuum excavation to the top 5 feet was recommended if access allowed. However, due to the presence of numerous utilities and limited rig access, Nobis opted to complete SB-6 and SB-7 manually by removing a small section of the concrete with a jackhammer and digging with a shovel and hand auger. Soil samples were then collected manually from a depth of 2 feet below grade (fbg).
- In GPR Area 3, the GPR survey identified the presence of a possible UST near the two unknown metal pipes on Lot 10-76 near proposed test pit TP-7. Thus, TP-7 was moved closer to the line of hedges and where the subsurface anomaly was identified to better assess if a UST was present. As discussed in Section 3.0, a UST was not found to be present in this location.
- In GPR Area 4, the GPR survey identified a linear object (possible pipe) in the sidewalk in close proximity to proposed boring SB-1/NB-1. A gas line was observed and marked in adjacent Constitution Street. SB-1/NB-1 was moved in a slight eastern direction and was drilled to refusal at 4 fbg. Refusal was suspected to be a large boulder.

## **2.2 Soil Boring Advancement and Sampling**

On June 8, 2021, prior to the start of drilling, GeoSearch Inc., of Sterling, MA, conducted a field cleared soil boring advancement/well installation and test pitting locations. GeoSearch used a pipe utility locator and GPR survey equipment to clear and/or relocate locations of soil borings and test pits in the field only (no report was prepared). GeoSearch's survey was limited to the exterior of the site at proposed locations of soil borings and test pits. The additional pre-clear was conducted in locations within the property boundaries not covered by routine DIGSAFE procedures.

On June 8, 9, and 10, 2021, a Nobis field geologist oversaw the advancement of eleven (11) soil borings (SB-1 through SB-11), including the installations of two (2) groundwater monitoring wells at SB-5 and SB-8 which were designated NB-2 and NB-3, respectively. Soil boring/groundwater well locations are shown on Figure 2. Drilling was conducted using a direct-push (hydraulic) drilling method with a low-profile track-mounted Geoprobe®. Based upon GPR survey findings and presence of potential utilities, air vacuum extraction was used in the top 5 feet in soil borings SB-1, SB-2, and SB-3.

Soil borings were advanced around the exterior of the Mill and on the paved and unpaved parking lots associated with the property to assess subsurface conditions in the identified REC locations per the Phase I and various AOCs as follows:

- *SB-1/NB-1* was advanced at the southern end of the Mill Building along Constitution Street in an area of known former gasoline USTs identified on historical Sanborn maps (REC-2). This boring was terminated at a shallow depth of 4 feet due to refusal on a suspect boulder or building footing. Consequently, groundwater monitoring well NB-1 was not able to be installed.
- *SB-2* was advanced in the sidewalk along Thames Street to assess subsurface conditions adjacent to the suspect leaking hydraulic lift (REC-3).
- *SB-3* was advanced in the sidewalk along Thames Street to assess subsurface conditions where the pipes for the former No. 6 heating oil USTs (REC-4).
- *SB-4* was advanced at the north entrance to the Mill (from Church Street extension) to assess subsurface conditions related to a former transformer area (REC-7).
- *SB-5/NB-2* was advanced between Building #4 and the new dye house to assess subsurface conditions related to floor drain trenches and the new dye house area (REC-8) and was completed as groundwater monitoring well NB-2.
- *SB-6 and SB-7*– Drilling using the GeoProbe® was not possible in these locations due to access and presence of numerous subsurface utilities (water, gas, sewer). Instead, a small 2 ft by 2 ft section of pavement was removed and the soil beneath the pavement was manually accessed using a hand shovel and hand auger to a depth of 2 fbg.
- *SB-8 /NB-3* was advanced in the unpaved parking lot on Lot 10-76 and was completed as a groundwater monitoring well NB-3. The purpose of this boring/well was to assess

subsurface conditions related to a historical off-site gasoline release on Hope Street (Additional HREC).

- *SB- 9* was advanced in the paved parking lot on Lot 10-44 at the request of Brady Sullivan to assess general subsurface conditions (and to check for the presence of fill) in an area proposed for a new parking lot.
- *SB-10* was advanced on Lot 10-32 within the unpaved parking lot in a location considered upgradient of the Mill.
- *SB-11* was advanced in the paved parking lot on Lot 10-68 at the request of Brady Sullivan to assess general subsurface conditions (and to check for the presence of fill) in an area proposed for a new parking lot.

The borings/monitoring well installations were performed to assess subsurface soil and groundwater quality in these areas. Except at *SB-1* (refusal at 4 fbg), soil borings were advanced to depths ranging from 12 feet to 15 feet below ground surface (fbg). As noted above, drilling was limited at *SB-6* and *SB-7* and subsurface soils were thus obtained manually using a hand shovel and hand auger. Soil samples were collected continuously to the bottom of the boring and were field screened for total VOCs using a hand-held photoionization detector (PID) equipped with a 10.6 eV lamp. Photos of subsurface soil conditions are shown on the Photolog in Appendix C. Soil observations and PID readings are summarized on the soil boring logs included in Appendix D.

Select soil samples based on location, PID readings and field observations were submitted to a State-certified laboratory for analysis. Soil Sampling results are discussed in Section 3.4.1. Eight (8) soil samples collected from varying depths were submitted for laboratory analysis to Eastern Analytical of Concord, New Hampshire. Soil boring samples were analyzed for volatile organic compounds (VOCs) by Method 8260, semi-volatile organic compounds (SVOCs) by Method 8270, total petroleum hydrocarbons (TPH) by Method 8100, pesticides via Method 8081, polychlorinated biphenyls (PCBs) via Method 8082, total cyanide, and RCRA 8 Metals. Additionally, three (3) select soil samples from borings advanced within the Mill Building area at locations *SB-4*, *SB-6* and *SB-7* near the former dye house area were also analyzed for Hexavalent Chromium (Cr+6). Additionally, two (2) soil samples collected from *SB-6* and *SB-7* from 2 fbg which contained lead greater 100 mg/kg (TCLP 20x Rule) were also analyzed for TCLP lead.

## **2.3 Groundwater Monitoring Well Installation and Development**

As described in Section 2.2, monitoring wells NB-2 (installed in SB-5) and NB-3 (installed in SB-8) were completed as 2-inch diameter polyvinyl chloride (PVC) wells. NB-2 and NB-3 were set at depths of 13 fbg and 15 fbg, respectively and screened across the groundwater table. The annular space around the screen was completed using #00 filter screen followed by a minimum 2-foot bentonite chip seal and native soil to ground surface. Each well was completed with protective road boxes flush mounted with the ground surface. Because NB-2 is located closer to Bristol Harbor, groundwater is tidally influenced and thus the screened interval was set slightly shallower than at NB-3 located further inland. *Note: Originally, three monitoring wells were proposed for the Phase II exploration. Monitoring well NB-1 (at SB-1) located near the southwest corner of building #7A could not be installed due to an obstruction at 4 fbg and other limitations (property lines and presence of subsurface utilities) for re-drilling in the same location. SB-1 was back-filled with soil cuttings and the surface was concreted.*

Following installation, the groundwater monitoring wells were developed by purging a minimum of five well volumes utilizing a surge block and inertial pump. Existing GZA wells were previously developed using the same methods in preparation for sampling, in concurrence with GPR Survey and Digsafe pre mark field activities on May 27, 2021. No investigation derived waste (either soil or groundwater) was generated during the Phase II subsurface drilling and well installation activities.

## **2.4 Soil Vapor Probe Installation and Sampling**

On July 9 and 10, 2021, vapor probes were installed by GeoSearch under the oversight of Nobis within the basements of Mill Buildings #1, #3, #7, and #7A. Soil vapor sampling points were installed to obtain information on potential vapor intrusion issues, if any. The soil vapor probes (designated SG-1, SG-2, SG-4, and SG-5) locations are shown on Figure 2.

Soil vapor locations were chosen based on evidence of potential contamination such as staining on the floor, historical information from Sanborn Maps and locations proposed for future residential use. SG-1 was installed in Mill building #3 near the leaking oil drums and former UST piping into the building associated with REC-4. SG-2 was installed in Mill building #1. SG-4 was installed in building #7 in the vicinity of the paint shop noted on the 1896 Sanborn Map and staining on the floor. SG-5 was installed in building #7A near floor staining. *Note: SG-3 was not installed. The drilling subcontractor, GeoSearch cored through approximately eight (8) inches of concrete. When the core was removed, empty space was observed below, with a concrete wall on one side and wood below it, and a wooden beam and visible water several feet below in the open space. It appears part of*

*Building #7 was built on piers before the area was filled in. A photo of the SG-3 location is included in the photolog in Appendix C.*

Soil vapor pins were installed to depths of approximately 3 feet below the concrete slab in various locations in the Main Mill Building basement. The soil vapor pins were constructed of approximately 6-inch stainless steel ports with screens and 0.25-inch LDPE tubing. The sampling points were closed with a valve and finished as 4-inch flush mounted road boxes. Prior to sample collection, a tightness test was conducted by purging 2L of vapor at a rate of 0.2 L/minute to simulate the flow rate under vacuum conditions from the SUMMA cannisters. Vapor was purged into Tedlar bags and screened using a PID and 4-gas meter to assess conditions compared to ambient air readings. Higher levels of CO<sub>2</sub> and/or total VOCs and/or lower levels of O<sub>2</sub> indicated the soil vapor pins were pulling sub slab soil vapor as opposed to ambient air.

On June 30, 201, Nobis collected four (4) soil vapor samples from SG-1, SG-2, SG-4 and SG-5. Samples were collected a 30-minute air sample using a 6-liter Summa Cannister at a flow rate of 0.2 L/min. Samples were submitted to Con-Test, a Pace Analytical Laboratory for analysis for VOCs via Method TO-15.

## **2.5 Test Pitting and Soil Sampling**

On June 10 and 11, 2021, GeoSearch excavated fifteen (15) test pits (TP-1 through TP-14 and TP-17) under the oversight of a Nobis field geologist. Test pits were excavated by using a John Deere Model 60G compact excavator to depths ranging from approximately 5 to 10 fbg. Excavated soil and debris material were temporarily stockpiled and were backfilled into the test pit after completion.

Test pits were excavated in primarily two general areas - west side of the Mill Building and in the parking lots on Thames Street. Test Pit locations are shown on Figure 2. Test Pits TP-15 and TP-16 were not completed. TP-15 could not be completed due to access and safety issues associated with the presence of numerous subsurface utilities. Similarly, TP-16 (former water tower location) could not be completed due to excessive overgrown vegetation and safety issues associated with the presence of an active underground water line.

Test pit soil samples were field screened for total VOCs using a hand-held photoionization detector (PID) equipped with a 10.6 eV lamp. Photos of subsurface soil conditions in test pit locations are shown on the photolog in Appendix C. Soil observations and PID readings are summarized on the test pit logs included in Appendix E.

Select soil samples based on location, PID readings and field observations were submitted to a State-certified laboratory for analysis. Eight (8) soil samples collected from varying depths were submitted for laboratory analysis to Eastern Analytical of Concord, New Hampshire. Test pit samples were analyzed for a combination of the following analytes: volatile organic compounds (VOCs) by Method 8260, PAHs only by Method 8270, TPH by Method 8100, pesticides, and PCBs via Method 8081/8082 and RCRA 8 Metals. Additionally, three (3) soil test pit samples collected from TP-2, TP-7 and TP-14 which contained lead greater 100 mg/kg (TCLP 20x Rule) were also analyzed for TCLP lead. Soil test pit sampling results are discussed in Section 3.4.2. The laboratory report is provided in Appendix F.

## **2.6 Groundwater Sampling and Well Survey**

On July 29, 2021, Nobis samples groundwater samples from the three existing GZA wells (GZA-1, GZA-2, and GZA-3) and the two newly installed wells NB-2 and NB-3. Groundwater monitoring sampling locations are shown on Figure 2.

Prior to sample collection, groundwater levels were measured in each groundwater monitoring well using a Solinst electronic water level indicator. Water quality meters with flow-through cells, bladder pumps, and appropriate tubing were used to purge the wells, collect aquifer stabilization data, and collect samples in general accordance with EPA Region 1 Low-Stress/Low-Flow sampling techniques. Prior to use, the instruments were calibrated in accordance with the manufacturer's instructions. The groundwater samples were collected into appropriate pre-preserved sample containers supplied by the laboratory and placed in an ice-filled cooler for delivery to the laboratory under chain-of-custody control.

Groundwater samples were analyzed for VOCs by Method 8260, SVOCs by Method 8270, and TPH by Method 8100. Based upon the soil analytical results for pesticides, PCBs, RCRA 8 metals, cyanide and hexavalent chromium, analysis of these parameters in groundwater was not warranted due to either non- or low detectable levels. Groundwater samples were submitted to and analyzed by Eastern Analytical of Concord, New Hampshire. A copy of the groundwater laboratory analytical report is provided in Appendix F.

On July 30, 2021, Nobis conducted a well elevation survey of the five (5) monitoring wells. The temporary benchmark (Elevation = 100 feet) was identified as the southeast corner of a concrete pad located on Church Street. Monitoring well elevations were measured to the top of the PVC casing. The elevation survey information is used to determine groundwater depth and general direction of flow (See Figure 3).

## **2.7 PCB Wipe Sampling**

On June 28, 2021, Nobis collected a total of thirteen (13) wipe samples from various locations within the main mill building. Wipe sample locations are shown on Figure 2.

Four (4) wipe samples (designated WS-series) were collected from the gear oil from each of the four cable-weighted elevators. WS-series wipe samples were collected from an oil reservoir in contact with the cables located on the roof or penthouse above each elevator. Nine (9) wipe samples (designated CW-Series) were located on a concrete floor. For the CW-series, samples were collected by 1) first blotting a 10cm square area horizontally with one side of the wipe and then vertically with the other side of the wipe, and then 2) blotting uniformly at least five times in each direction, and then 3) the wipe was carefully rolled into a lab container with the wet exposed to the inside. Wipe samples were preserved with hexane. Samples were submitted to Con-test, a Pace Analytical Lab and were analyzed for PCBs via EPA Method 8082 using Soxhlet extraction.

### 3.0 – PHASE II FINDINGS

#### 3.1 Soil Observations and Field Screening Results

Soils consisted of primarily sandy fill overlying native soil consisting of alternating layers of hardpacked marine deposits of sand, silt, clay. Crushed seashells were observed in the native soils at shallow depths in explorations advanced west of the Main Mill Building (TP-1 through TP-3 and TP-17) and in SB-9 on parking Lot 10-44.

Secondary debris observed in the fill layer included: crushed rock/stone, crushed brick and concrete pieces, glass fragments, asphalt shingles, ash and pieces of slag and pieces of steel rebar. Slag was particularly abundant at TP-3 and TP-17 (west of Mill Bldg#6A) and was the majority component of the soil excavated. Fill thickness ranged from approximately 4 to 8.5 feet in thickness. Fill was observed in several soil borings and most test pits as follows: SB-1 (4 ft), SB-4 (4.5 ft), SB-8, (0.5 ft), SB-9 (1 ft), SB-10 (4.5 ft), TP-1, TP-2, TP-3 (3.5 ft), TP-4 (2.5 ft), TP-6 (8.5 ft), TP-7 (3 ft), TP-8 (3 ft), TP-9 (3 ft), TP-10 (2 ft), TP-11 (2 ft), TP-12 (2.5 ft), TP-13 (2 ft), TP-14 (4 ft), TP-17 (7 ft). The greatest thickness of fill was observed in TP-6 excavated in the parking area on Lot 10-43. The fill in TP-6 extended to 8.5 feet and was underlain by a brown-grey layer of moist to wet fine to medium sand. A petroleum odor was encountered at the groundwater table at approximately 9.5 fbg.

West of the Main Mill Building, moderate to difficult excavation conditions were encountered at test pit locations TP-1 and TP-2. Excavation at TP-3 and TP-17 was easy to moderate as extensive fill was encountered to depths of approximately 7 to 7.5 fbg. The 2015 GZA Phase I report noted that soils in GZA-1 through GZA-3 (in the same area) consisted of a mixture of fill and quarry gravel. The source of the fill was unspecified and contains very dense materials with a high frequency of large cobbles and small boulders. The latter prevented installation of a well at SB-1/NB-1.

Soil PID readings of total VOCs (TVOCs) were detected (>1 ppmv) in several soil borings but in only one test pit location. PID readings are summarized by depth in Table 1. PID readings measured above 1 ppmV were as follows:

- *Main Mill Parcel* – PID readings were detected in SB-2, SB-3, SB-4, SB-5, SB-7, SB-8, SB-10. PID readings were obtained from various depths from 0 to depths up to 15 fbg. The highest PID reading (26 ppmv) was measured in SB-10 (Lot 10-32 parking lot) at 5 to 7 fbg.
- *Parking Lot Parcels (East of Thames Street)* – A PID reading of 65 ppmv was detected in TP-6 at depth of 9 to 10 at the groundwater table. PID readings in all other test pits were less than 1 ppmv.

No staining or dark colored (black or brown, black) soils was observed in the subsurface. Petroleum odors were noted at TP-6 at 9 to 10 fbg at the groundwater table. No sheen or free product was observed on groundwater during drilling or excavation activities.

### **3.2 Groundwater Elevations and Flow Directions**

The well elevations and groundwater gauging data as measured on June 30, 2021, are summarized in Table 1. Depth to groundwater measured from 5.40 feet (in NB-2) to 7.71 feet (in GZA-1). Corresponding groundwater elevations ranged from 89.22 feet 9in GZA-1) to 103.34 feet (in NB-3). Groundwater elevations measured on June 30, 2021, were used to prepare the potentiometric map as shown on **Figure 3**. Based upon the groundwater contour, groundwater is inferred to flow to the southwest towards Bristol Harbor. This direction of flow is consistent with local topography and location of area surface water.

### **3.3 Laboratory Analytical Results**

#### **3.3.1 Soil**

Soil analytical results from soil borings and test pits are shown in Tables 3 and 4, respectively.

##### VOCs

VOCs were detected in SB-6, SB-7, SB-5 (northern mill area) and in TP-3 (downgradient of northern mill area). Tetrachloroethene (PCE) was detected at 0.40 mg/kg in the 2 fbg soil sample from SB-7. Naphthalene was detected at 0.10 mg/kg in the 2 fbg soil sample from SB-6. Both SB-6 and SB-7 are in the northern mill building area adjacent to the old dye house. Styrene was detected at 5.1 mg/kg in a 2-to-3-foot sample at TP-3 (west of Main Mill Building).

##### SVOCs

SVOCs consisted of primarily PAHs (16 compounds) and were detected in: SB-6, SB-7 and SB-5 (northern main parcel), test pits TP-1, TP-2, TP-3 (west of main mill building) and in test pits TP-6 and TP-8 in the parking lots parcels east of Thames Street. The highest total PAH compound concentrations were detected in SB-6/2 ft (265.3 mg/kg) and SB-7 (46.67 mg/kg) on the northern mill parcel. Total PAHs were lower in TP-1 (7.42 mg/kg) and TP-2 (14.17 mg/kg), TP-3 (6.30 mg/kg) on the main mill parcel west of the building. Total PAHs were also low in TP-7 (3.47 mg/kg) and in TP-14 (4.01 mg/kg) on the parking lot parcels.

##### Metals and TCLP Lead

Seven of the eight RCRA 8 metals were detected in one or more of the 16 soil samples analyzed. The highest metals concentrations were as follows:

**Summary Metals in Soil (All Locations) – mg/kg**

Metal	Frequency Detection	Min	Max	Location Max	Soil Depth
Arsenic	16/16 = 100%	1.5	8.5	SB-8	7 – 9 ft
Barium	16/16 = 100%	2.3	1,500	TP-7	0 – 3.5 ft
Cadmium	2/16 = 13%	0.59	1.2	TP-3	2 - 3 ft
Chromium, Total	16/16 = 100%	7.1	25	TP-2	3 – 4 ft
Lead	16/16 = 100%	5.7	4,600	TP-7	0 - 3.5 ft
Mercury	6/16 = 38%	0.13	0.60	SB-6	2 ft
Selenium	7/16 = 44%	0.52	2.4	TP-3	2-3 ft

**Note:** Based upon 8 soil boring samples and 8 test pit soil samples (n=16 samples). Detected concentrations shown.

Silver and hexavalent chromium were not detected above laboratory detection limits in the four (4) soil boring samples. Total lead was greater than the RCRA 20x Rule (20 x 5 mg/L =100 mg/k) in four soil samples: SB-6/0-2 ft (310 mg/kg), SB-7/0-2 ft (260 mg/kg), TP-2/3-4 ft (130 mg/kg) and TP-7/0-3.5 ft (4,600 mg/kg). These samples were further analyzed by the toxicity characteristic leaching procedure (TCLP) for lead. TCLP Lead was detected in only one of the four samples analyzed – TP-7 TCLP lead at 1.4 mg/L, which is below the maximum concentration for the lead toxicity characteristic of 5 mg/L and thus is not considered hazardous.

Petroleum

Petroleum (as TPH) was detected above laboratory analytical results in three test pit samples (SB-5/NB-1, SB-6 and SB-7) and six test pit samples (TP-1, TP-2, TP-3, TP-6, TP-7, and TP-14. TPH was highest at SB-6 (800 mg/kg) in the north mill area, TP-3 (230 mg/kg) west of the main mill and in TP-6 (580 mg/kg) in the parking lot east of Thames Street. TPH in other locations was less than 100 mg/kg or not detected.

Pesticides and PCBs

Pesticides were detected test pit samples TP-7 and TP-14. Analytes detected in one or more samples were 4,4'-DDT, 4,4'-DDE, and 4,4'-DDD. Pesticides were not detected in any soil boring samples, or the three other test pit samples analyzed for pesticides. One PCB analyte, PCB-1260, was detected in the sample from TP-1. PCBs were not detected above laboratory detection limits in any other sample.

Cyanide

Total cyanide was detected at 0.54 mg/kg in the 2-foot soil sampling from soil boring SB-6. Cyanide was not detected in other locations sampled.

### **3.3.2 Groundwater**

Groundwater analytical results are summarized in Table 5.

Groundwater pH ranged between approximately 6.6 and 7.6, which is within the range of natural waters. Groundwater temperature ranged between 18 and 23 degrees Celsius (64- and 73-degrees Fahrenheit) and was consistent with seasonal summer temperature. Specific conductivity values ranged from 245.43 microsiemens per centimeter (uS/cm) in NB-3 to 42,867  $\mu$ S/cm in GZA-3. High specific conductivity (<20,000  $\mu$ S/cm) was observed at NB-2, GZA-1, GZA-2, and GZA-3 and is inferred to be due to the proximity to the harbor and influence from brackish water.

No VOCs or petroleum were detected in the five groundwater monitoring wells. PAHs were detected primarily in monitoring well GZA-1 (7 compounds) and to a lesser extent in GZA-3 (1 compound). PAHs detected included: phenanthrene, fluoranthene, pyrene, benzo[a]anthracene, chrysene, benzo[b]fluoranthene and benzo[a]pyrene.

### **3.3.3 Soil Vapor**

Soil vapor analytical results are summarized in Table 6.

Fourteen (14) VOCs were detected in soil vapor sampling locations. Analytes present above laboratory detection limits included petroleum compounds such as benzene, toluene, ethylbenzene, xylenes (BTEX) and 1,2,4-trimethylbenzene (1,2,4-TMB) and several chlorinated VOCs (CVOCs) detected included: chloroform, 1,4-dichlorobenzene, 1,1,1, -trichloroethane (1,1,1, -TCA), trichlorethylene (TCE) and tetrachloroethylene (PCE).

### **3.3.4 PCB Wipes**

PCB wipe analytical results are summarized in Table 7.

PCBs were detected in standard wipe samples collected from six of the thirteen locations sampled. PCBs included Aroclor 1254 and Aroclor 1260. Total PCBs were detected at concentrations ranging from 0.25 ug/100 cm<sup>2</sup> to 0.75 ug/100 cm<sup>2</sup>. The PCB wipe concentrations are below the RIDEM Notification Limit of 10 ug/m<sup>3</sup> and does not constitute “release” as defined under the RIDEM Remediation Rules, which is consistent with the definition under Toxic Substances

Control Act (TSCA) 40 CFR 761.243. TSCA requires reporting of greater than 10 ug/100 cm<sup>2</sup> for low and high-concentration spill occurrences<sup>2</sup>.

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<sup>2</sup> USEPA, June 23, 1987, Revised/Clarified April 18, 1991, Wipe Sampling and Double Wash/Rinse Cleanup as recommended by the EPA PCB Spill Cleanup Policy. See Tables 1 – Low Concentration Spills (<270 gallons of Untreated Mineral Oil with <500 ppm PCBs) and Table 2 - High Concentrations Spills (>270 gallons of Untreated Mineral Oil with <500 ppm PCBs).

## 4.0 – DISCUSSION OF RESULTS

### 4.1 Comparison to State Soil Standards

Currently, the subject property consists of parcels which are used for both residential (Lots 49 and 50 at 60 and 70 Thames Street) and industrial/commercial purposes (Main Mill parcel and parking lot parcels). In the future, the Main Mill parcel may be used for residential purposes (condominiums) upon development by Brady Sullivan.

Based upon the identified existing and potential uses, the soil analytical results were compared to the Method 1 Soil Objectives codified in the Rhode Island Department of Management (RIDEM) *Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases* (250-RICR-140-30-1) in Table 1 – Residential Direct Exposure Criteria (RDEC), and Industrial/Commercial Exposure Criteria (I/C-DEC) and Table 2 - Leachability Criteria for GB Groundwater. The RDEC standards are more stringent than the I/C DEC standards. Note: There are no reportable concentrations for TPH. However, RIDEM Remediation Rules do have Method 1 Cleanup Objectives for TPH in soil which are as follows: Residential DEC of 500 ppm, Industrial/Commercial DEC of 2,500 ppm and GB TPH Leachability criterion of 2,500 ppm (Source: RIDEM 250-RICR-140-30-1 Subsection 1.9.2 Soil Objectives).

As shown in Tables 3 and 4, one or more exceedances of the RDEC and/or of the I/C DEC were observed in samples collected from three general locations:

- Main Mill Parcels (West of Building) – TP-1, TP-2, and TP-3 (Lots 10-42 and 10-60)
- Main Mill Parcels (Central Mill Exterior) – SB-6 and SB-7 (Lot 10-42)
- Parking Lot Parcels (Thames Street) – SB-8 and TP-6 (Lot 10-43) and TP-7 (Lot 10-76)

PAHs, arsenic, and lead in shallow soils (0 to 4 fbg) at TP-1, TP-2, and TP-3 exceeded the RDEC and/or I/C DEC. These constituents may be related to the presence of historical fill which is commingled with quarry fill and is known to have been placed in the land area between the Main Mill and Bristol Harbor to expand the developable land area.

Several PAHs, TPH and lead in soils at SB-6 and SB-7 (at 2 fbg) exceeds the RDEC and/or IDEC within the central exterior Mill Parcel area. These constituents may be related in part to fill but may be related to releases from historical mill operations, which in this location included a boiler house, a mechanical room and dye house. SB-6 and SB-7 are in the vicinity of the floor drains and former stock dye kettle associated with REC-9, which were identified in the Phase I (Nobis, 2021).

The geophysical survey also identified many subsurface utilities (water, sewer, drains) in the vicinity of SB-5, SB-6, and SB-7.

Arsenic in soils at 7 to fbg in SB-8 (on Lot 10-43) exceeds the RDCE and IDEC of 7.0 mg/kg. Lot - 10-42 does contain a structure that is used for residential purposes. The arsenic may be related to presence of fill. Also on Lot 10-43, TPH in soil at TP-6 (9 – 10 fbg) contained TPH above the RDEC of 500 mg/kg. The TPH concentration at depth is likely related to an old off-site gasoline UST release at 318 Hope Steet. Nobis also observed petroleum odors at the groundwater table in TP-6.

Lead in soil was detected at 4,600 mg/kg in a 0 to 3.5 fbg sample at TP-7 on Lot 10-76 above the RDEC of 150 mg/kg and the I/CDEC of 500 mg/kg. Nobis has conducted a geophysical survey around the two unknown metal pipes which identified a potential UST to be present. However, test pits excavated around TP-7 did not find a UST to be present. Nobis believe the source of the high lead in shallow soil may be related to the presence of fill (black/grey ash like material) which was reported at depth in this sample as PID readings were asl less than 1 ppmv to a depth of 8 fbg.

#### **4.2 Comparison to State Groundwater Standards**

Groundwater beneath the subject property is classified by RIDEM as a GB designation. Groundwater category GB applies to areas where pollution has degraded the underlying aquifer, and the aquifer is not a current or potential drinking water source. In Rhode Island, the GB groundwater designation is typical for urban locations. The subject property is also serviced by a municipal water supply system. The nearest GA (drinking water) groundwater area is located approximately ¼ mile (1,320 feet) to the north of the subject property.

The groundwater analytical results were compared to the Method 1 Groundwater Objectives codified in the Rhode Island Department of Management (RIDEM) *Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases* (250-RICR-140-30-1) in Table 4 –GB Groundwater Objectives.

As shown in Table 5, concentrations of VOCs, PAHs and TPH were below the applicable RIDEM Method 1 GB Groundwater Objectives.

#### **4.3 Comparison to Soil Vapor Standards**

Soil vapor pins were installed, and vapor samples were collected to assess the subject property for the potential for vapor intrusion of volatiles into the building. The State of Rhode Island does not have a stand-alone guidance dedicated to vapor intrusion; however, the vapor intrusion and

inhalation pathway is addressed in remediation regulations prepared by the Office of Waste Management of the Rhode Island Department of Environmental Management (DEM), entitled "Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases," last amended in November 2011. In addition, the Office of Waste Management has published a guidance document entitled "School Siting Guidance for the Evaluation of Vapor Intrusion Potential in Proposed Rhode Island School Sites," dated September 19, 2012. The latter guidance is not applicable to the current use of the subject property.

Thus, for reference purposes only, the soil vapor data was compared to soil vapor criteria values published by the Connecticut Department of Energy and Environmental Protection (CTDEEP) and subslab soil gas screening values published by the Massachusetts Department of Environmental Protection (MassDEP). The CTDEEP Volatilization Criteria are regulated and enforceable values in the State of Connecticut whereas the MassDEP has screening values only. Both states have values for residential and industrial/commercial scenarios. These criteria/values can be used to screen VOC air concentrations from soil vapor (gas) to assess the potential for vapor intrusion into indoor air.

As shown in Table 6, fourteen (14) VOCs were detected in soil vapor beneath the basement slab. VOCs detected included both gasoline compounds (i.e., benzene, ethylbenzene, toluene, xylenes or BTEX and 1,2,4-trimethylbenzene) and several chlorinated VOCs or CVOCs. The CVOCs detected in subslab soil vapor included: 1,4-dichlorobenzene, tetrachloroethylene [PCE], 1,1,1-trichloroethane [1,1,1-TCA] and trichloroethylene [TCE]. Total VOCs ranged from 45.64 microgram per cubic meter (ug/m<sup>3</sup>) in SG-5 (Mill Bldg#7A) to 772.05 ug/m<sup>3</sup> (Mill Bldg#7). In SG-4, most of the total VOCs (772.05 ug/m<sup>3</sup>) in soil vapor consisted of trichlorofluoromethane (Freon 11) and PCE.

There are no screening values for Freon 11. In SG-4 (Mill Bldg#7), the PCE concentration of 260 ug/m<sup>3</sup> exceeded the MassDEP Residential Subslab Soil Gas Screening Value of 98 ug/m<sup>3</sup>. This concentration did not exceed (but was just below) the MassDEP Industrial/Commercial Subslab Soil Gas Screening Value of 290 ug/m<sup>3</sup>. PCE, is a solvent used in the dry-cleaning process and was also a compound detected in the waste stream generated by the Robin Rug and discharged to the City of Bristol sewer via a permit.

#### **4.4 Notification to RIDEM**

In accordance with RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (250-RICR-140-30-1) *Subsection 1.6.1 – Notification of a Release*, a Responsible Party shall notify the RIDEM, in writing in both hard copy and electronic format (as

specified by the Department), of the discovery of any Release in accordance with the Remediation Rules within 15 days after discovery of the Release. Releases related to underground injection control (UIC), or underground storage tanks (USTs) are exempt from reporting under the Remediation Regulations.

Under the RIDEM Remediation Regulations, notification is required if: 1) concentrations of hazardous substances in soil which exceed the soil objectives in Tables 1 and 2, Subsection 1.9.2 (C) (2) or (3) of the RIDEM Remediation Regulations are considered to present a “significant potential to cause an acute or chronic adverse effect on human health or the environment”, and 2) because the following conditions are not met:

RIDEM 250-RICR-140-30-1 Subsection 1.6.1 (C) – Condition	Reason for Notification
2.(a). The release has impacted an area currently limited to Industrial or Commercial Activity	Arsenic in SB-8 and TPH in TP-6 > RDEC and/or I/C DEC (for arsenic) on Lot 10-76 which is a residential property. Lead in TP-7 > RDEC and I/CDEC on Lot 10-76 which is a residential property.
2.(b). The reasonably foreseeable future use of the property impacted by the Release is limited to Industrial/Commercial Activity	Lots 10-42 and 10-60 (the Main Mill parcels) are proposed for redevelopment as residential condominium apartments. Parcels east of Thames Street are proposed for use as a paved parking lot.
2.(e). The Hazardous Substances of concern are listed in Table 1 and 1, Subsection 1.9.2(C)(2) and (3) of this Part, and are at concentrations which are below the industrial or commercial DEC, and below the GB leachability criteria as listed in those tables, respectively	PAHs, arsenic, and lead exceed the I/C DEC on the Lot 10-42 and Lot 10-60 (the Main Mill parcels). TPH, arsenic and lead on the parking lot parcels Lot 10-43 and 10-76 exceed the RDEC and/or I/CDEC.
2.(g). The abutting properties are used for Industrial/Commercial Activity	Abutting properties include residential properties (east and south) and a park (north side).
2. (h). There is no physical boundary of any wetland or surface water within 500 feet of the Release	Bristol Harbor abuts Lots 10-42 and 10-60 (the Mina Mill parcels) to the west. Most of the subject property is located within 500 feet of surface water.

The summary of exceedances in Soil Requiring Notification to RIDEM are summarized in Table 8.

## 5.0 – SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Based upon the findings of the limited Phase II, Nobis concludes the following:

- Subsurface soil consists of fill overlying native marine deposits consisting of alternating layers of sand, silt, and clay. Fill consists of fine to coarse sand with debris consisting of crushed stone/rock, concrete, brick, ash, slag, glass, plastic, and wire fragments. Fill is present in several area of the site, including west of the main mill, the central northern interior (SB-6/SB-7 area) and in the parking lots parcels east of Thames Street. Fill ranged in thickness from approximately 3 to 8 feet. The greatest amount of fill (≈8 feet) was encountered in TP-6 on Lot 10-43.
- Except for one reading (65 ppmv in TP-6), PID readings of TVOCs in soil were generally low less than 1 ppmv in most locations. Petroleum odors were encountered at the groundwater table at 8 fbg in TP-6 only. No dark brown or black-stained soils were encountered in the subsurface. No sheen or free product was encountered in groundwater monitoring locations.
- A UST, which was suspected to exist based upon GPR, was not encountered during test pit explorations at TP-7 on Lot 10-76. The past and/or current use of the two unknown metal pipes in this location remains unclear. Lead was detected at 4,600 mg/kg in TP-7 at depth of 0 to 3.5 feet and is suspected to be related to the presence of ash.
- In soil, contaminants detected included primarily PAHs, TPH and metals (primarily arsenic and lead). The contaminants may be related to the presence of anthropogenic fill (placed by man) or pyrogenic fill (burn residue or produced by fire) and/or possibly by undocumented releases from historic mill activities and operations. Other contaminants such as VOCs, pesticides, PCBs, cyanide, and hexavalent chromium were low and/or not detected. Several constituents detected in soil exceed the Rhode Island Residential DEC and/or the Industrial/Commercial DEC. Exceedance of the DEC indicates that a potential increased risk to human health exists via the direct contact pathway.
- In groundwater, VOCs and TPH were not detected in groundwater monitoring wells located on the Main Mill Building parcels (Lots 10-42 and 10-60) and or in NB-3 installed on parking lot parcel Lot 10-43. PAHs were detected at low concentrations in GZA-3 primarily located on the downgradient site of the subject property. Based upon the groundwater sampling data, groundwater quality does not appear significantly negatively impacted and is consistent with groundwater quality in GB areas.

- In subslab soil vapor, VOCs are present at varying concentrations. VOCs reported include various types of gasoline related compounds and several CVOCs. Total VOC vapor concentrations (772.05 ug/m<sup>3</sup>) in SG-4 located beneath Mill Bldg#7 was much higher than in other locations. Most of the total VOC concentration in SG-4 soil vapor consisted of trichlorofluoromethane (Freon 11) and PCE. The State of Rhode Island does not have a stand-alone guidance dedicated to vapor intrusion and/or standards (like CTDEEP) or vapor screening values (like MassDEP). For comparison only, the PCE concentration of 260 ug/m<sup>3</sup> in SG-4 exceeds the MassDEP Subslab Soil Gas Screening Value for Residential Use. Per MassDEP guidance, this exceedance indicates that the vapor intrusion pathway may be of concern under future residential use conditions. However, the PCE soil vapor detection was in only 1 of 4 sample locations and was in portion of the main mill building proposed as open-air garage space (below first residential living floor). Additionally, PCE was not detected in either soil or groundwater and thus the presence of PCE in soil vapor may be indicative of background conditions and from an unknown off-site source. Thus, this single PCE soil vapor detection beneath the subslab is not considered to have an impact on proposed future use.
- In wipe samples, low to trace levels of PCBs are present. Wipe samples indicated that low level PCBs are associated with some elevator oils and in some stained concrete surfaces (from past spills) in the basement. Total PCB wipe concentrations were less than 1 ug/100 cm<sup>2</sup> which is below the reporting notification threshold per State of Rhode Island and federal (TSCA) requirement of 10 ug/100 cm<sup>2</sup>. However, wipe sampling is “qualitative” and only indicates that PCBs are present or absent on the surface and does not provide a “quantitative” measure or concentration of PCBs on the wiped surface. Additionally, as noted in the lab report, the PCB wipe analytical results were biased low.

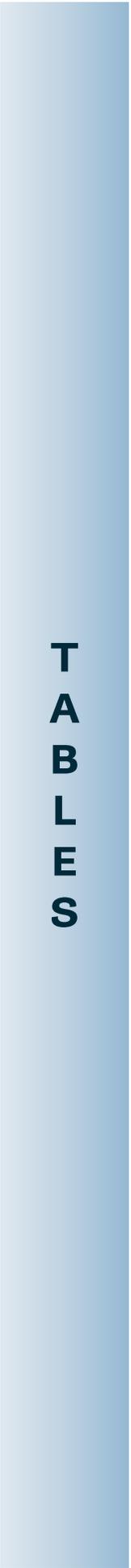
Nobis provides the following recommendations:

- Management of fill material is advised during future redevelopment of the property. Soils should be characterized in accordance with a written soil management plan and in coordination with a qualified environmental professional.
- Soil concentrations exceeding the RDEC and/or the I/C DEC (coupled with exemption criteria not met) constitute a “release” in accordance with RIDEM Remediation Regulations (250-RICR-140-30-1). The release is required to be reported by a Responsible Party, which per the regulations is defined as the Property Owner. A summary of the results of soil exceedance to be reported to RIDEM are summarized in Table 8. Upon

Brady Sullivan’s notification to the Property Owner of this information (which triggers the Responsible Party’s “discovery”), RIDEM should be made in writing (both hard copy and electronic via email) within 15 days.

## 6.0 – REFERENCES

- CTDEEP, 2021, *Remediation Standards Regulations (RSRs) 22a-133k-3. Appendix F - Volatilization Criteria for Soil Vapor.*
- GZA GeoEnvironmental, Inc., 2005, *Phase I and Phase II Environmental Site Assessment Report, Robin Rug Facility, 125 Thames Street, Bristol, Rhode Island.*
- MassDEP, December 20, 2011, Revised February 22, 2013, and March 7, 2013, *Interim Final Vapor Intrusion Guidance, WSC# 11-435, Table II.1 -Residential Sub-Slab Soil Gas Screening Values and Table II.2 – Commercial/Industrial Sub-Slab Soil Gas Screening Values.*
- Nobis Group, June 2021, *Phase I Environmental Site Assessment Report, Robin Rug, 125 Thames Street, Bristol, Rhode Island.*
- Rhode Island Department of Environmental Management (RIDEM) Title 250, Chapter 140 – Waste and Materials Management, Subchapter 30 – *Site Remediation, Part 1 - Rules and Regulations for the Investigation and Remediation of Hazardous Materials Releases (250-RICR-140-30-1) effective April 22, 2020.*
- USEPA, June 23, 1987, Revised and Clarified 18, 1991, *Wipe Sampling and Double Wash/Rinse Cleanup as Recommended by The Environmental Protection Agency PCB Spill Cleanup Policy.*
- USEPA, November 2005, *Polychlorinated Biphenyls (PCBs) Site Revitalization Guidance Under the Toxic Substances Control Act (TSCA).*



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**Table 1**  
**Soil PID Readings**  
Robin Rug  
125 Thames Street  
Bristol, Rhode Island

Location	Sample Number	Sample Depth (ft)	PID Reading (ppmV)
SB-1	-	0 to 4	No readings collected
SB-2	S-1	5 to 7	1.7
SB-2	S-1	7 to 10	3.7
SB-2	S-2	10 to 11	3.8
SB-2	S-2	12 to 13	1.2
SB-2	S-2	15	<1
SB-3	S-1	5 to 7	3.0
SB-3	S-1	7 to 10	4.5
SB-3	S-2	10 to 12	1.0
SB-3	S-2	12 to 15	2.4
SB-4	S-1	0 to 4	3.0
SB-4	S-1	4 to 5	7.3
SB-4	S-2	5 to 9	<1
SB-4	S-2	9 to 10	<1
SB-4	S-3	10 to 13	<1
SB-4	S-3	13 to 15	<1
SB-5	S-1	0 to 3	8.9
SB-5	S-1	3 to 5	<1
SB-5	S-2	5 to 7	7.6
SB-5	S-2	7 to 9	1.6
SB-5	S-2	9 to 10	14.5
SB-5	S-3	10 to 15	<1
SB-6	--	0 to 1	<1
SB-6	--	1 to 2	<1
SB-7	--	0 to 2.5	2.3
SB-8	S-1	0 to 4	8.0
SB-8	S-1	4 to 5	<1
SB-8	S-2	5 to 8	<1
SB-8	S-2	8 to 10	<1
SB-8	S-3	10 to 12	3.7
SB-8	S-3	12 to 15	<1
SB-9	S-1	0 to 3	<1
SB-9	S-1	3 to 5	<1
SB-9	S-2	5 to 7	<1
SB-9	S-2	7 to 9	<1
SB-9	S-2	9 to 10	<1
SB-9	S-3	10 to 13	<1
SB-9	S-3	13 to 15	<1

**Table 1**  
**Soil PID Readings**  
Robin Rug  
125 Thames Street  
Bristol, Rhode Island

Location	Sample Number	Sample Depth (ft)	PID Reading (ppmV)
SB-10	S-1	0 to 5	4.3
SB-10	S-2	5 to 7	26
SB-10	S-2	7 to 9	1.1
SB-10	S-2	9 to 10	16.4
SB-10	S-3	10 to 13	3.8
SB-10	S-3	13 to 15	14.5
SB-11	S-1	0 to 3	<1
SB-11	S-1	3 to 5	<1
SB-11	S-2	5 to 7	<1
SB-11	S-2	7 to 10	<1
SB-11	S-3	10 to 11	<1
SB-11	S-3	11 to 15	<1
TP-1	--	0 to 1	<1
TP-1	--	1 to 2	<1
TP-1	--	2 to 3	<1
TP-1	--	3 to 4	<1
TP-1	--	4 to 5	<1
TP-2	--	0 to 1	<1
TP-2	--	1 to 2	<1
TP-2	--	2 to 3	<1
TP-2	--	3 to 4	1.1
TP-2	--	4 to 5	<1
TP-2	--	5 to 6	<1
TP-2	--	6 to 7	<1
TP-3	--	0 to 1	<1
TP-3	--	1 to 2	<1
TP-3	--	2 to 3	<1
TP-3	--	3 to 4	<1
TP-3	--	4 to 5	<1
TP-3	--	5 to 6	<1
TP-3	--	6 to 7	<1
TP-4	--	0 to 2	<1
TP-4	--	2 to 4	<1
TP-4	--	4 to 6	<1
TP-4	--	6 to 8	<1
TP-4	--	8 to 9	<1
TP-4	--	9 to 10	<1
TP-5	--	0 to 2	<1
TP-5	--	2 to 4	<1
TP-5	--	4 to 6.5	<1

**Table 1**  
**Soil PID Readings**  
Robin Rug  
125 Thames Street  
Bristol, Rhode Island

Location	Sample Number	Sample Depth (ft)	PID Reading (ppmV)
TP-6	--	0 to 3	<1
TP-6	--	3 to 6	<1
TP-6	--	6 to 8	<1
TP-6	--	8 to 10	65.6
TP-7 (1)	--	0 to 3	<1
TP-7 (1)	--	3 to 5	<1
TP-7 (1)	--	5 to 7	<1
TP-7 (2)	--	0 to 2	<1
TP-7 (2)	--	2 to 4	<1
TP-7 (2)	--	4 to 6	<1
TP-7 (2)	--	6 to 7	<1
TP-7 (2)	--	7 to 8	<1
TP-8	--	0 to 2	<1
TP-8	--	2 to 4	<1
TP-8	--	4 to 6	<1
TP-9	--	0 to 2	<1
TP-9	--	2 to 4	<1
TP-9	--	4 to 6	<1
TP-10	--	0 to 1	<1
TP-10	--	1 to 2	<1
TP-10	--	2 to 4	<1
TP-10	--	4 to 5	<1
TP-10	--	5 to 7	<1
TP-10	--	7 to 8	<1
TP-10	--	8 to 9	<1
TP-10	--	9 to 10	<1
TP-11	--	0 to 3	<1
TP-11	--	3 to 5	<1
TP-11	--	5 to 7	<1
TP-12	--	0 to 2	<1
TP-12	--	2 to 4	<1
TP-12	--	4 to 6	<1
TP-12	--	6 to 7	<1
TP-13	--	0 to 2	<1
TP-13	--	2 to 4	<1
TP-13	--	4 to 5	<1
TP-13	--	5 to 6.5	<1

**Table 1**  
**Soil PID Readings**  
Robin Rug  
125 Thames Street  
Bristol, Rhode Island

Location	Sample Number	Sample Depth (ft)	PID Reading (ppmV)
TP-14	--	0 to 1	<1
TP-14	--	1 to 2	<1
TP-14	--	2 to 3	<1
TP-14	--	3 to 4	<1
TP-14	--	4 to 5	<1
TP-14	--	5 to 6	<1
TP-14	--	6 to 7	<1
TP-14	--	7 to 8	<1
TP-14	--	8 to 9	<1
TP-19	--	0 to 1	<1
TP-19	--	1 to 2	<1
TP-19	--	2 to 3	<1
TP-19	--	3 to 4	<1
TP-19	--	4 to 5	<1
TP-19	--	5 to 6	<1
TP-19	--	6 to 7.5	<1

**Notes:**

1. Soil boring PID headspace readings were recorded during drilling operations on June 8, 9 and 10, 2021.
2. Soil test pit PID headspace readings were recorded during excavation on June 10 and 11, 2021.
3. PIDs were calibrated and used in accordance with Nobis SOP FS-007 Vapor and Air Screening with PID and FID.

**Table 2**  
**Groundwater Elevation Data**  
 Robin Rug  
 125 Thames Street  
 Bristol, Rhode Island

Well No.	Date	Reference Elevation (ft.)	Depth to Groundwater (ft.)	Groundwater Elevation (ft.)
NB-2	6/30/2021	98.90	5.40	93.50
NB-3	6/30/2021	109.78	6.44	103.34
GZA-1	6/30/2021	96.93	7.71	89.22
GZA-2	6/30/2021	96.35	7.09	89.26
GZA-3	6/30/2021	96.14	6.57	89.57

**Notes:**

1. Well elevations were surveyed on June 30, 2021. The reference elevation is based on a temporary benchmark located at the southeast corner of a concrete pad on Church Street Extension, with a given elevation of 100 ft.
2. Groundwater level measurements were obtained by Nobis Group on the dates indicated, using an electronic water level indicator.

**Table 3**  
**Soil Analytical Results - Soil Borings**  
 Robin Rug  
 125 Thames Street  
 Bristol, Rhode Island

Parameter	Units	Soil Boring/Sample Depth								RIDEM Soil Standards <sup>(1)(2)</sup>		
		SB-3 7-9 ft	SB-2 12-14 ft	SB-4 7-9 ft	SB-5/NB-1 10-12 ft	SB-6 2 ft	SB-7 2 ft	SB-8/NB-2 7-9 ft	SB-11 8-10 ft	RDEC	I/C DEC	Leachability Criteria (GB)
<b>VOCS (EPA 8260C):</b>												
Tetrachloroethene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<b>0.40</b>	<0.5	<0.5	12	110	4.2
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<b>0.10</b>	<0.1	<0.1	<0.1	NS	NS	NS
<b>SVOCs (8270D):</b>												
Carbazole	mg/kg	< 0.08	< 0.08	< 0.08	<0.08	<b>3.10</b>	<b>0.57</b>	< 0.07	< 0.08	NS	NS	NS
Dibenzofuran	mg/kg	< 0.08	< 0.08	< 0.08	< 0.08	<b>2.20</b>	<b>0.31</b>	< 0.07	< 0.08	NS	NS	NS
Naphthalene	mg/kg	< 0.08	< 0.08	< 0.08	< 0.08	<b>2.60</b>	<b>0.35</b>	< 0.07	< 0.08	54	10,000	NS
2-Methylnaphthalene	mg/kg	< 0.08	< 0.08	< 0.08	< 0.08	<b>0.73</b>	<b>0.12</b>	< 0.07	< 0.08	123	10,000	NS
1-Methylnaphthalene	mg/kg	< 0.08	< 0.08	< 0.08	< 0.08	<b>0.55</b>	<b>0.13</b>	< 0.07	< 0.08	NS	NS	NS
Acenaphthylene	mg/kg	< 0.08	< 0.08	< 0.08	< 0.08	<b>2.8</b>	<b>0.57</b>	< 0.07	< 0.08	23	10,000	NS
Acenaphthene	mg/kg	< 0.08	< 0.08	< 0.08	< 0.08	<b>2.4</b>	<b>0.41</b>	< 0.07	< 0.08	43	10,000	NS
Fluorene	mg/kg	< 0.08	< 0.08	< 0.08	< 0.08	<b>2.6</b>	<b>0.40</b>	< 0.07	< 0.08	28	10,000	NS
Phenanthrene	mg/kg	< 0.08	< 0.08	< 0.08	< 0.08	<b>0.11</b>	<b>4.90</b>	< 0.07	< 0.08	40	10,000	NS
Anthracene	mg/kg	< 0.08	< 0.08	< 0.08	< 0.08	<b>8.1</b>	<b>1.40</b>	< 0.07	< 0.08	35	10,000	NS
Fluoranthene	mg/kg	< 0.08	< 0.08	< 0.08	<b>0.14</b>	<b>57</b>	<b>7.20</b>	< 0.07	< 0.08	28	10,000	NS
Pyrene	mg/kg	< 0.08	< 0.08	< 0.08	<b>0.12</b>	<b>37</b>	<b>6.80</b>	< 0.07	< 0.08	13	10,000	NS
Benzo[a]anthracene	mg/kg	< 0.08	< 0.08	< 0.08	< 0.08	<b>25</b>	<b>4.60</b>	< 0.07	< 0.08	0.9	7.8	NS
Chrysene	mg/kg	< 0.08	< 0.08	< 0.08	< 0.08	<b>22</b>	<b>4.20</b>	< 0.07	< 0.08	0.4	780	NS
Benzo[b]fluoranthene	mg/kg	< 0.08	< 0.08	< 0.08	< 0.08	<b>27</b>	<b>6.10</b>	< 0.07	< 0.08	0.9	7.8	NS
Benzo[k]fluoranthene	mg/kg	< 0.08	< 0.08	< 0.08	< 0.08	<b>7.8</b>	<b>2.30</b>	< 0.07	< 0.08	0.9	7.8	NS
Benzo[a]pyrene	mg/kg	< 0.08	< 0.08	< 0.08	< 0.08	<b>22</b>	<b>4.60</b>	< 0.07	< 0.08	0.4	0.8	NS
Indeno[1,2,3-cd]pyrene	mg/kg	< 0.08	< 0.08	< 0.08	< 0.08	<b>9.2</b>	<b>1.30</b>	< 0.07	< 0.08	0.9	7.8	NS
Dibenz[a,h]anthracene	mg/kg	< 0.08	< 0.08	< 0.08	< 0.08	<b>2.2</b>	<b>0.31</b>	< 0.07	< 0.08	0.4	0.8	NS
Benzo[g,h,i]perylene	mg/kg	< 0.08	< 0.08	< 0.08	< 0.08	<b>6.3</b>	<b>0.98</b>	< 0.07	< 0.08	0.8	10,000	NS
<b>Total SVOCs</b>	mg/kg	<0.08	<0.08	<0.08	<0.08	<b>270.58</b>	<b>47.55</b>	<0.07	<0.08	n/a	n/a	n/a
<b>Total PAHs</b>	mg/kg	<0.08	<0.08	<0.08	<b>0.37</b>	<b>265.28</b>	<b>46.67</b>	<0.07	<0.08	n/a	n/a	n/a
<b>TPH (8100 Modified):</b>												
C9 - C40 Hydrocarbons	mg/kg	<30	<30	<30	<b>90</b>	<b>800</b>	<b>190</b>	<30	<30	500	2,500	2,500
<b>Pesticides (EPA 8081B):</b>												
	mg/kg	<0.005 to <0.05	<0.005 to <0.05	<0.005 to <0.05	<0.005 to <0.05	<0.005 to <0.05	<0.005 to <0.05	<0.005 to <0.05	<0.005 to <0.05	NS	NS	NS
<b>PCBs (8082A):</b>												
	mg/kg	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	10	10	10.0
<b>Metals:</b>												
Arsenic	mg/kg	<b>4.1</b>	<b>4.0</b>	<b>1.5</b>	<b>4.2</b>	<b>6.1</b>	<b>4.7</b>	<b>8.50</b>	<b>4.5</b>	7.00	7.00	NS
Barium	mg/kg	<b>19</b>	<b>11</b>	<b>2.3</b>	<b>8.5</b>	<b>92</b>	<b>62</b>	<b>16</b>	<b>18</b>	5500	10000	NS
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	39	1000	NS
Chromium, Total	mg/kg	<b>14</b>	<b>7.7</b>	<b>6.1</b>	<b>24</b>	<b>25</b>	<b>17</b>	<b>12</b>	<b>12</b>	1790	20000	NS
Chromium, Hexavalent	mg/kg	NA	NA	<0.43	<0.41	<0.44	<0.44	NA	NA	390	10000	NS
Lead	mg/kg	<b>6.7</b>	<b>5.7</b>	<b>2.3</b>	<b>19</b>	<b>310</b>	<b>260</b>	<b>6.60</b>	<b>7.7</b>	150	500	NS
Mercury	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	<b>0.60</b>	<b>0.16</b>	<0.1	< 0.1	23	610	NS
Selenium	mg/kg	< 0.5	< 0.5	< 0.5	<b>0.52</b>	< 0.5	< 0.5	<b>0.57</b>	< 0.5	390	10000	NS
Silver	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	200	10000	NS
<b>TCPLP, Lead:</b>	mg/L	NA	NA	NA	NA	<0.5	<0.5	NA	NA	n/a	n/a	NS
<b>Cyanide, Total:</b>	mg/kg	<0.5	<0.5	<0.5	<0.5	<b>0.54</b>	<0.5	<0.5	<0.5	200	10,000	NS

**Notes:**  
 Samples were collected on June 8, 9 and 10, 2021.  
 Samples were analyzed by Eastern Analytical, Inc. of Concord, NH.  
 Samples were analyzed for Volatile Organic Compounds (VOCs) by EPA Method 8260C. Only analytes detected at least once shown above.  
 Samples were analyzed for Semi-Volatile Organic Compounds (SVOCs) by EPA Method 8270D. Only analytes detected at least once shown above.  
 NA = Not analyzed for parameter shown.

<0.5 Concentration is less than laboratory detection limit. Analyte not detected.  
**57** Concentration in **BOLD/Yellow** exceeds Residential Direct Exposure Criteria (RDEC)  
**9.2** Concentration in **BOLD/Blue** exceeds both Residential Direct Exposure Criteria (RDEC) and Industrial/Commercial DEC (I/C/DEC)

(1) Source: Rhode Island Department of Environmental Management (RIDEM) - Site Remediation Rules and Regulations for the Investigation and Remediation of Hazardous Materials Releases, effective April 22, 2020. Subchapter 30, Section 1.9.2 - Soil Objectives Table 2 : Direct Exposure Criteria for Residential (REDEC) and Industrial/Commercial (I/CDEC) and Table 2 - Leachability Criteria for GA Groundwater and GB Groundwater.

(2) Source RIDEM Site Remediation Rules and Regulations for the Investigation and Remediation of Hazardous Materials Releases, effective April 22, 2020. Subchapter 30, Section 1.92 Soil Objectives, Subsection B.4. (a) Soil Objectives for Total Petroleum Hydrocarbons (TPH).

NS = indicates no standard is established for parameter group and/or analyte.

**Table 4**  
**Soil Analytical Results - Test Pits**  
 Robin Rug  
 125 Thames Street  
 Bristol, Rhode Island

Parameter	Units	Test Pit No./Sample Depth								RIDEM Standards <sup>(1)(2)</sup>		
		TP-1 0-2 ft	TP-2 3-4 ft	TP-3 2-3 ft	TP-4 9 ft	TP-5 6 ft	TP-6 9-10 ft	TP-7 0-3.5 ft	TP-14 1-2 ft	RDEC	I/C DEC	Leachability Criteria (GB)
<b>VOCS (EPA 8260C):</b>												
Styrene	mg/kg	<0.5	--	5.1	--	<0.5	<0.5	<0.8	<0.5	13	190	64
<b>SVOCS/PAHs (EPA 8270D):</b>												
Naphthalene	mg/kg	< 0.07	<b>0.086</b>	< 0.09	< 0.08	< 0.07	< 0.08	< 0.09	< 0.08	54.00	10000	NS
Acenaphthylene	mg/kg	<b>0.10</b>	<b>0.19</b>	< 0.09	< 0.08	< 0.07	< 0.08	< 0.09	< 0.08	23.00	10000	NS
Acenaphthene	mg/kg	< 0.07	<b>0.13</b>	< 0.09	< 0.08	< 0.07	< 0.08	< 0.09	< 0.08	43.00	10000	NS
Fluorene	mg/kg	<b>0.07</b>	<b>0.19</b>	< 0.09	< 0.08	< 0.07	< 0.08	< 0.09	< 0.08	28.00	10000	NS
Phenanthrene	mg/kg	<b>0.75</b>	<b>1.50</b>	<b>0.57</b>	< 0.08	< 0.07	< 0.08	<b>0.17</b>	<b>0.38</b>	40.00	10000	NS
Anthracene	mg/kg	<b>0.22</b>	<b>0.46</b>	<b>0.12</b>	< 0.08	< 0.07	< 0.08	< 0.09	<b>0.12</b>	35.00	10000	NS
Fluoranthene	mg/kg	<b>1.30</b>	<b>2.40</b>	<b>0.95</b>	< 0.08	< 0.07	< 0.08	<b>0.53</b>	<b>0.71</b>	28.00	10000	NS
Pyrene	mg/kg	<b>1.10</b>	<b>2.10</b>	<b>0.79</b>	< 0.08	< 0.07	< 0.08	<b>0.61</b>	<b>0.59</b>	13.00	10000	NS
Benzo[a]anthracene	mg/kg	<b>0.71</b>	<b>1.30</b>	<b>0.70</b>	< 0.08	< 0.07	< 0.08	<b>0.44</b>	<b>0.37</b>	0.90	7.80	NS
Chrysene	mg/kg	<b>0.69</b>	<b>1.30</b>	<b>0.75</b>	< 0.08	< 0.07	< 0.08	<b>0.40</b>	<b>0.38</b>	0.40	780	NS
Benzo[b]fluoranthene	mg/kg	<b>0.83</b>	<b>1.60</b>	<b>0.93</b>	< 0.08	< 0.07	< 0.08	<b>0.40</b>	<b>0.47</b>	0.90	7.80	NS
Benzo[k]fluoranthene	mg/kg	<b>0.33</b>	<b>0.54</b>	<b>0.35</b>	< 0.08	< 0.07	< 0.08	<b>0.14</b>	<b>0.16</b>	0.90	78.00	NS
Benzo[a]pyrene	mg/kg	<b>0.68</b>	<b>1.30</b>	<b>0.65</b>	< 0.08	< 0.07	< 0.08	<b>0.35</b>	<b>0.36</b>	0.40	0.80	NS
Indeno[1,2,3-cd]pyrene	mg/kg	<b>0.32</b>	<b>0.58</b>	<b>0.28</b>	< 0.08	< 0.07	< 0.08	<b>0.21</b>	<b>0.26</b>	0.90	7.80	NS
Dibenz[a,h]anthracene	mg/kg	<b>0.08</b>	<b>0.15</b>	< 0.09	< 0.08	< 0.07	< 0.08	< 0.09	< 0.08	0.40	0.80	NS
Benzo[g,h,i]perylene	mg/kg	<b>0.24</b>	<b>0.43</b>	<b>0.21</b>	< 0.08	< 0.07	< 0.08	<b>0.22</b>	<b>0.22</b>	0.80	10000	NS
<b>Total PAHs</b>	mg/kg	<b>7.42</b>	<b>14.17</b>	<b>6.30</b>	<0.08	<0.07	<0.08	<b>3.47</b>	<b>4.02</b>	n/a	n/a	n/a
<b>TPH (8100 Modified):</b>												
C9 - C40 Hydrocarbons	mg/kg	69	93	230	< 30	< 30	<b>580</b>	69	59	500	2500	2500
<b>Pesticides (EPA 8081B):</b>												
4,4'-DDT	mg/kg	< 0.005	NA	< 0.006	NA	NA	<b>0.040</b>	<b>0.014</b>	< 0.006	NS	NS	NS
4,4'-DDE	mg/kg	< 0.005	NA	< 0.006	NA	NA	< 0.006	<b>0.012</b>	< 0.006	NS	NS	NS
4,4'-DDD	mg/kg	< 0.005	NA	< 0.006	NA	NA	<b>0.063</b>	< 0.006	< 0.006	NS	NS	NS
<b>PCBs (8082A):</b>												
PCB-1260	mg/kg	<b>0.040</b>	NA	< 0.02	NA	NA	< 0.02	< 0.02	< 0.02	10	10	10.0
<b>Metals:</b>												
Arsenic	mg/kg	<b>8.4</b>	6.9	<b>18</b>	4.9	2.9	2.3	6.6	4.2	7	7	NS
Barium	mg/kg	29	43	120	20	11	8.3	1,500	72	5500	10000	NS
Cadmium	mg/kg	< 0.5	<b>0.59</b>	1.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	39	1000	NS
Chromium, Total	mg/kg	14	25	15	13	8.4	7.1	13	15	1790	20000	NS
Chromium, Hexavalent	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	390	10000	NS
Lead	mg/kg	55	<b>130</b>	63	7.7	6.0	8.4	<b>4,600</b>	99	150	500	NS
Mercury	mg/kg	< 0.1	<b>0.28</b>	0.13	< 0.1	< 0.1	< 0.1	<b>0.28</b>	<b>0.22</b>	23	610	NS
Selenium	mg/kg	<b>0.65</b>	<b>0.66</b>	2.4	< 0.5	< 0.5	<b>0.82</b>	1.3	<b>0.54</b>	390	10000	NS
Silver	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	200	10000	NS
<b>TCCLP, Lead:</b>	mg/L	NA	<0.5	NA	NA	NA	NA	1.4	<0.5	n/a	n/a	NS

**Notes:**

Samples were collected on June 10 and 11, 2021.

Samples were analyzed by Eastern Analytical, Inc. of Concord, NH.

Samples were analyzed for Volatile Organic Compounds (VOCs) by EPA Method 8260C. Only analytes detected at least once shown above

Samples were analyzed for Semi-Volatile Organic Compounds (SVOCs) by EPA Method 8270D analyzed for PAHs only. Only analytes detected at least once shown above

NA = Not analyzed for parameter shown.

<0.5 Concentration is less than laboratory detection limit. Analyte not detected.

**57** Concentration in **BOLD/Yellow** exceeds Residential Direct Exposure Criteria (RDEC)

**9.2** Concentration in **BOLD/Blue** exceeds both Residential Direct Exposure Criteria (RDEC) and Industrial/Commercial DEC (IC/DEC)

(1) Source: Rhode Island Department of Environmental Management (RIDEM) - Site Remediation Rules and Regulations for the Investigation and Remediation of Hazardous Materials Releases, effective April 22, 2020. Subchapter 30, Section 1.9.2 - Soil Objectives Table 2 : Direct Exposure Criteria for Residential (REDEC) and Industrial/Commercial (I/CDEC) and Table 2 - Leachability Criteria for GA Groundwater and GB Groundwater.

(2) Source RIDEM Site Remediation Rules and Regulations for the Investigation and Remediation of Hazardous Materials Releases, effective April 22, 2020. Subchapter 30, Section 1.92 Soil Objectives, Subsection B.4. (a) Soil Objectives for Total Petroleum Hydrocarbons (TPH).

NS = indicates no standard is established for parameter group and/or analyte.

**Table 5**  
**Groundwater Sampling Results**  
Robin Rug  
125 Thames Street  
Bristol, Rhode Island

Parameter	Units	Sample Location					RIDEM Site Remediation - Method 1 Groundwater Objective (1)
		NB-2	NB-3	GZA-1	GZA-2	GZA-3	GB Category
<b>VOCs (EPA 8260):</b>	mg/L	<0.5 to <30	<0.5 to <30	<0.5 to <30	<0.5 to <30	<0.5 to <30	varies
<b>PAHs (EPA Method 8270):</b>							
Phenanthrene	mg/L	<0.1	<0.1	<0.1	<0.1	<b>0.13</b>	NS
Fluoranthene	mg/L	<0.1	<0.1	<0.1	<0.1	<b>0.28</b>	NS
Pyrene	mg/L	<0.1	<0.1	<b>0.14</b>	<0.1	<b>0.24</b>	NS
Benzo[a]anthracene	mg/L	<0.1	<0.1	<0.1	<0.1	<b>0.18</b>	NS
Chrysene	mg/L	<0.1	<0.1	<0.1	<0.1	<b>0.12</b>	NS
Benzo[b]fluoranthene	mg/L	<0.1	<0.1	<0.1	<0.1	<b>0.18</b>	NS
Benzo[a]pyrene	mg/L	<0.1	<0.1	<0.1	<0.1	<b>0.14</b>	NS
<b>TPH (EPA 8100 Modified):</b>							
C9 - C40 Hydrocarbons	mg/L	<0.4	<0.5	<0.5	<0.4	<0.4	NS

**Notes:**

Samples were collected on 6/29/21. NB-2 was sampled on 6/30/21.

Samples were analyzed by Eastern Analytical, Inc. of Concord, NH.

Samples were analyzed by EPA Method 8270 for PAHs only.

<0.5 Concentration is less than laboratory detection limit. Analyte not detected.

**0.14** Concentrations in **BOLD** indicate analytes detected above laboratory detection limits.

(1) Source: Rhode Island Department of Environmental Management (RIDEM) - Site Remediation Rules and Regulations for the Investigation and Remediation of Hazardous Materials Releases, effective April 22, 2020. Subchapter 30, Section 1.9.3 - Groundwater Objectives Table 4: GB Groundwater Objectives.  
NS = indicates no standard is established for parameter group and/or analyte.

**Table 6**  
**Subslab Soil Vapor Sampling Results**

Robin Rug  
125 Thames Street  
Bristol, Rhode Island

Parameter	Units	Sample Location				Soil Vapor Screening Values <sup>(1)</sup>			
						CT DEEP 2021 <sup>(2)</sup>		MassDEP - 2013 <sup>(3)</sup>	
		SG-1 Bldg #3	SG-2 Bldg #1	SG-4 Bldg#7	SG-5 Bldg#7A	Volatilization Criteria		Sub-Slab Soil Gas Screening Values	
				Residential	I/C	Residential	I/C		
<b>VOCs (EPA Method TO-15):</b>									
Acetone	ug/m <sup>3</sup>	12	12	13	28	140,000	690,000	6,400	50,000
Benzene	ug/m <sup>3</sup>	0.95	<0.32	<0.32	0.61	2,500	4,600	160	770
Chloroform	ug/m <sup>3</sup>	0.74	1.80	<0.49	0.81	380	690	130	210
1,4-Dichlorobenzene	ug/m <sup>3</sup>	9.90	2.70	1.10	<0.60	18,000	33,000	35	120
Ethanol	ug/m <sup>3</sup>	20	62	44	<7.5	-	-	-	-
Ethylbenzene	ug/m <sup>3</sup>	0.89	0.59	<0.43	0.52	40,000	400,000	520	62,000
Styrene	ug/m <sup>3</sup>	<0.43	0.43	<0.43	0.53	39,000	400,000	98	1,400
Tetrachloroethylene (PCE)	ug/m <sup>3</sup>	9.60	18	260	11	3,800	6,900	98	290
Toluene	ug/m <sup>3</sup>	4.80	1.60	0.93	2.30	160,000	690,000	3,800	310,000
1,1,1-Trichloroethane (1,1,1-TCA)	ug/m <sup>3</sup>	<0.55	<0.55	2.30	<0.55	380,000	690,000	210	320,000
Trichloroethylene (TCE)	ug/m <sup>3</sup>	<0.54	1.20	19	<0.54	760	1,400	28	130
Trichlorofluoromethane (Freon 11)	ug/m <sup>3</sup>	13	<2.2	430	<2.2	-	-	-	-
1,2,4-Trimethylbenzene	ug/m <sup>3</sup>	2.80	<0.49	<0.49	<0.49	-	-	-	-
Xylenes, Total	ug/m <sup>3</sup>	2.38	1.56	1.72	1.87	170,000	690,000	1,400	6,200
<u>Total VOCs</u>	ug/m <sup>3</sup>	77.06	101.88	772.05	45.64	-	-	-	-

**Notes:**

Vapor (air) samples were collected on 6/30/21.

Samples were analyzed by Con-Test, a Pace Analytical Laboratory.

Samples were analyzed for Volatile Organic Compounds (VOCs) by EPA Method TO-15

<0.5

Concentration is less than laboratory detection limit. Analyte not detected.

0.14

Concentration in **BOLD** indicate analytes detected above laboratory detection limits.

260

Concentration in **BOLD/Yellow** exceeds MassDEP Residential Use Subslab Soil Gas Screening Value.

(1) Source: Rhode Island Department of Environmental Management (RIDEM) has no screening values or standards for soil vapor. Screening values shown from CTDEEP and MassDEP are for reference only.

(2) Source: State of Connecticut Regulations - Volatilization Criteria for Soil Vapor, Appendix F to RSRs 22a-133k-3.

(3) Source: Massachusetts Department of Environmental Protection (MassDEP) Interim Final Vapor Intrusion Guidance WSC#-11-435, Dec 2011, Revised February 22, 2013, Appendix II (Sub-Slab Soil Gas Screening Values)

(-) = indicates no screening value or standard established for analyte.

**Table 7**  
**PCB Wipe Sampling Results**  
Robin Rug  
125 Thames Street  
Bristol, Rhode Island

Sample ID	Location	PCBs (ug/Wipe)		
		Aroclor-1254	Aroclor-1260	Total PCBs
WS-1	Elevator cables in Building #4 "Penthouse"	<b>0.25</b>	<0.20	<b>0.25</b>
WS-2	Elevator cables in Building #2 "Penthouse"	<0.20	<0.20	<0.20
WS-3	Elevator cables in Building #7 "Penthouse"	<0.20	<0.20	<0.20
WS-4	Elevator cables in Building #7A "Penthouse"	<0.20	<b>0.20</b>	<b>0.20</b>
CW-1	Concrete floor in NW corner of Building #4 basement	<b>0.32</b>	<0.20	<b>0.32</b>
CW-2	Concrete floor in Building #5 basement next to waste oil drum storage	<0.20	<0.20	<0.20
CW-3	Concrete floor in Building #3 basement next to leaking drum and former UST piping	<0.20	<0.20	<0.20
CW-4	Stained area on concrete floor in Building #2A	<0.20	<0.20	<0.20
CW-5	Concrete floor between base of back two transformers in basement of Building #1	<0.20	<0.20	<0.20
CW-6	Concrete slab in Building #6 near elevator	<b>0.27</b>	<0.20	<b>0.27</b>
CW-7	Concrete floor between base of first two transformers in basement of Building #1	<b>0.47</b>	<0.20	<0.20
CW-8	Metal floor in Building #7A in front of elevator doors	<b>0.40</b>	<b>0.35</b>	<b>0.75</b>
CW-9	Surface of transformer, near base, in basement of Building #1	<0.20	<0.20	<0.20
RIDEM Reportable Notification				10 ug/100 cm <sup>2</sup>

**Notes:**

Samples collected on 6/30/2021.  
Samples were analyzed by Con-Test, a Pace Analytical Laboratory.  
Polychlorinated Biphenyls (PCBs) SW-846 8082A  
Wipe Area = 10 cm x 10 cm square = 100 cm<sup>2</sup>.

Table 8  
**Summary of Soil DEC Exceedances**  
 Robin Rug  
 125 Thames Street  
 Bristol, RI

Parcel No.	Current Use	Future Use	Location/Depth	Constituent	Soil Concentration (mg/kg) > RIDEM Standard	RIDEM Soil Standard <sup>(1)</sup>
10-42 Main Mill Parcel (Robin Rug)	Industrial/ Commercial	Residential	SB-6 2 feet	Fluoranthene	57	RDEC = 28 mg/kg
				Pyrene	37	RDEC = 13 mg/kg
				Benzo(a)anthracene	25	RDEC = 0.9 mg/kg; I/C DEC = 7.8 mg/kg
				Chrysene	22.0	RDEC = 0.4 mg/kg
				Benzo(b)fluoranthene	27.0	RDEC = 0.9 mg/kg; I/C DEC = 7.8 mg/kg
Benzo(k)fluoranthene	7.8	RDEC = 0.9 mg/kg; I/C DEC = 0.8 mg/kg				
Benzo(a)pyrene	22.0	RDEC = 0.4 mg/kg; I/C DEC = 0.8 mg/kg				
Indeno[1,2,3-cd]pyrene	9.2	RDEC = 0.9 mg/kg; I/C DEC = 7.8 mg/kg				
Dibenzo[a,h]anthracene	2.2	RDEC = 0.4 mg/kg; I/C DEC = 0.8 mg/kg				
Benzo[g,h,i]perylene	6.3	RDEC = 0.8 mg/kg				
TPH	800	RDEC = 500 mg/kg				
Lead	310	RDEC = 150 mg/kg				
10-42 Main Mill Parcel (Robin Rug)	Industrial/ Commercial	Residential	SB-7 2 feet	Benzo(a)anthracene	4.6	RDEC = 28 mg/kg
				Chrysene	4.2	RDEC = 0.4 mg/kg
				Benzo(b)fluoranthene	6.1	RDEC = 0.9 mg/kg
				Benzo(k)fluoranthene	2.3	RDEC = 0.9 mg/kg
				Benzo(a)pyrene	4.6	RDEC = 0.4 mg/kg; I/C DEC = 0.8 mg/kg
Indeno[1,2,3-cd]pyrene	1.3	RDEC = 0.9 mg/kg				
Benzo[g,h,i]perylene	0.98	RDEC = 0.8 mg/kg				
Lead	260	RDEC = 150 mg/kg				
10-42 Main Mill Parcel (Robin Rug)	Industrial/ Commercial	Residential	TP-2 3 - 4 feet	Benzo(a)anthracene	1.30	RDEC = 28 mg/kg
				Chrysene	1.30	RDEC = 0.4 mg/kg
				Benzo(b)fluoranthene	1.60	RDEC = 0.9 mg/kg
				Benzo(a)pyrene	1.30	RDEC = 0.4 mg/kg; I/C DEC = 0.8 mg/kg
Lead	130	RDEC = 150 mg/kg				
10-42 Main Mill Parcel (Robin Rug)	Industrial/ Commercial	Residential	TP-3 2 - 3 feet	Chrysene	0.75	RDEC = 0.4 mg/kg
				Benzo(b)fluoranthene	0.93	RDEC = 0.9 mg/kg
				Benzo(a)pyrene	0.65	RDEC = 0.4 mg/kg
				Arsenic	18	RDEC = 7.0 mg/kg
10-60 Main Mill Parcel (Robin Rug)	Industrial/ Commercial	Residential	TP-1 0 - 2 feet	Chrysene	0.69	RDEC = 0.4 mg/kg
				Benzo(a)pyrene	0.68	RDEC = 0.4 mg/kg
				Arsenic	8.4	RDEC = 7.0 mg/kg; I/C DEC = 7.0 mg/kg
10-43 Parking Lot Parcel	Residential	Industrial/ Commercial (Parking Lot for Condos)	SB-8 7 - 9 feet	Arsenic	8.5	RDEC = 7.0 mg/kg; I/C DEC = 7.0 mg/kg
			TP-6 9 - 10 feet	TPH	580	RDEC = 500 mg/kg
10-76 Parking Lot Parcel	Residential	Industrial/ Commercial (Parking Lot for Condos)	TP-7 0 - 3.5 feet	Lead	4,600	RDEC = 150 mg/kg; I/C DEC = 500 mg/kg

Note:

(1) Source: Rhode Island Department of Environmental Management (RIDEM) - Site Remediation Rules and Regulations for the Investigation and Remediation of Hazardous Materials Releases, effective April 22, 2020. Subchapter 30, Section 1.9.2 - Soil Objectives Table 1 : Direct Exposure Criteria for Residential (REDEC) and Industrial/Commercial

# **F I G U R E S**



USGS Topographic Map  
 Bristol, RI-Mass  
 Revised 1955

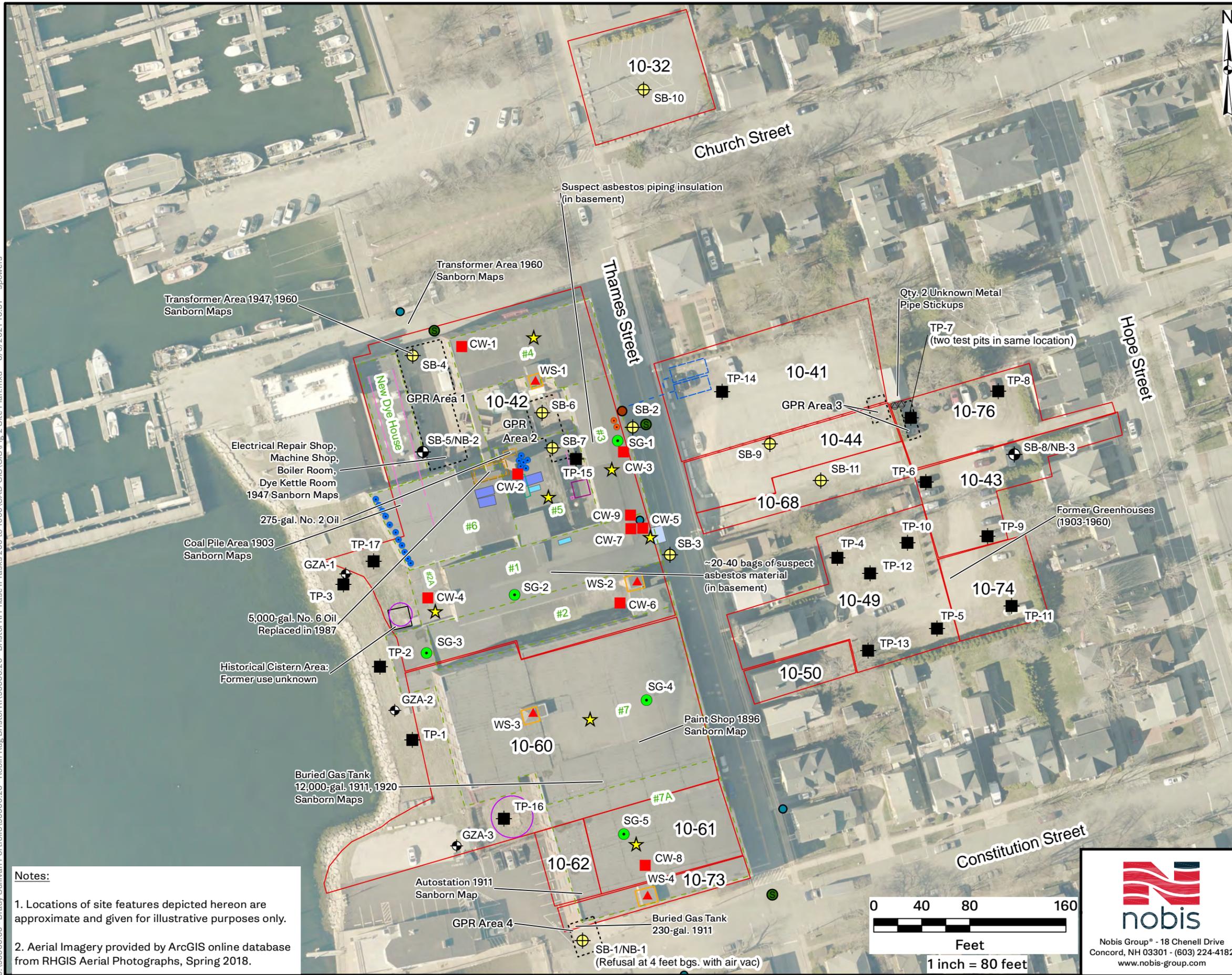


**FIGURE 1**  
 SITE LOCUS  
 ROBIN RUG MANUFACTURING FACILITY  
 125 THAMES STREET  
 BRISTOL, RI

PREPARED BY: SKP  
 PROJECT NO. 95560.26

CHECKED BY: BE  
 DATE: MARCH 2021

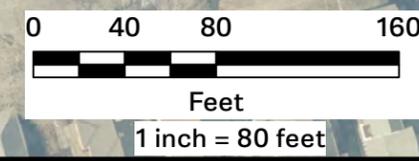
J:\95560.00 - Brady Sullivan Portfolio\95560.26 - Robin Rug Bristol RI\Phase II Tasks 200 to 1000\CAD-GIS\GIS\Fig 2 Site Plan.mxd 8/5/2021 16:51 spowers



- Test Pit (TP-15 and TP-16 not excavated)
  - ▲ PCB Wipe (elevator cable) WS-series (total = 4)
  - PCB Wipe (concrete floor) CW-series (total =9)
  - Soil Gas Vapor Point (SG-3 not installed)
  - ⊕ Soil Boring (total=11)
  - ⊕ Groundwater Monitoring Well
  - ★ Stained Floor
  - Transformer(Qty. 3 out of use)
  - Former UST Piping Into
  - Sewer Manhole
  - Pipe Stickups
  - Waste Oil
  - Leaking Oil
  - Floor
  - GPR Exploration Location
  - ▭ Cable-Weighted
  - ▭ Former Stock Dye Kettle
  - ▭ Former Water
  - ▭ Hydraulic
  - ▭ Trench Around
  - ▭ Water
  - ▭ Active
  - ▭ Former UST (20,000 gal. #6 oil)
  - ▭ Former
  - ▭ Parcel Boundary (Total = 14)
- 10-42 = Tax Map and Lot Number

**Notes:**

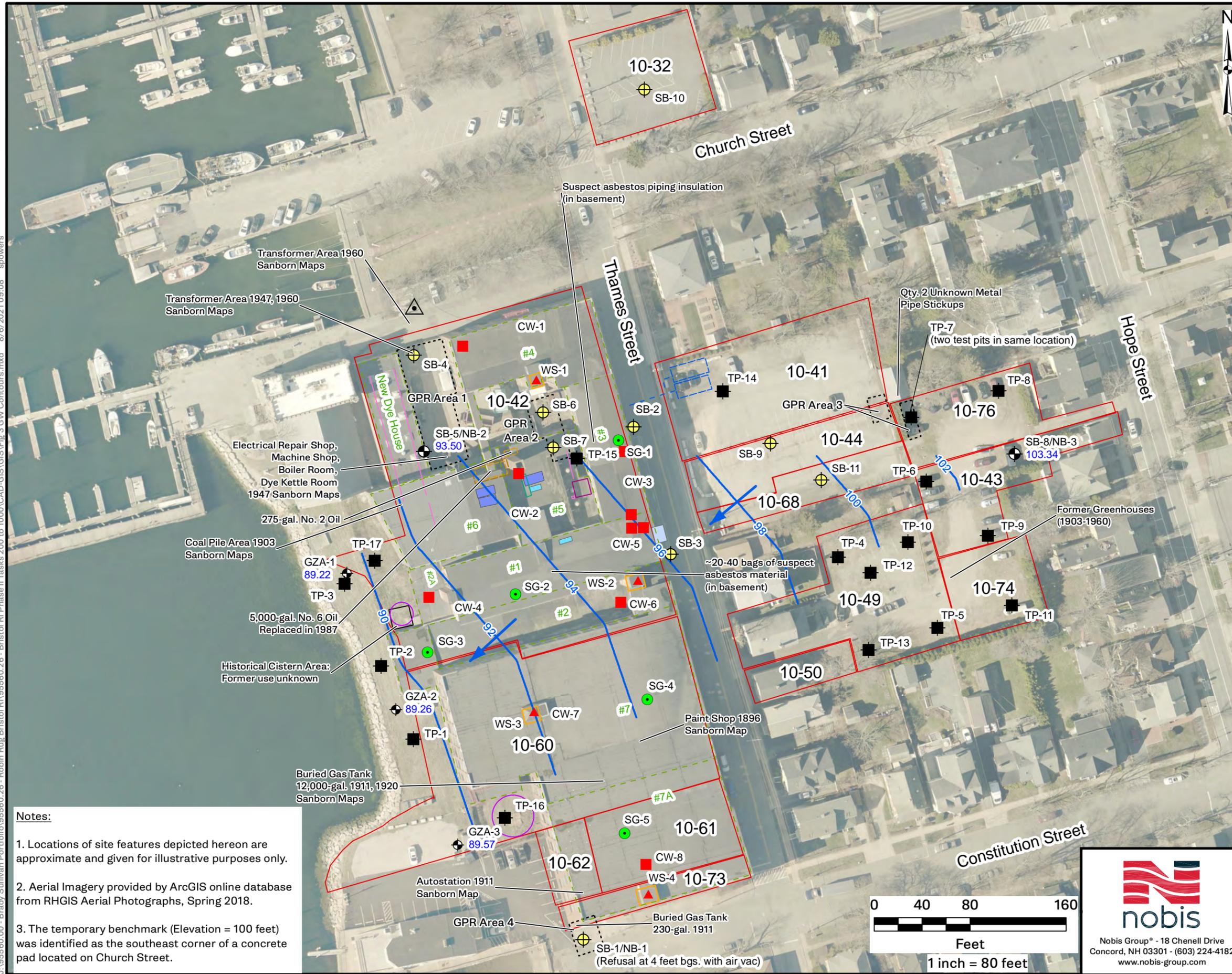
- Locations of site features depicted hereon are approximate and given for illustrative purposes only.
- Aerial Imagery provided by ArcGIS online database from RHGIS Aerial Photographs, Spring 2018.



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<b>FIGURE 2</b>	
<b>SITE PLAN</b> <b>ROBIN RUG FACILITY</b> <b>125 THAMES STREET</b> <b>BRISTOL, RHODE ISLAND</b>	
PREPARED BY: SKP	CHECKED BY: BEE
PROJECT NO. 95560.26	DATE: AUGUST 2021

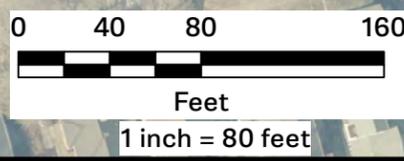
J:\95560.00 - Brady Sullivan Portfolio\95560.26 - Bristol RI Phase II Tasks\200 to 1000\CAD-GIS\GIS\Fig 3 GW Contours.mxd 8/6/2021 09:08 spowers



- Legend**
- Test Pit (TP-15 and TP-16 not excavated)
  - ▲ PCB Wipe (elevator cable) WS-series (total = 4)
  - PCB Wipe (concrete floor) CW-series (total =9)
  - Soil Gas Vapor Point (SG-3 not installed)
  - ⊕ Soil Boring
  - ⊕ Groundwater Monitoring Well with Groundwater Elevation 93.50 (on 6/30/21)
  - △ Temporary Benchmark
  - Floor Drains
  - Groundwater Elevation Contour
  - Groundwater Flow Direction
  - ⋯ GPR Exploration Location
  - ▭ Cable-Weighted Elevator
  - ▭ Former Stock Dye Kettle
  - ▭ Former Water Tower
  - ▭ Hydraulic Lift
  - ▭ Trench Around Boiler
  - ▭ Boilers
  - ▭ Water Tanks
  - ▭ Active AST
  - ▭ Former UST (20,000 gal. #6 oil)
  - ▭ Former AST
  - ▭ Parcel Boundary (Total =14)
- 10-42 = Tax Map Parcel ID

**Notes:**

1. Locations of site features depicted hereon are approximate and given for illustrative purposes only.
2. Aerial Imagery provided by ArcGIS online database from RHGIS Aerial Photographs, Spring 2018.
3. The temporary benchmark (Elevation = 100 feet) was identified as the southeast corner of a concrete pad located on Church Street.



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<b>FIGURE 3</b>	
<b>GROUNDWATER POTENTIOMETRIC MAP          ROBIN RUG FACILITY          125 THAMES STREET          BRISTOL, RHODE ISLAND</b>	
PREPARED BY: SKP	CHECKED BY: BEE
PROJECT NO. 95560.26	DATE: AUGUST 2021

# **A P P E N D I C E S**

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## **APPENDIX A LIMITATIONS**

1. These environmental services were performed in accordance with generally accepted practices of other consultants using the degree of skill and care exercised in undertaking similar services at the same time and in the same geographical area. The results of these services are based on our professional judgment and are not scientific certainties. Specifically, Nobis Engineering, Inc. d/b/a as Nobis Group® (Nobis) does not and cannot represent that the site contains no hazardous wastes, oil or other latent conditions beyond those observed during this assessment. No other warranty, express or implied, is made.
2. The observations and conclusions presented in this report were made solely on the basis of conditions described in the report and not on scientific tasks or procedures beyond the scope of described services or the budgetary and time constraints imposed by the client. Nobis shall not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time the investigation was performed. The work described in this report was performed in accordance with the terms and conditions of our contract. No other warranty, express or implied, is made.
3. Observations were made of the site as indicated in this report. Where access to portions of the site was unavailable or limited, Nobis renders no opinion as to the presence of hazardous wastes or the presence of indirect evidence of hazardous wastes in that portion of the site.
4. No property boundary, site feature or topographic surveys of the site were performed by Nobis unless specifically indicated in the text of the report.
5. No sampling or testing was performed for the presence of herbicides, radon, lead paint, urea-formaldehyde, or asbestos at the site.
6. The purpose of this investigation was to assess the physical characteristics of the subject site with respect to the presence of hazardous wastes in the environment within the context of Rhode Island Department of Environmental Management (RIDEM) per the Rules and Regulations for the Investigation and Remediation of Hazardous Materials Releases (250-RICR-140-30-1). No attempt was made to check the compliance of present or past owners of the site with federal, state or local laws.
7. The observations and conclusions contained in this report are based in part upon data obtained from widely spaced subsurface explorations. The nature and extent of variations



## **APPENDIX A LIMITATIONS**

between these explorations may not become evident until further exploration is performed. If variations or other latent conditions then appear evident, it will be necessary to reevaluate the conclusions and recommendations of this report.

8. Water level readings have been made in the monitoring wells at the times and under the conditions stated in this report. Fluctuations in groundwater levels will occur due to variations in rainfall, tide fluctuations and other factors different from those prevailing at the time measurements were made.

9. Except as noted within the text of the report, no quantitative laboratory testing was performed as part of this assessment. Where analyses have been conducted by an outside laboratory or engineering firm, Nobis has relied upon the data provided and has not conducted an independent evaluation of the reliability of these data.

10. Chemical analyses have been performed for specific parameters during these environmental services, as described in the text of the report. Additional chemical constituents not searched for during the current study may be present in soil and/or groundwater at the site.

11. These environmental services have been prepared for the exclusive use of Brady Sullivan solely for use in an environmental evaluation of the site. This report shall not, in whole or in part, be conveyed to any other party without prior written consent of Nobis. This report shall not be construed to create any warranty or representation that the real property on which the investigation was conducted is free of pollution or complies with any or all applicable regulatory or statutory requirements, or that the property is fit for any particular purpose. No third party is entitled to rely upon any information or opinions contained in the report.

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Geophysical Survey Report  
125 Thames Street  
Bristol, Rhode Island

prepared for  
**NOBIS GROUP**  
June 2021

# GEOPHYSICAL APPLICATIONS

INCORPORATED

June 4, 2021

Ms. Bettina Eames, P.G.  
NOBIS GROUP  
18 Chenell Drive  
Concord, NH 03301

Office: 603-513-7328  
e-mail: beames@nobis-group.com

Subject: Geophysical Survey Report  
125 Thames Street  
Bristol, Rhode Island

Dear Ms. Eames:

Geophysical Applications, Inc. recently completed geophysical surveys designed to locate buried utilities and other obstacles to drilling and test pits, and to locate a possible underground storage tank (UST) near two visible pipes.

We completed this survey using ground penetrating radar (GPR) profiling and a pipe locator as described below. The survey regions were designated by Nobis' onsite representative.

## **PROPOSED WORK SCOPE**

### Survey Grid

We established reference grids throughout each survey area prior to geophysical data acquisition. The grids were denoted at ten-foot intervals with chalk and pink spray paint marks, and were referenced by taped distance measurements to nearby fences, the building, and other semi-permanent features.

### **Geophysical Techniques**

#### Ground Penetrating Radar Profiling

GPR data were obtained with a GSSI model SIR-4000 radar instrument coupled to a 400-megahertz antenna. Data was acquired at a slow walking pace while the operator dragged the antenna or pushed a survey cart along pre-marked traverses. GPR data was displayed on a color monitor to facilitate preliminary, on-site data interpretation. Digital GPR data was also downloaded to a computer and transferred to digital media for archival purposes.

GPR can typically identify pipes, USTs or other large objects, at depths up to 8 to 10 feet below ground surface in granular soils. In urban areas, GPR signal depth penetration may be reduced to 5 or 6 feet (or sometimes less). GPR signal-penetration depths may be further reduced by shallow or brackish groundwater, concrete pavement (especially if reinforced), or electrically conductive materials (especially clay or residual deicing salts). Note that GPR signals cannot penetrate standing water (i.e. puddles) or metal objects (manholes, hatches, etc.).

GPR profiles are typically acquired along perpendicular traverses located 2.5 or 5 feet apart to help characterize the approximate size and burial depth of observed reflections. Five-foot

traverse spacing is generally sufficient to detect laterally-extensive pipes and 1,000-gallon capacity (or larger) USTs. Smaller objects and USTs (down to approximately 200-gallons) generally require a traverse spacing of 2.5 feet. We used a 2.5-foot traverse spacing throughout the designated survey areas.

USTs, pipes, or other discrete objects typically produce inverted U-shaped GPR reflections. We interpreted buried objects' dimensions directly from GPR records. Inferred objects' burial depths were estimated using GPR signal velocities from similar sites.

Data interpretation was performed in our office following the survey's completion, using GSSI's RADAN for Windows software to enhance faint or small GPR reflections. GPR interpretations are shown on Figures 1 and 2.

#### Pipe Locator

The Radiodetection model RD7100 instrument, when used in the passive and radio modes, can detect cables carrying an active electric current under load or re-radiating ambient radio signals. We used this instrument in both modes throughout the survey areas. In some instances, this method can also detect water lines, steam lines or other metallic pipes in the presence of nearby buried electric lines under load.

This instrument has separate transmitting and receiving units that can trace weak electrical signals induced in electrically-continuous metallic pipes or cables. Current induction is achieved by connecting the transmitter to a visible portion of the desired pipe or cable (for example a vent pipe), or (in suitable conditions) placing the transmitter on the ground surface above the subject pipe or cable. The induced current is subsequently traced with a handheld receiver unit.

#### **SURVEY LIMITATIONS**

GPR antennas require a relatively smooth surface (e.g. mowed grass, flat dirt, asphalt, concrete, etc.) to differentiate reflections produced by buried objects from those caused by topographic variations. Areas with irregular ground surfaces (e.g. tall grass and plants, rough ground surface, etc.) may hinder or prevent GPR data acquisition. At this site the ground surface was relatively smooth.

GPR is most likely to detect concrete or metallic objects. Plastic or vitreous clay pipes, or fiberglass tanks, are less likely to be detected with GPR. GPR signal penetration is site specific, determined by dielectric properties of the materials through which GPR signals are propagating. Objects deeper than the GPR signal's maximum penetration depth remain undetected.

GPR interpretations are based on identifying reflection patterns that may not uniquely represent a subsurface object. Recording data along perpendicular traverses helps to determine the size and shape of subsurface objects. GPR data interpretation is more subjective than most geophysical survey methods, and careful confirmation of interpreted GPR results via cores or test pits is recommended.

Note that a pipe's diameter must generally increase approximately one inch for every foot below ground surface in order for the GPR technique to detect that pipe. For instance, a pipe buried 8 feet below ground surface must typically be at least 8 inches in diameter to produce a recognizable GPR reflection. Note that the shallowest buried object in any given location (i.e. closest to the ground surface) is most likely to be detected, and deeper objects directly below will be more difficult to detect. Therefore, if pipes are situated on top of one another, only the shallowest may be identified unless the deeper pipe is considerably wider.

Horizontal locations of interpreted objects are generally accurate to  $\pm 1$  to 2 feet for the 400 MHz antenna. The vertical scale for GPR data is in units of time (nanoseconds). Interpreted object locations must be converted to depth using a conversion factor. Unless access to a buried pipe

(e.g. an open catch basin) exists in the survey area to calibrate the raw GPR data, depths must be calculated from a range of industry standards for the media type. Calculated depths may therefore be off, either shallower or deeper, by some small amount. Care should be taken when drilling or digging near interpreted objects until their actual depth is determined by physical methods or visible observation.

## RESULTS

Figures 1 and 2 shows the GPR traverses, geophysical interpretations, and visible above-ground features.

Depths to inferred objects noted on Figures 1 and 2 are in units of feet below ground surface. GPR signal penetration varied depending the ground surface. Over grass, GPR signal penetration was approximately 6 to 7 feet. Over asphalt and concrete the GPR signal penetration was 1 to 3 feet, but sometimes reaching down to 7 feet. This variance in signal penetration over asphalt and concrete is probably due to years of applying de-icing salts. We suggest that Nobis consider using vacuum excavation to at least five feet deep in areas limited GPR signal penetration.

On Figure 1 two proposed borings cleared for drilling are shown as green borehole symbols. On Figure 2, the area with many PIVs has many subsurface linear objects. We could not give a recommended "clear" drilling location in that area. The test pit location near the GPR-inferred UST is clear to dig. SB-1 is not clear to drill, based on the possible pipe locator-inferred linear object. GPR could not see below the steel-reinforced concrete slab and did not detect the nearby gas line.

A GPR-inferred possible UST was detected near the proposed test pit.

Many GPR-inferred linear objects are shown as dark blue lines on Figures 1 and 2. Pipe locator-inferred linear objects are shown as thin red lines on Figures 1 and 2. The GPR and pipe locator-inferred linear objects are dashed where less certain.

Numerous GPR reflections were observed that could not be traced to adjacent traverses. These reflections are interpreted to represent discrete objects such as rocks, boulders, rubble, pipe segments, possibly drums, changes in subsurface layering, or other discrete buried objects. The largest of these reflections are identified on Figures 1 and 2 as magenta dots and lines.

\* \* \* \* \*

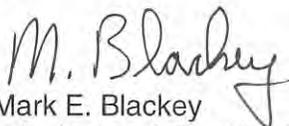
Please call the undersigned at 508/429-2430 if you have questions regarding our report. We appreciate this opportunity to provide geophysical services to Nobis and we welcome inquiries regarding this project or future surveys.

Regards,

GEOPHYSICAL APPLICATIONS, INC.

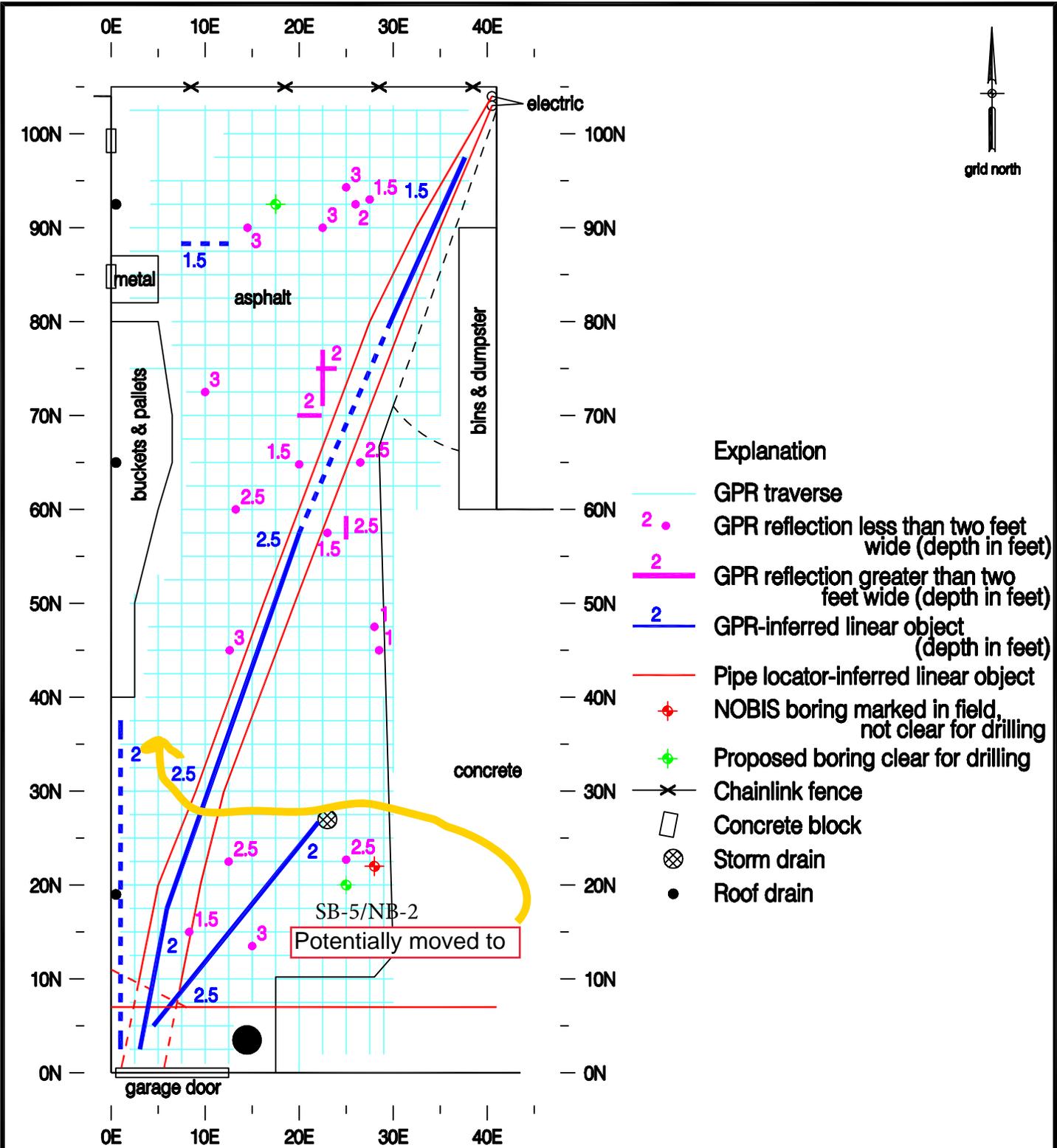


Peter Giger  
Geophysicist



Mark E. Blackey  
Principal and Geophysicist

1211761



**Explanation**

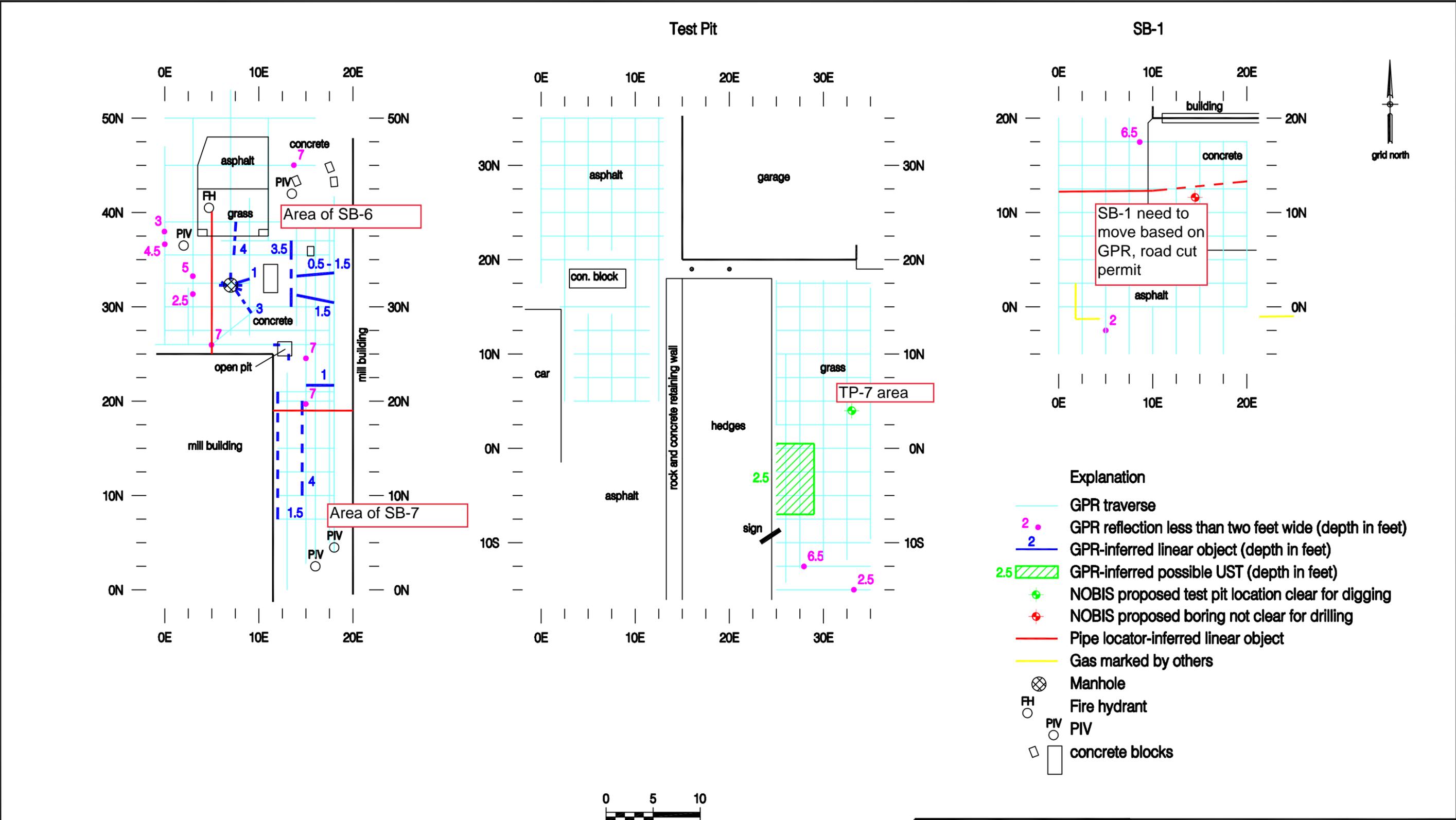
- GPR traverse
- 2 GPR reflection less than two feet wide (depth in feet)
- 2 GPR reflection greater than two feet wide (depth in feet)
- 2 GPR-inferred linear object (depth in feet)
- Pipe locator-inferred linear object
- ◆ NOBIS boring marked in field, not clear for drilling
- ◆ Proposed boring clear for drilling
- × Chainlink fence
- Concrete block
- Storm drain
- Roof drain

1211761\_Fig1.dwg  
last modified 06/04/21

**GEO PHYSICAL  
APPLICATIONS  
INCORPORATED**

**Figure 1**  
**GPR Traverses and Interpretations**  
125 Thames Street  
Bristol, Rhode Island  
prepared for  
NOBIS GROUP

Note: Drawing from field notes.



Note: Drawing from field notes.

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last modified 06/03/21



Figure 2  
GPR Traverses and Interpretations  
125 Thames Street  
Bristol, Rhode Island  
prepared for  
NOBIS GROUP

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**SITE PHOTOGRAPHS  
PHASE II ENVIRONMENTAL SITE ASSESSMENT  
ROBIN RUG  
125 THAMES STREET, BRISTOL, RHODE ISLAND**



**Photo 1:** SB-2 from 5'-10' bgs. Fine to coarse sand with trace silt.



**Photo 2:** SB-2 from 10'-15' bgs. Gray hardpacked sand and trace silt and clay.



**Photo 3:** SB-3 from 5'-10' bgs. Fine to coarse sand with trace silt and few brick fragments.



**Photo 4:** SB-3 from 10'-15' bgs. Gray fine to coarse sand and hardpacked silt at depth.



**Photo 5:** SB-4 from 0'-5' bgs. Fill with asphalt, fine to coarse sand and trace crushed stone.



**Photo 6:** SB-4 from 10'-15' bgs. Fine to coarse sand with gray silt and little sand at depth.

**SITE PHOTOGRAPHS  
PHASE II ENVIRONMENTAL SITE ASSESSMENT  
ROBIN RUG  
125 THAMES STREET, BRISTOL, RHODE ISLAND**



**Photo 7:** SB-5 from 0'-5' bgs. Fill with asphalt, fine to coarse sand and trace silt and ash.



**Photo 8:** SB-5 from 5'-10'. Fine to coarse sand and trace silt. Gravel at 5' depth.



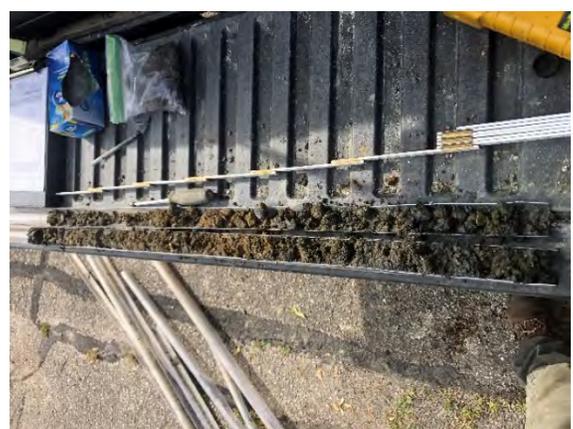
**Photo 9:** SB-8 from 0-5' bgs. Fill with asphalt, sand, crushed stone and trace silt and gravel.



**Photo 10:** SB-8 from 10'-15' bgs. Fine to medium sand and silt with trace coarse sand.



**Photo 11:** SB-9 from 0'-5' bgs. Fill with asphalt, sand with little silt. Trace shells, ash, and glass.



**Photo 12:** SB-9 from 5-10' bgs. Fine to coarse sand and trace silt and clay.

**SITE PHOTOGRAPHS  
PHASE II ENVIRONMENTAL SITE ASSESSMENT  
ROBIN RUG  
125 THAMES STREET, BRISTOL, RHODE ISLAND**



**Photo 13:** SB-10 from 0'-5' bgs. Fill with crushed brick and stone, fine sand, and little silt.



**Photo 14:** SB-10 from 10'-15' bgs. Fine to coarse sand and gray clayey silt with trace gravel



**Photo 15:** SB-11 from 0'-5' bgs. Fill with asphalt, fine to coarse sand, trace silt and cobbles.



**Photo 16:** SB-11 from 10'-15' bgs. Alternating sand and clayey silt.



**Photo 17:** TP-1 Fill observed from 0' to 3' bgs.



**Photo 18:** TP-3 Fill observed from 0' to 7' bgs.



**SITE PHOTOGRAPHS  
PHASE II ENVIRONMENTAL SITE ASSESSMENT  
ROBIN RUG  
125 THAMES STREET, BRISTOL, RHODE ISLAND**



**Photo 19:** TP-6 Fill observed from 0' to 8.5' bgs.



**Photo 20:** TP-8 Fill observed from 0' to 3' bgs.



**Photo 21:** SG-3 location looking into cored hole and open space beneath.

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## BORING LOG

Project: Robin Rug  
 Location: Bristol, RI  
 Nobis Project No.: 95560.26

Boring No.: SB-1/NB-1  
 Boring Location: See Site Sketch  
 Checked by: B. Eames  
 Date Start: June 10, 2021  
 Date Finish: June 10, 2021

Contractor: Geosearch, Inc.  
 Driller: E. Belsky  
 Nobis Rep.: S. Powers

Rig Type / Model: Geoprobe 6610  
 Hammer Type: N/A  
 Hammer Hoist: N/A

Ground Surface Elev.: \_\_\_\_\_  
 Datum: \_\_\_\_\_

Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
	Vacuumed	N/A	06/10/21	00:00	Not Encountered			while drilling
Size ID (in.)		N/A						
Advancement	Vacuumed	N/A						

Depth (ft.)	SAMPLE INFORMATION				Ground Water	LITHOLOGY		SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.		Graphic	Stratum Elev. / Depth (ft.)		
1					 FILL		(FILL). Large cobbles, piled wood, large rocks.		
2									
3									
4									
5									

Soil	Percentage	Non-Soil	NOTES:
trace	5 - 10	very few	1) The bottom of the 4 ft. deep hole was obstructed. Due to utility clearance, property lines, and time, B. Eames decided to abandon the location. No well was installed, the hole was filled with the soil cuttings, and the surface was concreted.
little	10 - 20	few	
some	20 - 35	several	
and	35 - 50	numerous	

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 8/4/21 14:44 - \NOBIS.LOCAL\SHARES\PROJECTS\ACTIVE\95560.00 - BRADY SULLIVAN PORTFOLIO\95560.26 - ROBIN RUG BRISTOL, RI\95560.26 - BRISTOL RI PHASE II TASKS 200 TO 1000\DATA\08-F-



# BORING LOG

Project: Robin Rug  
 Location: Bristol, RI  
 Nobis Project No.: 95560.26

Boring No.: SB-2  
 Boring Location: See Site Sketch  
 Checked by: B. Eames  
 Date Start: June 10, 2021  
 Date Finish: June 10, 2021

Contractor: Geosearch, Inc.  
 Driller: E. Belsky  
 Nobis Rep.: S. Powers

Rig Type / Model: Geoprobe 6610  
 Hammer Type: N/A  
 Hammer Hoist: N/A

Ground Surface Elev.: \_\_\_\_\_  
 Datum: \_\_\_\_\_

Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
Geoprobe <td>Geoprobe <td>Macro-Core Liners <td>06/10/21</td> <td>01:00</td> <td>7</td> <td></td> <td></td> <td>while drilling</td> </td></td>	Geoprobe <td>Macro-Core Liners <td>06/10/21</td> <td>01:00</td> <td>7</td> <td></td> <td></td> <td>while drilling</td> </td>	Macro-Core Liners <td>06/10/21</td> <td>01:00</td> <td>7</td> <td></td> <td></td> <td>while drilling</td>	06/10/21	01:00	7			while drilling
Size ID (in.)		2						
Advancement	Direct Push	Push						

Depth (ft.)	SAMPLE INFORMATION				PID (ppm)	Ground Water	LITHOLOGY		SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.			Graphic	Stratum Elev. / Depth (ft.)		
1									No sample collected.	
2										
3								NOT SAMPLED		
4										
5										
6	S-1	34	5-10		1.7	▼			S-1A (5"): Brown, fine to coarse SAND, little Silt. Dry. S-1B (15"): Fine SAND & SILT, trace Clay, trace medium to coarse Sand. Dry.	
7									S-1C (14"): Brown, fine to coarse SAND, trace Silt. Dry.	
8					3.7					
9								SAND		
10										
11	S-2	50	10-15		3.8				S-2A (20"): Gray, fine to coarse SAND, trace Silt. Dry.	
12										
13					1.2				S-2B (13"): Gray, fine to medium SAND, trace Silt, trace coarse Sand. Wet.	
14								SILT	S-2C (3"): Hard, gray, SILT, trace fine to coarse Sand. Wet.	
15					<1			SAND	S-2D (4"): Gray, fine to coarse SAND. Wet.	
16								CLAY	S-2E (3"): Gray, fine SAND, trace Silt. Wet.	
17								SILT	S-2F (3"): Gray, Clayey SILT. Wet.	
18									S-2G (4"): Gray, SILT and coarse Sand. Wet.	
19										
20									Boring terminated at 15 feet.	

Soil	Percentage	Non-Soil	NOTES:
trace	5 - 10	very few	1) 0 - 6 ft. bgs cleared with Air Vac. No sample was collected and no water was observed in the hole. Geoprobe used 5 - 15 ft. bgs. Located near hydraulic lift. 2) Sample collected 12 - 14 ft. bgs. 3) End of exploration at 15 ft bgs. No refusal encountered.
little	10 - 20	few	
some	20 - 35	several	
and	35 - 50	numerous	

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 8/4/21 14:44 - \NOBIS.LOCAL\SHARES\PROJECTS\ACTIVE\95560.00 - BRADY SULLIVAN PORTFOLIO\95560.26 - ROBIN RUG BRISTOL.RI\95560.26 - BRISTOL.RI PHASE II TASKS 200 TO 1000\DATA\08-F



# BORING LOG

Project: Robin Rug  
 Location: Bristol, RI  
 Nobis Project No.: 95560.26

Boring No.: SB-3  
 Boring Location: See Site Sketch  
 Checked by: B. Eames  
 Date Start: June 10, 2021  
 Date Finish: June 10, 2021

Contractor: Geosearch, Inc.  
 Driller: E. Belsky  
 Nobis Rep.: S. Powers

Rig Type / Model: Geoprobe 6610  
 Hammer Type: N/A  
 Hammer Hoist: N/A

Ground Surface Elev.: \_\_\_\_\_  
 Datum: \_\_\_\_\_

Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
Geoprobe	Geoprobe	Macro-Core Liners	06/10/21	10:00	6			while drilling
Size ID (in.)		2						
Advancement	Direct Push	Push						

Depth (ft.)	SAMPLE INFORMATION				PID (ppm)	Ground Water	LITHOLOGY		SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.			Graphic	Stratum Elev. / Depth (ft.)		
1								No sample collected.		
2										
3								NOT SAMPLED		
4										
5										
6	S-1	44	5-10		3.0	▼	SAND SILT	S-1A (4"): Brown, fine to medium SAND, little Silt. Dry. S-1B (2"): Brown, fine to coarse SAND. Dry.		
7							SAND SILT	S-1C (3"): Hard, gray, SILT, trace fine to coarse Sand. Dry. S-1D (6"): Brown, fine to coarse SAND, trace Silt. Wet.		
8					4.5			S-1E (29"): Hard, gray, SILT, little fine to coarse Sand, few Brick fragments, few Cobbles. Wet.		
9							SAND			
10										
11	S-2	39	10-15		1.0			S-2A (9"): Gray, fine to coarse SAND, trace Silt, trace Clay. Wet. S-2B (30"): Hard, gray, SILT, trace fine to coarse Sand. Wet.		
12										
13					2.4		SILT			
14										
15										
16								Boring terminated at 15 feet.		
17										
18										
19										
20										

Soil	Percentage	Non-Soil	NOTES:
trace	5 - 10	very few	1) 0 - 6 ft. bgs cleared with Air Vac and no sample was collected. Geoprobe used 5 - 15 ft. bgs. 2) Sample collected 7 - 9 ft. bgs. 3) End of exploration at 15 ft bgs. No refusal encountered.
little	10 - 20	few	
some	20 - 35	several	
and	35 - 50	numerous	

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 8/4/21 14:44 - \NOBIS.LOCAL\SHARES\PROJECTS\ACTIVE\95560.00 - BRADY SULLIVAN PORTFOLIO\95560.26 - ROBIN RUG BRISTOL - RI\95560.26 - BRISTOL RI PHASE II TASKS 200 TO 1000\DATA\08-F



# BORING LOG

Project: Robin Rug  
 Location: Bristol, RI  
 Nobis Project No.: 95560.26

Boring No.: SB-4  
 Boring Location: See Site Sketch  
 Checked by: B. Eames  
 Date Start: June 9, 2021  
 Date Finish: June 9, 2021

Contractor: Geosearch, Inc.  
 Driller: D. Freeman  
 Nobis Rep.: S. Powers

Rig Type / Model: Geoprobe 6610  
 Hammer Type: N/A  
 Hammer Hoist: N/A

Ground Surface Elev.: \_\_\_\_\_  
 Datum: \_\_\_\_\_

Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
Geoprobe	Geoprobe	Macro-Core Liners	06/09/21	22:45	7			while drilling
Size ID (in.)		2						
Advancement	Direct Push	Push						

Depth (ft.)	SAMPLE INFORMATION				PID (ppm)	Ground Water	LITHOLOGY		SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.			Graphic	Stratum Elev. / Depth (ft.)		
1	S-1	29	0-5				ASPHALT	S-1A (3"): Gray, Dry. (ASPHALT). Crushed asphalt. S-1B (7"): Gray, fine to coarse SAND, trace Silt. Dry. S-1C (12"): Gray, fine to coarse SAND, trace Silt, trace crushed stone, trace brick fragments. Dry.		
2							FILL	S-1D (2"): Gray, Crushed/cored stone. Dry. S-1E (1"): Brown, fine to coarse SAND, trace Silt. Dry. S-1F (2"): Brown, fine to coarse SAND, trace Silt, some weathered crushed rock. Dry. Iron staining. S-1G (2"): Brown, fine to coarse SAND, trace Silt. Dry.		
3					3.0					
4										
5					7.3		SAND			
6	S-2	28	5-10				COBBLES	S-2A (3"): Gray, Crushed cobble. Dry. S-2B (25"): Tan, fine to coarse SAND. Wet.		
7										
8					<1					
9							SAND			
10					<1					
11	S-3	46	10-15					S-3A (22"): Tan, medium to coarse SAND, trace coarse Sand, trace Silt. Wet.  S-3B (6"): Fine to medium SAND, trace coarse Sand, trace Silt. Wet. S-3C (18"): Gray, SILT, little fine Sand. Wet.		
12					<1					
13										
14					<1		SILT			
15										
16									Boring terminated at 15 feet.	
17										
18										
19										
20										

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:  
 1) Sample collected at 7 - 9 ft. bgs.  
 2) Boring performed at 1100 during falling tide. Low tide occurred at 0100.  
 3) End of exploration at 15 ft bgs. No refusal encountered.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 8/4/21 14:44 - \NOBIS.LOCAL\SHARES\PROJECTS\ACTIVE\95560.00 - BRADY SULLIVAN PORTFOLIO\95560.26 - ROBIN RUG BRISTOL, RI\95560.26 - BRISTOL RI PHASE II TASKS 200 TO 1000\DATA\08 - F



# BORING LOG

Project: Robin Rug  
 Location: Bristol, RI  
 Nobis Project No.: 95560.26

Boring No.: SB-5/NB-2  
 Boring Location: See Site Sketch  
 Checked by: B. Eames  
 Date Start: June 9, 2021  
 Date Finish: June 9, 2021

Contractor: Geosearch, Inc.  
 Driller: D. Freeman  
 Nobis Rep.: S. Powers

Rig Type / Model: Geoprobe 6610  
 Hammer Type: N/A  
 Hammer Hoist: N/A

Ground Surface Elev.: \_\_\_\_\_  
 Top of Riser Elev.: 0  
 Datum: \_\_\_\_\_

Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
Geoprobe	Geoprobe	Macro-Core Liners	06/09/21	12:00	Not Encountered			while drilling
Size ID (in.)		2						
Advancement	Direct Push	Push						

Depth (ft.)	SAMPLE INFORMATION				PID (ppm)	Ground Water	LITHOLOGY		SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	WELL DETAIL	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.			Graphic	Stratum Elev. / Depth (ft.)			
1	S-1	18	0-5				ASPHALT	S-1A (7"): Dry. (ASPHALT). Crushed asphalt.			
2					8.9		SAND	S-1B (4"): Brown, fine to coarse SAND, trace Silt. Dry. S-1C (2"): Tan, fine to coarse SAND. Dry. S-1D (2"): Brown, fine to coarse SAND, little Silt. Dry. S-1E (3"): Brown, fine to coarse SAND, Trace ash. Dry.			
3											
4					<1						
5											
6	S-2	18	5-10		7.6		GRAVEL	S-2A (5"): GRAVEL. Dry.			
7							SAND	S-2B (6"): Brown, fine to coarse SAND, trace Silt. Dry. S-2C (6"): Gray, fine to coarse SAND, trace Silt. Dry. S-2D (1"): Gray, CLAY & SILT. Dry. Iron staining.			
8					1.6						
9											
10					14.5		CLAY	S-3A (10"): Gray, fine to coarse SAND. Dry.			
11	S-3	22	10-15				SAND	S-3B (12"): Hard, gray, SILT, trace fine Sand. Dry.			
12											
13					<1		SILT				
14											
15								Boring terminated at 15 feet.			
16											
17											
18											
19											
20											

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:  
 1) Void with sand falling into open space at 3'-7" bgs.  
 2) Void with gravel falling into open space 5 ft. bgs.  
 3) Sample collected at 10 - 12 ft bgs.  
 5) End of exploration at 15 ft bgs. No refusal encountered.



## BORING LOG

Project: Robin Rug  
 Location: Bristol, RI  
 Nobis Project No.: 95560.26

Boring No.: SB-6  
 Boring Location: See Site Sketch  
 Checked by: B. Eames  
 Date Start: June 11, 2021  
 Date Finish: June 11, 2021

Contractor: Geosearch, Inc.  
 Driller: D. Freeman  
 Nobis Rep.: S. Powers

Rig Type / Model: N/A  
 Hammer Type: N/A  
 Hammer Hoist: N/A

Ground Surface Elev.: \_\_\_\_\_  
 Datum: \_\_\_\_\_

Type	Drilling Method	Sampler	Groundwater Observations						
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time	
		N/A	06/11/21	10:30	Not Encountered				while drilling
Size ID (in.)		2							
Advancement	Augered	N/A							

Depth (ft.)	SAMPLE INFORMATION				PID (ppm)	Ground Water	LITHOLOGY		SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.			Graphic	Stratum Elev. / Depth (ft.)		
1					<1			SILT	Dense, gray, SILT, trace fine to coarse Sand. Moist.	
2					<1					
3										
4										
5									Boring terminated at 2 feet.	

Soil	Percentage	Non-Soil	NOTES:
trace	5 - 10	very few	1) Sample collected at 2 ft. bgs.
little	10 - 20	few	2) End of exploration at 2 ft bgs. No refusal encountered.
some	20 - 35	several	3) Sample collected with hand auger method.
and	35 - 50	numerous	



# BORING LOG

Project: Robin Rug  
 Location: Bristol, RI  
 Nobis Project No.: 95560.26

Boring No.: SB-7  
 Boring Location: See Site Sketch  
 Checked by: B. Eames  
 Date Start: June 11, 2021  
 Date Finish: June 11, 2021

Contractor: Geosearch, Inc.  
 Driller: D. Freeman  
 Nobis Rep.: S. Powers

Rig Type / Model: N/A  
 Hammer Type: N/A  
 Hammer Hoist: N/A

Ground Surface Elev.: \_\_\_\_\_  
 Datum: \_\_\_\_\_

Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
		N/A	06/11/21	11:30	Not Encountered			while drilling
Size ID (in.)		2						
Advancement	Augered	N/A						

Depth (ft.)	SAMPLE INFORMATION					Ground Water	LITHOLOGY		SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.	PID (ppm)		Graphic	Stratum Elev. / Depth (ft.)		
1							CONCRETE	Concrete.		
2					2.3		CLAYEY SILT	Gray, Clayey SILT, trace fine to coarse Sand. Wet.		
3								Boring terminated at 2.5 feet.		
4										
5										

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:  
 1) Sample collected at 2 ft. bgs.  
 2) Refusal at 2.5 ft. bgs. Refusal potentially caused by metal.  
 3) Sample collected with hand auger method.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 8/4/21 14:44 - \NOBIS.LOCAL\SHARES\PROJECTS\ACTIVE\95560.00 - BRADY SULLIVAN PORTFOLIO\95560.26 - ROBIN RUG BRISTOL - RI\95560.26 - BRISTOL RI PHASE II TASKS 200 TO 1000\DATA\08 - F



# BORING LOG

Project: Robin Rug  
 Location: Bristol, RI  
 Nobis Project No.: 95560.26

Boring No.: SB-8/NB-3  
 Boring Location: See Site Sketch  
 Checked by: B. Eames  
 Date Start: June 8, 2021  
 Date Finish: June 8, 2021

Contractor: Geosearch, Inc.  
 Driller: D. Freeman  
 Nobis Rep.: S. Powers

Rig Type / Model: Geoprobe 6610  
 Hammer Type: N/A  
 Hammer Hoist: N/A

Ground Surface Elev.: \_\_\_\_\_  
 Datum: \_\_\_\_\_

Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
Geoprobe	Geoprobe	Macro-Core Liners	06/08/21	12:30	6.5	15		while drilling
Size ID (in.)		2						
Advancement	Direct Push	Push						

Depth (ft.)	SAMPLE INFORMATION				PID (ppm)	Ground Water	LITHOLOGY		SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	WELL DETAIL	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.			Graphic	Stratum Elev. / Depth (ft.)			
1	S-1	33	0-5				SAND	S-1A (5"): Brown, fine to coarse SAND, trace Silt, trace fine Gravel. Dry.			
2							ASPHALT FILL	S-1B (1"): Dry. (ASPHALT). Sticky, black cold patch asphalt.			
3					8.0		COBBLES	S-1C (6"): Brown, fine to coarse SAND, trace Silt. Dry.			
4								S-1D (5"): Cobbles. Dry.			
5					<1			S-1E (8"): Brown, fine to medium SAND, some Silt, trace coarse Sand, trace fine Roots. Dry.			
6	S-2	46	5-10				SAND	S-1F (4"): Hard, grey, fine to medium SAND and Silt, trace coarse Sand. Dry.			
7					<1			S-1G (4"): Brown, fine to medium SAND, some Silt, trace coarse Sand. Dry.			
8								S-2A (11"): Brown, fine to medium SAND, some Silt, trace coarse Sand, crushed Brick. Dry.			
9					<1			S-2B (35"): Grey, fine to medium SAND and Silt, trace coarse Sand, fine Gravel. Wet. Spots of iron staining.			
10											
11	S-3	55	10-15		3.7		CLAY	S-3A (45"): Dense, gray, SILT & CLAY, little fine to coarse Sand, trace fine Gravel. Wet.			
12											
13					<1						
14							SAND	S-3B (7"): Gray, fine to coarse SAND & SILT. Wet.			
15								S-3C (3"): Yellow, fine to coarse SAND. Wet.			
16								Boring terminated at 15 feet.			
17											
18											
19											
20											

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:  
 2) Static water level is likely influenced by the tide. Water level was measured at low tide (12:30).  
 1) Sampled collected at 7 - 9 ft. bgs.  
 3) End of exploration at 15 ft bgs. No refusal encountered.



# BORING LOG

Project: Robin Rug  
 Location: Bristol, RI  
 Nobis Project No.: 95560.26

Boring No.: SB-9  
 Boring Location: See Site Sketch  
 Checked by: B. Eames  
 Date Start: June 9, 2021  
 Date Finish: June 9, 2021

Contractor: Geosearch, Inc.  
 Driller: D. Freeman  
 Nobis Rep.: S. Powers

Rig Type / Model: Geoprobe 6610  
 Hammer Type: N/A  
 Hammer Hoist: N/A

Ground Surface Elev.: \_\_\_\_\_  
 Datum: \_\_\_\_\_

Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
Geoprobe	Geoprobe	Macro-Core Liners	06/09/21	08:00	8			while drilling
Size ID (in.)		2						
Advancement	Direct Push	Push						

Depth (ft.)	SAMPLE INFORMATION				PID (ppm)	Ground Water	LITHOLOGY		SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.			Graphic	Stratum Elev. / Depth (ft.)		
1	S-1	26	0-5				ASPHALT FILL	S-1A (3"): Dry. (ASPHALT). Crushed asphalt.		
2					<1		COBBLES	S-1B (7"): Brown, fine to coarse SAND. Dry. (FILL). Trace asphalt. S-1C (11"): Brown, fine to medium SAND, little Silt. Dry. (FILL). Trace crushed seashells, trace ash, glass fragments and pieces. S-1D (5"): Crushed Cobble. Dry.		
3										
4					<1					
5										
6	S-2	44	5-10		<1		SAND	S-2A (1"): Crushed Cobble. Dry. S-2B (1"): Cobble. Dry. S-2C (10"): Grey, fine to medium SAND, trace Silt. Dry. S-2D (16"): Brown, fine to coarse SAND, trace Silt. Dry.		
7										
8					<1			S-2E (16"): Gray, medium to coarse SAND, trace fine Sand, trace Silt. Wet.		
9										
10					<1					
11	S-3	40	10-15				CLAY	S-3A (13"): Gray, fine to coarse SAND, trace Silt. Wet. S-3B (6"): Gray, Clayey SILT and fine to medium Sand, trace coarse Sand. Wet.		
12					<1					
13										
14					<1		SAND	S-3C (21"): Gray, fine to coarse SAND, trace Silt. Wet.		
15										
16								Boring terminated at 15 feet.		
17										
18										
19										
20										

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:  
 2) Sample collected 10 - 12 ft. bgs.  
 1) End of exploration at 15 ft bgs. No refusal encountered.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 8/4/21 14:44 - \NOBIS.LOCAL\SHARES\PROJECTS\ACTIVE\95560.00 - BRADY SULLIVAN PORTFOLIO\95560.26 - ROBIN RUG BRISTOL - BRISTOL RI PHASE II TASKS 200 TO 1000\DATA\08-F



# BORING LOG

Project: Robin Rug  
 Location: Bristol, RI  
 Nobis Project No.: 95560.26

Boring No.: SB-10  
 Boring Location: See Site Sketch  
 Checked by: B. Eames  
 Date Start: June 8, 2021  
 Date Finish: June 8, 2021

Contractor: Geosearch, Inc.  
 Driller: D. Freeman  
 Nobis Rep.: S. Powers

Rig Type / Model: Geoprobe 6610  
 Hammer Type: N/A  
 Hammer Hoist: N/A

Ground Surface Elev.: \_\_\_\_\_  
 Datum: \_\_\_\_\_

Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
Geoprobe	Geoprobe	Macro-Core Liners	06/08/21	09:00	10			while drilling
Size ID (in.)		2						
Advancement	Direct Push	Push						

Depth (ft.)	SAMPLE INFORMATION				PID (ppm)	Ground Water	LITHOLOGY		SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.			Graphic	Stratum Elev. / Depth (ft.)		
1	S-1	20	0-5				ASPHALT	S-1A (6"): Dry. (ASPHALT). S-1B (7"): Dry. (FILL). Crushed brick.		
2							FILL	S-1C (4"): Crushed white/grey stone. Dry. S-1D (3"): Brown, fine SAND, little Silt, trace Clay, trace Ash. Dry.		
3										
4										
5					4.3		COBBLES			
6	S-2	43	5-10		26			S-2A (6"): Fine to medium SAND, crushed Brick. Dry. S-2B (20"): Brown, fine to medium SAND, trace coarse Sand, little Silt, trace fine Gravel. Dry.		
7										
8					1.1		SAND	S-2C (8"): Grey, fine to coarse SAND, little Silt. Dry. S-2D (9"): Brown, fine to coarse SAND, trace Silt. Dry.		
9										
10					16.4					
11	S-3	60	10-15					S-3A (16"): Brown, fine to coarse SAND, trace Brick. Wet.		
12							CLAYEY SILT	S-3B (1"): Brown, SILT & CLAY, little fine to medium Sand. Wet. S-3C (5"): Brown, fine to coarse SAND. Wet.		
13					3.8			S-3D (1"): Grey, Clayey SILT, little fine to coarse Sand. Wet. S-3E (9"): Brown, fine to coarse SAND, trace fragments Gravel. Wet. S-3F (28"): Hard, grey, Clayey SILT, trace fine to medium Sand. Wet.		
14							SAND			
15					14.5					
16									Boring terminated at 15 feet.	
17										
18										
19										
20										

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:  
 1) Sampled collected at 10 - 12 ft. bgs. No odors observed.  
 2) End of exploration at 15 ft bgs. No refusal encountered.

BOREHOLE LOG - NOBIS GINT DATA TEMPLATE OCT 7 2011.GDT - 8/4/21 14:44 - \NOBIS.LOCAL\SHARES\PROJECTS\ACTIVE\95560.00 - BRADY SULLIVAN PORTFOLIO\95560.26 - ROBIN RUG BRISTOL - RI\95560.26 - BRISTOL RI PHASE II TASKS 200 TO 1000\DATA\08-F



# BORING LOG

Project: Robin Rug  
 Location: Bristol, RI  
 Nobis Project No.: 95560.26

Boring No.: SB-11  
 Boring Location: See Site Sketch  
 Checked by: B. Eames  
 Date Start: June 9, 2021  
 Date Finish: June 9, 2021

Contractor: Geosearch, Inc.  
 Driller: D. Freeman  
 Nobis Rep.: S. Powers

Rig Type / Model: Geoprobe 6610  
 Hammer Type: N/A  
 Hammer Hoist: N/A

Ground Surface Elev.: \_\_\_\_\_  
 Datum: \_\_\_\_\_

Type	Drilling Method	Sampler	Groundwater Observations					
			Date	Time	Depth Below Ground (ft.)	Depth of Casing (ft.)	Depth to Bottom of Hole (ft.)	Stabilization Time
Geoprobe <td>Geoprobe <td>Macro-Core Liners <td>06/09/21</td> <td>07:30</td> <td>6.5</td> <td></td> <td></td> <td>while drilling</td> </td></td>	Geoprobe <td>Macro-Core Liners <td>06/09/21</td> <td>07:30</td> <td>6.5</td> <td></td> <td></td> <td>while drilling</td> </td>	Macro-Core Liners <td>06/09/21</td> <td>07:30</td> <td>6.5</td> <td></td> <td></td> <td>while drilling</td>	06/09/21	07:30	6.5			while drilling
Size ID (in.)		2						
Advancement	Direct Push	Push						

Depth (ft.)	SAMPLE INFORMATION				PID (ppm)	Ground Water	LITHOLOGY		SAMPLE DESCRIPTION AND REMARKS (Classification System: Modified Burmister)	NOTES
	Type & No.	Rec (in.)	Depth (ft.)	Blows/6 in.			Graphic	Stratum Elev. / Depth (ft.)		
1	S-1	29	0-5				ASPHALT SAND COBBLES SILT COBBLES	S-1A (4"): Yellow, fine to coarse SAND. Dry. (ASPHALT). Crushed asphalt. S-1B (1"): Tan, fine to coarse SAND. Dry. S-1C (7"): Brown, fine to coarse SAND, trace Silt, trace fine Gravel. Dry. S-1D (2"): Gray, Cobble. Dry.		
2					<1		SILT AND CLAY	S-1E (3"): Brown, SILT, little fine to coarse Sand, trace brick fragments. Dry. S-1F (1"): Gray, Cobble/crushed rock. Dry.		
3								S-1G (5"): Brown, SILT & CLAY, trace fine Sand. Dry. S-1H (4"): Gray, fine SAND, trace Silt. Dry. Iron oxidation staining.		
4					<1			S-1I (2"): Brown, fine to coarse SAND, trace Silt. Dry. Iron oxidation staining.		
5										
6	S-2	39	5-10				SAND	S-2A (20"): Brown, fine to coarse SAND, trace Silt. Dry.		
7					<1			S-2B (2"): GRAVEL. Wet. S-2C (4"): Coarse SAND, little fine to medium Sand, trace Silt. Wet.		
8							COBBLES	S-2D (2"): Fine to medium SAND, trace coarse Sand, trace Silt. Wet.		
9					<1			S-2E (11"): Gray, fine to medium SAND, little Silt, trace coarse Sand, crushed rock. Wet.		
10							SAND			
11	S-3	43	10-15					S-3A (11"): Gray, medium to coarse SAND, trace fine Sand. Wet.		
12					<1		CLAYEY SILT	S-3B (4"): Gray, Clayey SILT, little fine Sand. Wet. S-3C (21"): Brown, fine to coarse SAND. Wet.		
13										
14							SAND	S-3D (7"): Gray, CLAY & SILT, trace fine Sand. Wet.		
15							CLAY AND SILT			
16								Boring terminated at 15 feet.		
17										
18										
19										
20										

Soil	Percentage	Non-Soil
trace	5 - 10	very few
little	10 - 20	few
some	20 - 35	several
and	35 - 50	numerous

NOTES:  
 1) Wet at 6.5 - 7 ft. bgs during high tide.  
 2) Sample collected 8 - 10 ft. bgs.  
 3) End of exploration at 15 ft bgs. No refusal encountered.

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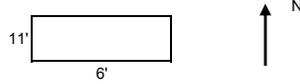
**TEST PIT LOG**

	<b>PROJECT</b>	TEST PIT NO. <u>TP-1</u>
	Robin Rug	SHEET <u>1</u> of <u>1</u>
	<u>125 Thames St.</u>	FILE NO. <u>095560.260</u>
	<u>Bristol, RI</u>	DATE <u>6/11/2021</u>

Engineer <u>Richard Rizza</u>	Make <u>Deere</u>	Ground El. _____
Contractor <u>Geosearch</u>	Model <u>60 G</u>	Datum _____
Operator <u>Shawn Preston</u>	Capacity <u>0.3 cu. yd.</u>	Time Start <u>0950</u>
Weather <u>70's, sunny</u>	Reach <u>12 ft.</u>	Time End <u>1030</u>

PID (ppm)	Depth Below Grade (ft)	Strata Change & Water Level	Subsurface Description	Excavation Effort	Boulder Qty/Class	Remarks
<1	1		0 - 3': Brown, Fine SAND and Silt, trace medium to coarse Sand, little fine Gravel, trace coarse Gravel, some cobbles, trace Class A Boulders, Dry. FILL: Very few red bricks and glass, several Seashell fragments.	M/D	A	Fill
<1	2					
<1	3					
<1	4		3 - 5': Brown/grey, SILT and fine Sand, trace medium to coarse Sand, little fine Gravel, trace coarse Gravel, trace Cobbles, Dry.			Native
<1	5					
	6		Excavation terminated at 5 feet below ground surface. No refusal.			
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					

REMARKS:  
 1) Groundwater: 5' bgs.  
 2) Sample depth: Ranged from 0 to 2 ft bgs, sampled at 1015.

<b>TEST PIT PLAN</b> 	<b>BOULDER CLASS</b> 6"-8"      A 18"-36"    B >36"        C	<b>PROPORTIONS USED</b> 0-10%    Trace (Tr.) 10-20%   Little (Li.) 20-35%   Some (So.) 35-50%   And	<b>EXCAVATION EFFORT</b> E = Easy M = Moderate D = Difficult
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**TEST PIT LOG**

	<b>PROJECT</b>	TEST PIT NO. <u>TP-2</u>
	Robin Rug 125 Thames St. Bristol, RI	SHEET <u>1</u> of <u>1</u> FILE NO. <u>095560.260</u> DATE <u>6/11/2021</u>

Engineer <u>Richard Rizza</u>	Make <u>Deere</u>	Ground El. _____
Contractor <u>Geosearch</u>	Model <u>60 G</u>	Datum _____
Operator <u>Shawn Preston</u>	Capacity <u>0.3 cu. yd.</u>	Time Start <u>1030</u>
Weather <u>70's, sunny</u>	Reach <u>12'</u>	Time End <u>1115</u>

PID (ppm)	Depth Below Grade (ft)	Strata Change & Water Level	Subsurface Description	Excavation Effort	Boulder Qty/Class	Remarks
<1	1		0 - 5': Brown, fine SAND and Silt, trace medium to coarse Sand, little fine Gravel, trace coarse, Gravel, some Cobbles, trace Class A Boulders, Dry. FILL: Very few red Brick fragments, Glass, Seashell fragments.	M/D	A	Fill
<1	2					
<1	3					
1.1	4					
<1	5					
<1	6		5 - 7': Brown/grey, SILT and fine Sand, little medium to coarse Sand, little fine Gravel, trace coarse Gravel, trace Cobbles, Moist/Wet.			Possible Native or Fill
<1	7					
	8		Exploration terminated 7 feet below ground surface. No refusal.			
	9					
	10					
	11					
	12					
	13					
	14					
	15					

REMARKS:  
 1) Groundwater: 7' bgs.  
 2) Sample depth: Ranged from 3 to 4 ft bgs, sampled at 1055.

<b>TEST PIT PLAN</b> 	<b>BOULDER</b> 6"-8" 18"-36" >36"	<b>CLASS</b> A B C	<b>PROPORTIONS USED</b> 0-10% Trace (Tr.) 10-20% Little (Li.) 20-35% Some (So.) 35-50% And	<b>EXCAVATION EFFORT</b> E = Easy M = Moderate D = Difficult
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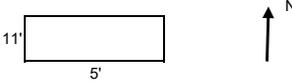
**TEST PIT LOG**

	<b>PROJECT</b>	TEST PIT NO. <u>TP-3</u>
	Robin Rug	SHEET <u>1</u> of <u>1</u>
	<u>125 Thames St.</u>	FILE NO. <u>095560.260</u>
	<u>Bristol, RI</u>	DATE <u>6/11/2021</u>

Engineer <u>Richard Rizza</u>	Make <u>Deere</u>	Ground El. _____
Contractor <u>Geosearch</u>	Model <u>60 G</u>	Datum _____
Operator <u>Shawn Preston</u>	Capacity <u>0.3 cu. yd.</u>	Time Start <u>1115</u>
Weather <u>70's, sunny</u>	Reach <u>12'</u>	Time End <u>1150</u>

PID (ppm)	Depth Below Grade (ft)	Strata Change & Water Level	Subsurface Description	Excavation Effort	Boulder Qty/Class	Remarks
<1	1		0 - 7': Brown, fine SAND, little Silt, trace medium to coarse Sand, trace, Cobbles. Dry (0-6 ft bgs). Mostly Fill, very little soil. 0 - 3': Numerous Seashells. FILL: Very few red and yellow Brick fragments, very few fragments to pieces of Clay Pipe, numerous fine fragments to pieces of Slag, few fine to coarse fragments Concrete.  6 - 6.5': Wet	M		Fill
<1	2					
<1	3					
<1	4					
<1	5					
<1	6					
<1	7					
	8		Exploration terminated 7 feet below ground surface. No refusal.			
	9					
	10					
	11					
	12					
	13					
	14					
	15					

REMARKS:  
 1) Groundwater: 6.5' bgs.  
 2) Sample depth: Ranged from 2 to 3 ft bgs, sampled at 1140.

<b>TEST PIT PLAN</b> 	<b>BOULDER CLASS</b> 6"-8"      A 18"-36"    B >36"        C	<b>PROPORTIONS USED</b> 0-10%    Trace (Tr.) 10-20%   Little (Li.) 20-35%   Some (So.) 35-50%   And	<b>EXCAVATION EFFORT</b> E = Easy M = Moderate D = Difficult
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**TEST PIT LOG**



**PROJECT**

Robin Rug  
125 Thames St.  
Bristol, RI

TEST PIT NO. TP-4  
SHEET 1 of 1  
FILE NO. 095560.260  
DATE 6/10/2021

Engineer Richard Rizza  
Contractor Geosearch  
Operator Shawn Preston  
Weather 80's, sunny

Make Deere  
Model 60 G  
Capacity 0.3 cu. yd.  
Reach 12'

Ground El. \_\_\_\_\_  
Datum \_\_\_\_\_  
Time Start 1425  
Time End 1505

PID (ppm)	Depth Below Grade (ft)	Strata Change & Water Level	Subsurface Description	Excavation Effort	Boulder Qty/Class	Remarks	
	1		0 - 2.5': Dark brown, fine SAND, some Silt, trace medium to coarse sand, trace fine Gravel, trace cobbles, trace Class A Boulders, Dry. FILL: Very few red Brick fragments.	E	A	Fill	
<1	2						
	3						Native
<1	4		2.5 - 7': Dark grey/grey, SILT, little fine Sand, little medium to coarse Sand, little fine Gravel, trace coarse Gravel, Dry.	M	NA		
	5						
<1	6						
	7				M/D	Very few A	
<1	8		7 - 8.5': Brown, fine to medium SAND, some Silt, little coarse Sand, little fine Gravel, trace coarse Gravel, trace Cobbles, Moist.				
<1	9				M/D	Very few A	
<1	10		8.5 - 10': Gray/brown, SILT, little fine Sand, trace medium to coarse Sand, little fine Gravel, trace coarse Gravel, trace Cobbles, Moist/Wet at 9.5'				
	11		Exploration terminated 10 feet below ground surface. No refusal.				
	12						
	13						
	14						
	15						

REMARKS:  
1) Groundwater: 10' bgs.  
2) Sample depth: 9 ft bgs, sampled at 1450.

<p align="center"><u>TEST PIT PLAN</u></p>	<p><u>BOULDER</u></p> <p>6"-8"      A 18"-36"    B &gt;36"        C</p>	<p><u>CLASS</u></p>	<p><u>PROPORTIONS USED</u></p> <p>0-10%    Trace (Tr.) 10-20%   Little (Li.) 20-35%   Some (So.) 35-50%   And</p>	<p><u>EXCAVATION EFFORT</u></p> <p>E = Easy M = Moderate D = Difficult</p>
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**TEST PIT LOG**



**PROJECT**

Robin Rug  
125 Thames St.  
Bristol, RI

TEST PIT NO. TP-5  
SHEET 1 of 1  
FILE NO. 095560.260  
DATE 6/10/2021

Engineer Richard Rizza  
Contractor Geosearch  
Operator Shawn Preston  
Weather 80's, sunny

Make Deere  
Model 60 G  
Capacity 0.3 cu. yd.  
Reach 12'

Ground El. \_\_\_\_\_  
Datum \_\_\_\_\_  
Time Start 1245  
Time End 1315

PID (ppm)	Depth Below Grade (ft)	Strata Change & Water Level	Subsurface Description	Excavation Effort	Boulder Qty/Class	Remarks
	1		0 - 3': Brown, fine SAND and Silt, trace medium to coarse sand, little fine and coarse Gravel, Dry.	E	NA	Native
<1	2					
	3			E	NA	Native
<1	4		3 - 6.5': Grey/Dark brown, fine SAND, little Silt, little medium Sand, trace coarse Sand, little fine and coarse Gravel, trace Cobbles, Dry.			
	5					
<1	6			E	NA	Native
	7		Exploration terminated 6.5 feet below ground surface. No refusal.			
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					

REMARKS:  
1) Groundwater: Not encountered.  
2) Sample depth: 6 ft bgs, sampled at 1300.

<p align="center"><u>TEST PIT PLAN</u></p>	<p><u>BOULDER</u></p> <p>6"-8"      A 18"-36"    B &gt;36"       C</p>	<p><u>CLASS</u></p>	<p><u>PROPORTIONS USED</u></p> <p>0-10%    Trace (Tr.) 10-20%   Little (Li.) 20-35%   Some (So.) 35-50%   And</p>	<p><u>EXCAVATION EFFORT</u></p> <p>E = Easy M = Moderate D = Difficult</p>
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**TEST PIT LOG**



**PROJECT**

Robin Rug  
125 Thames St.  
Bristol, RI

TEST PIT NO. TP-6  
SHEET 1 of 1  
FILE NO. 095560.260  
DATE 6/10/2021

Engineer Richard Rizza  
Contractor Geosearch  
Operator Shawn Preston  
Weather 80's, sunny

Make Deere  
Model 60 G  
Capacity 0.3 cu. yd.  
Reach 12'

Ground El. \_\_\_\_\_  
Datum \_\_\_\_\_  
Time Start 1025  
Time End 1125

PID (ppm)	Depth Below Grade (ft)	Strata Change & Water Level	Subsurface Description	Excavation Effort	Boulder Qty/Class	Remarks
	1		0 - 8.5': Brown, fine SAND, some Silt, trace medium to coarse sand, trace fine Gravel, very few Class A boulders, Dry. FILL: Few red Bricks, few pieces to block size Concrete, very few fragmetns of Glass, very few Metal Bars, very few 2" Steel Pipe, 1" diameter black plastic tubing, very few poly-sheeting, Fiberglass, metal Chicken Wire, asphalt shingles, wood, Plastic flower pots.	M	A	Fill
<1	2					
	3					
	4					
<1	5					
	6					
<1	7					
	8					
	9		8.5 - 10': Brown/grey, fine to medium SAND, little Silt, trace to coarse Sand, trace fine and coarse Gravel, Moist/Wet at 9.5 ft bgs. Petroleum odor observed.			Native
65.6	10					
	11		Exploration terminated 10 feet below ground surface. No refusal.			
	12					
	13					
	14					
	15					

REMARKS:  
1) Groundwater: 9.5' bgs.  
2) Sample depth: 9-10 ft bgs, sampled at 1115.

<p align="center"><u>TEST PIT PLAN</u></p>	<u>BOULDER</u>	<u>CLASS</u>	<u>PROPORTIONS USED</u>	<u>EXCAVATION EFFORT</u>
	6"-8"	A	0-10% Trace (Tr.)	E = Easy
18"-36"	B	10-20% Little (Li.)	M = Moderate	
>36"	C	20-35% Some (So.)	D = Difficult	
		35-50% And		

**TEST PIT LOG**



**PROJECT**

Robin Rug  
125 Thames St.  
Bristol, RI

TEST PIT NO. TP-7 (1)  
SHEET 1 of 1  
FILE NO. 095560.260  
DATE 6/10/2021

Engineer Richard Rizza  
Contractor Geosearch  
Operator Shawn Preston  
Weather 70's - 80's, sunny

Make Deere  
Model 60 G  
Capacity 0.3 cu. yd.  
Reach 12'

Ground El. \_\_\_\_\_  
Datum \_\_\_\_\_  
Time Start 0830  
Time End 0935

PID (ppm)	Depth Below Grade (ft)	Strata Change & Water Level	Subsurface Description	Excavation Effort	Boulder Qty/Class	Remarks
<1	1		0 - 1': Topsoil 0 - 3.5': Dark brown, fine SAND and Silt, trace medium to coarse sand, trace fine and coarse Gravel, trace Class A Boulders, Dry FILL: very few red Bricks, black/grey ash-like material, burnt wood, very few concrete pieces.	E	A	Fill
	2					
	3					
	4				M	
<1	5		3.5 - 6': Brown/grey, SILT, some fine Sand, trace Clay, trace medium to coarse Sand, trace fine and coarse Gravel, trace Class A Cobbles, Dry.	M		
	6				M	A
<1	7		6 - 8': Dark brown/grey, SILT, some fine Sand, little medium Sand, trace coarse Sand, trace fine Gravel, Dry.			
	8				M	
	9		Exploration terminated 8 feet below ground surface. No refusal.			
	10					
	11					
	12					
	13					
	14					
	15					

REMARKS:  
1) Groundwater: Not encountered.  
2) Sample depth: Ranged from 0 to 3.5 ft bgs, sampled at 0900.

<p align="center"><u>TEST PIT PLAN</u></p>	<p><u>BOULDER</u></p> <p>6"-8"      A 18"-36"    B &gt;36"        C</p>	<p><u>CLASS</u></p>	<p><u>PROPORTIONS USED</u></p> <p>0-10%    Trace (Tr.) 10-20%   Little (Li.) 20-35%   Some (So.) 35-50%   And</p>	<p><u>EXCAVATION EFFORT</u></p> <p>E = Easy M = Moderate D = Difficult</p>
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**TEST PIT LOG**



**PROJECT**

Robin Rug  
125 Thames St.  
Bristol, RI

TEST PIT NO. TP-7 (2)  
SHEET 1 of 1  
FILE NO. 095560.260  
DATE 6/10/2021

Engineer Richard Rizza  
Contractor Geosearch  
Operator Shawn Preston  
Weather 70's - 80's, sunny

Make Deere  
Model 60 G  
Capacity 0.3 cu. yd.  
Reach 12'

Ground El. \_\_\_\_\_  
Datum \_\_\_\_\_  
Time Start 1600  
Time End 1640

PID (ppm)	Depth Below Grade (ft)	Strata Change & Water Level	Subsurface Description	Excavation Effort	Boulder Qty/Class	Remarks
	1		0 - 3': Dark brown, fine SAND and Silt, trace medium to coarse sand, trace fine and coarse Gravel, trace Class A Boulders, very few red Bricks, Dry.	E	A	Fill
<1	2					
	3					
<1	4		3.5 - 6': Brown/grey, SILT, some fine Sand, trace Clay, trace medium to coarse Sand, trace fine and coarse Gravel, trace Class A Cobbles, Dry.	M		Native
	5					
<1	6				M/D	
<1	7		6 - 8': Dark brown/grey, SILT, some fine Sand, little medium Sand, trace Sand, trace fine Gravel, Dry.			
<1	8					
	9		Exploration terminated 8 feet below ground surface. No refusal.			
	10					
	11					
	12					
	13					
	14					
	15					

REMARKS:  
1) Groundwater: Not encountered.  
2) Sample depth: No laboratory soil samples collected.

<p align="center"><u>TEST PIT PLAN</u></p>	<u>BOULDER</u>	<u>CLASS</u>	<u>PROPORTIONS USED</u>	<u>EXCAVATION EFFORT</u>
	6"-8"	A	0-10% Trace (Tr.)	E = Easy
18"-36"	B	10-20% Little (Li.)	M = Moderate	
>36"	C	20-35% Some (So.)	D = Difficult	
			35-50% And	

**TEST PIT LOG**



**PROJECT**

Robin Rug

125 Thames St

Bristol, RI

TEST PIT NO. TP-8

SHEET 1 of 1

FILE NO. 095560.260

DATE 6/10/2021

Engineer Richard Rizza  
 Contractor Geosearch  
 Operator Shawn Preston  
 Weather 70's - 80's, sunny

Make Deere  
 Model 60 G  
 Capacity 0.3 cu. yd.  
 Reach 12'

Ground El. \_\_\_\_\_  
 Datum \_\_\_\_\_  
 Time Start 0935  
 Time End 1025

PID (ppm)	Depth Below Grade (ft)	Strata Change & Water Level	Subsurface Description	Excavation Effort	Boulder Qty/Class	Remarks
<1	1		0 - 3': Brown, fine SAND, some Silt, trace medium to coarse Sand, trace fine and coarse Gravel, little Class A Boulders, Dry. FILL: Very few red Bricks and Glass, Piece of steel rebar observed, not attached to anything.	M	A	Fill
	2					
	3					
<1	4		3 - 5': Brown/grey, fine SAND and Silt, trace medium to coarse sand, trace fine Gravel, few Class A Boulder, very few Class B Boulder, Dry.	M	A, very few B	Native
	5					
<1	6		5 - 6.5': Dark brown, SILT, little fine Sand, little medium Sand, trace coarse SAND, trace fine and coarse Gravel, Dry.			
	7					
	8		Exploration terminated 6.5 feet below ground surface. No refusal.			
	9					
	10					
	11					
	12					
	13					
	14					
	15					

REMARKS:  
 1) Groundwater: Not encountered.  
 2) Sample depth: No laboratory soil samples collected.

<p align="center"><u>TEST PIT PLAN</u></p>	<p align="center"><u>BOULDER</u></p> <p>6"-8"      A                  18"-36"    B                  &gt;36"        C</p>	<p align="center"><u>CLASS</u></p>	<p align="center"><u>PROPORTIONS USED</u></p> <p>0-10%    Trace (Tr.)                  10-20%   Little (Li.)                  20-35%   Some (So.)                  35-50%   And</p>	<p align="center"><u>EXCAVATION EFFORT</u></p> <p>E = Easy                  M = Moderate                  D = Difficult</p>
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**TEST PIT LOG**



**PROJECT**

Robin Rug  
125 Thames St.  
Bristol, RI

TEST PIT NO. TP-9  
SHEET 1 of 1  
FILE NO. 095560.260  
DATE 6/10/2021

Engineer Richard Rizza  
Contractor Geosearch  
Operator Shawn Preston  
Weather 80's, sunny

Make Deere  
Model 60 G  
Capacity 0.3 cu. yd.  
Reach 12'

Ground El. \_\_\_\_\_  
Datum \_\_\_\_\_  
Time Start 1315  
Time End 1340

PID (ppm)	Depth Below Grade (ft)	Strata Change & Water Level	Subsurface Description	Excavation Effort	Boulder Qty/Class	Remarks
	1		0 - 3': Brown, fine SAND and SILT, trace medium to coarse sand, trace fine and coarse Gravel, Dry. FILL: Very few red Bricks and Glass fragments to pieces. Observed one Brick in sidewall at 3' bgs. Very little Fill.	E	NA	Fill
<1	2					
	3					
<1	4		3 - 6': Grey/brown, fine SAND and Silt, trace Clay, trace medium to coarse sand, trace fine and coarse gravel, trace Cobbles, Dry.			Native
	5					
<1	6					
	7		Exploration terminated 6 feet below ground surface. No refusal.			
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					

REMARKS:  
1) Groundwater: Not encountered.  
2) Sample depth: No laboratory soil samples collected.

<p align="center"><u>TEST PIT PLAN</u></p>	<p><u>BOULDER</u></p> <p>6"-8"      A 18"-36"    B &gt;36"        C</p>	<p><u>CLASS</u></p>	<p><u>PROPORTIONS USED</u></p> <p>0-10%    Trace (Tr.) 10-20%   Little (Li.) 20-35%   Some (So.) 35-50%   And</p>	<p><u>EXCAVATION EFFORT</u></p> <p>E = Easy M = Moderate D = Difficult</p>
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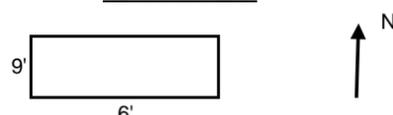
**TEST PIT LOG**

	<b>PROJECT</b>	TEST PIT NO. <u>TP-10</u>
	Robin Rug 125 Thames St. Bristol, RI	SHEET <u>1</u> of <u>1</u> FILE NO. <u>095560.260</u> DATE <u>6/10/2021</u>

Engineer <u>Richard Rizza</u>	Make <u>Deere</u>	Ground El. _____
Contractor <u>Geosearch</u>	Model <u>60 G</u>	Datum _____
Operator <u>Shawn Preston</u>	Capacity <u>0.3 cu. yd.</u>	Time Start <u>1530</u>
Weather <u>80's, sunny</u>	Reach <u>12'</u>	Time End <u>1600</u>

PID (ppm)	Depth Below Grade (ft)	Strata Change & Water Level	Subsurface Description	Excavation Effort	Boulder Qty/Class	Remarks
<1	1		0 - 2': Brown, fine SAND, some Silt, little medium to coarse sand, some fine and coarse Gravel, trace cobbles, trace Class A Boulders, Dry. FILL: Very few red Brick fragments.	E	A	Fill
<1	2					
	3		2 - 3': Brown, fine SAND, some Silt, little medium to coarse sand, trace fine and coarse Gravel, Dry.	E	NA	Native
<1	4		3 - 8': Brown, fine SAND, little Silt, trace medium to coarse sand, trace fine Gravel, Dry/Moist.			
<1	5					
	6			E	NA	Native
<1	7					
	8					
<1	9		8 - 10': Brown, fine SAND, trace Silt, little medium Sand, trace coarse Sand, trace fine and coarse Gravel, Moist (8 - 9.5'), Wet (9.5 - 10').	E/M	NA	
<1	10			E/M	NA	
	11		Exploration terminated 10 feet below ground surface. No refusal.			
	12					
	13					
	14					
	15					

REMARKS:  
 1) Groundwater: 10' bgs.  
 2) Sample depth: No laboratory soil samples collected.

<b>TEST PIT PLAN</b> 	<b>BOULDER</b> 6"-8" 18"-36" >36"	<b>CLASS</b> A B C	<b>PROPORTIONS USED</b> 0-10% Trace (Tr.) 10-20% Little (Li.) 20-35% Some (So.) 35-50% And	<b>EXCAVATION EFFORT</b> E = Easy M = Moderate D = Difficult
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**TEST PIT LOG**



**PROJECT**

Robin Rug  
125 Thames St.  
Bristol, RI

TEST PIT NO. TP-11  
SHEET 1 of 1  
FILE NO. 095560.260  
DATE 6/10/2021

Engineer Richard Rizza  
Contractor Geosearch  
Operator Shawn Preston  
Weather 80's, sunny

Make Deere  
Model 60 G  
Capacity 0.3 cu. yd.  
Reach 12'

Ground El. \_\_\_\_\_  
Datum \_\_\_\_\_  
Time Start 1125  
Time End 1150

PID (ppm)	Depth Below Grade (ft)	Strata Change & Water Level	Subsurface Description	Excavation Effort	Boulder Qty/Class	Remarks
	1		0 - 2': Brown, fine SAND, some Silt, trace medium to coarse sand, trace fine and coarse Gravel, Dry. FILL: Very few red Bricks.	E	NA	Fill
<1	2			E	NA	Native
	3		2 - 7': Grey/brown, SILT, some fine Sand, trace medium to coarse sand, little fine to coarse Gravel, Dry.			
	4					
<1	5					
	6					
<1	7					
	8		Exploration terminated 7 feet below ground surface. No refusal.			
	9					
	10					
	11					
	12					
	13					
	14					
	15					

REMARKS:  
1) Groundwater: Not encountered.  
2) Sample depth: No laboratory soil samples collected.

<p align="center"><u>TEST PIT PLAN</u></p>	<p align="center"><u>BOULDER</u></p> 6"-8" 18"-36" >36"	<p align="center"><u>CLASS</u></p> A B C	<p align="center"><u>PROPORTIONS USED</u></p> 0-10% Trace (Tr.) 10-20% Little (Li.) 20-35% Some (So.) 35-50% And	<p align="center"><u>EXCAVATION EFFORT</u></p> E = Easy M = Moderate D = Difficult
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**TEST PIT LOG**

	<b>PROJECT</b>	TEST PIT NO. <u>TP-12</u>
	Robin Rug	SHEET <u>1</u> of <u>1</u>
	<u>125 Thames St.</u>	FILE NO. <u>095560.260</u>
	<u>Bristol, RI</u>	DATE <u>6/10/2021</u>

Engineer <u>Richard Rizza</u>	Make <u>Deere</u>	Ground El. _____
Contractor <u>Geosearch</u>	Model <u>60 G</u>	Datum _____
Operator <u>Shawn Preston</u>	Capacity <u>0.3 cu. yd.</u>	Time Start <u>1505</u>
Weather <u>80's, sunny</u>	Reach <u>12'</u>	Time End <u>1530</u>

PID (ppm)	Depth Below Grade (ft)	Strata Change & Water Level	Subsurface Description	Excavation Effort	Boulder Qty/Class	Remarks
<1	1		0 - 2.5': Brown, fine SAND, some Silt, trace medium to coarse sand, trace fine and coarse Gravel, trace cobbles, trace Class A Boulders, Dry. FILL: Very few red Brick fragments and Ceramic Tile.	E	A	Fill
	2					
<1	3		2.5 - 7': Dark grey/grey, SILT, little fine Sand, little medium to coarse Sand, little fine Gravel, trace coarse Gravel, Dry.			Native
	4					
<1	5					
	6					
<1	7					
	8		Exploration terminated 7 feet below ground surface. No refusal.			
	9					
	10					
	11					
	12					
	13					
	14					
	15					

REMARKS:  
 1) Groundwater: Not encountered.  
 2) Sample depth: No laboratory soil samples collected.

<b>TEST PIT PLAN</b> 	<b>BOULDER</b> 6"-8" 18"-36" >36"	<b>CLASS</b> A B C	<b>PROPORTIONS USED</b> 0-10% Trace (Tr.) 10-20% Little (Li.) 20-35% Some (So.) 35-50% And	<b>EXCAVATION EFFORT</b> E = Easy M = Moderate D = Difficult
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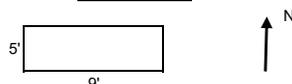
**TEST PIT LOG**

	<b>PROJECT</b>	TEST PIT NO. <u>TP-13</u>
	Robin Rug	SHEET <u>1</u> of <u>1</u>
	<u>125 Thames St.</u>	FILE NO. <u>095560.260</u>
	<u>Bristol, RI</u>	DATE <u>6/10/2021</u>

Engineer <u>Richard Rizza</u>	Make <u>Deere</u>	Ground El. _____
Contractor <u>Geosearch</u>	Model <u>60 G</u>	Datum _____
Operator <u>Shawn Preston</u>	Capacity <u>0.3 cu. yd.</u>	Time Start <u>1340</u>
Weather <u>80's, sunny</u>	Reach <u>12'</u>	Time End <u>1425</u>

PID (ppm)	Depth Below Grade (ft)	Strata Change & Water Level	Subsurface Description	Excavation Effort	Boulder Qty/Class	Remarks
<1	1		0 - 2': Brown, fine SAND and Silt, trace medium to coarse sand, trace fine gravel, trace cobbles, Dry. FILL: Very few red Brick fragments, glass, and plastic.	E		Fill
	2					
<1	3		2 - 6.5': Grey/brown, SILT, some fine Sand, trace medium to coarse Sand, trace fine and coarse Gravel, Dry. Very dense, Native material. Possible Till.	M/D		Native
	4					
<1	5					
<1	6					
	7		Exploration terminated 6.5 feet below ground surface due to dense soil and difficulty excavating.			
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					

REMARKS:  
 1) Groundwater: Not encountered.  
 2) Sample depth: No laboratory soil samples collected.

<p><u>TEST PIT PLAN</u></p> 	<p><u>BOULDER</u></p> <p>6"-8"      A                  18"-36"    B                  &gt;36"      C</p>	<p><u>CLASS</u></p>	<p><u>PROPORTIONS USED</u></p> <p>0-10%    Trace (Tr.)                  10-20%   Little (Li.)                  20-35%   Some (So.)                  35-50%   And</p>	<p><u>EXCAVATION EFFORT</u></p> <p>E = Easy                  M = Moderate                  D = Difficult</p>
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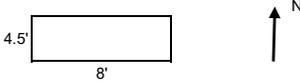
**TEST PIT LOG**

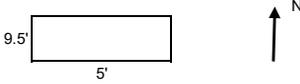
	<b>PROJECT</b>	TEST PIT NO. <u>TP-14</u>
	Robin Rug	SHEET <u>1</u> of <u>1</u>
	<u>125 Thames St.</u>	FILE NO. <u>095560.260</u>
	<u>Bristol, RI</u>	DATE <u>6/11/2021</u>

Engineer <u>Richard Rizza</u>	Make <u>Deere</u>	Ground El. _____
Contractor <u>Geosearch</u>	Model <u>60 G</u>	Datum _____
Operator <u>Shawn Preston</u>	Capacity <u>0.3 cu. yd.</u>	Time Start <u>0820</u>
Weather <u>70's, sunny</u>	Reach <u>12'</u>	Time End <u>0945</u>

PID	Depth Below Grade (ft)	Strata Change & Water Level	Subsurface Description	Excavation Effort	Boulder Qty/Class	Remarks
<1	1		0 - 1': Brown, fine SAND, some Silt, little medium to coarse Sand, some fine Gravel, little coarse Gravel, very few red and yellow Bricks, Dry	E	A	Fill
<1	2		1 - 3': Brown/grey, fine SAND and Silt, little medium to coarse Sand, little fine Gravel, trace coarse Gravel, very few red Brick fragments, Dry			
<1	3					NA
<1	4		3 - 4': Brown/grey, SILT, little fine Sand, trace medium to coarse Sand, trace fine and coarse Gravel, trace Cobbles, very few red Brick fragments, Moist.			
<1	5		4 - 5': Tan/grey, fine SAND, little Silt, Moist.	M		
<1	6		5 - 6': Brown/grey, CLAY and Silt, trace fine to coarse Sand, trace fine and coarse Gravel, trace Cobbles, Moist/Wet.			
<1	7		6 - 9': Brown/grey, CLAY and Silt, little fine Sand, trace medium to coarse sand, trace fine and coarse Gravel, trace Cobbles, Wet.			
<1	8					
<1	9					
	10		Exploration terminated 9 feet below ground surface. No refusal.			
	11					
	12					
	13					
	14					
	15					

REMARKS:  
 1) Groundwater: 8.5 - 9' bgs.  
 2) Sample depth: Ranged from 1 to 2 ft bgs, sampled at 0830.

<b>TEST PIT PLAN</b> 	<b>BOULDER CLASS</b> 6"-8"      A 18"-36"    B >36"        C	<b>PROPORTIONS USED</b> 0-10%    Trace (Tr.) 10-20%   Little (Li.) 20-35%   Some (So.) 35-50%   And	<b>EXCAVATION EFFORT</b> E = Easy M = Moderate D = Difficult
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TEST PIT LOG						
		<b>PROJECT</b> Robin Rug 125 Thames St. Bristol, RI			TEST PIT NO. <u>TP-17</u> SHEET <u>1</u> of <u>1</u> FILE NO. <u>095560.260</u> DATE <u>6/11/2021</u>	
Engineer <u>Richard Rizza</u> Contractor <u>Geosearch</u> Operator <u>Shawn Preston</u> Weather <u>70's, sunny</u>		Make <u>Deere</u> Model <u>60 G</u> Capacity <u>0.3 cu. yd.</u> Reach <u>12'</u>		Ground El. _____ Datum _____ Time Start <u>1215</u> Time End <u>1310</u>		
PID (ppm)	Depth Below Grade (ft)	Strata Change & Water Level	Subsurface Description	Excavation Effort	Boulder Qty/Class	Remarks
<1	1		0 - 7.5': Brown, fine SAND, little Silt, trace medium to coarse Sand, Dry trace coarse, Gravel, some Cobbles, trace Class A Boulders, Dry. 0 - 3': Numerous Seashells. FILL: very few red and yellow fine to coarse Brick fragments, very few coarse fragments Clay Pipe and Electrical Wire, very few pieces block size concrete, numerous fine fragments to pieces of Slag.	E/M		Fill
<1	2					
<1	3					
<1	4					
<1	5					
<1	6					
<1	7					
	8					
	9		Exploration terminated 7.5 feet below ground surface. No refusal.			
	10					
	11					
	12					
	13					
	14					
	15					
REMARKS: 1) Groundwater: 7 - 7.5' bgs. 2) Sample depth: No laboratory soil samples collected.						
<b>TEST PIT PLAN</b> 		<b>BOULDER CLASS</b> 6"-8"      A 18"-36"    B >36"      C	<b>PROPORTIONS USED</b> 0-10%    Trace (Tr.) 10-20%   Little (Li.) 20-35%   Some (So.) 35-50%   And	<b>EXCAVATION EFFORT</b> E = Easy M = Moderate D = Difficult		

**A  
P  
P  
E  
N  
D  
I  
X  
  
F**



# Eastern Analytical, Inc.

*professional laboratory and drilling services*

Bettina Eames  
Nobis Group  
18 Chenell Drive  
Concord, NH 03301



## Laboratory Report for:

Eastern Analytical, Inc. ID: 227592  
Client Identification: Robin Rug | 095560.260  
Date Received: 6/14/2021

Enclosed are the analytical results per the Chain of Custody for sample(s) in the referenced project. All analyses were performed in accordance with our QA/QC Program, NELAP and other applicable state requirements. All quality control criteria was within acceptance criteria unless noted on the report pages. Results are for the exclusive use of the client named on this report and will not be released to a third party without consent.

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the written approval of the laboratory.

The following standard abbreviations and conventions apply to all EAI reports:

- < : "less than" followed by the reporting limit
- > : "greater than" followed by the reporting limit
- %R : % Recovery

## Certifications:

Eastern Analytical, Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269), Vermont (VT1012), New York (12072), West Virginia (9910C) and Alabama (41620). Please refer to our website at [www.easternanalytical.com](http://www.easternanalytical.com) for a copy of our certificates and accredited parameters.

## References:

- EPA 600/4-79-020, 1983
- Standard Methods for Examination of Water and Wastewater, 20th, 21st, 22nd & 23rd edition or noted revision year.
- Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
- Hach Water Analysis Handbook, 4th edition, 1992

If you have any questions regarding the results contained within, please feel free to contact customer service. Unless otherwise requested, we will dispose of the sample(s) 6 weeks from the sample receipt date.

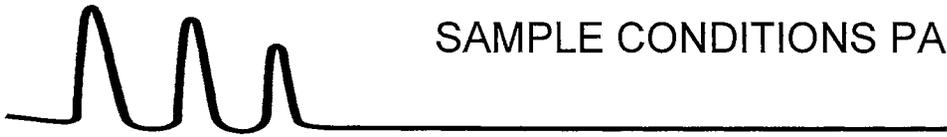
We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

*Lorraine Olashaw*  
Lorraine Olashaw, Lab Director

6.22.21  
Date

33  
# of pages (excluding cover letter)



# SAMPLE CONDITIONS PAGE

EAI ID#: 227592

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

**Temperature upon receipt (°C): 3.3**

Acceptable temperature range (°C): 0-6

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

Lab ID	Sample ID	Date Received	Date/Time Sampled	Sample Matrix	% Dry Weight	Exceptions/Comments (other than thermal preservation)
227592.01	SB-10 (10-12')	6/14/21	6/8/21 10:15	soil		Sample canceled at customer's request
227592.02	SB-8/NB-2 (7-9')	6/14/21	6/8/21 14:20	soil	96.4	Adheres to Sample Acceptance Policy
227592.03	SB-11 (8-10')	6/14/21	6/9/21 08:30	soil	90.1	Adheres to Sample Acceptance Policy
227592.04	SB-9 (10-12')	6/14/21	6/9/21 09:30	soil		Sample canceled at customer's request
227592.05	SB-4 (7-9')	6/14/21	6/9/21 12:25	soil	85.1	Adheres to Sample Acceptance Policy
227592.06	SB-5/NB-1 (10-12')	6/14/21	6/9/21 13:25	soil	89.2	Adheres to Sample Acceptance Policy
227592.07	SB-3 (7-9')	6/14/21	6/10/21 15:35	soil	88.3	Adheres to Sample Acceptance Policy
227592.08	SB-2 (12-14')	6/14/21	6/10/21 16:35	soil	87.5	Adheres to Sample Acceptance Policy
227592.09	SB-6 (2.0')	6/14/21	6/11/21 13:30	soil	86.2	Adheres to Sample Acceptance Policy
227592.1	SB-7 (2.0')	6/14/21	6/11/21 11:50	soil	84.1	Adheres to Sample Acceptance Policy
227592.11	Trip Blank	6/14/21	6/8/21 07:00	soil	100.0	Adheres to Sample Acceptance Policy

All results contained in this report relate only to the above listed samples.

Unless otherwise noted:

- Hold times, preservation, container types, and sample conditions adhered to EPA Protocol.
- Solid samples are reported on a dry weight basis, unless otherwise noted. pH/Corrosivity, Flashpoint, Ignitability, Paint Filter, Conductivity and Specific Gravity are always reported on an "as received" basis.
- Analysis of pH, Total Residual Chlorine, Dissolved Oxygen and Sulfite were performed at the laboratory outside of the recommended 15 minute hold time.
- Samples collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures.



# LABORATORY REPORT

EAI ID#: **227592**

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	SB-8/NB-2 (7-9')	SB-11 (8-10')	SB-4 (7-9')	SB-5/NB-1 (10-12')
Lab Sample ID:	227592.02	227592.03	227592.05	227592.06
Matrix:	soil	soil	soil	soil
Date Sampled:	6/8/21	6/9/21	6/9/21	6/9/21
Date Received:	6/14/21	6/14/21	6/14/21	6/14/21
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Date of Analysis:	6/15/21	6/15/21	6/15/21	6/15/21
Analyst:	JAK	JAK	JAK	JAK
Method:	8260C	8260C	8260C	8260C
Dilution Factor:	1	1	1	1
Dichlorodifluoromethane	< 0.1	< 0.1	< 0.1	< 0.1
Chloromethane	< 0.1	< 0.1	< 0.1	< 0.1
Vinyl chloride	< 0.02	< 0.02	< 0.02	< 0.02
Bromomethane	< 0.1	< 0.1	< 0.1	< 0.1
Chloroethane	< 0.1	< 0.1	< 0.1	< 0.1
Trichlorofluoromethane	< 0.1	< 0.1	< 0.1	< 0.1
Diethyl Ether	< 0.05	< 0.05	< 0.05	< 0.05
Acetone	< 2	< 2	< 2	< 2
1,1-Dichloroethene	< 0.05	< 0.05	< 0.05	< 0.05
tert-Butyl Alcohol (TBA)	< 2	< 2	< 2	< 2
Methylene chloride	< 0.1	< 0.1	< 0.1	< 0.1
Carbon disulfide	< 0.1	< 0.1	< 0.1	< 0.1
Methyl-t-butyl ether(MTBE)	< 0.1	< 0.1	< 0.1	< 0.1
Ethyl-t-butyl ether(ETBE)	< 0.1	< 0.1	< 0.1	< 0.1
Isopropyl ether(DIPE)	< 0.1	< 0.1	< 0.1	< 0.1
tert-amyl methyl ether(TAME)	< 0.1	< 0.1	< 0.1	< 0.1
trans-1,2-Dichloroethene	< 0.05	< 0.05	< 0.05	< 0.05
1,1-Dichloroethane	< 0.05	< 0.05	< 0.05	< 0.05
2,2-Dichloropropane	< 0.05	< 0.05	< 0.05	< 0.05
cis-1,2-Dichloroethene	< 0.05	< 0.05	< 0.05	< 0.05
2-Butanone(MEK)	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	< 0.05	< 0.05	< 0.05	< 0.05
Tetrahydrofuran(THF)	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	< 0.05	< 0.05	< 0.05	< 0.05
1,1,1-Trichloroethane	< 0.05	< 0.05	< 0.05	< 0.05
Carbon tetrachloride	< 0.05	< 0.05	< 0.05	< 0.05
1,1-Dichloropropene	< 0.05	< 0.05	< 0.05	< 0.05
Benzene	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichloroethane	< 0.05	< 0.05	< 0.05	< 0.05
Trichloroethene	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichloropropane	< 0.05	< 0.05	< 0.05	< 0.05
Dibromomethane	< 0.05	< 0.05	< 0.05	< 0.05
Bromodichloromethane	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dioxane	< 1	< 1	< 1	< 1
4-Methyl-2-pentanone(MIBK)	< 0.5	< 0.5	< 0.5	< 0.5
cis-1,3-Dichloropropene	< 0.05	< 0.05	< 0.05	< 0.05
Toluene	< 0.05	< 0.05	< 0.05	< 0.05
trans-1,3-Dichloropropene	< 0.05	< 0.05	< 0.05	< 0.05
1,1,2-Trichloroethane	< 0.05	< 0.05	< 0.05	< 0.05
2-Hexanone	< 0.1	< 0.1	< 0.1	< 0.1
Tetrachloroethene	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichloropropane	< 0.05	< 0.05	< 0.05	< 0.05
Dibromochloromethane	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dibromoethane(EDB)	< 0.02	< 0.02	< 0.02	< 0.02
Chlorobenzene	< 0.05	< 0.05	< 0.05	< 0.05
1,1,1,2-Tetrachloroethane	< 0.05	< 0.05	< 0.05	< 0.05



# LABORATORY REPORT

EAI ID#: 227592

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	SB-8/NB-2 (7-9')	SB-11 (8-10')	SB-4 (7-9')	SB-5/NB-1 (10-12')
Lab Sample ID:	227592.02	227592.03	227592.05	227592.06
Matrix:	soil	soil	soil	soil
Date Sampled:	6/8/21	6/9/21	6/9/21	6/9/21
Date Received:	6/14/21	6/14/21	6/14/21	6/14/21
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Date of Analysis:	6/15/21	6/15/21	6/15/21	6/15/21
Analyst:	JAK	JAK	JAK	JAK
Method:	8260C	8260C	8260C	8260C
Dilution Factor:	1	1	1	1
Ethylbenzene	< 0.05	< 0.05	< 0.05	< 0.05
mp-Xylene	< 0.05	< 0.05	< 0.05	< 0.05
o-Xylene	< 0.05	< 0.05	< 0.05	< 0.05
Styrene	< 0.05	< 0.05	< 0.05	< 0.05
Bromoform	< 0.05	< 0.05	< 0.05	< 0.05
IsoPropylbenzene	< 0.05	< 0.05	< 0.05	< 0.05
Bromobenzene	< 0.05	< 0.05	< 0.05	< 0.05
1,1,2,2-Tetrachloroethane	< 0.05	< 0.05	< 0.05	< 0.05
1,2,3-Trichloropropane	< 0.05	< 0.05	< 0.05	< 0.05
n-Propylbenzene	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorotoluene	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorotoluene	< 0.05	< 0.05	< 0.05	< 0.05
1,3,5-Trimethylbenzene	< 0.05	< 0.05	< 0.05	< 0.05
tert-Butylbenzene	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trimethylbenzene	< 0.05	< 0.05	< 0.05	< 0.05
sec-Butylbenzene	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	< 0.05	< 0.05	< 0.05	< 0.05
p-Isopropyltoluene	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	< 0.05	< 0.05	< 0.05	< 0.05
n-Butylbenzene	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dibromo-3-chloropropane	< 0.05	< 0.05	< 0.05	< 0.05
1,3,5-Trichlorobenzene	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trichlorobenzene	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	< 0.1	< 0.1	< 0.1	< 0.1
1,2,3-Trichlorobenzene	< 0.05	< 0.05	< 0.05	< 0.05
4-Bromofluorobenzene (surr)	88 %R	87 %R	87 %R	89 %R
1,2-Dichlorobenzene-d4 (surr)	103 %R	103 %R	103 %R	102 %R
Toluene-d8 (surr)	96 %R	95 %R	96 %R	97 %R
1,2-Dichloroethane-d4 (surr)	102 %R	104 %R	104 %R	104 %R



# LABORATORY REPORT

EAI ID#: **227592**

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	SB-3 (7-9')	SB-2 (12-14')	SB-6 (2.0')	SB-7 (2.0')
Lab Sample ID:	227592.07	227592.08	227592.09	227592.1
Matrix:	soil	soil	soil	soil
Date Sampled:	6/10/21	6/10/21	6/11/21	6/11/21
Date Received:	6/14/21	6/14/21	6/14/21	6/14/21
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Date of Analysis:	6/15/21	6/15/21	6/15/21	6/15/21
Analyst:	JAK	JAK	JAK	JAK
Method:	8260C	8260C	8260C	8260C
Dilution Factor:	1	1	1	1
Dichlorodifluoromethane	< 0.1	< 0.1	< 0.1	< 0.1
Chloromethane	< 0.1	< 0.1	< 0.1	< 0.1
Vinyl chloride	< 0.02	< 0.02	< 0.02	< 0.02
Bromomethane	< 0.1	< 0.1	< 0.1	< 0.1
Chloroethane	< 0.1	< 0.1	< 0.1	< 0.1
Trichlorofluoromethane	< 0.1	< 0.1	< 0.1	< 0.1
Diethyl Ether	< 0.05	< 0.05	< 0.05	< 0.05
Acetone	< 2	< 2	< 2	< 2
1,1-Dichloroethene	< 0.05	< 0.05	< 0.05	< 0.05
tert-Butyl Alcohol (TBA)	< 2	< 2	< 2	< 2
Methylene chloride	< 0.1	< 0.1	< 0.1	< 0.1
Carbon disulfide	< 0.1	< 0.1	< 0.1	< 0.1
Methyl-t-butyl ether(MTBE)	< 0.1	< 0.1	< 0.1	< 0.1
Ethyl-t-butyl ether(ETBE)	< 0.1	< 0.1	< 0.1	< 0.1
Isopropyl ether(DIPE)	< 0.1	< 0.1	< 0.1	< 0.1
tert-amyl methyl ether(TAME)	< 0.1	< 0.1	< 0.1	< 0.1
trans-1,2-Dichloroethene	< 0.05	< 0.05	< 0.05	< 0.05
1,1-Dichloroethane	< 0.05	< 0.05	< 0.05	< 0.05
2,2-Dichloropropane	< 0.05	< 0.05	< 0.05	< 0.05
cis-1,2-Dichloroethene	< 0.05	< 0.05	< 0.05	< 0.05
2-Butanone(MEK)	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	< 0.05	< 0.05	< 0.05	< 0.05
Tetrahydrofuran(THF)	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	< 0.05	< 0.05	< 0.05	< 0.05
1,1,1-Trichloroethane	< 0.05	< 0.05	< 0.05	< 0.05
Carbon tetrachloride	< 0.05	< 0.05	< 0.05	< 0.05
1,1-Dichloropropene	< 0.05	< 0.05	< 0.05	< 0.05
Benzene	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichloroethane	< 0.05	< 0.05	< 0.05	< 0.05
Trichloroethene	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichloropropane	< 0.05	< 0.05	< 0.05	< 0.05
Dibromomethane	< 0.05	< 0.05	< 0.05	< 0.05
Bromodichloromethane	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dioxane	< 1	< 1	< 1	< 1
4-Methyl-2-pentanone(MIBK)	< 0.5	< 0.5	< 0.5	< 0.5
cis-1,3-Dichloropropene	< 0.05	< 0.05	< 0.05	< 0.05
Toluene	< 0.05	< 0.05	< 0.05	< 0.05
trans-1,3-Dichloropropene	< 0.05	< 0.05	< 0.05	< 0.05
1,1,2-Trichloroethane	< 0.05	< 0.05	< 0.05	< 0.05
2-Hexanone	< 0.1	< 0.1	< 0.1	< 0.1
Tetrachloroethene	< 0.05	< 0.05	< 0.05	<b>0.40</b>
1,3-Dichloropropane	< 0.05	< 0.05	< 0.05	< 0.05
Dibromochloromethane	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dibromoethane(EDB)	< 0.02	< 0.02	< 0.02	< 0.02
Chlorobenzene	< 0.05	< 0.05	< 0.05	< 0.05
1,1,1,2-Tetrachloroethane	< 0.05	< 0.05	< 0.05	< 0.05



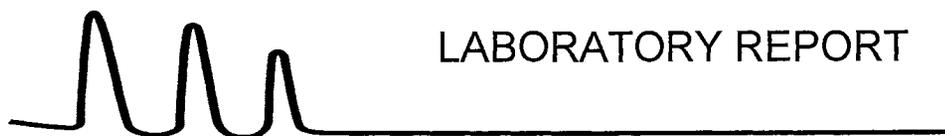
# LABORATORY REPORT

EAI ID#: **227592**

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	SB-3 (7-9')	SB-2 (12-14')	SB-6 (2.0')	SB-7 (2.0')
Lab Sample ID:	227592.07	227592.08	227592.09	227592.1
Matrix:	soil	soil	soil	soil
Date Sampled:	6/10/21	6/10/21	6/11/21	6/11/21
Date Received:	6/14/21	6/14/21	6/14/21	6/14/21
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Date of Analysis:	6/15/21	6/15/21	6/15/21	6/15/21
Analyst:	JAK	JAK	JAK	JAK
Method:	8260C	8260C	8260C	8260C
Dilution Factor:	1	1	1	1
Ethylbenzene	< 0.05	< 0.05	< 0.05	< 0.05
mp-Xylene	< 0.05	< 0.05	< 0.05	< 0.05
o-Xylene	< 0.05	< 0.05	< 0.05	< 0.05
Styrene	< 0.05	< 0.05	< 0.05	< 0.05
Bromoform	< 0.05	< 0.05	< 0.05	< 0.05
IsoPropylbenzene	< 0.05	< 0.05	< 0.05	< 0.05
Bromobenzene	< 0.05	< 0.05	< 0.05	< 0.05
1,1,2,2-Tetrachloroethane	< 0.05	< 0.05	< 0.05	< 0.05
1,2,3-Trichloropropane	< 0.05	< 0.05	< 0.05	< 0.05
n-Propylbenzene	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorotoluene	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorotoluene	< 0.05	< 0.05	< 0.05	< 0.05
1,3,5-Trimethylbenzene	< 0.05	< 0.05	< 0.05	< 0.05
tert-Butylbenzene	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trimethylbenzene	< 0.05	< 0.05	< 0.05	< 0.05
sec-Butylbenzene	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	< 0.05	< 0.05	< 0.05	< 0.05
p-Isopropyltoluene	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	< 0.05	< 0.05	< 0.05	< 0.05
n-Butylbenzene	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dibromo-3-chloropropane	< 0.05	< 0.05	< 0.05	< 0.05
1,3,5-Trichlorobenzene	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trichlorobenzene	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	< 0.1	< 0.1	<b>0.10</b>	< 0.1
1,2,3-Trichlorobenzene	< 0.05	< 0.05	< 0.05	< 0.05
4-Bromofluorobenzene (surr)	<b>86 %R</b>	<b>86 %R</b>	<b>88 %R</b>	<b>91 %R</b>
1,2-Dichlorobenzene-d4 (surr)	<b>103 %R</b>	<b>103 %R</b>	<b>102 %R</b>	<b>101 %R</b>
Toluene-d8 (surr)	<b>95 %R</b>	<b>95 %R</b>	<b>95 %R</b>	<b>93 %R</b>
1,2-Dichloroethane-d4 (surr)	<b>105 %R</b>	<b>105 %R</b>	<b>105 %R</b>	<b>105 %R</b>



# LABORATORY REPORT

EAI ID#: 227592

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID: Trip Blank

Lab Sample ID: 227592.11

Matrix: soil

Date Sampled: 6/8/21

Date Received: 6/14/21

Units: mg/kg

Date of Analysis: 6/15/21

Analyst: JAK

Method: 8260C

Dilution Factor: 1

Dichlorodifluoromethane	< 0.1
Chloromethane	< 0.1
Vinyl chloride	< 0.02
Bromomethane	< 0.1
Chloroethane	< 0.1
Trichlorofluoromethane	< 0.1
Diethyl Ether	< 0.05
Acetone	< 2
1,1-Dichloroethene	< 0.05
tert-Butyl Alcohol (TBA)	< 2
Methylene chloride	< 0.1
Carbon disulfide	< 0.1
Methyl-t-butyl ether(MTBE)	< 0.1
Ethyl-t-butyl ether(ETBE)	< 0.1
Isopropyl ether(DIPE)	< 0.1
tert-amyl methyl ether(TAME)	< 0.1
trans-1,2-Dichloroethene	< 0.05
1,1-Dichloroethane	< 0.05
2,2-Dichloropropane	< 0.05
cis-1,2-Dichloroethene	< 0.05
2-Butanone(MEK)	< 0.5
Bromochloromethane	< 0.05
Tetrahydrofuran(THF)	< 0.5
Chloroform	< 0.05
1,1,1-Trichloroethane	< 0.05
Carbon tetrachloride	< 0.05
1,1-Dichloropropene	< 0.05
Benzene	< 0.05
1,2-Dichloroethane	< 0.05
Trichloroethene	< 0.05
1,2-Dichloropropane	< 0.05
Dibromomethane	< 0.05
Bromodichloromethane	< 0.05
1,4-Dioxane	< 1
4-Methyl-2-pentanone(MIBK)	< 0.5
cis-1,3-Dichloropropene	< 0.05
Toluene	< 0.05
trans-1,3-Dichloropropene	< 0.05
1,1,2-Trichloroethane	< 0.05
2-Hexanone	< 0.1
Tetrachloroethene	< 0.05
1,3-Dichloropropane	< 0.05
Dibromochloromethane	< 0.05
1,2-Dibromoethane(EDB)	< 0.02
Chlorobenzene	< 0.05
1,1,1,2-Tetrachloroethane	< 0.05



# LABORATORY REPORT

EAI ID#: 227592

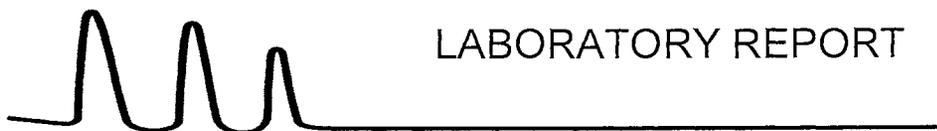
Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID: Trip Blank

Lab Sample ID: 227592.11  
Matrix: soil  
Date Sampled: 6/8/21  
Date Received: 6/14/21  
Units: mg/kg  
Date of Analysis: 6/15/21  
Analyst: JAK  
Method: 8260C  
Dilution Factor: 1

Ethylbenzene	< 0.05
mp-Xylene	< 0.05
o-Xylene	< 0.05
Styrene	< 0.05
Bromoform	< 0.05
IsoPropylbenzene	< 0.05
Bromobenzene	< 0.05
1,1,2,2-Tetrachloroethane	< 0.05
1,2,3-Trichloropropane	< 0.05
n-Propylbenzene	< 0.05
2-Chlorotoluene	< 0.05
4-Chlorotoluene	< 0.05
1,3,5-Trimethylbenzene	< 0.05
tert-Butylbenzene	< 0.05
1,2,4-Trimethylbenzene	< 0.05
sec-Butylbenzene	< 0.05
1,3-Dichlorobenzene	< 0.05
p-Isopropyltoluene	< 0.05
1,4-Dichlorobenzene	< 0.05
1,2-Dichlorobenzene	< 0.05
n-Butylbenzene	< 0.05
1,2-Dibromo-3-chloropropane	< 0.05
1,3,5-Trichlorobenzene	< 0.05
1,2,4-Trichlorobenzene	< 0.05
Hexachlorobutadiene	< 0.05
Naphthalene	< 0.1
1,2,3-Trichlorobenzene	< 0.05
4-Bromofluorobenzene (surr)	89 %R
1,2-Dichlorobenzene-d4 (surr)	101 %R
Toluene-d8 (surr)	95 %R
1,2-Dichloroethane-d4 (surr)	103 %R



# LABORATORY REPORT

EAI ID#: 227592

Client: Nobis Group

Client Designation: Robin Rug | 095560.260

Sample ID:	SB-8/NB-2 (7-9')	SB-11 (8-10')	SB-4 (7-9')	SB-5/NB-1 (10-12')
Lab Sample ID:	227592.02	227592.03	227592.05	227592.06
Matrix:	soil	soil	soil	soil
Date Sampled:	6/8/21	6/9/21	6/9/21	6/9/21
Date Received:	6/14/21	6/14/21	6/14/21	6/14/21
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Date of Extraction/Prep:	6/16/21	6/14/21	6/14/21	6/16/21
Date of Analysis:	6/17/21	6/15/21	6/15/21	6/17/21
Analyst:	JMR	JMR	JMR	JMR
Method:	8270D	8270D	8270D	8270D
Dilution Factor:	1	1	1	1
alpha-Terpineol	< 0.34	< 0.4	< 0.4	< 0.4
Phenol	< 0.07	< 0.08	< 0.08	< 0.08
2-Chlorophenol	< 0.07	< 0.08	< 0.08	< 0.08
2,4-Dichlorophenol	< 0.07	< 0.08	< 0.08	< 0.08
2,4,5-Trichlorophenol	< 0.07	< 0.08	< 0.08	< 0.08
2,4,6-Trichlorophenol	< 0.07	< 0.08	< 0.08	< 0.08
Pentachlorophenol	< 0.34	< 0.4	< 0.4	< 0.4
2-Nitrophenol	< 0.34	< 0.4	< 0.4	< 0.4
4-Nitrophenol	< 0.34	< 0.4	< 0.4	< 0.4
2,4-Dinitrophenol	< 0.7	< 0.7	< 0.8	< 0.7
2-Methylphenol	< 0.07	< 0.08	< 0.08	< 0.08
3/4-Methylphenol	< 0.07	< 0.08	< 0.08	< 0.08
2,4-Dimethylphenol	< 0.34	< 0.4	< 0.4	< 0.4
4-Chloro-3-methylphenol	< 0.07	< 0.08	< 0.08	< 0.08
4,6-Dinitro-2-methylphenol	< 0.34	< 0.4	< 0.4	< 0.4
Benzoic Acid	< 3.4	< 4	< 4	< 4
N-Nitrosodimethylamine	< 0.07	< 0.08	< 0.08	< 0.08
n-Nitroso-di-n-propylamine	< 0.04	< 0.04	< 0.05	< 0.04
n-Nitrosodiphenylamine	< 0.07	< 0.08	< 0.08	< 0.08
bis(2-Chloroethyl)ether	< 0.07	< 0.08	< 0.08	< 0.08
bis(2-chloroisopropyl)ether	< 0.07	< 0.08	< 0.08	< 0.08
bis(2-Chloroethoxy)methane	< 0.07	< 0.08	< 0.08	< 0.08
1,3-Dichlorobenzene	< 0.07	< 0.08	< 0.08	< 0.08
Acetophenone	< 0.7	< 0.7	< 0.8	< 0.7
1,4-Dichlorobenzene	< 0.07	< 0.08	< 0.08	< 0.08
1,2-Dichlorobenzene	< 0.07	< 0.08	< 0.08	< 0.08
1,2,4-Trichlorobenzene	< 0.07	< 0.08	< 0.08	< 0.08
2-Chloronaphthalene	< 0.07	< 0.08	< 0.08	< 0.08
4-Chlorophenyl-phenylether	< 0.07	< 0.08	< 0.08	< 0.08
4-Bromophenyl-phenylether	< 0.07	< 0.08	< 0.08	< 0.08
Hexachloroethane	< 0.07	< 0.08	< 0.08	< 0.08
Hexachlorobutadiene	< 0.07	< 0.08	< 0.08	< 0.08
Hexachlorocyclopentadiene	< 0.34	< 0.4	< 0.4	< 0.4
Hexachlorobenzene	< 0.07	< 0.08	< 0.08	< 0.08
4-Chloroaniline	< 0.07	< 0.08	< 0.08	< 0.08
2,3-Dichloroaniline	< 0.07	< 0.08	< 0.08	< 0.08
2-Nitroaniline	< 0.34	< 0.4	< 0.4	< 0.4
3-Nitroaniline	< 0.34	< 0.4	< 0.4	< 0.4
4-Nitroaniline	< 0.34	< 0.4	< 0.4	< 0.4
Aniline	< 0.07	< 0.08	< 0.08	< 0.08
Benzyl alcohol	< 0.7	< 0.7	< 0.8	< 0.7
Nitrobenzene	< 0.07	< 0.08	< 0.08	< 0.08
Isophorone	< 0.07	< 0.08	< 0.08	< 0.08
2,4-Dinitrotoluene	< 0.14	< 0.2	< 0.2	< 0.2
2,6-Dinitrotoluene	< 0.14	< 0.2	< 0.2	< 0.2
Benzdine (estimated)	< 0.34	< 0.4	< 0.4	< 0.4
3,3'-Dichlorobenzidine	< 0.07	< 0.08	< 0.08	< 0.08



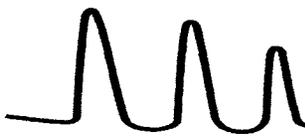
# LABORATORY REPORT

EAI ID#: **227592**

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	SB-8/NB-2 (7-9')	SB-11 (8-10')	SB-4 (7-9')	SB-5/NB-1 (10-12')
Lab Sample ID:	227592.02	227592.03	227592.05	227592.06
Matrix:	soil	soil	soil	soil
Date Sampled:	6/8/21	6/9/21	6/9/21	6/9/21
Date Received:	6/14/21	6/14/21	6/14/21	6/14/21
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Date of Extraction/Prep:	6/16/21	6/14/21	6/14/21	6/16/21
Date of Analysis:	6/17/21	6/15/21	6/15/21	6/17/21
Analyst:	JMR	JMR	JMR	JMR
Method:	8270D	8270D	8270D	8270D
Dilution Factor:	1	1	1	1
Pyridine	< 0.34	< 0.4	< 0.4	< 0.4
Azobenzene	< 0.07	< 0.08	< 0.08	< 0.08
Carbazole	< 0.07	< 0.08	< 0.08	< 0.08
Dimethylphthalate	< 0.07	< 0.08	< 0.08	< 0.08
Diethylphthalate	< 0.34	< 0.4	< 0.4	< 0.4
Di-n-butylphthalate	< 0.34	< 0.4	< 0.4	< 0.4
Butylbenzylphthalate	< 0.34	< 0.4	< 0.4	< 0.4
bis(2-Ethylhexyl)phthalate	< 0.34	< 0.4	< 0.4	< 0.4
Di-n-octylphthalate	< 0.34	< 0.4	< 0.4	< 0.4
Dibenzofuran	< 0.07	< 0.08	< 0.08	< 0.08
Naphthalene	< 0.07	< 0.08	< 0.08	< 0.08
2-Methylnaphthalene	< 0.07	< 0.08	< 0.08	< 0.08
1-Methylnaphthalene	< 0.07	< 0.08	< 0.08	< 0.08
Acenaphthylene	< 0.07	< 0.08	< 0.08	< 0.08
Acenaphthene	< 0.07	< 0.08	< 0.08	< 0.08
Fluorene	< 0.07	< 0.08	< 0.08	< 0.08
Phenanthrene	< 0.07	< 0.08	< 0.08	<b>0.11</b>
Anthracene	< 0.07	< 0.08	< 0.08	< 0.08
Fluoranthene	< 0.07	< 0.08	< 0.08	<b>0.14</b>
Pyrene	< 0.07	< 0.08	< 0.08	<b>0.12</b>
Benzo[a]anthracene	< 0.07	< 0.08	< 0.08	< 0.08
Chrysene	< 0.07	< 0.08	< 0.08	< 0.08
Benzo[b]fluoranthene	< 0.07	< 0.08	< 0.08	< 0.08
Benzo[k]fluoranthene	< 0.07	< 0.08	< 0.08	< 0.08
Benzo[a]pyrene	< 0.07	< 0.08	< 0.08	< 0.08
Indeno[1,2,3-cd]pyrene	< 0.07	< 0.08	< 0.08	< 0.08
Dibenz[a,h]anthracene	< 0.07	< 0.08	< 0.08	< 0.08
Benzo[g,h,i]perylene	< 0.07	< 0.08	< 0.08	< 0.08
n-Decane	< 0.34	< 0.4	< 0.4	< 0.4
n-Octadecane	< 0.34	< 0.4	< 0.4	< 0.4
2-Fluorophenol (surr)	<b>68 %R</b>	<b>58 %R</b>	<b>68 %R</b>	<b>62 %R</b>
Phenol-d6 (surr)	<b>71 %R</b>	<b>61 %R</b>	<b>72 %R</b>	<b>67 %R</b>
2,4,6-Tribromophenol (surr)	<b>84 %R</b>	<b>74 %R</b>	<b>88 %R</b>	<b>83 %R</b>
Nitrobenzene-D5 (surr)	<b>77 %R</b>	<b>67 %R</b>	<b>77 %R</b>	<b>70 %R</b>
2-Fluorobiphenyl (surr)	<b>80 %R</b>	<b>70 %R</b>	<b>83 %R</b>	<b>75 %R</b>
p-Terphenyl-D14 (surr)	<b>82 %R</b>	<b>76 %R</b>	<b>83 %R</b>	<b>76 %R</b>



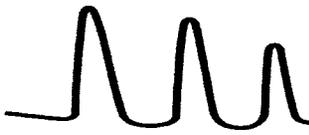
# LABORATORY REPORT

EAI ID#: 227592

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	SB-3 (7-9')	SB-2 (12-14')	SB-6 (2.0')	SB-7 (2.0')
Lab Sample ID:	227592.07	227592.08	227592.09	227592.1
Matrix:	soil	soil	soil	soil
Date Sampled:	6/10/21	6/10/21	6/11/21	6/11/21
Date Received:	6/14/21	6/14/21	6/14/21	6/14/21
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Date of Extraction/Prep:	6/16/21	6/16/21	6/16/21	6/14/21
Date of Analysis:	6/17/21	6/17/21	6/17/21	6/15/21
Analyst:	JMR	JMR	JMR	JMR
Method:	8270D	8270D	8270D	8270D
Dilution Factor:	1	1	6	1
alpha-Terpineol	< 0.4	< 0.4	< 2	< 0.4
Phenol	< 0.08	< 0.08	< 0.4	< 0.08
2-Chlorophenol	< 0.08	< 0.08	< 0.4	< 0.08
2,4-Dichlorophenol	< 0.08	< 0.08	< 0.4	< 0.08
2,4,5-Trichlorophenol	< 0.08	< 0.08	< 0.4	< 0.08
2,4,6-Trichlorophenol	< 0.08	< 0.08	< 0.4	< 0.08
Pentachlorophenol	< 0.4	< 0.4	< 2	< 0.4
2-Nitrophenol	< 0.4	< 0.4	< 2	< 0.4
4-Nitrophenol	< 0.4	< 0.4	< 2	< 0.4
2,4-Dinitrophenol	< 0.8	< 0.8	< 4	< 0.8
2-Methylphenol	< 0.08	< 0.08	< 0.4	< 0.08
3/4-Methylphenol	< 0.08	< 0.08	< 0.4	< 0.08
2,4-Dimethylphenol	< 0.4	< 0.4	< 2	< 0.4
4-Chloro-3-methylphenol	< 0.08	< 0.08	< 0.4	< 0.08
4,6-Dinitro-2-methylphenol	< 0.4	< 0.4	< 2	< 0.4
Benzoic Acid	< 4	< 4	< 20	< 4
N-Nitrosodimethylamine	< 0.08	< 0.08	< 0.4	< 0.08
n-Nitroso-di-n-propylamine	< 0.04	< 0.05	< 0.2	< 0.05
n-Nitrosodiphenylamine	< 0.08	< 0.08	< 0.4	< 0.08
bis(2-Chloroethyl)ether	< 0.08	< 0.08	< 0.4	< 0.08
bis(2-chloroisopropyl)ether	< 0.08	< 0.08	< 0.4	< 0.08
bis(2-Chloroethoxy)methane	< 0.08	< 0.08	< 0.4	< 0.08
1,3-Dichlorobenzene	< 0.08	< 0.08	< 0.4	< 0.08
Acetophenone	< 0.8	< 0.8	< 4	< 0.8
1,4-Dichlorobenzene	< 0.08	< 0.08	< 0.4	< 0.08
1,2-Dichlorobenzene	< 0.08	< 0.08	< 0.4	< 0.08
1,2,4-Trichlorobenzene	< 0.08	< 0.08	< 0.4	< 0.08
2-Chloronaphthalene	< 0.08	< 0.08	< 0.4	< 0.08
4-Chlorophenyl-phenylether	< 0.08	< 0.08	< 0.4	< 0.08
4-Bromophenyl-phenylether	< 0.08	< 0.08	< 0.4	< 0.08
Hexachloroethane	< 0.08	< 0.08	< 0.4	< 0.08
Hexachlorobutadiene	< 0.08	< 0.08	< 0.4	< 0.08
Hexachlorocyclopentadiene	< 0.4	< 0.4	< 2	< 0.4
Hexachlorobenzene	< 0.08	< 0.08	< 0.4	< 0.08
4-Chloroaniline	< 0.08	< 0.08	< 0.4	< 0.08
2,3-Dichloroaniline	< 0.08	< 0.08	< 0.4	< 0.08
2-Nitroaniline	< 0.4	< 0.4	< 2	< 0.4
3-Nitroaniline	< 0.4	< 0.4	< 2	< 0.4
4-Nitroaniline	< 0.4	< 0.4	< 2	< 0.4
Aniline	< 0.08	< 0.08	< 0.4	< 0.08
Benzyl alcohol	< 0.8	< 0.8	< 4	< 0.8
Nitrobenzene	< 0.08	< 0.08	< 0.4	< 0.08
Isophorone	< 0.08	< 0.08	< 0.4	< 0.08
2,4-Dinitrotoluene	< 0.2	< 0.2	< 0.8	< 0.2
2,6-Dinitrotoluene	< 0.2	< 0.2	< 0.8	< 0.2
Benzidine (estimated)	< 0.4	< 0.4	< 2	< 0.4
3,3'-Dichlorobenzidine	< 0.08	< 0.08	< 0.4	< 0.08



# LABORATORY REPORT

EAI ID#: **227592**

Client: **Nobis Group**

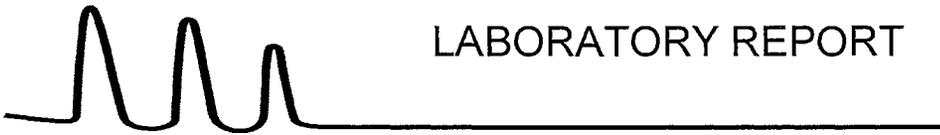
Client Designation: **Robin Rug | 095560.260**

Sample ID:	SB-3 (7-9')	SB-2 (12-14')	SB-6 (2.0')	SB-7 (2.0')
Lab Sample ID:	227592.07	227592.08	227592.09	227592.1
Matrix:	soil	soil	soil	soil
Date Sampled:	6/10/21	6/10/21	6/11/21	6/11/21
Date Received:	6/14/21	6/14/21	6/14/21	6/14/21
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Date of Extraction/Prep:	6/16/21	6/16/21	6/16/21	6/14/21
Date of Analysis:	6/17/21	6/17/21	6/17/21	6/15/21
Analyst:	JMR	JMR	JMR	JMR
Method:	8270D	8270D	8270D	8270D
Dilution Factor:	1	1	6	1
Pyridine	< 0.4	< 0.4	< 2	< 0.4
Azobenzene	< 0.08	< 0.08	< 0.4	< 0.08
Carbazole	< 0.08	< 0.08	<b>3.1</b>	<b>0.57</b>
Dimethylphthalate	< 0.08	< 0.08	< 0.4	< 0.08
Diethylphthalate	< 0.4	< 0.4	< 2	< 0.4
Di-n-butylphthalate	< 0.4	< 0.4	< 2	< 0.4
Butylbenzylphthalate	< 0.4	< 0.4	< 2	< 0.4
bis(2-Ethylhexyl)phthalate	< 0.4	< 0.4	< 2	< 0.4
Di-n-octylphthalate	< 0.4	< 0.4	< 2	< 0.4
Dibenzofuran	< 0.08	< 0.08	<b>2.2</b>	<b>0.31</b>
Naphthalene	< 0.08	< 0.08	<b>2.6</b>	<b>0.35</b>
2-Methylnaphthalene	< 0.08	< 0.08	<b>0.73</b>	<b>0.12</b>
1-Methylnaphthalene	< 0.08	< 0.08	<b>0.55</b>	<b>0.13</b>
Acenaphthylene	< 0.08	< 0.08	<b>2.8</b>	<b>0.57</b>
Acenaphthene	< 0.08	< 0.08	<b>2.4</b>	<b>0.41</b>
Fluorene	< 0.08	< 0.08	<b>2.6</b>	<b>0.40</b>
Phenanthrene	< 0.08	< 0.08	<b>30</b>	<b>4.9</b>
Anthracene	< 0.08	< 0.08	<b>8.1</b>	<b>1.4</b>
Fluoranthene	< 0.08	< 0.08	<b>57</b>	<b>7.2</b>
Pyrene	< 0.08	< 0.08	<b>37</b>	<b>6.8</b>
Benzo[a]anthracene	< 0.08	< 0.08	<b>25</b>	<b>4.6</b>
Chrysene	< 0.08	< 0.08	<b>22</b>	<b>4.2</b>
Benzo[b]fluoranthene	< 0.08	< 0.08	<b>27</b>	<b>6.1</b>
Benzo[k]fluoranthene	< 0.08	< 0.08	<b>7.8</b>	<b>2.3</b>
Benzo[a]pyrene	< 0.08	< 0.08	<b>22</b>	<b>4.6</b>
Indeno[1,2,3-cd]pyrene	< 0.08	< 0.08	<b>9.2</b>	<b>1.3</b>
Dibenz[a,h]anthracene	< 0.08	< 0.08	<b>2.2</b>	<b>0.31</b>
Benzo[g,h,i]perylene	< 0.08	< 0.08	<b>6.3</b>	<b>0.98</b>
n-Decane	< 0.4	< 0.4	< 2	< 0.4
n-Octadecane	< 0.4	< 0.4	< 2	< 0.4
2-Fluorophenol (surr)	<b>57 %R</b>	<b>61 %R</b>	<b>59 %R</b>	<b>66 %R</b>
Phenol-d6 (surr)	<b>62 %R</b>	<b>65 %R</b>	<b>64 %R</b>	<b>70 %R</b>
2,4,6-Tribromophenol (surr)	<b>80 %R</b>	<b>79 %R</b>	<b>83 %R</b>	<b>88 %R</b>
Nitrobenzene-D5 (surr)	<b>62 %R</b>	<b>69 %R</b>	<b>68 %R</b>	<b>74 %R</b>
2-Fluorobiphenyl (surr)	<b>70 %R</b>	<b>74 %R</b>	<b>76 %R</b>	<b>81 %R</b>
p-Terphenyl-D14 (surr)	<b>79 %R</b>	<b>78 %R</b>	<b>80 %R</b>	<b>83 %R</b>

Deviations from the Report:

SB-6 (2.0'): Parameter: Fluoranthene Date of Analysis: 6/18/2021 Dilution Factor: 30

SB-6 (2.0'): Detection limits elevated due to sample matrix causing internal standard failure in initial extraction.



# LABORATORY REPORT

EAI ID#: 227592

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	SB-8/NB-2 (7-9')	SB-11 (8-10')	SB-4 (7-9')	SB-5/NB-1 (10-12')
Lab Sample ID:	227592.02	227592.03	227592.05	227592.06
Matrix:	soil	soil	soil	soil
Date Sampled:	6/8/21	6/9/21	6/9/21	6/9/21
Date Received:	6/14/21	6/14/21	6/14/21	6/14/21
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Date of Extraction/Prep:	6/15/21	6/15/21	6/15/21	6/15/21
Date of Analysis:	6/15/21	6/15/21	6/15/21	6/15/21
Analyst:	JLB	JLB	JLB	JLB
Method:	8100mod	8100mod	8100mod	8100mod
Dilution Factor:	1	1	1	1
TPH (C9-C40)	< 30	< 30	< 30	90
p-Terphenyl-D14 (surr)	78 %R	77 %R	77 %R	85 %R



# LABORATORY REPORT

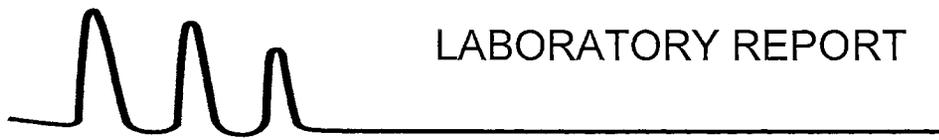
EAI ID#: **227592**

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	SB-3 (7-9')	SB-2 (12-14')	SB-6 (2.0')	SB-7 (2.0')
Lab Sample ID:	227592.07	227592.08	227592.09	227592.1
Matrix:	soil	soil	soil	soil
Date Sampled:	6/10/21	6/10/21	6/11/21	6/11/21
Date Received:	6/14/21	6/14/21	6/14/21	6/14/21
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Date of Extraction/Prep:	6/15/21	6/15/21	6/15/21	6/15/21
Date of Analysis:	6/15/21	6/15/21	6/15/21	6/15/21
Analyst:	JLB	JLB	JLB	JLB
Method:	8100mod	8100mod	8100mod	8100mod
Dilution Factor:	1	1	11	2
TPH (C9-C40)	< 30	< 30	<b>800</b>	<b>190</b>
p-Terphenyl-D14 (surr)	<b>55 %R</b>	<b>69 %R</b>	<b>DOR</b>	<b>118 %R</b>

DOR: Diluted out of range.



# LABORATORY REPORT

EAI ID#: 227592

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	SB-8/NB-2 (7-9')	SB-11 (8-10')	SB-4 (7-9')	SB-5/NB-1 (10-12')
Lab Sample ID:	227592.02	227592.03	227592.05	227592.06
Matrix:	soil	soil	soil	soil
Date Sampled:	6/8/21	6/9/21	6/9/21	6/9/21
Date Received:	6/14/21	6/14/21	6/14/21	6/14/21
% Solid:	96.4	90.1	85.1	89.2
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Date of Extraction/Prep:	6/14/21	6/14/21	6/14/21	6/14/21
Date of Analysis:	6/18/21	6/18/21	6/18/21	6/18/21
Analyst:	MB	MB	MB	MB
Extraction Method:	3540C	3540C	3540C	3540C
Analysis Method:	8081B	8081B	8081B	8081B
Dilution Factor:	1	1	1	1
Aldrin	< 0.005	< 0.005	< 0.006	< 0.006
alpha-BHC	< 0.005	< 0.005	< 0.006	< 0.006
beta-BHC	< 0.005	< 0.005	< 0.006	< 0.006
Lindane(gamma-BHC)	< 0.005	< 0.005	< 0.006	< 0.006
delta-BHC	< 0.005	< 0.005	< 0.006	< 0.006
Chlordane	< 0.02	< 0.02	< 0.02	< 0.02
4,4'-DDT	< 0.005	< 0.005	< 0.006	< 0.006
4,4'-DDE	< 0.005	< 0.005	< 0.006	< 0.006
4,4'-DDD	< 0.005	< 0.005	< 0.006	< 0.006
Dieldrin	< 0.005	< 0.005	< 0.006	< 0.006
Endosulfan I	< 0.005	< 0.005	< 0.006	< 0.006
Endosulfan II	< 0.005	< 0.005	< 0.006	< 0.006
Endosulfan Sulfate	< 0.005	< 0.005	< 0.006	< 0.006
Endrin	< 0.005	< 0.005	< 0.006	< 0.006
Endrin Aldehyde	< 0.005	< 0.005	< 0.006	< 0.006
Endrin Ketone	< 0.005	< 0.005	< 0.006	< 0.006
Heptachlor	< 0.005	< 0.005	< 0.006	< 0.006
Heptachlor Epoxide	< 0.005	< 0.005	< 0.006	< 0.006
Methoxychlor	< 0.005	< 0.005	< 0.006	< 0.006
Toxaphene	< 0.05	< 0.05	< 0.06	< 0.06
TMX (surr)	64 %R	57 %R	62 %R	61 %R
DCB (surr)	46 %R	45 %R	41 %R	41 %R

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



# LABORATORY REPORT

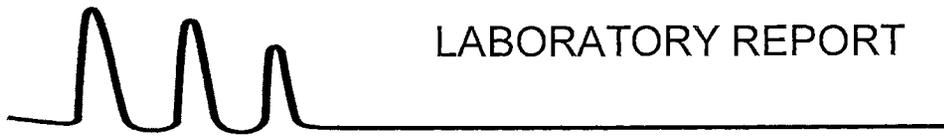
EAI ID#: 227592

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	SB-3 (7-9')	SB-2 (12-14')	SB-6 (2.0')	SB-7 (2.0')
Lab Sample ID:	227592.07	227592.08	227592.09	227592.1
Matrix:	soil	soil	soil	soil
Date Sampled:	6/10/21	6/10/21	6/11/21	6/11/21
Date Received:	6/14/21	6/14/21	6/14/21	6/14/21
% Solid:	88.3	87.5	86.2	84.1
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Date of Extraction/Prep:	6/14/21	6/15/21	6/15/21	6/15/21
Date of Analysis:	6/18/21	6/18/21	6/18/21	6/18/21
Analyst:	MB	MB	MB	MB
Extraction Method:	3540C	3540C	3540C	3540C
Analysis Method:	8081B	8081B	8081B	8081B
Dilution Factor:	1	1	1	1
Aldrin	< 0.006	< 0.006	< 0.006	< 0.006
alpha-BHC	< 0.006	< 0.006	< 0.006	< 0.006
beta-BHC	< 0.006	< 0.006	< 0.006	< 0.006
Lindane(gamma-BHC)	< 0.006	< 0.006	< 0.006	< 0.006
delta-BHC	< 0.006	< 0.006	< 0.006	< 0.006
Chlordane	< 0.02	< 0.02	< 0.02	< 0.02
4,4'-DDT	< 0.006	< 0.006	< 0.006	< 0.006
4,4'-DDE	< 0.006	< 0.006	< 0.006	< 0.006
4,4'-DDD	< 0.006	< 0.006	< 0.006	< 0.006
Dieldrin	< 0.006	< 0.006	< 0.006	< 0.006
Endosulfan I	< 0.006	< 0.006	< 0.006	< 0.006
Endosulfan II	< 0.006	< 0.006	< 0.006	< 0.006
Endosulfan Sulfate	< 0.006	< 0.006	< 0.006	< 0.006
Endrin	< 0.006	< 0.006	< 0.006	< 0.006
Endrin Aldehyde	< 0.006	< 0.006	< 0.006	< 0.006
Endrin Ketone	< 0.006	< 0.006	< 0.006	< 0.006
Heptachlor	< 0.006	< 0.006	< 0.006	< 0.006
Heptachlor Epoxide	< 0.006	< 0.006	< 0.006	< 0.006
Methoxychlor	< 0.006	< 0.006	< 0.006	< 0.006
Toxaphene	< 0.06	< 0.06	< 0.06	< 0.06
TMX (surr)	57 %R	57 %R	36 %R	39 %R
DCB (surr)	45 %R	43 %R	35 %R	33 %R

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



# LABORATORY REPORT

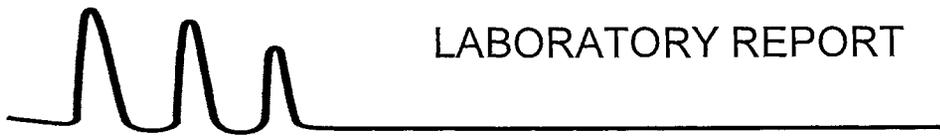
EAI ID#: 227592

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	SB-8/NB-2 (7-9')	SB-11 (8-10')	SB-4 (7-9')	SB-5/NB-1 (10-12')
Lab Sample ID:	227592.02	227592.03	227592.05	227592.06
Matrix:	soil	soil	soil	soil
Date Sampled:	6/8/21	6/9/21	6/9/21	6/9/21
Date Received:	6/14/21	6/14/21	6/14/21	6/14/21
% Solid:	96.4	90.1	85.1	89.2
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Date of Extraction/Prep:	6/14/21	6/14/21	6/14/21	6/14/21
Date of Analysis:	6/15/21	6/15/21	6/15/21	6/15/21
Analyst:	MB	MB	MB	MB
Extraction Method:	3540C	3540C	3540C	3540C
Analysis Method:	8082A	8082A	8082A	8082A
Dilution Factor:	1	1	1	1
PCB-1016	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1221	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1232	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1242	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1248	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1254	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1260	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1262	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1268	< 0.02	< 0.02	< 0.02	< 0.02
TMX (surr)	94 %R	85 %R	99 %R	98 %R
DCB (surr)	98 %R	97 %R	99 %R	84 %R

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



# LABORATORY REPORT

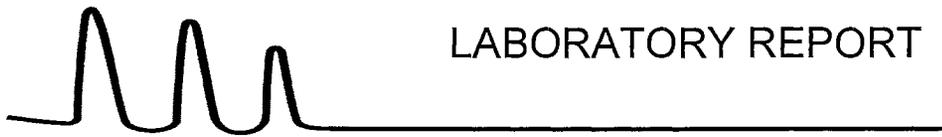
EAI ID#: **227592**

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	SB-3 (7-9')	SB-2 (12-14')	SB-6 (2.0')	SB-7 (2.0')
Lab Sample ID:	227592.07	227592.08	227592.09	227592.1
Matrix:	soil	soil	soil	soil
Date Sampled:	6/10/21	6/10/21	6/11/21	6/11/21
Date Received:	6/14/21	6/14/21	6/14/21	6/14/21
% Solid:	88.3	87.5	86.2	84.1
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Date of Extraction/Prep:	6/14/21	6/15/21	6/15/21	6/15/21
Date of Analysis:	6/15/21	6/16/21	6/16/21	6/16/21
Analyst:	MB	MB	MB	MB
Extraction Method:	3540C	3540C	3540C	3540C
Analysis Method:	8082A	8082A	8082A	8082A
Dilution Factor:	1	1	1	1
PCB-1016	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1221	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1232	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1242	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1248	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1254	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1260	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1262	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1268	< 0.02	< 0.02	< 0.02	< 0.02
TMX (surr)	<b>97 %R</b>	<b>85 %R</b>	<b>51 %R</b>	<b>56 %R</b>
DCB (surr)	<b>108 %R</b>	<b>96 %R</b>	<b>52 %R</b>	<b>56 %R</b>

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



# LABORATORY REPORT

EAI ID#: 227592

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	SB-8/NB-2 (7-9')	SB-11 (8-10')	SB-4 (7-9')	SB-5/NB-1 (10-12')					
Lab Sample ID:	227592.02	227592.03	227592.05	227592.06					
Matrix:	soil	soil	soil	soil					
Date Sampled:	6/8/21	6/9/21	6/9/21	6/9/21					
Date Received:	6/14/21	6/14/21	6/14/21	6/14/21	Units	Analysis Date Time		Method	Analyst
Cyanide Total	< 0.5	< 0.5	< 0.5	< 0.5	mg/kg	06/16/21	8:55	9010/9014	RB

Sample ID:	SB-3 (7-9')	SB-2 (12-14')	SB-6 (2.0')	SB-7 (2.0')					
Lab Sample ID:	227592.07	227592.08	227592.09	227592.1					
Matrix:	soil	soil	soil	soil					
Date Sampled:	6/10/21	6/10/21	6/11/21	6/11/21					
Date Received:	6/14/21	6/14/21	6/14/21	6/14/21	Units	Analysis Date Time		Method	Analyst
Cyanide Total	< 0.5	< 0.5	<b>0.54</b>	< 0.5	mg/kg	06/16/21	8:55	9010/9014	RB



# LABORATORY REPORT

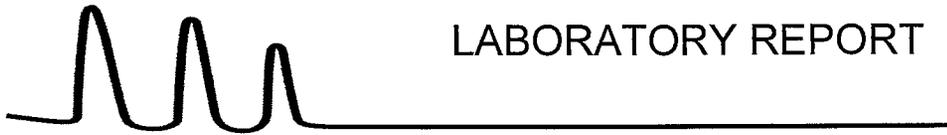
EAI ID#: 227592

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	SB-8/NB-2 (7-9')	SB-11 (8-10')	SB-4 (7-9')	SB-5/NB-1 (10-12')					
Lab Sample ID:	227592.02	227592.03	227592.05	227592.06					
Matrix:	soil	soil	soil	soil					
Date Sampled:	6/8/21	6/9/21	6/9/21	6/9/21	<b>Analytical</b>		<b>Date of</b>		
Date Received:	6/14/21	6/14/21	6/14/21	6/14/21	<b>Matrix</b>	<b>Units</b>	<b>Analysis</b>	<b>Method</b>	<b>Analyst</b>
Arsenic	8.5	4.5	1.5	4.2	SolTotDry	mg/kg	6/15/21	6020	DS
Barium	16	18	2.3	8.5	SolTotDry	mg/kg	6/15/21	6020	DS
Cadmium	< 0.5	< 0.5	< 0.5	< 0.5	SolTotDry	mg/kg	6/15/21	6020	DS
Chromium	12	12	6.1	24	SolTotDry	mg/kg	6/15/21	6020	DS
Lead	6.6	7.7	2.3	19	SolTotDry	mg/kg	6/15/21	6020	DS
Mercury	< 0.1	< 0.1	< 0.1	< 0.1	SolTotDry	mg/kg	6/15/21	6020	DS
Selenium	0.57	< 0.5	< 0.5	0.52	SolTotDry	mg/kg	6/15/21	6020	DS
Silver	< 0.5	< 0.5	< 0.5	< 0.5	SolTotDry	mg/kg	6/15/21	6020	DS

Sample ID:	SB-3 (7-9')	SB-2 (12-14')						
Lab Sample ID:	227592.07	227592.08						
Matrix:	soil	soil						
Date Sampled:	6/10/21	6/10/21			<b>Analytical</b>		<b>Date of</b>	
Date Received:	6/14/21	6/14/21			<b>Matrix</b>	<b>Units</b>	<b>Analysis</b>	<b>Method</b>
Arsenic	4.1	4.0			SolTotDry	mg/kg	6/15/21	6020
Barium	19	11			SolTotDry	mg/kg	6/15/21	6020
Cadmium	< 0.5	< 0.5			SolTotDry	mg/kg	6/15/21	6020
Chromium	14	7.7			SolTotDry	mg/kg	6/15/21	6020
Lead	6.7	5.7			SolTotDry	mg/kg	6/15/21	6020
Mercury	< 0.1	< 0.1			SolTotDry	mg/kg	6/15/21	6020
Selenium	< 0.5	< 0.5			SolTotDry	mg/kg	6/15/21	6020
Silver	< 0.5	< 0.5			SolTotDry	mg/kg	6/15/21	6020



# LABORATORY REPORT

EAI ID#: **227592**

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	SB-6 (2.0')	SB-7 (2.0')					
<b>Lab Sample ID:</b>	227592.09	227592.1					
<b>Matrix:</b>	soil	soil					
<b>Date Sampled:</b>	6/11/21	6/11/21	<b>Analytical</b>		<b>Date of</b>		
<b>Date Received:</b>	6/14/21	6/14/21	<b>Matrix</b>	<b>Units</b>	<b>Analysis</b>	<b>Method</b>	<b>Analyst</b>
Arsenic	6.1	4.7	SolTotDry	mg/kg	6/15/21	6020	DS
Barium	92	62	SolTotDry	mg/kg	6/15/21	6020	DS
Cadmium	< 0.5	< 0.5	SolTotDry	mg/kg	6/15/21	6020	DS
Chromium	25	17	SolTotDry	mg/kg	6/15/21	6020	DS
Lead	310	260	SolTotDry	mg/kg	6/15/21	6020	DS
Mercury	0.60	0.16	SolTotDry	mg/kg	6/15/21	6020	DS
Selenium	< 0.5	< 0.5	SolTotDry	mg/kg	6/15/21	6020	DS
Silver	< 0.5	< 0.5	SolTotDry	mg/kg	6/15/21	6020	DS
Lead	< 0.5	< 0.5	TCLPsolid	mg/L	6/18/21	6020	DS



Tuesday, June 22, 2021

Attn: Front Office  
Eastern Analytical  
25 Chenell Drive  
Concord, NH 03301

Project ID: 227592  
SDG ID: GCI54779  
Sample ID#s: CI54779 - CI54782

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in cursive script that reads "Phyllis Shiller".

Phyllis/Shiller  
Laboratory Director

NELAC - #NY11301  
CT Lab Registration #PH-0618  
MA Lab Registration #M-CT007  
ME Lab Registration #CT-007  
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003  
NY Lab Registration #11301  
PA Lab Registration #68-03530  
RI Lab Registration #63  
UT Lab Registration #CT00007  
VT Lab Registration #VT11301



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Sample Id Cross Reference

June 22, 2021

SDG I.D.: GCI54779

Project ID: 227592

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Client Id	Lab Id	Matrix
SB-4 (7-9')	CI54779	SOIL
SB-6 (2.0')	CI54780	SOIL
SB-7 (2.0')	CI54781	SOIL
SB-5/NB-1 (10-12')	CI54782	SOIL



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102 Fax (860) 645-0823

**Analysis Report**  
 June 22, 2021

FOR: Attn: Front Office  
 Eastern Analytical  
 25 Chenell Drive  
 Concord, NH 03301

Sample Information

Matrix: SOIL  
 Location Code: EASTANAL-NH  
 Rush Request: Standard  
 P.O.#: 55122

Custody Information

Collected by:  
 Received by: SW  
 Analyzed by: see "By" below

Date Time

06/09/21 12:25  
 06/15/21 11:33

Laboratory Data

SDG ID: GC154779  
 Phoenix ID: CI54779

Project ID: 227592  
 Client ID: SB-4 (7-9')

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	84		%		06/15/21	AR	SW846-%Solid
Chromium, Hex. (SW3060 digestion)	< 0.43	0.43	mg/Kg	1	06/17/21	BJA	SW7196A
pH at 25C - Soil	7.15	1.00	pH Units	1	06/16/21 12:37	DJ/EG	SW846 9045D
Redox Potential	231		mV	1	06/16/21	DJ/EG	SM2580B-09

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Hexavalent Chromium:  
 This sample is in a reducing state.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

June 22, 2021

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102 Fax (860) 645-0823

# Analysis Report

June 22, 2021

FOR: Attn: Front Office  
 Eastern Analytical  
 25 Chenell Drive  
 Concord, NH 03301

## Sample Information

Matrix: SOIL  
 Location Code: EASTANAL-NH  
 Rush Request: Standard  
 P.O.#: 55122

## Custody Information

Collected by:  
 Received by: SW  
 Analyzed by: see "By" below

Date Time

06/11/21 13:30  
 06/15/21 11:33

## Laboratory Data

SDG ID: GC154779  
 Phoenix ID: CI54780

Project ID: 227592  
 Client ID: SB-6 (2.0')

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	85		%		06/15/21	AR	SW846-%Solid
Chromium, Hex. (SW3060 digestion)	< 0.44	0.44	mg/Kg	1	06/17/21	BJA	SW7196A
pH at 25C - Soil	7.38	1.00	pH Units	1	06/16/21 12:37	DJ/EG	SW846 9045D
Redox Potential	314		mV	1	06/16/21	DJ/EG	SM2580B-09

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

### Comments:

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Hexavalent Chromium:  
 This sample is in a reducing state.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.  
 If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.  
 The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

June 22, 2021

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102 Fax (860) 645-0823

# Analysis Report

June 22, 2021

FOR: Attn: Front Office  
 Eastern Analytical  
 25 Chenell Drive  
 Concord, NH 03301

## Sample Information

Matrix: SOIL  
 Location Code: EASTANAL-NH  
 Rush Request: Standard  
 P.O.#: 55122

## Custody Information

Collected by:  
 Received by: SW  
 Analyzed by: see "By" below

Date Time  
 06/11/21 11:50  
 06/15/21 11:33

## Laboratory Data

SDG ID: GCI54779  
 Phoenix ID: CI54781

Project ID: 227592  
 Client ID: SB-7 (2.0')

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	87		%		06/15/21	AR	SW846-%Solid
Chromium, Hex. (SW3060 digestion)	< 0.44	0.44	mg/Kg	1	06/18/21	BJA/QH	SW7196A
pH at 25C - Soil	7.93	1.00	pH Units	1	06/16/21 12:37	DJ/EG	SW846 9045D
Redox Potential	338		mV	1	06/16/21	DJ/EG	SM2580B-09

RL/PQL=Reporting/Practical Quantitation Level! ND=Not Detected BRL=Below Reporting Level

### Comments:

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Hexavalent Chromium:  
 This sample is in a reducing state.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

June 22, 2021

Reviewed and Released by: Rashmi Makol, Project Manager



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102 Fax (860) 645-0823

# Analysis Report

June 22, 2021

FOR: Attn: Front Office  
 Eastern Analytical  
 25 Chenell Drive  
 Concord, NH 03301

## Sample Information

Matrix: SOIL  
 Location Code: EASTANAL-NH  
 Rush Request: Standard  
 P.O.#: 55122

## Custody Information

Collected by:  
 Received by: SW  
 Analyzed by: see "By" below

## Date Time

06/09/21 13:25  
 06/15/21 11:33

## Laboratory Data

SDG ID: GCI54779  
 Phoenix ID: CI54782

Project ID: 227592  
 Client ID: SB-5/NB-1 (10-12')

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Percent Solid	91		%		06/15/21	AR	SW846-%Solid
Chromium, Hex. (SW3060 digestion)	< 0.41	0.41	mg/Kg	1	06/18/21	BJA/QH	SW7196A
pH at 25C - Soil	7.39	1.00	pH Units	1	06/16/21 12:37	DJ/EG	SW846 9045D
Redox Potential	320		mV	1	06/16/21	DJ/EG	SM2580B-09

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

### Comments:

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Hexavalent Chromium:  
 This sample is in a reducing state.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.  
 If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.  
 The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

June 22, 2021

Reviewed and Released by: Rashmi Makol, Project Manager



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045

Tel. (860) 645-1102 Fax (860) 645-0823

**QA/QC Report**

June 22, 2021

QA/QC Data

SDG I.D.: GCI54779

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 579920 (mg/kg), QC Sample No: CI54469 40X (CI54779, CI54780)													
<u>Chromium, Hexavalent - Soil</u>													
Chromium, Hexavalent	BRL	0.40	<0.39	<0.42	NC	94.1						85 - 115	30
Chromium, Hexavalent (Ins)						95.1			92.8			85 - 115	30
Chromium, Hexavalent (Sol)						93.4			90.8			85 - 115	30
QA/QC Batch 580132 (mg/kg), QC Sample No: CI57461 40X (CI54781, CI54782)													
<u>Chromium, Hexavalent - Soil</u>													
Chromium, Hexavalent	BRL	0.40	<0.42	<0.42	NC	95.1						85 - 115	30
Chromium, Hexavalent (Ins)						103			94.3			85 - 115	30
Chromium, Hexavalent (Sol)						92.2			56.7			85 - 115	30 m

m = This parameter is outside laboratory MS/MSD specified recovery limits.



Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045

Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

June 22, 2021

QA/QC Data

SDG I.D.: GCI54779

Parameter	Blk Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 579781 (PH), QC Sample No: CI54731 (CI54779, CI54780, CI54781, CI54782)													
pH at 25C - Soil			7.50	7.46	0.50	99.7						85 - 115	20

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

- RPD - Relative Percent Difference
- LCS - Laboratory Control Sample
- LCSD - Laboratory Control Sample Duplicate
- MS - Matrix Spike
- MS Dup - Matrix Spike Duplicate
- NC - No Criteria
- Intf - Interference

Phyllis Shiller, Laboratory Director

June 22, 2021

# Sample Criteria Exceedances Report

## GC154779 - EASTANAL-NH

Criteria

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedances. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedance information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

Result	RL	Criteria	RL	Criteria	Analysis Units



**Environmental Laboratories, Inc.**

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Tel. (860) 645-1102 Fax (860) 645-0823



## Analysis Comments

June 22, 2021

SDG I.D.: GCI54779

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The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report: None.

# CHAIN-OF-CUSTODY RECORD

4.7° WC  
10

EAI ID# 227592

Page 1

Sample ID	Date Sampled	Matrix	aParameters	Sample Notes
SB-4 (7-9')	6/9/2021 12:25	soil	Subcontract - Hexavalent Chromium Soil 3060/7196	54779
SB-6 (2.0')	6/11/2021 13:30	soil	Subcontract - Hexavalent Chromium Soil 3060/7196	54780
SB-7 (2.0')	6/11/2021 11:50	soil	Subcontract - Hexavalent Chromium Soil 3060/7196	54781
SB-5/NB-1 (10-12')	6/9/2021 13:25	soil	Subcontract - Hexavalent Chromium Soil 3060/7196	54782

Rud - 1 802 jar persample.

EAI ID# 227592      Project State: RI  
Project ID: 0  
Company Phoenix Environmental Labs  
Address 587 East Middle Turnpike  
Address Manchester, CT 06040  
Account #  
Phone # (860) 645-1102

**Results Needed:** Preferred Date: Standard  
RUSH Due Date: \_\_\_\_\_

**QC Deliverables**  
 A  
  A+  
  B  
  B+  
  C  
  MA MCP

**Notes about project:**  
 Email login confirmation, pdf of results and invoice to customerservice@easternanalytical.com.

PO #: 55122      EAI ID# 227592

**Data Deliverable** (circle)  
 Excel NH EMD EQUIS ME EGAD

Call prior to analyzing, if RUSH charges will be applied.

Samples Collected by: [Signature] 6/14/21 1500 VPS  
 Relinquished by      Date/Time      Received by  
 UPS [Signature] 6/15/21 11:33  
 Relinquished by      Date/Time      Received by

Eastern Analytical, Inc. 25 Chenell Dr. Concord, NH 03301      Phone: (603)228-0525      1-800-287-0525      customerservice@easternanalytical.com

As a subcontract lab to EAI, you will defend, indemnify and hold Eastern Analytical, Inc., its officers, employees, and agents harmless from and against any and all liability, loss, expense or claims for injury or damages arising out of the performance against this chain of custody but only in proportion to and to the extent such liability, loss, expense, or claims for injury or damages are caused by or result from the negligent or intentional acts or omissions of you as a subcontract lab, your officers, agents or employees







# Eastern Analytical, Inc.

*professional laboratory and drilling services*

Bettina Eames  
Nobis Group  
18 Chenell Drive  
Concord, NH 03301



## Laboratory Report for:

Eastern Analytical, Inc. ID: 227591  
Client Identification: Robin Rug | 095560.260  
Date Received: 6/14/2021

Enclosed are the analytical results per the Chain of Custody for sample(s) in the referenced project. All analyses were performed in accordance with our QA/QC Program, NELAP and other applicable state requirements. All quality control criteria was within acceptance criteria unless noted on the report pages. Results are for the exclusive use of the client named on this report and will not be released to a third party without consent.

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the written approval of the laboratory.

The following standard abbreviations and conventions apply to all EAI reports:

- < : "less than" followed by the reporting limit
- > : "greater than" followed by the reporting limit
- %R : % Recovery

## Certifications:

Eastern Analytical, Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269), Vermont (VT1012), New York (12072), West Virginia (9910C) and Alabama (41620). Please refer to our website at [www.easternanalytical.com](http://www.easternanalytical.com) for a copy of our certificates and accredited parameters.

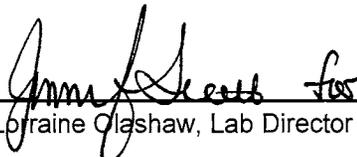
## References:

- EPA 600/4-79-020, 1983
- Standard Methods for Examination of Water and Wastewater, 20th, 21st, 22nd & 23rd edition or noted revision year.
- Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
- Hach Water Analysis Handbook, 4th edition, 1992

If you have any questions regarding the results contained within, please feel free to contact customer service. Unless otherwise requested, we will dispose of the sample(s) 6 weeks from the sample receipt date.

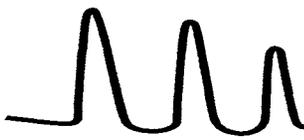
We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

  
Lorraine Clashaw, Lab Director

6/21/21  
Date

16  
# of pages (excluding cover letter)



# SAMPLE CONDITIONS PAGE

EAI ID#: 227591

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Temperature upon receipt (°C): **2.9**

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

Acceptable temperature range (°C): 0-6

Lab ID	Sample ID	Date Received	Date/Time Sampled	Sample Matrix	% Dry Weight	Exceptions/Comments (other than thermal preservation)
227591.01	Trip Blank	6/14/21	6/10/21 08:00	soil	100.0	Adheres to Sample Acceptance Policy
227591.02	TP-7 0-3.5'	6/14/21	6/10/21 09:00	soil	82.1	Adheres to Sample Acceptance Policy
227591.03	TP-6 9-10'	6/14/21	6/10/21 11:15	soil	86.7	Adheres to Sample Acceptance Policy
227591.04	TP-5 6'	6/14/21	6/10/21 13:00	soil	93.9	Adheres to Sample Acceptance Policy
227591.05	TP-4 9'	6/14/21	6/10/21 14:50	soil	89.5	Adheres to Sample Acceptance Policy
227591.06	Trip Blank	6/14/21	6/11/21 07:00	soil	100.0	Adheres to Sample Acceptance Policy
227591.07	TP-14 1-2'	6/14/21	6/11/21 08:30	soil	90.3	Adheres to Sample Acceptance Policy
227591.08	TP-1 0-2'	6/14/21	6/11/21 10:15	soil	92.1	Adheres to Sample Acceptance Policy
227591.09	TP-2 3-4'	6/14/21	6/11/21 10:55	soil	92.0	Adheres to Sample Acceptance Policy
227591.1	TP-3 2-3'	6/14/21	6/11/21 11:40	soil	81.6	Adheres to Sample Acceptance Policy

All results contained in this report relate only to the above listed samples.

Unless otherwise noted:

- Hold times, preservation, container types, and sample conditions adhered to EPA Protocol.
- Solid samples are reported on a dry weight basis, unless otherwise noted. pH/Corrosivity, Flashpoint, Ignitability, Paint Filter, Conductivity and Specific Gravity are always reported on an "as received" basis.
- Analysis of pH, Total Residual Chlorine, Dissolved Oxygen and Sulfite were performed at the laboratory outside of the recommended 15 minute hold time.
- Samples collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures.



# LABORATORY REPORT

EAI ID#: **227591**

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	Trip Blank	TP-7 0-3.5'	TP-6 9-10'	TP-5 6'
<b>Lab Sample ID:</b>	227591.01	227591.02	227591.03	227591.04
<b>Matrix:</b>	soil	soil	soil	soil
<b>Date Sampled:</b>	6/10/21	6/10/21	6/10/21	6/10/21
<b>Date Received:</b>	6/14/21	6/14/21	6/14/21	6/14/21
<b>Units:</b>	mg/kg	mg/kg	mg/kg	mg/kg
<b>Date of Analysis:</b>	6/14/21	6/14/21	6/15/21	6/15/21
<b>Analyst:</b>	JAK	JAK	JAK	JAK
<b>Method:</b>	8260C	8260C	8260C	8260C
<b>Dilution Factor:</b>	1	2	1	1
Dichlorodifluoromethane	< 0.1	< 0.2	< 0.1	< 0.1
Chloromethane	< 0.1	< 0.2	< 0.1	< 0.1
Vinyl chloride	< 0.02	< 0.03	< 0.02	< 0.02
Bromomethane	< 0.1	< 0.2	< 0.1	< 0.1
Chloroethane	< 0.1	< 0.2	< 0.1	< 0.1
Trichlorofluoromethane	< 0.1	< 0.2	< 0.1	< 0.1
Diethyl Ether	< 0.05	< 0.08	< 0.05	< 0.05
Acetone	< 2	< 3	< 2	< 2
1,1-Dichloroethene	< 0.05	< 0.08	< 0.05	< 0.05
tert-Butyl Alcohol (TBA)	< 2	< 3	< 2	< 2
Methylene chloride	< 0.1	< 0.2	< 0.1	< 0.1
Carbon disulfide	< 0.1	< 0.2	< 0.1	< 0.1
Methyl-t-butyl ether(MTBE)	< 0.1	< 0.2	< 0.1	< 0.1
Ethyl-t-butyl ether(ETBE)	< 0.1	< 0.2	< 0.1	< 0.1
Isopropyl ether(DIPE)	< 0.1	< 0.2	< 0.1	< 0.1
tert-amyl methyl ether(TAME)	< 0.1	< 0.2	< 0.1	< 0.1
trans-1,2-Dichloroethene	< 0.05	< 0.08	< 0.05	< 0.05
1,1-Dichloroethane	< 0.05	< 0.08	< 0.05	< 0.05
2,2-Dichloropropane	< 0.05	< 0.08	< 0.05	< 0.05
cis-1,2-Dichloroethene	< 0.05	< 0.08	< 0.05	< 0.05
2-Butanone(MEK)	< 0.5	< 0.8	< 0.5	< 0.5
Bromochloromethane	< 0.05	< 0.08	< 0.05	< 0.05
Tetrahydrofuran(THF)	< 0.5	< 0.8	< 0.5	< 0.5
Chloroform	< 0.05	< 0.08	< 0.05	< 0.05
1,1,1-Trichloroethane	< 0.05	< 0.08	< 0.05	< 0.05
Carbon tetrachloride	< 0.05	< 0.08	< 0.05	< 0.05
1,1-Dichloropropene	< 0.05	< 0.08	< 0.05	< 0.05
Benzene	< 0.05	< 0.08	< 0.05	< 0.05
1,2-Dichloroethane	< 0.05	< 0.08	< 0.05	< 0.05
Trichloroethene	< 0.05	< 0.08	< 0.05	< 0.05
1,2-Dichloropropane	< 0.05	< 0.08	< 0.05	< 0.05
Dibromomethane	< 0.05	< 0.08	< 0.05	< 0.05
Bromodichloromethane	< 0.05	< 0.08	< 0.05	< 0.05
1,4-Dioxane	< 1	< 2	< 1	< 1
4-Methyl-2-pentanone(MIBK)	< 0.5	< 0.8	< 0.5	< 0.5
cis-1,3-Dichloropropene	< 0.05	< 0.08	< 0.05	< 0.05
Toluene	< 0.05	< 0.08	< 0.05	< 0.05
trans-1,3-Dichloropropene	< 0.05	< 0.08	< 0.05	< 0.05
1,1,2-Trichloroethane	< 0.05	< 0.08	< 0.05	< 0.05
2-Hexanone	< 0.1	< 0.2	< 0.1	< 0.1
Tetrachloroethene	< 0.05	< 0.08	< 0.05	< 0.05
1,3-Dichloropropane	< 0.05	< 0.08	< 0.05	< 0.05
Dibromochloromethane	< 0.05	< 0.08	< 0.05	< 0.05
1,2-Dibromoethane(EDB)	< 0.02	< 0.03	< 0.02	< 0.02
Chlorobenzene	< 0.05	< 0.08	< 0.05	< 0.05
1,1,1,2-Tetrachloroethane	< 0.05	< 0.08	< 0.05	< 0.05



# LABORATORY REPORT

EAI ID#: 227591

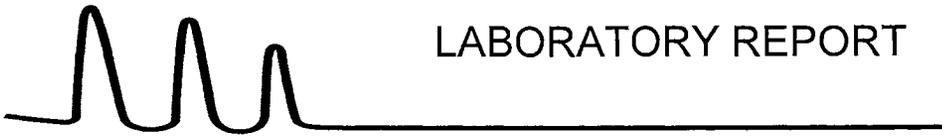
Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	Trip Blank	TP-7 0-3.5'	TP-6 9-10'	TP-5 6'
<b>Lab Sample ID:</b>	227591.01	227591.02	227591.03	227591.04
<b>Matrix:</b>	soil	soil	soil	soil
<b>Date Sampled:</b>	6/10/21	6/10/21	6/10/21	6/10/21
<b>Date Received:</b>	6/14/21	6/14/21	6/14/21	6/14/21
<b>Units:</b>	mg/kg	mg/kg	mg/kg	mg/kg
<b>Date of Analysis:</b>	6/14/21	6/14/21	6/15/21	6/15/21
<b>Analyst:</b>	JAK	JAK	JAK	JAK
<b>Method:</b>	8260C	8260C	8260C	8260C
<b>Dilution Factor:</b>	1	2	1	1
Ethylbenzene	< 0.05	< 0.08	< 0.05	< 0.05
mp-Xylene	< 0.05	< 0.08	< 0.05	< 0.05
o-Xylene	< 0.05	< 0.08	< 0.05	< 0.05
Styrene	< 0.05	< 0.08	< 0.05	< 0.05
Bromoform	< 0.05	< 0.08	< 0.05	< 0.05
IsoPropylbenzene	< 0.05	< 0.08	< 0.05	< 0.05
Bromobenzene	< 0.05	< 0.08	< 0.05	< 0.05
1,1,2,2-Tetrachloroethane	< 0.05	< 0.08	< 0.05	< 0.05
1,2,3-Trichloropropane	< 0.05	< 0.08	< 0.05	< 0.05
n-Propylbenzene	< 0.05	< 0.08	< 0.05	< 0.05
2-Chlorotoluene	< 0.05	< 0.08	< 0.05	< 0.05
4-Chlorotoluene	< 0.05	< 0.08	< 0.05	< 0.05
1,3,5-Trimethylbenzene	< 0.05	< 0.08	< 0.05	< 0.05
tert-Butylbenzene	< 0.05	< 0.08	< 0.05	< 0.05
1,2,4-Trimethylbenzene	< 0.05	< 0.08	< 0.05	< 0.05
sec-Butylbenzene	< 0.05	< 0.08	< 0.05	< 0.05
1,3-Dichlorobenzene	< 0.05	< 0.08	< 0.05	< 0.05
p-Isopropyltoluene	< 0.05	< 0.08	< 0.05	< 0.05
1,4-Dichlorobenzene	< 0.05	< 0.08	< 0.05	< 0.05
1,2-Dichlorobenzene	< 0.05	< 0.08	< 0.05	< 0.05
n-Butylbenzene	< 0.05	< 0.08	< 0.05	< 0.05
1,2-Dibromo-3-chloropropane	< 0.05	< 0.08	< 0.05	< 0.05
1,3,5-Trichlorobenzene	< 0.05	< 0.08	< 0.05	< 0.05
1,2,4-Trichlorobenzene	< 0.05	< 0.08	< 0.05	< 0.05
Hexachlorobutadiene	< 0.05	< 0.08	< 0.05	< 0.05
Naphthalene	< 0.1	< 0.2	< 0.1	< 0.1
1,2,3-Trichlorobenzene	< 0.05	< 0.08	< 0.05	< 0.05
4-Bromofluorobenzene (surr)	92 %R	90 %R	140 %R	88 %R
1,2-Dichlorobenzene-d4 (surr)	100 %R	102 %R	92 %R	102 %R
Toluene-d8 (surr)	95 %R	95 %R	88 %R	96 %R
1,2-Dichloroethane-d4 (surr)	101 %R	102 %R	108 %R	101 %R

TP-7 0-3.5': Reporting limits are elevated due to the % solids content of the sample or the sample mass used for analysis.

TP-6 9-10': Non target interference in the sample resulted in recovery high outside of the acceptance control limits of 70-130%R for the surrogate 4-Bromofluorobenzene (surr).



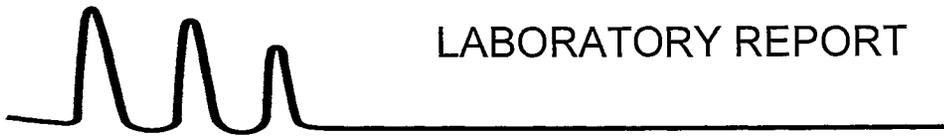
# LABORATORY REPORT

EAI ID#: 227591

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	Trip Blank	TP-14 1-2'	TP-1 0-2'	TP-3 2-3'
<b>Lab Sample ID:</b>	227591.06	227591.07	227591.08	227591.1
<b>Matrix:</b>	soil	soil	soil	soil
<b>Date Sampled:</b>	6/11/21	6/11/21	6/11/21	6/11/21
<b>Date Received:</b>	6/14/21	6/14/21	6/14/21	6/14/21
<b>Units:</b>	mg/kg	mg/kg	mg/kg	mg/kg
<b>Date of Analysis:</b>	6/15/21	6/15/21	6/15/21	6/15/21
<b>Analyst:</b>	JAK	JAK	JAK	JAK
<b>Method:</b>	8260C	8260C	8260C	8260C
<b>Dilution Factor:</b>	1	1	1	2
Dichlorodifluoromethane	< 0.1	< 0.1	< 0.1	< 0.2
Chloromethane	< 0.1	< 0.1	< 0.1	< 0.2
Vinyl chloride	< 0.02	< 0.02	< 0.02	< 0.04
Bromomethane	< 0.1	< 0.1	< 0.1	< 0.2
Chloroethane	< 0.1	< 0.1	< 0.1	< 0.2
Trichlorofluoromethane	< 0.1	< 0.1	< 0.1	< 0.2
Diethyl Ether	< 0.05	< 0.05	< 0.05	< 0.1
Acetone	< 2	< 2	< 2	< 4
1,1-Dichloroethene	< 0.05	< 0.05	< 0.05	< 0.1
tert-Butyl Alcohol (TBA)	< 2	< 2	< 2	< 4
Methylene chloride	< 0.1	< 0.1	< 0.1	< 0.2
Carbon disulfide	< 0.1	< 0.1	< 0.1	< 0.2
Methyl-t-butyl ether(MTBE)	< 0.1	< 0.1	< 0.1	< 0.2
Ethyl-t-butyl ether(ETBE)	< 0.1	< 0.1	< 0.1	< 0.2
Isopropyl ether(DIPE)	< 0.1	< 0.1	< 0.1	< 0.2
tert-amyl methyl ether(TAME)	< 0.1	< 0.1	< 0.1	< 0.2
trans-1,2-Dichloroethene	< 0.05	< 0.05	< 0.05	< 0.1
1,1-Dichloroethane	< 0.05	< 0.05	< 0.05	< 0.1
2,2-Dichloropropane	< 0.05	< 0.05	< 0.05	< 0.1
cis-1,2-Dichloroethene	< 0.05	< 0.05	< 0.05	< 0.1
2-Butanone(MEK)	< 0.5	< 0.5	< 0.5	< 1
Bromochloromethane	< 0.05	< 0.05	< 0.05	< 0.1
Tetrahydrofuran(THF)	< 0.5	< 0.5	< 0.5	< 1
Chloroform	< 0.05	< 0.05	< 0.05	< 0.1
1,1,1-Trichloroethane	< 0.05	< 0.05	< 0.05	< 0.1
Carbon tetrachloride	< 0.05	< 0.05	< 0.05	< 0.1
1,1-Dichloropropene	< 0.05	< 0.05	< 0.05	< 0.1
Benzene	< 0.05	< 0.05	< 0.05	< 0.1
1,2-Dichloroethane	< 0.05	< 0.05	< 0.05	< 0.1
Trichloroethene	< 0.05	< 0.05	< 0.05	< 0.1
1,2-Dichloropropane	< 0.05	< 0.05	< 0.05	< 0.1
Dibromomethane	< 0.05	< 0.05	< 0.05	< 0.1
Bromodichloromethane	< 0.05	< 0.05	< 0.05	< 0.1
1,4-Dioxane	< 1	< 1	< 1	< 2
4-Methyl-2-pentanone(MIBK)	< 0.5	< 0.5	< 0.5	< 1
cis-1,3-Dichloropropene	< 0.05	< 0.05	< 0.05	< 0.1
Toluene	< 0.05	< 0.05	< 0.05	< 0.1
trans-1,3-Dichloropropene	< 0.05	< 0.05	< 0.05	< 0.1
1,1,2-Trichloroethane	< 0.05	< 0.05	< 0.05	< 0.1
2-Hexanone	< 0.1	< 0.1	< 0.1	< 0.2
Tetrachloroethene	< 0.05	< 0.05	< 0.05	< 0.1
1,3-Dichloropropane	< 0.05	< 0.05	< 0.05	< 0.1
Dibromochloromethane	< 0.05	< 0.05	< 0.05	< 0.1
1,2-Dibromoethane(EDB)	< 0.02	< 0.02	< 0.02	< 0.04
Chlorobenzene	< 0.05	< 0.05	< 0.05	< 0.1
1,1,1,2-Tetrachloroethane	< 0.05	< 0.05	< 0.05	< 0.1



# LABORATORY REPORT

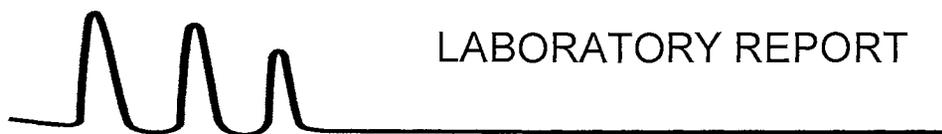
EAI ID#: **227591**

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	Trip Blank	TP-14 1-2'	TP-1 0-2'	TP-3 2-3'
<b>Lab Sample ID:</b>	227591.06	227591.07	227591.08	227591.1
<b>Matrix:</b>	soil	soil	soil	soil
<b>Date Sampled:</b>	6/11/21	6/11/21	6/11/21	6/11/21
<b>Date Received:</b>	6/14/21	6/14/21	6/14/21	6/14/21
<b>Units:</b>	mg/kg	mg/kg	mg/kg	mg/kg
<b>Date of Analysis:</b>	6/15/21	6/15/21	6/15/21	6/15/21
<b>Analyst:</b>	JAK	JAK	JAK	JAK
<b>Method:</b>	8260C	8260C	8260C	8260C
<b>Dilution Factor:</b>	1	1	1	2
Ethylbenzene	< 0.05	< 0.05	< 0.05	< 0.1
mp-Xylene	< 0.05	< 0.05	< 0.05	< 0.1
o-Xylene	< 0.05	< 0.05	< 0.05	< 0.1
Styrene	< 0.05	< 0.05	< 0.05	<b>5.1</b>
Bromoform	< 0.05	< 0.05	< 0.05	< 0.1
IsoPropylbenzene	< 0.05	< 0.05	< 0.05	< 0.1
Bromobenzene	< 0.05	< 0.05	< 0.05	< 0.1
1,1,2,2-Tetrachloroethane	< 0.05	< 0.05	< 0.05	< 0.1
1,2,3-Trichloropropane	< 0.05	< 0.05	< 0.05	< 0.1
n-Propylbenzene	< 0.05	< 0.05	< 0.05	< 0.1
2-Chlorotoluene	< 0.05	< 0.05	< 0.05	< 0.1
4-Chlorotoluene	< 0.05	< 0.05	< 0.05	< 0.1
1,3,5-Trimethylbenzene	< 0.05	< 0.05	< 0.05	< 0.1
tert-Butylbenzene	< 0.05	< 0.05	< 0.05	< 0.1
1,2,4-Trimethylbenzene	< 0.05	< 0.05	< 0.05	< 0.1
sec-Butylbenzene	< 0.05	< 0.05	< 0.05	< 0.1
1,3-Dichlorobenzene	< 0.05	< 0.05	< 0.05	< 0.1
p-Isopropyltoluene	< 0.05	< 0.05	< 0.05	< 0.1
1,4-Dichlorobenzene	< 0.05	< 0.05	< 0.05	< 0.1
1,2-Dichlorobenzene	< 0.05	< 0.05	< 0.05	< 0.1
n-Butylbenzene	< 0.05	< 0.05	< 0.05	< 0.1
1,2-Dibromo-3-chloropropane	< 0.05	< 0.05	< 0.05	< 0.1
1,3,5-Trichlorobenzene	< 0.05	< 0.05	< 0.05	< 0.1
1,2,4-Trichlorobenzene	< 0.05	< 0.05	< 0.05	< 0.1
Hexachlorobutadiene	< 0.05	< 0.05	< 0.05	< 0.1
Naphthalene	< 0.1	< 0.1	< 0.1	< 0.2
1,2,3-Trichlorobenzene	< 0.05	< 0.05	< 0.05	< 0.1
4-Bromofluorobenzene (surr)	<b>88 %R</b>	<b>88 %R</b>	<b>89 %R</b>	<b>103 %R</b>
1,2-Dichlorobenzene-d4 (surr)	<b>101 %R</b>	<b>102 %R</b>	<b>102 %R</b>	<b>95 %R</b>
Toluene-d8 (surr)	<b>96 %R</b>	<b>95 %R</b>	<b>95 %R</b>	<b>95 %R</b>
1,2-Dichloroethane-d4 (surr)	<b>101 %R</b>	<b>102 %R</b>	<b>103 %R</b>	<b>102 %R</b>

TP-3 2-3': Reporting limits are elevated due to the % solids content of the sample or the sample mass used for analysis.



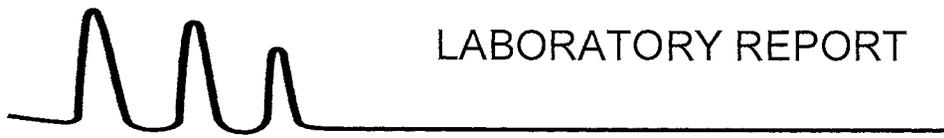
# LABORATORY REPORT

EAI ID#: **227591**

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	TP-7 0-3.5'	TP-6 9-10'	TP-5 6'	TP-4 9'
Lab Sample ID:	227591.02	227591.03	227591.04	227591.05
Matrix:	soil	soil	soil	soil
Date Sampled:	6/10/21	6/10/21	6/10/21	6/10/21
Date Received:	6/14/21	6/14/21	6/14/21	6/14/21
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Date of Extraction/Prep:	6/15/21	6/15/21	6/15/21	6/15/21
Date of Analysis:	6/15/21	6/15/21	6/15/21	6/15/21
Analyst:	JMR	JMR	JMR	JMR
Method:	8270D	8270D	8270D	8270D
Dilution Factor:	1	1	1	1
Naphthalene	< 0.09	< 0.08	< 0.07	< 0.08
2-Methylnaphthalene	< 0.09	< 0.08	< 0.07	< 0.08
1-Methylnaphthalene	< 0.09	< 0.08	< 0.07	< 0.08
Acenaphthylene	< 0.09	< 0.08	< 0.07	< 0.08
Acenaphthene	< 0.09	< 0.08	< 0.07	< 0.08
Fluorene	< 0.09	< 0.08	< 0.07	< 0.08
Phenanthrene	<b>0.17</b>	< 0.08	< 0.07	< 0.08
Anthracene	< 0.09	< 0.08	< 0.07	< 0.08
Fluoranthene	<b>0.53</b>	< 0.08	< 0.07	< 0.08
Pyrene	<b>0.61</b>	< 0.08	< 0.07	< 0.08
Benzo[a]anthracene	<b>0.44</b>	< 0.08	< 0.07	< 0.08
Chrysene	<b>0.40</b>	< 0.08	< 0.07	< 0.08
Benzo[b]fluoranthene	<b>0.40</b>	< 0.08	< 0.07	< 0.08
Benzo[k]fluoranthene	<b>0.14</b>	< 0.08	< 0.07	< 0.08
Benzo[a]pyrene	<b>0.35</b>	< 0.08	< 0.07	< 0.08
Indeno[1,2,3-cd]pyrene	<b>0.21</b>	< 0.08	< 0.07	< 0.08
Dibenz[a,h]anthracene	< 0.09	< 0.08	< 0.07	< 0.08
Benzo[g,h,i]perylene	<b>0.22</b>	< 0.08	< 0.07	< 0.08
p-Terphenyl-D14 (surr)	<b>71 %R</b>	<b>79 %R</b>	<b>76 %R</b>	<b>70 %R</b>



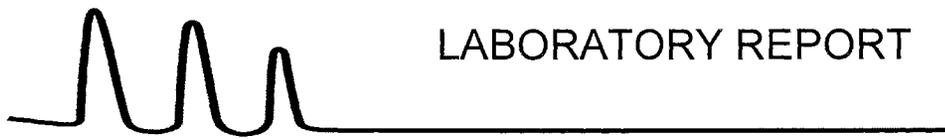
# LABORATORY REPORT

EAI ID#: 227591

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	TP-14 1-2'	TP-1 0-2'	TP-2 3-4'	TP-3 2-3'
Lab Sample ID:	227591.07	227591.08	227591.09	227591.1
Matrix:	soil	soil	soil	soil
Date Sampled:	6/11/21	6/11/21	6/11/21	6/11/21
Date Received:	6/14/21	6/14/21	6/14/21	6/14/21
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Date of Extraction/Prep:	6/15/21	6/15/21	6/15/21	6/15/21
Date of Analysis:	6/15/21	6/15/21	6/15/21	6/15/21
Analyst:	JMR	JMR	JMR	JMR
Method:	8270D	8270D	8270D	8270D
Dilution Factor:	1	1	1	1
Naphthalene	< 0.08	< 0.07	<b>0.086</b>	< 0.09
2-Methylnaphthalene	< 0.08	< 0.07	< 0.08	< 0.09
1-Methylnaphthalene	< 0.08	< 0.07	< 0.08	< 0.09
Acenaphthylene	< 0.08	<b>0.10</b>	<b>0.19</b>	< 0.09
Acenaphthene	< 0.08	< 0.07	<b>0.13</b>	< 0.09
Fluorene	< 0.08	<b>0.073</b>	<b>0.19</b>	< 0.09
Phenanthrene	<b>0.38</b>	<b>0.75</b>	<b>1.5</b>	<b>0.57</b>
Anthracene	<b>0.12</b>	<b>0.22</b>	<b>0.46</b>	<b>0.12</b>
Fluoranthene	<b>0.71</b>	<b>1.3</b>	<b>2.4</b>	<b>0.95</b>
Pyrene	<b>0.59</b>	<b>1.1</b>	<b>2.1</b>	<b>0.79</b>
Benzo[a]anthracene	<b>0.37</b>	<b>0.71</b>	<b>1.3</b>	<b>0.70</b>
Chrysene	<b>0.38</b>	<b>0.69</b>	<b>1.3</b>	<b>0.75</b>
Benzo[b]fluoranthene	<b>0.47</b>	<b>0.83</b>	<b>1.6</b>	<b>0.93</b>
Benzo[k]fluoranthene	<b>0.16</b>	<b>0.33</b>	<b>0.54</b>	<b>0.35</b>
Benzo[a]pyrene	<b>0.36</b>	<b>0.68</b>	<b>1.3</b>	<b>0.65</b>
Indeno[1,2,3-cd]pyrene	<b>0.26</b>	<b>0.32</b>	<b>0.58</b>	<b>0.28</b>
Dibenz[a,h]anthracene	< 0.08	<b>0.081</b>	<b>0.15</b>	< 0.09
Benzo[g,h,i]perylene	<b>0.22</b>	<b>0.24</b>	<b>0.43</b>	<b>0.21</b>
p-Terphenyl-D14 (surr)	<b>69 %R</b>	<b>74 %R</b>	<b>75 %R</b>	<b>66 %R</b>



# LABORATORY REPORT

EAI ID#: **227591**

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	TP-7 0-3.5'	TP-6 9-10'	TP-5 6'	TP-4 9'
Lab Sample ID:	227591.02	227591.03	227591.04	227591.05
Matrix:	soil	soil	soil	soil
Date Sampled:	6/10/21	6/10/21	6/10/21	6/10/21
Date Received:	6/14/21	6/14/21	6/14/21	6/14/21
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Date of Extraction/Prep:	6/15/21	6/15/21	6/15/21	6/15/21
Date of Analysis:	6/15/21	6/15/21	6/15/21	6/15/21
Analyst:	JLB	JLB	JLB	JLB
Method:	8100mod	8100mod	8100mod	8100mod
Dilution Factor:	1	1	1	1
TPH (C9-C40)	<b>69</b>	<b>580</b>	< 30	< 30
p-Terphenyl-D14 (surr)	<b>86 %R</b>	<b>97 %R</b>	<b>81 %R</b>	<b>68 %R</b>



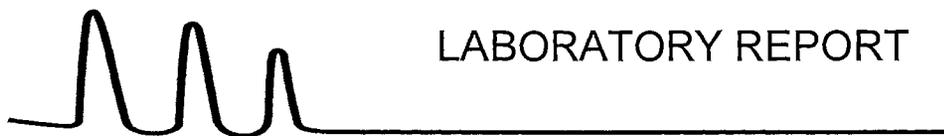
# LABORATORY REPORT

EAI ID#: **227591**

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	TP-14 1-2'	TP-1 0-2'	TP-2 3-4'	TP-3 2-3'
Lab Sample ID:	227591.07	227591.08	227591.09	227591.1
Matrix:	soil	soil	soil	soil
Date Sampled:	6/11/21	6/11/21	6/11/21	6/11/21
Date Received:	6/14/21	6/14/21	6/14/21	6/14/21
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Date of Extraction/Prep:	6/15/21	6/15/21	6/15/21	6/15/21
Date of Analysis:	6/15/21	6/15/21	6/15/21	6/15/21
Analyst:	JLB	JLB	JLB	JLB
Method:	8100mod	8100mod	8100mod	8100mod
Dilution Factor:	1	1	1	1
TPH (C9-C40)	<b>59</b>	<b>69</b>	<b>93</b>	<b>230</b>
p-Terphenyl-D14 (surr)	<b>84 %R</b>	<b>89 %R</b>	<b>96 %R</b>	<b>107 %R</b>



# LABORATORY REPORT

EAI ID#: **227591**

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	TP-7 0-3.5'	TP-6 9-10'	TP-14 1-2'	TP-1 0-2'
Lab Sample ID:	227591.02	227591.03	227591.07	227591.08
Matrix:	soil	soil	soil	soil
Date Sampled:	6/10/21	6/10/21	6/11/21	6/11/21
Date Received:	6/14/21	6/14/21	6/14/21	6/14/21
% Solid:	82.1	86.7	90.3	92.1
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Date of Extraction/Prep:	6/14/21	6/14/21	6/14/21	6/14/21
Date of Analysis:	6/18/21	6/18/21	6/18/21	6/18/21
Analyst:	MB	MB	MB	MB
Extraction Method:	3540C	3540C	3540C	3540C
Analysis Method:	8081B	8081B	8081B	8081B
Dilution Factor:	1	1	1	1
Aldrin	< 0.006	< 0.006	< 0.006	< 0.005
alpha-BHC	< 0.006	< 0.006	< 0.006	< 0.005
beta-BHC	< 0.006	< 0.006	< 0.006	< 0.005
Lindane(gamma-BHC)	< 0.006	< 0.006	< 0.006	< 0.005
delta-BHC	< 0.006	< 0.006	< 0.006	< 0.005
Chlordane	< 0.02	< 0.02	< 0.02	< 0.02
4,4'-DDT	<b>0.014</b>	<b>0.040</b>	< 0.006	< 0.005
4,4'-DDE	<b>0.012</b>	< 0.006	< 0.006	< 0.005
4,4'-DDD	< 0.006	<b>0.063</b>	< 0.006	< 0.005
Dieldrin	< 0.006	< 0.006	< 0.006	< 0.005
Endosulfan I	< 0.006	< 0.006	< 0.006	< 0.005
Endosulfan II	< 0.006	< 0.006	< 0.006	< 0.005
Endosulfan Sulfate	< 0.006	< 0.006	< 0.006	< 0.005
Endrin	< 0.006	< 0.006	< 0.006	< 0.005
Endrin Aldehyde	< 0.006	< 0.006	< 0.006	< 0.005
Endrin Ketone	< 0.006	< 0.006	< 0.006	< 0.005
Heptachlor	< 0.006	< 0.006	< 0.006	< 0.005
Heptachlor Epoxide	< 0.006	< 0.006	< 0.006	< 0.005
Methoxychlor	< 0.006	< 0.006	< 0.006	< 0.005
Toxaphene	< 0.06	< 0.06	< 0.06	< 0.05
TMX (surr)	<b>61 %R</b>	<b>45 %R</b>	<b>60 %R</b>	<b>53 %R</b>
DCB (surr)	<b>44 %R</b>	<b>56 %R</b>	<b>45 %R</b>	<b>35 %R</b>

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



# LABORATORY REPORT

EAI ID#: 227591

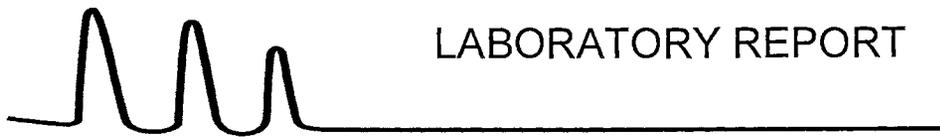
Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID: TP-3 2-3'  
  
Lab Sample ID: 227591.1  
Matrix: soil  
Date Sampled: 6/11/21  
Date Received: 6/14/21  
% Solid: 81.6  
Units: mg/kg  
Date of Extraction/Prep: 6/14/21  
Date of Analysis: 6/18/21  
Analyst: MB  
Extraction Method: 3540C  
Analysis Method: 8081B  
Dilution Factor: 1

Aldrin	< 0.006
alpha-BHC	< 0.006
beta-BHC	< 0.006
Lindane(gamma-BHC)	< 0.006
delta-BHC	< 0.006
Chlordane	< 0.02
4,4'-DDT	< 0.006
4,4'-DDE	< 0.006
4,4'-DDD	< 0.006
Dieldrin	< 0.006
Endosulfan I	< 0.006
Endosulfan II	< 0.006
Endosulfan Sulfate	< 0.006
Endrin	< 0.006
Endrin Aldehyde	< 0.006
Endrin Ketone	< 0.006
Heptachlor	< 0.006
Heptachlor Epoxide	< 0.006
Methoxychlor	< 0.006
Toxaphene	< 0.06
TMX (surr)	<b>49 %R</b>
DCB (surr)	<b>37 %R</b>

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



# LABORATORY REPORT

EAI ID#: 227591

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	TP-7 0-3.5'	TP-6 9-10'	TP-14 1-2'	TP-1 0-2'
Lab Sample ID:	227591.02	227591.03	227591.07	227591.08
Matrix:	soil	soil	soil	soil
Date Sampled:	6/10/21	6/10/21	6/11/21	6/11/21
Date Received:	6/14/21	6/14/21	6/14/21	6/14/21
% Solid:	82.1	86.7	90.3	92.1
Units:	mg/kg	mg/kg	mg/kg	mg/kg
Date of Extraction/Prep:	6/14/21	6/14/21	6/14/21	6/14/21
Date of Analysis:	6/15/21	6/15/21	6/15/21	6/15/21
Analyst:	MB	MB	MB	MB
Extraction Method:	3540C	3540C	3540C	3540C
Analysis Method:	8082A	8082A	8082A	8082A
Dilution Factor:	1	1	1	1
PCB-1016	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1221	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1232	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1242	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1248	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1254	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1260	< 0.02	< 0.02	< 0.02	<b>0.040</b>
PCB-1262	< 0.02	< 0.02	< 0.02	< 0.02
PCB-1268	< 0.02	< 0.02	< 0.02	< 0.02
TMX (surr)	<b>96 %R</b>	<b>58 %R</b>	<b>79 %R</b>	<b>88 %R</b>
DCB (surr)	<b>94 %R</b>	<b>93 %R</b>	<b>87 %R</b>	<b>78 %R</b>

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



# LABORATORY REPORT

EAI ID#: 227591

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID: TP-3 2-3'

Lab Sample ID: 227591.1

Matrix: soil

Date Sampled: 6/11/21

Date Received: 6/14/21

% Solid: 81.6

Units: mg/kg

Date of Extraction/Prep: 6/14/21

Date of Analysis: 6/15/21

Analyst: MB

Extraction Method: 3540C

Analysis Method: 8082A

Dilution Factor: 1

PCB-1016	< 0.02
PCB-1221	< 0.02
PCB-1232	< 0.02
PCB-1242	< 0.02
PCB-1248	< 0.02
PCB-1254	< 0.02
PCB-1260	< 0.02
PCB-1262	< 0.02
PCB-1268	< 0.02
TMX (surr)	76 %R
DCB (surr)	73 %R

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



# LABORATORY REPORT

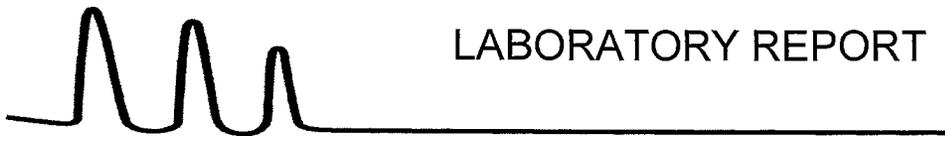
EAI ID#: 227591

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	TP-6 9-10'	TP-5 6'	TP-4 9'	TP-1 0-2'					
Lab Sample ID:	227591.03	227591.04	227591.05	227591.08					
Matrix:	soil	soil	soil	soil					
Date Sampled:	6/10/21	6/10/21	6/10/21	6/11/21	<b>Analytical</b>		<b>Date of</b>		
Date Received:	6/14/21	6/14/21	6/14/21	6/14/21	<b>Matrix</b>	<b>Units</b>	<b>Analysis</b>	<b>Method</b>	<b>Analyst</b>
Arsenic	2.3	2.9	4.9	8.4	SolTotDry	mg/kg	6/15/21	6020	DS
Barium	8.3	11	20	29	SolTotDry	mg/kg	6/15/21	6020	DS
Cadmium	< 0.5	< 0.5	< 0.5	< 0.5	SolTotDry	mg/kg	6/15/21	6020	DS
Chromium	7.1	8.4	13	14	SolTotDry	mg/kg	6/15/21	6020	DS
Lead	8.4	6.0	7.7	55	SolTotDry	mg/kg	6/15/21	6020	DS
Mercury	< 0.1	< 0.1	< 0.1	< 0.1	SolTotDry	mg/kg	6/15/21	6020	DS
Selenium	0.82	< 0.5	< 0.5	0.65	SolTotDry	mg/kg	6/15/21	6020	DS
Silver	< 0.5	< 0.5	< 0.5	< 0.5	SolTotDry	mg/kg	6/15/21	6020	DS

Sample ID:	TP-3 2-3'								
Lab Sample ID:	227591.1								
Matrix:	soil								
Date Sampled:	6/11/21				<b>Analytical</b>		<b>Date of</b>		
Date Received:	6/14/21				<b>Matrix</b>	<b>Units</b>	<b>Analysis</b>	<b>Method</b>	<b>Analyst</b>
Arsenic	18				SolTotDry	mg/kg	6/15/21	6020	DS
Barium	120				SolTotDry	mg/kg	6/15/21	6020	DS
Cadmium	1.2				SolTotDry	mg/kg	6/15/21	6020	DS
Chromium	15				SolTotDry	mg/kg	6/15/21	6020	DS
Lead	63				SolTotDry	mg/kg	6/15/21	6020	DS
Mercury	0.13				SolTotDry	mg/kg	6/15/21	6020	DS
Selenium	2.4				SolTotDry	mg/kg	6/15/21	6020	DS
Silver	< 0.5				SolTotDry	mg/kg	6/15/21	6020	DS



# LABORATORY REPORT

EAI ID#: **227591**

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	TP-7 0-3.5'	TP-14 1-2'	TP-2 3-4'						
Lab Sample ID:	227591.02	227591.07	227591.09						
Matrix:	soil	soil	soil						
Date Sampled:	6/10/21	6/11/21	6/11/21						
Date Received:	6/14/21	6/14/21	6/14/21						
				<b>Analytical Matrix</b>	<b>Units</b>	<b>Date of Analysis</b>	<b>Method</b>	<b>Analyst</b>	
Arsenic	<b>6.6</b>	<b>4.2</b>	<b>6.9</b>	SolTotDry	mg/kg	6/15/21	6020	DS	
Barium	<b>1500</b>	<b>72</b>	<b>43</b>	SolTotDry	mg/kg	6/15/21	6020	DS	
Cadmium	< 0.5	< 0.5	<b>0.59</b>	SolTotDry	mg/kg	6/15/21	6020	DS	
Chromium	<b>13</b>	<b>15</b>	<b>25</b>	SolTotDry	mg/kg	6/15/21	6020	DS	
Lead	<b>4600</b>	<b>99</b>	<b>130</b>	SolTotDry	mg/kg	6/15/21	6020	DS	
Mercury	<b>0.28</b>	<b>0.22</b>	<b>0.28</b>	SolTotDry	mg/kg	6/15/21	6020	DS	
Selenium	<b>1.3</b>	<b>0.54</b>	<b>0.66</b>	SolTotDry	mg/kg	6/15/21	6020	DS	
Silver	< 0.5	< 0.5	< 0.5	SolTotDry	mg/kg	6/15/21	6020	DS	
Lead	<b>1.4</b>	< 0.5	< 0.5	TCLPsolid	mg/L	6/18/21	6020	DS	





# Eastern Analytical, Inc.

professional laboratory and drilling services



Bettina Eames  
Nobis Group  
18 Chenell Drive  
Concord, NH 03301

## Laboratory Report for:

Eastern Analytical, Inc. ID: 228404  
Client Identification: Robin Rug | 095560.260  
Date Received: 7/1/2021

Enclosed are the analytical results per the Chain of Custody for sample(s) in the referenced project. All analyses were performed in accordance with our QA/QC Program, NELAP and other applicable state requirements. All quality control criteria was within acceptance criteria unless noted on the report pages. Results are for the exclusive use of the client named on this report and will not be released to a third party without consent.

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the written approval of the laboratory.

The following standard abbreviations and conventions apply to all EAI reports:

- < : "less than" followed by the reporting limit
- > : "greater than" followed by the reporting limit
- %R : % Recovery

## Certifications:

Eastern Analytical, Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269), Vermont (VT1012), New York (12072), West Virginia (9910C) and Alabama (41620). Please refer to our website at [www.easternanalytical.com](http://www.easternanalytical.com) for a copy of our certificates and accredited parameters.

## References:

- EPA 600/4-79-020, 1983
- Standard Methods for Examination of Water and Wastewater, 20th, 21st, 22nd & 23rd edition or noted revision year.
- Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
- Hach Water Analysis Handbook, 4th edition, 1992

If you have any questions regarding the results contained within, please feel free to contact customer service. Unless otherwise requested, we will dispose of the sample(s) 6 weeks from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

  
Lorraine Olashaw, Lab Director

7.7.21  
Date

10  
# of pages (excluding cover letter)



# SAMPLE CONDITIONS PAGE

EAI ID#: 228404

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

**Temperature upon receipt (°C): 3.8**

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

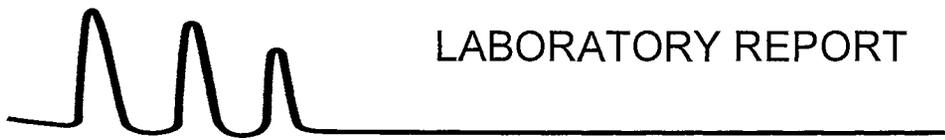
Acceptable temperature range (°C): 0-6

Lab ID	Sample ID	Date Received	Date/Time Sampled	Sample Matrix	% Dry Weight	Exceptions/Comments (other than thermal preservation)
228404.01	Trip Blank	7/1/21	6/29/21 07:00	aqueous		Adheres to Sample Acceptance Policy
228404.02	NB-2	7/1/21	6/30/21 08:00	aqueous		Adheres to Sample Acceptance Policy
228404.03	NB-3	7/1/21	6/29/21 15:10	aqueous		Adheres to Sample Acceptance Policy
228404.04	GZA-1	7/1/21	6/29/21 16:50	aqueous		Adheres to Sample Acceptance Policy
228404.05	GZA-2	7/1/21	6/29/21 17:35	aqueous		Adheres to Sample Acceptance Policy
228404.06	GZA-3	7/1/21	6/29/21 16:15	aqueous		Adheres to Sample Acceptance Policy

All results contained in this report relate only to the above listed samples.

Unless otherwise noted:

- Hold times, preservation, container types, and sample conditions adhered to EPA Protocol.
- Solid samples are reported on a dry weight basis, unless otherwise noted. pH/Corrosivity, Flashpoint, Ignitability, Paint Filter, Conductivity and Specific Gravity are always reported on an "as received" basis.
- Analysis of pH, Total Residual Chlorine, Dissolved Oxygen and Sulfite were performed at the laboratory outside of the recommended 15 minute hold time.
- Samples collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures.



# LABORATORY REPORT

EAI ID#: 228404

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	Trip Blank	NB-2	NB-3	GZA-1
Lab Sample ID:	228404.01	228404.02	228404.03	228404.04
Matrix:	aqueous	aqueous	aqueous	aqueous
Date Sampled:	6/29/21	6/30/21	6/29/21	6/29/21
Date Received:	7/1/21	7/1/21	7/1/21	7/1/21
Units:	ug/L	ug/L	ug/L	ug/L
Date of Analysis:	7/1/21	7/1/21	7/1/21	7/1/21
Analyst:	DGM	DGM	DGM	DGM
Method:	8260C	8260C	8260C	8260C
Dilution Factor:	1	1	1	1
Dichlorodifluoromethane	< 2	< 2	< 2	< 2
Chloromethane	< 2	< 2	< 2	< 2
Vinyl chloride	< 1	< 1	< 1	< 1
Bromomethane	< 2	< 2	< 2	< 2
Chloroethane	< 2	< 2	< 2	< 2
Trichlorofluoromethane	< 2	< 2	< 2	< 2
Diethyl Ether	< 2	< 2	< 2	< 2
Acetone	< 10	< 10	< 10	< 10
1,1-Dichloroethene	< 0.5	< 0.5	< 0.5	< 0.5
tert-Butyl Alcohol (TBA)	< 30	< 30	< 30	< 30
Methylene chloride	< 1	< 1	< 1	< 1
Carbon disulfide	< 2	< 2	< 2	< 2
Methyl-t-butyl ether(MTBE)	< 1	< 1	< 1	< 1
Ethyl-t-butyl ether(ETBE)	< 2	< 2	< 2	< 2
Isopropyl ether(DIPE)	< 2	< 2	< 2	< 2
tert-amyl methyl ether(TAME)	< 2	< 2	< 2	< 2
trans-1,2-Dichloroethene	< 1	< 1	< 1	< 1
1,1-Dichloroethane	< 1	< 1	< 1	< 1
2,2-Dichloropropane	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	< 1	< 1	< 1	< 1
2-Butanone(MEK)	< 10	< 10	< 10	< 10
Bromochloromethane	< 1	< 1	< 1	< 1
Tetrahydrofuran(THF)	< 10	< 10	< 10	< 10
Chloroform	< 1	< 1	< 1	< 1
1,1,1-Trichloroethane	< 1	< 1	< 1	< 1
Carbon tetrachloride	< 1	< 1	< 1	< 1
1,1-Dichloropropene	< 1	< 1	< 1	< 1
Benzene	< 1	< 1	< 1	< 1
1,2-Dichloroethane	< 1	< 1	< 1	< 1
Trichloroethene	< 1	< 1	< 1	< 1
1,2-Dichloropropane	< 1	< 1	< 1	< 1
Dibromomethane	< 1	< 1	< 1	< 1
Bromodichloromethane	< 0.5	< 0.5	< 0.5	< 0.5
1,4-Dioxane	< 50	< 50	< 50	< 50
4-Methyl-2-pentanone(MIBK)	< 10	< 10	< 10	< 10
cis-1,3-Dichloropropene	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	< 1	< 1	< 1	< 1
trans-1,3-Dichloropropene	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2-Trichloroethane	< 1	< 1	< 1	< 1
2-Hexanone	< 10	< 10	< 10	< 10
Tetrachloroethene	< 1	< 1	< 1	< 1
1,3-Dichloropropane	< 1	< 1	< 1	< 1
Dibromochloromethane	< 1	< 1	< 1	< 1
1,2-Dibromoethane(EDB)	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	< 1	< 1	< 1	< 1
1,1,1,2-Tetrachloroethane	< 1	< 1	< 1	< 1



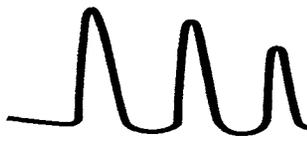
# LABORATORY REPORT

EAI ID#: **228404**

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	Trip Blank	NB-2	NB-3	GZA-1
Lab Sample ID:	228404.01	228404.02	228404.03	228404.04
Matrix:	aqueous	aqueous	aqueous	aqueous
Date Sampled:	6/29/21	6/30/21	6/29/21	6/29/21
Date Received:	7/1/21	7/1/21	7/1/21	7/1/21
Units:	ug/L	ug/L	ug/L	ug/L
Date of Analysis:	7/1/21	7/1/21	7/1/21	7/1/21
Analyst:	DGM	DGM	DGM	DGM
Method:	8260C	8260C	8260C	8260C
Dilution Factor:	1	1	1	1
Ethylbenzene	< 1	< 1	< 1	< 1
mp-Xylene	< 1	< 1	< 1	< 1
o-Xylene	< 1	< 1	< 1	< 1
Styrene	< 1	< 1	< 1	< 1
Bromoform	< 2	< 2	< 2	< 2
IsoPropylbenzene	< 1	< 1	< 1	< 1
Bromobenzene	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroethane	< 1	< 1	< 1	< 1
1,2,3-Trichloropropane	< 0.5	< 0.5	< 0.5	< 0.5
n-Propylbenzene	< 1	< 1	< 1	< 1
2-Chlorotoluene	< 1	< 1	< 1	< 1
4-Chlorotoluene	< 1	< 1	< 1	< 1
1,3,5-Trimethylbenzene	< 1	< 1	< 1	< 1
tert-Butylbenzene	< 1	< 1	< 1	< 1
1,2,4-Trimethylbenzene	< 1	< 1	< 1	< 1
sec-Butylbenzene	< 1	< 1	< 1	< 1
1,3-Dichlorobenzene	< 1	< 1	< 1	< 1
p-Isopropyltoluene	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	< 1	< 1	< 1	< 1
n-Butylbenzene	< 1	< 1	< 1	< 1
1,2-Dibromo-3-chloropropane	< 2	< 2	< 2	< 2
1,3,5-Trichlorobenzene	< 1	< 1	< 1	< 1
1,2,4-Trichlorobenzene	< 1	< 1	< 1	< 1
Hexachlorobutadiene	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	< 2	< 2	< 2	< 2
1,2,3-Trichlorobenzene	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr)	90 %R	91 %R	91 %R	90 %R
1,2-Dichlorobenzene-d4 (surr)	103 %R	101 %R	103 %R	103 %R
Toluene-d8 (surr)	97 %R	97 %R	97 %R	97 %R
1,2-Dichloroethane-d4 (surr)	106 %R	105 %R	106 %R	106 %R



# LABORATORY REPORT

EAI ID#: 228404

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	GZA-2	GZA-3
Lab Sample ID:	228404.05	228404.06
Matrix:	aqueous	aqueous
Date Sampled:	6/29/21	6/29/21
Date Received:	7/1/21	7/1/21
Units:	ug/L	ug/L
Date of Analysis:	7/1/21	7/1/21
Analyst:	DGM	DGM
Method:	8260C	8260C
Dilution Factor:	1	1
Dichlorodifluoromethane	< 2	< 2
Chloromethane	< 2	< 2
Vinyl chloride	< 1	< 1
Bromomethane	< 2	< 2
Chloroethane	< 2	< 2
Trichlorofluoromethane	< 2	< 2
Diethyl Ether	< 2	< 2
Acetone	< 10	< 10
1,1-Dichloroethene	< 0.5	< 0.5
tert-Butyl Alcohol (TBA)	< 30	< 30
Methylene chloride	< 1	< 1
Carbon disulfide	< 2	< 2
Methyl-t-butyl ether(MTBE)	< 1	< 1
Ethyl-t-butyl ether(ETBE)	< 2	< 2
Isopropyl ether(DIPE)	< 2	< 2
tert-amyl methyl ether(TAME)	< 2	< 2
trans-1,2-Dichloroethene	< 1	< 1
1,1-Dichloroethane	< 1	< 1
2,2-Dichloropropane	< 1	< 1
cis-1,2-Dichloroethene	< 1	< 1
2-Butanone(MEK)	< 10	< 10
Bromochloromethane	< 1	< 1
Tetrahydrofuran(THF)	< 10	< 10
Chloroform	< 1	< 1
1,1,1-Trichloroethane	< 1	< 1
Carbon tetrachloride	< 1	< 1
1,1-Dichloropropene	< 1	< 1
Benzene	< 1	< 1
1,2-Dichloroethane	< 1	< 1
Trichloroethene	< 1	< 1
1,2-Dichloropropane	< 1	< 1
Dibromomethane	< 1	< 1
Bromodichloromethane	< 0.5	< 0.5
1,4-Dioxane	< 50	< 50
4-Methyl-2-pentanone(MIBK)	< 10	< 10
cis-1,3-Dichloropropene	< 0.5	< 0.5
Toluene	< 1	< 1
trans-1,3-Dichloropropene	< 0.5	< 0.5
1,1,2-Trichloroethane	< 1	< 1
2-Hexanone	< 10	< 10
Tetrachloroethene	< 1	< 1
1,3-Dichloropropane	< 1	< 1
Dibromochloromethane	< 1	< 1
1,2-Dibromoethane(EDB)	< 0.5	< 0.5
Chlorobenzene	< 1	< 1
1,1,1,2-Tetrachloroethane	< 1	< 1



# LABORATORY REPORT

EAI ID#: 228404

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	GZA-2	GZA-3
Lab Sample ID:	228404.05	228404.06
Matrix:	aqueous	aqueous
Date Sampled:	6/29/21	6/29/21
Date Received:	7/1/21	7/1/21
Units:	ug/L	ug/L
Date of Analysis:	7/1/21	7/1/21
Analyst:	DGM	DGM
Method:	8260C	8260C
Dilution Factor:	1	1
Ethylbenzene	< 1	< 1
mp-Xylene	< 1	< 1
o-Xylene	< 1	< 1
Styrene	< 1	< 1
Bromoform	< 2	< 2
IsoPropylbenzene	< 1	< 1
Bromobenzene	< 1	< 1
1,1,2,2-Tetrachloroethane	< 1	< 1
1,2,3-Trichloropropane	< 0.5	< 0.5
n-Propylbenzene	< 1	< 1
2-Chlorotoluene	< 1	< 1
4-Chlorotoluene	< 1	< 1
1,3,5-Trimethylbenzene	< 1	< 1
tert-Butylbenzene	< 1	< 1
1,2,4-Trimethylbenzene	< 1	< 1
sec-Butylbenzene	< 1	< 1
1,3-Dichlorobenzene	< 1	< 1
p-Isopropyltoluene	< 1	< 1
1,4-Dichlorobenzene	< 1	< 1
1,2-Dichlorobenzene	< 1	< 1
n-Butylbenzene	< 1	< 1
1,2-Dibromo-3-chloropropane	< 2	< 2
1,3,5-Trichlorobenzene	< 1	< 1
1,2,4-Trichlorobenzene	< 1	< 1
Hexachlorobutadiene	< 0.5	< 0.5
Naphthalene	< 2	< 2
1,2,3-Trichlorobenzene	< 0.5	< 0.5
4-Bromofluorobenzene (surr)	90 %R	90 %R
1,2-Dichlorobenzene-d4 (surr)	102 %R	102 %R
Toluene-d8 (surr)	97 %R	97 %R
1,2-Dichloroethane-d4 (surr)	106 %R	105 %R



# LABORATORY REPORT

EAI ID#: 228404

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	NB-2	NB-3	GZA-1	GZA-2
Lab Sample ID:	228404.02	228404.03	228404.04	228404.05
Matrix:	aqueous	aqueous	aqueous	aqueous
Date Sampled:	6/30/21	6/29/21	6/29/21	6/29/21
Date Received:	7/1/21	7/1/21	7/1/21	7/1/21
Units:	ug/L	ug/L	ug/L	ug/L
Date of Extraction/Prep:	7/1/21	7/1/21	7/1/21	7/1/21
Date of Analysis:	7/1/21	7/1/21	7/1/21	7/1/21
Analyst:	JMR	JMR	JMR	JMR
Method:	8270D	8270D	8270D	8270D
Dilution Factor:	1	1	1	1
Naphthalene	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylnaphthalene	< 0.1	< 0.1	< 0.1	< 0.1
1-Methylnaphthalene	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	< 0.1	< 0.1	<b>0.14</b>	< 0.1
Benzo[a]anthracene	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	< 0.1	< 0.1	< 0.1	< 0.1
Benzo[b]fluoranthene	< 0.1	< 0.1	< 0.1	< 0.1
Benzo[k]fluoranthene	< 0.1	< 0.1	< 0.1	< 0.1
Benzo[a]pyrene	< 0.1	< 0.1	< 0.1	< 0.1
Indeno[1,2,3-cd]pyrene	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz[a,h]anthracene	< 0.1	< 0.1	< 0.1	< 0.1
Benzo[g,h,i]perylene	< 0.1	< 0.1	< 0.1	< 0.1
p-Terphenyl-D14 (surr)	<b>51 %R</b>	<b>48 %R</b>	<b>30 %R</b>	<b>66 %R</b>



# LABORATORY REPORT

EAI ID#: 228404

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID: GZA-3

Lab Sample ID: 228404.06  
Matrix: aqueous  
Date Sampled: 6/29/21  
Date Received: 7/1/21  
Units: ug/L  
Date of Extraction/Prep: 7/1/21  
Date of Analysis: 7/1/21  
Analyst: JMR  
Method: 8270D  
Dilution Factor: 1

Naphthalene	< 0.1
2-Methylnaphthalene	< 0.1
1-Methylnaphthalene	< 0.1
Acenaphthylene	< 0.1
Acenaphthene	< 0.1
Fluorene	< 0.1
Phenanthrene	0.13
Anthracene	< 0.1
Fluoranthene	0.28
Pyrene	0.24
Benzo[a]anthracene	0.18
Chrysene	0.12
Benzo[b]fluoranthene	0.18
Benzo[k]fluoranthene	< 0.1
Benzo[a]pyrene	0.14
Indeno[1,2,3-cd]pyrene	< 0.1
Dibenz[a,h]anthracene	< 0.1
Benzo[g,h,i]perylene	< 0.1
p-Terphenyl-D14 (surr)	55 %R



# LABORATORY REPORT

EAI ID#: **228404**

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

Sample ID:	NB-2	NB-3	GZA-1	GZA-2
Lab Sample ID:	228404.02	228404.03	228404.04	228404.05
Matrix:	aqueous	aqueous	aqueous	aqueous
Date Sampled:	6/30/21	6/29/21	6/29/21	6/29/21
Date Received:	7/1/21	7/1/21	7/1/21	7/1/21
Units:	mg/L	mg/L	mg/L	mg/L
Date of Extraction/Prep:	7/1/21	7/1/21	7/1/21	7/1/21
Date of Analysis:	7/1/21	7/1/21	7/1/21	7/1/21
Analyst:	JLB	JLB	JLB	JLB
Method:	8100mod	8100mod	8100mod	8100mod
Dilution Factor:	1	1	1	1
TPH (C9-C40)	< 0.4	< 0.5	< 0.5	< 0.4
p-Terphenyl-D14 (surr)	<b>45 %R</b>	<b>44 %R</b>	<b>29 %R</b>	<b>61 %R</b>

GZA-1: The surrogate p-Terphenyl-D14 exhibited recovery below acceptance limits. The results were confirmed by re-analysis.



# LABORATORY REPORT

EAI ID#: 228404

Client: **Nobis Group**

Client Designation: **Robin Rug | 095560.260**

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Sample ID: GZA-3

Lab Sample ID: 228404.06

Matrix: aqueous

Date Sampled: 6/29/21

Date Received: 7/1/21

Units: mg/L

Date of Extraction/Prep: 7/1/21

Date of Analysis: 7/1/21

Analyst: JLB

Method: 8100mod

Dilution Factor: 1

TPH (C9-C40) < 0.4

p-Terphenyl-D14 (surr) **49 %R**

**CHAIN-OF-CUSTODY RECORD**

**228404**

**BOLD FIELDS REQUIRED. PLEASE CIRCLE REQUESTED ANALYSIS.**

SAMPLE I.D.	SAMPLING DATE/TIME *IF COMPOSITE, INDICATE BOTH START & FINISH DATE/TIME	MATRIX (SEE BELOW) GRAB/*COMPOSITE	VOC		SVOC		TCLP	INORGANICS				MICRO		METALS		OTHER		NOTES MeOH Vial #	
			524.2 524.2 MTBE ONLY	VTGS 624 1, 4 DIOLANE	8021	8015 GRO MAYPH	8015 DRO MAEPH	PEST 608 PCB 8082	OIL & GREASE 1664 TPH 1664	TCLP 1311 VOC PEST METALS HERB	BOD CBOD	TS TSS TDS	BA Cl F SO <sub>4</sub> NO <sub>2</sub> NO <sub>3</sub>	TN NH <sub>3</sub> TN	pH T. RES. CHLORINE O. PHOS. SPEC. CON. T. ALK.	COD PHEOLS TOC DOC	TOTAL CHLORIDE TOTAL SULFIDE		REACTIVE CHLORIDE FLASHPOINT REACTIVE SULFIDE IGNITABILITY
Trp Blank	6/29/21 0700	GW G	✓	✓															2
NB-2	6/30/21 0800	GW G	✓	✓															4
NB-3	6/29/21 1510	GW G	✓	✓															4
GZA-1	6/29/21 1650	GW G	✓	✓															4
GZA-2	6/29/21 1735	GW G	✓	✓															4
GZA-3	6/29/21 1615	GW G	✓	✓															4

MATRIX: A-Air; S-Soil; GW-Ground Water; SW-Surface Water; DW-Drinking Water; WW-Waste Water  
PRESERVATIVE: H-HCL; N-HNO<sub>3</sub>; S-H<sub>2</sub>SO<sub>4</sub>; Na-NaOH; M-MEOH

PROJECT MANAGER: Bettina Farnus  
 COMPANY: Nobis  
 ADDRESS: 18 Chenell Drive  
 CITY: Concord STATE: NH ZIP: 03301  
 PHONE: 603-224-4182 EXT.:  
 E-MAIL: beames@nobis-group.com  
 SITE NAME: Robin Rug  
 PROJECT #: 095560.260  
 STATE: NH MA ME VT OTHER: RI  
 REGULATORY PROGRAM: NPDES: RGP POTW STORMWATER OR GWP, OIL FUND, BROWNFIELD OR OTHER:  
 QUOTE #: PO #:

QA/QC REPORTING  
 A B C  
 MA MCP  
3.8  
 TEMP. 4 °C  
 ICE?  YES  NO

REPORTING OPTIONS  
 PRELIMS: YES OR  NO  
 ELECTRONIC OPTIONS  
 PDF  EXCEL  
 Equis  
 OTHER

TURN AROUND TIME  
 24hr\* 48hr\*  
 3-4 Days\*  
 5 Day 7 Day  
 10 Day  
 \*Pre-approval Required

METALS: 8 RCRA 13 PP FE, MN Pb, Cu  
 OTHER METALS:  
 SAMPLES FIELD FILTERED?  YES  NO  
 NOTES: (IE: SPECIAL DETECTION LIMITS, BILLING INFO, IF DIFFERENT)  
GZA-1 Filtered for PAH due to turbidity  
RI GB objectives  
 SITE HISTORY: Textile Mill  
 SUSPECTED CONTAMINATION:  
 FIELD READINGS:

SAMPLER(S): S. Powers  
Sarah Powers 7/1/21 1045  
 RELINQUISHED BY: DATE: TIME: RECEIVED BY:  
 RELINQUISHED BY: DATE: TIME: RECEIVED BY:  
 RELINQUISHED BY: DATE: TIME: RECEIVED BY:

July 9, 2021

Bettina Eames  
Nobis Engineering - NH  
18 Chenell Drive  
Concord, NH 03301

Project Location: Bristol, RI  
Client Job Number:  
Project Number: 095560.00  
Laboratory Work Order Number: 21G0029

Enclosed are results of analyses for samples received by the laboratory on July 1, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman  
Project Manager

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39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Nobis Engineering - NH  
18 Chenell Drive  
Concord, NH 03301  
ATTN: Bettina Eames

REPORT DATE: 7/9/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 095560.00

**ANALYTICAL SUMMARY**

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WORK ORDER NUMBER: 21G0029

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Bristol, RI

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SG-1	21G0029-01	Sub Slab		EPA TO-15	
SG-2	21G0029-02	Sub Slab		EPA TO-15	
SG-4	21G0029-03	Sub Slab		EPA TO-15	
SG-5	21G0029-04	Sub Slab		EPA TO-15	

**CASE NARRATIVE SUMMARY**

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

**EPA TO-15**

**Qualifications:**

**V-05**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

**Analyte & Samples(s) Qualified:**

**Vinyl Acetate**

21G0029-01[SG-1], 21G0029-02[SG-2], 21G0029-03[SG-4], 21G0029-04[SG-5], B285631-BLK1, B285631-BS1, B285631-DUP1, S061346-CCV1

**V-34**

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

**Analyte & Samples(s) Qualified:**

**1,2,4-Trichlorobenzene**

21G0029-01[SG-1], 21G0029-02[SG-2], 21G0029-03[SG-4], 21G0029-04[SG-5], B285631-BLK1, B285631-BS1, B285631-DUP1, S061346-CCV1

**Z-01**

Compound fails the method requirement of 70-130% recovery for the LCS. Is classified by the lab as a difficult compound and passes the in house limits of 50-150%.

**Analyte & Samples(s) Qualified:**

**1,2,4-Trichlorobenzene**

21G0029-01[SG-1], 21G0029-02[SG-2], 21G0029-03[SG-4], 21G0029-04[SG-5], B285631-BLK1, B285631-BS1, B285631-DUP1

**Naphthalene**

21G0029-01[SG-1], 21G0029-02[SG-2], 21G0029-03[SG-4], 21G0029-04[SG-5], B285631-BLK1, B285631-BS1, B285631-DUP1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington  
Technical Representative

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

**ANALYTICAL RESULTS**

 Project Location: Bristol, RI  
 Date Received: 7/1/2021  
**Field Sample #: SG-1**  
**Sample ID: 21G0029-01**  
 Sample Matrix: Sub Slab  
 Sampled: 6/30/2021 14:16

 Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 2057  
 Canister Size: 6 liter  
 Flow Controller ID: 4067  
 Sample Type: 30 min

**Work Order: 21G0029**  
 Initial Vacuum(in Hg): -30  
 Final Vacuum(in Hg): -7  
 Receipt Vacuum(in Hg): -5.8  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	4.9	4.0		12	9.5	2	7/8/21	19:38	BRF
Benzene	0.30	0.10		0.95	0.32	2	7/8/21	19:38	BRF
Benzyl chloride	ND	0.10		ND	0.52	2	7/8/21	19:38	BRF
Bromodichloromethane	ND	0.10		ND	0.67	2	7/8/21	19:38	BRF
Bromoform	ND	0.10		ND	1.0	2	7/8/21	19:38	BRF
Bromomethane	ND	0.10		ND	0.39	2	7/8/21	19:38	BRF
1,3-Butadiene	ND	0.10		ND	0.22	2	7/8/21	19:38	BRF
2-Butanone (MEK)	ND	4.0		ND	12	2	7/8/21	19:38	BRF
Carbon Disulfide	ND	1.0		ND	3.1	2	7/8/21	19:38	BRF
Carbon Tetrachloride	ND	0.10		ND	0.63	2	7/8/21	19:38	BRF
Chlorobenzene	ND	0.10		ND	0.46	2	7/8/21	19:38	BRF
Chloroethane	ND	0.10		ND	0.26	2	7/8/21	19:38	BRF
Chloroform	0.15	0.10		0.74	0.49	2	7/8/21	19:38	BRF
Chloromethane	ND	0.20		ND	0.41	2	7/8/21	19:38	BRF
Cyclohexane	ND	0.10		ND	0.34	2	7/8/21	19:38	BRF
Dibromochloromethane	ND	0.10		ND	0.85	2	7/8/21	19:38	BRF
1,2-Dibromoethane (EDB)	ND	0.10		ND	0.77	2	7/8/21	19:38	BRF
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	7/8/21	19:38	BRF
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	7/8/21	19:38	BRF
1,4-Dichlorobenzene	1.6	0.10		9.9	0.60	2	7/8/21	19:38	BRF
Dichlorodifluoromethane (Freon 12)	ND	0.10		ND	0.49	2	7/8/21	19:38	BRF
1,1-Dichloroethane	ND	0.10		ND	0.40	2	7/8/21	19:38	BRF
1,2-Dichloroethane	ND	0.10		ND	0.40	2	7/8/21	19:38	BRF
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	7/8/21	19:38	BRF
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	7/8/21	19:38	BRF
trans-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	7/8/21	19:38	BRF
1,2-Dichloropropane	ND	0.10		ND	0.46	2	7/8/21	19:38	BRF
cis-1,3-Dichloropropene	ND	0.10		ND	0.45	2	7/8/21	19:38	BRF
trans-1,3-Dichloropropene	ND	0.10		ND	0.45	2	7/8/21	19:38	BRF
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.10		ND	0.70	2	7/8/21	19:38	BRF
1,4-Dioxane	ND	1.0		ND	3.6	2	7/8/21	19:38	BRF
Ethanol	11	4.0		20	7.5	2	7/8/21	19:38	BRF
Ethyl Acetate	ND	1.0		ND	3.6	2	7/8/21	19:38	BRF
Ethylbenzene	0.20	0.10		0.89	0.43	2	7/8/21	19:38	BRF
4-Ethyltoluene	ND	0.10		ND	0.49	2	7/8/21	19:38	BRF
Heptane	ND	0.10		ND	0.41	2	7/8/21	19:38	BRF
Hexachlorobutadiene	ND	0.10		ND	1.1	2	7/8/21	19:38	BRF

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**ANALYTICAL RESULTS**

 Project Location: Bristol, RI  
 Date Received: 7/1/2021  
**Field Sample #: SG-1**  
**Sample ID: 21G0029-01**  
 Sample Matrix: Sub Slab  
 Sampled: 6/30/2021 14:16

 Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 2057  
 Canister Size: 6 liter  
 Flow Controller ID: 4067  
 Sample Type: 30 min

**Work Order: 21G0029**  
 Initial Vacuum(in Hg): -30  
 Final Vacuum(in Hg): -7  
 Receipt Vacuum(in Hg): -5.8  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	4.0		ND	14	2	7/8/21 19:38	BRF	
2-Hexanone (MBK)	ND	0.20		ND	0.82	2	7/8/21 19:38	BRF	
Isopropanol	ND	4.0		ND	9.8	2	7/8/21 19:38	BRF	
Methyl tert-Butyl Ether (MTBE)	ND	0.10		ND	0.36	2	7/8/21 19:38	BRF	
Methylene Chloride	ND	1.0		ND	3.5	2	7/8/21 19:38	BRF	
4-Methyl-2-pentanone (MIBK)	ND	0.10		ND	0.41	2	7/8/21 19:38	BRF	
Naphthalene	ND	0.10	Z-01	ND	0.52	2	7/8/21 19:38	BRF	
Propene	ND	4.0		ND	6.9	2	7/8/21 19:38	BRF	
Styrene	ND	0.10		ND	0.43	2	7/8/21 19:38	BRF	
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	7/8/21 19:38	BRF	
Tetrachloroethylene	1.4	0.10		9.6	0.68	2	7/8/21 19:38	BRF	
Tetrahydrofuran	ND	1.0		ND	2.9	2	7/8/21 19:38	BRF	
Toluene	1.3	0.10		4.8	0.38	2	7/8/21 19:38	BRF	
1,2,4-Trichlorobenzene	ND	0.10	Z-01, V-34	ND	0.74	2	7/8/21 19:38	BRF	
1,1,1-Trichloroethane	ND	0.10		ND	0.55	2	7/8/21 19:38	BRF	
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	7/8/21 19:38	BRF	
Trichloroethylene	ND	0.10		ND	0.54	2	7/8/21 19:38	BRF	
Trichlorofluoromethane (Freon 11)	2.4	0.40		13	2.2	2	7/8/21 19:38	BRF	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.40		ND	3.1	2	7/8/21 19:38	BRF	
1,2,4-Trimethylbenzene	0.57	0.10		2.8	0.49	2	7/8/21 19:38	BRF	
1,3,5-Trimethylbenzene	ND	0.10		ND	0.49	2	7/8/21 19:38	BRF	
Vinyl Acetate	ND	2.0	V-05	ND	7.0	2	7/8/21 19:38	BRF	
Vinyl Chloride	ND	0.10		ND	0.26	2	7/8/21 19:38	BRF	
m&p-Xylene	0.37	0.20		1.6	0.87	2	7/8/21 19:38	BRF	
o-Xylene	0.18	0.10		0.78	0.43	2	7/8/21 19:38	BRF	

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	91.0	70-130	7/8/21 19:38

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**ANALYTICAL RESULTS**

 Project Location: Bristol, RI  
 Date Received: 7/1/2021  
**Field Sample #: SG-2**  
**Sample ID: 21G0029-02**  
 Sample Matrix: Sub Slab  
 Sampled: 6/30/2021 14:57

 Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1641  
 Canister Size: 6 liter  
 Flow Controller ID: 4076  
 Sample Type: 30 min

**Work Order: 21G0029**  
 Initial Vacuum(in Hg): -28  
 Final Vacuum(in Hg): -4  
 Receipt Vacuum(in Hg): -4.6  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time Analyzed	Analyst
	Results	RL		Results	RL			
Acetone	4.8	4.0		12	9.5	2	7/8/21 20:30	BRF
Benzene	ND	0.10		ND	0.32	2	7/8/21 20:30	BRF
Benzyl chloride	ND	0.10		ND	0.52	2	7/8/21 20:30	BRF
Bromodichloromethane	ND	0.10		ND	0.67	2	7/8/21 20:30	BRF
Bromoform	ND	0.10		ND	1.0	2	7/8/21 20:30	BRF
Bromomethane	ND	0.10		ND	0.39	2	7/8/21 20:30	BRF
1,3-Butadiene	ND	0.10		ND	0.22	2	7/8/21 20:30	BRF
2-Butanone (MEK)	ND	4.0		ND	12	2	7/8/21 20:30	BRF
Carbon Disulfide	ND	1.0		ND	3.1	2	7/8/21 20:30	BRF
Carbon Tetrachloride	ND	0.10		ND	0.63	2	7/8/21 20:30	BRF
Chlorobenzene	ND	0.10		ND	0.46	2	7/8/21 20:30	BRF
Chloroethane	ND	0.10		ND	0.26	2	7/8/21 20:30	BRF
Chloroform	0.38	0.10		1.8	0.49	2	7/8/21 20:30	BRF
Chloromethane	ND	0.20		ND	0.41	2	7/8/21 20:30	BRF
Cyclohexane	ND	0.10		ND	0.34	2	7/8/21 20:30	BRF
Dibromochloromethane	ND	0.10		ND	0.85	2	7/8/21 20:30	BRF
1,2-Dibromoethane (EDB)	ND	0.10		ND	0.77	2	7/8/21 20:30	BRF
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	7/8/21 20:30	BRF
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	7/8/21 20:30	BRF
1,4-Dichlorobenzene	0.44	0.10		2.7	0.60	2	7/8/21 20:30	BRF
Dichlorodifluoromethane (Freon 12)	ND	0.10		ND	0.49	2	7/8/21 20:30	BRF
1,1-Dichloroethane	ND	0.10		ND	0.40	2	7/8/21 20:30	BRF
1,2-Dichloroethane	ND	0.10		ND	0.40	2	7/8/21 20:30	BRF
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	7/8/21 20:30	BRF
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	7/8/21 20:30	BRF
trans-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	7/8/21 20:30	BRF
1,2-Dichloropropane	ND	0.10		ND	0.46	2	7/8/21 20:30	BRF
cis-1,3-Dichloropropene	ND	0.10		ND	0.45	2	7/8/21 20:30	BRF
trans-1,3-Dichloropropene	ND	0.10		ND	0.45	2	7/8/21 20:30	BRF
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.10		ND	0.70	2	7/8/21 20:30	BRF
1,4-Dioxane	ND	1.0		ND	3.6	2	7/8/21 20:30	BRF
Ethanol	33	4.0		62	7.5	2	7/8/21 20:30	BRF
Ethyl Acetate	ND	1.0		ND	3.6	2	7/8/21 20:30	BRF
Ethylbenzene	0.14	0.10		0.59	0.43	2	7/8/21 20:30	BRF
4-Ethyltoluene	ND	0.10		ND	0.49	2	7/8/21 20:30	BRF
Heptane	ND	0.10		ND	0.41	2	7/8/21 20:30	BRF
Hexachlorobutadiene	ND	0.10		ND	1.1	2	7/8/21 20:30	BRF

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

**ANALYTICAL RESULTS**

 Project Location: Bristol, RI  
 Date Received: 7/1/2021  
**Field Sample #: SG-2**  
**Sample ID: 21G0029-02**  
 Sample Matrix: Sub Slab  
 Sampled: 6/30/2021 14:57

 Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 1641  
 Canister Size: 6 liter  
 Flow Controller ID: 4076  
 Sample Type: 30 min

**Work Order: 21G0029**  
 Initial Vacuum(in Hg): -28  
 Final Vacuum(in Hg): -4  
 Receipt Vacuum(in Hg): -4.6  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	4.0		ND	14	2	7/8/21 20:30	BRF	
2-Hexanone (MBK)	ND	0.20		ND	0.82	2	7/8/21 20:30	BRF	
Isopropanol	ND	4.0		ND	9.8	2	7/8/21 20:30	BRF	
Methyl tert-Butyl Ether (MTBE)	ND	0.10		ND	0.36	2	7/8/21 20:30	BRF	
Methylene Chloride	ND	1.0		ND	3.5	2	7/8/21 20:30	BRF	
4-Methyl-2-pentanone (MIBK)	ND	0.10		ND	0.41	2	7/8/21 20:30	BRF	
Naphthalene	ND	0.10	Z-01	ND	0.52	2	7/8/21 20:30	BRF	
Propene	ND	4.0		ND	6.9	2	7/8/21 20:30	BRF	
Styrene	0.10	0.10		0.43	0.43	2	7/8/21 20:30	BRF	
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	7/8/21 20:30	BRF	
Tetrachloroethylene	2.6	0.10		18	0.68	2	7/8/21 20:30	BRF	
Tetrahydrofuran	ND	1.0		ND	2.9	2	7/8/21 20:30	BRF	
Toluene	0.42	0.10		1.6	0.38	2	7/8/21 20:30	BRF	
1,2,4-Trichlorobenzene	ND	0.10	V-34, Z-01	ND	0.74	2	7/8/21 20:30	BRF	
1,1,1-Trichloroethane	ND	0.10		ND	0.55	2	7/8/21 20:30	BRF	
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	7/8/21 20:30	BRF	
Trichloroethylene	0.23	0.10		1.2	0.54	2	7/8/21 20:30	BRF	
Trichlorofluoromethane (Freon 11)	ND	0.40		ND	2.2	2	7/8/21 20:30	BRF	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.40		ND	3.1	2	7/8/21 20:30	BRF	
1,2,4-Trimethylbenzene	ND	0.10		ND	0.49	2	7/8/21 20:30	BRF	
1,3,5-Trimethylbenzene	ND	0.10		ND	0.49	2	7/8/21 20:30	BRF	
Vinyl Acetate	ND	2.0	V-05	ND	7.0	2	7/8/21 20:30	BRF	
Vinyl Chloride	ND	0.10		ND	0.26	2	7/8/21 20:30	BRF	
m&p-Xylene	0.39	0.20		1.7	0.87	2	7/8/21 20:30	BRF	
o-Xylene	0.20	0.10		0.86	0.43	2	7/8/21 20:30	BRF	

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	89.6	70-130	7/8/21 20:30

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**ANALYTICAL RESULTS**

 Project Location: Bristol, RI  
 Date Received: 7/1/2021  
**Field Sample #: SG-4**  
**Sample ID: 21G0029-03**  
 Sample Matrix: Sub Slab  
 Sampled: 6/30/2021 15:27

 Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 2205  
 Canister Size: 6 liter  
 Flow Controller ID: 4311  
 Sample Type: 30 min

**Work Order: 21G0029**  
 Initial Vacuum(in Hg): -29  
 Final Vacuum(in Hg): -4  
 Receipt Vacuum(in Hg): -4.5  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	5.4	4.0		13	9.5	2	7/8/21 21:49	BRF	
Benzene	ND	0.10		ND	0.32	2	7/8/21 21:49	BRF	
Benzyl chloride	ND	0.10		ND	0.52	2	7/8/21 21:49	BRF	
Bromodichloromethane	ND	0.10		ND	0.67	2	7/8/21 21:49	BRF	
Bromoform	ND	0.10		ND	1.0	2	7/8/21 21:49	BRF	
Bromomethane	ND	0.10		ND	0.39	2	7/8/21 21:49	BRF	
1,3-Butadiene	ND	0.10		ND	0.22	2	7/8/21 21:49	BRF	
2-Butanone (MEK)	ND	4.0		ND	12	2	7/8/21 21:49	BRF	
Carbon Disulfide	ND	1.0		ND	3.1	2	7/8/21 21:49	BRF	
Carbon Tetrachloride	ND	0.10		ND	0.63	2	7/8/21 21:49	BRF	
Chlorobenzene	ND	0.10		ND	0.46	2	7/8/21 21:49	BRF	
Chloroethane	ND	0.10		ND	0.26	2	7/8/21 21:49	BRF	
Chloroform	ND	0.10		ND	0.49	2	7/8/21 21:49	BRF	
Chloromethane	ND	0.20		ND	0.41	2	7/8/21 21:49	BRF	
Cyclohexane	ND	0.10		ND	0.34	2	7/8/21 21:49	BRF	
Dibromochloromethane	ND	0.10		ND	0.85	2	7/8/21 21:49	BRF	
1,2-Dibromoethane (EDB)	ND	0.10		ND	0.77	2	7/8/21 21:49	BRF	
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	7/8/21 21:49	BRF	
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	7/8/21 21:49	BRF	
1,4-Dichlorobenzene	0.19	0.10		1.1	0.60	2	7/8/21 21:49	BRF	
Dichlorodifluoromethane (Freon 12)	ND	0.10		ND	0.49	2	7/8/21 21:49	BRF	
1,1-Dichloroethane	ND	0.10		ND	0.40	2	7/8/21 21:49	BRF	
1,2-Dichloroethane	ND	0.10		ND	0.40	2	7/8/21 21:49	BRF	
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	7/8/21 21:49	BRF	
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	7/8/21 21:49	BRF	
trans-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	7/8/21 21:49	BRF	
1,2-Dichloropropane	ND	0.10		ND	0.46	2	7/8/21 21:49	BRF	
cis-1,3-Dichloropropene	ND	0.10		ND	0.45	2	7/8/21 21:49	BRF	
trans-1,3-Dichloropropene	ND	0.10		ND	0.45	2	7/8/21 21:49	BRF	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.10		ND	0.70	2	7/8/21 21:49	BRF	
1,4-Dioxane	ND	1.0		ND	3.6	2	7/8/21 21:49	BRF	
Ethanol	23	4.0		44	7.5	2	7/8/21 21:49	BRF	
Ethyl Acetate	ND	1.0		ND	3.6	2	7/8/21 21:49	BRF	
Ethylbenzene	ND	0.10		ND	0.43	2	7/8/21 21:49	BRF	
4-Ethyltoluene	ND	0.10		ND	0.49	2	7/8/21 21:49	BRF	
Heptane	ND	0.10		ND	0.41	2	7/8/21 21:49	BRF	
Hexachlorobutadiene	ND	0.10		ND	1.1	2	7/8/21 21:49	BRF	

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**ANALYTICAL RESULTS**

 Project Location: Bristol, RI  
 Date Received: 7/1/2021  
**Field Sample #: SG-4**  
**Sample ID: 21G0029-03**  
 Sample Matrix: Sub Slab  
 Sampled: 6/30/2021 15:27

 Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 2205  
 Canister Size: 6 liter  
 Flow Controller ID: 4311  
 Sample Type: 30 min

**Work Order: 21G0029**  
 Initial Vacuum(in Hg): -29  
 Final Vacuum(in Hg): -4  
 Receipt Vacuum(in Hg): -4.5  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	4.0		ND	14	2	7/8/21 21:49	BRF	
2-Hexanone (MBK)	ND	0.20		ND	0.82	2	7/8/21 21:49	BRF	
Isopropanol	ND	4.0		ND	9.8	2	7/8/21 21:49	BRF	
Methyl tert-Butyl Ether (MTBE)	ND	0.10		ND	0.36	2	7/8/21 21:49	BRF	
Methylene Chloride	ND	1.0		ND	3.5	2	7/8/21 21:49	BRF	
4-Methyl-2-pentanone (MIBK)	ND	0.10		ND	0.41	2	7/8/21 21:49	BRF	
Naphthalene	ND	0.10	Z-01	ND	0.52	2	7/8/21 21:49	BRF	
Propene	ND	4.0		ND	6.9	2	7/8/21 21:49	BRF	
Styrene	ND	0.10		ND	0.43	2	7/8/21 21:49	BRF	
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	7/8/21 21:49	BRF	
Tetrachloroethylene	38	0.10		260	0.68	2	7/8/21 21:49	BRF	
Tetrahydrofuran	ND	1.0		ND	2.9	2	7/8/21 21:49	BRF	
Toluene	0.25	0.10		0.93	0.38	2	7/8/21 21:49	BRF	
1,2,4-Trichlorobenzene	ND	0.10	V-34, Z-01	ND	0.74	2	7/8/21 21:49	BRF	
1,1,1-Trichloroethane	0.42	0.10		2.3	0.55	2	7/8/21 21:49	BRF	
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	7/8/21 21:49	BRF	
Trichloroethylene	3.6	0.10		19	0.54	2	7/8/21 21:49	BRF	
Trichlorofluoromethane (Freon 11)	77	0.40		430	2.2	2	7/8/21 21:49	BRF	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.40		ND	3.1	2	7/8/21 21:49	BRF	
1,2,4-Trimethylbenzene	ND	0.10		ND	0.49	2	7/8/21 21:49	BRF	
1,3,5-Trimethylbenzene	ND	0.10		ND	0.49	2	7/8/21 21:49	BRF	
Vinyl Acetate	ND	2.0	V-05	ND	7.0	2	7/8/21 21:49	BRF	
Vinyl Chloride	ND	0.10		ND	0.26	2	7/8/21 21:49	BRF	
m&p-Xylene	0.26	0.20		1.1	0.87	2	7/8/21 21:49	BRF	
o-Xylene	0.14	0.10		0.62	0.43	2	7/8/21 21:49	BRF	

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	86.2	70-130	7/8/21 21:49

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**ANALYTICAL RESULTS**

 Project Location: Bristol, RI  
 Date Received: 7/1/2021  
**Field Sample #: SG-5**  
**Sample ID: 21G0029-04**  
 Sample Matrix: Sub Slab  
 Sampled: 6/30/2021 15:58

 Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 2010  
 Canister Size: 6 liter  
 Flow Controller ID: 4213  
 Sample Type: 30 min

**Work Order: 21G0029**  
 Initial Vacuum(in Hg): -28  
 Final Vacuum(in Hg): -5  
 Receipt Vacuum(in Hg): -6.7  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	12	4.0		28	9.5	2	7/8/21 22:40		BRF
Benzene	0.19	0.10		0.61	0.32	2	7/8/21 22:40		BRF
Benzyl chloride	ND	0.10		ND	0.52	2	7/8/21 22:40		BRF
Bromodichloromethane	ND	0.10		ND	0.67	2	7/8/21 22:40		BRF
Bromoform	ND	0.10		ND	1.0	2	7/8/21 22:40		BRF
Bromomethane	ND	0.10		ND	0.39	2	7/8/21 22:40		BRF
1,3-Butadiene	ND	0.10		ND	0.22	2	7/8/21 22:40		BRF
2-Butanone (MEK)	ND	4.0		ND	12	2	7/8/21 22:40		BRF
Carbon Disulfide	ND	1.0		ND	3.1	2	7/8/21 22:40		BRF
Carbon Tetrachloride	ND	0.10		ND	0.63	2	7/8/21 22:40		BRF
Chlorobenzene	ND	0.10		ND	0.46	2	7/8/21 22:40		BRF
Chloroethane	ND	0.10		ND	0.26	2	7/8/21 22:40		BRF
Chloroform	0.17	0.10		0.81	0.49	2	7/8/21 22:40		BRF
Chloromethane	ND	0.20		ND	0.41	2	7/8/21 22:40		BRF
Cyclohexane	ND	0.10		ND	0.34	2	7/8/21 22:40		BRF
Dibromochloromethane	ND	0.10		ND	0.85	2	7/8/21 22:40		BRF
1,2-Dibromoethane (EDB)	ND	0.10		ND	0.77	2	7/8/21 22:40		BRF
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	7/8/21 22:40		BRF
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	7/8/21 22:40		BRF
1,4-Dichlorobenzene	ND	0.10		ND	0.60	2	7/8/21 22:40		BRF
Dichlorodifluoromethane (Freon 12)	ND	0.10		ND	0.49	2	7/8/21 22:40		BRF
1,1-Dichloroethane	ND	0.10		ND	0.40	2	7/8/21 22:40		BRF
1,2-Dichloroethane	ND	0.10		ND	0.40	2	7/8/21 22:40		BRF
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	7/8/21 22:40		BRF
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	7/8/21 22:40		BRF
trans-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	7/8/21 22:40		BRF
1,2-Dichloropropane	ND	0.10		ND	0.46	2	7/8/21 22:40		BRF
cis-1,3-Dichloropropene	ND	0.10		ND	0.45	2	7/8/21 22:40		BRF
trans-1,3-Dichloropropene	ND	0.10		ND	0.45	2	7/8/21 22:40		BRF
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.10		ND	0.70	2	7/8/21 22:40		BRF
1,4-Dioxane	ND	1.0		ND	3.6	2	7/8/21 22:40		BRF
Ethanol	ND	4.0		ND	7.5	2	7/8/21 22:40		BRF
Ethyl Acetate	ND	1.0		ND	3.6	2	7/8/21 22:40		BRF
Ethylbenzene	0.12	0.10		0.52	0.43	2	7/8/21 22:40		BRF
4-Ethyltoluene	ND	0.10		ND	0.49	2	7/8/21 22:40		BRF
Heptane	ND	0.10		ND	0.41	2	7/8/21 22:40		BRF
Hexachlorobutadiene	ND	0.10		ND	1.1	2	7/8/21 22:40		BRF

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**ANALYTICAL RESULTS**

 Project Location: Bristol, RI  
 Date Received: 7/1/2021  
**Field Sample #: SG-5**  
**Sample ID: 21G0029-04**  
 Sample Matrix: Sub Slab  
 Sampled: 6/30/2021 15:58

 Sample Description/Location:  
 Sub Description/Location:  
 Canister ID: 2010  
 Canister Size: 6 liter  
 Flow Controller ID: 4213  
 Sample Type: 30 min

**Work Order: 21G0029**  
 Initial Vacuum(in Hg): -28  
 Final Vacuum(in Hg): -5  
 Receipt Vacuum(in Hg): -6.7  
 Flow Controller Type: Fixed-Orifice  
 Flow Controller Calibration  
 RPD Pre and Post-Sampling:

**EPA TO-15**

Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Hexane	ND	4.0		ND	14	2	7/8/21 22:40	BRF	
2-Hexanone (MBK)	ND	0.20		ND	0.82	2	7/8/21 22:40	BRF	
Isopropanol	ND	4.0		ND	9.8	2	7/8/21 22:40	BRF	
Methyl tert-Butyl Ether (MTBE)	ND	0.10		ND	0.36	2	7/8/21 22:40	BRF	
Methylene Chloride	ND	1.0		ND	3.5	2	7/8/21 22:40	BRF	
4-Methyl-2-pentanone (MIBK)	ND	0.10		ND	0.41	2	7/8/21 22:40	BRF	
Naphthalene	ND	0.10	Z-01	ND	0.52	2	7/8/21 22:40	BRF	
Propene	ND	4.0		ND	6.9	2	7/8/21 22:40	BRF	
Styrene	0.12	0.10		0.53	0.43	2	7/8/21 22:40	BRF	
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	7/8/21 22:40	BRF	
Tetrachloroethylene	1.7	0.10		11	0.68	2	7/8/21 22:40	BRF	
Tetrahydrofuran	ND	1.0		ND	2.9	2	7/8/21 22:40	BRF	
Toluene	0.62	0.10		2.3	0.38	2	7/8/21 22:40	BRF	
1,2,4-Trichlorobenzene	ND	0.10	V-34, Z-01	ND	0.74	2	7/8/21 22:40	BRF	
1,1,1-Trichloroethane	ND	0.10		ND	0.55	2	7/8/21 22:40	BRF	
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	7/8/21 22:40	BRF	
Trichloroethylene	ND	0.10		ND	0.54	2	7/8/21 22:40	BRF	
Trichlorofluoromethane (Freon 11)	ND	0.40		ND	2.2	2	7/8/21 22:40	BRF	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.40		ND	3.1	2	7/8/21 22:40	BRF	
1,2,4-Trimethylbenzene	ND	0.10		ND	0.49	2	7/8/21 22:40	BRF	
1,3,5-Trimethylbenzene	ND	0.10		ND	0.49	2	7/8/21 22:40	BRF	
Vinyl Acetate	ND	2.0	V-05	ND	7.0	2	7/8/21 22:40	BRF	
Vinyl Chloride	ND	0.10		ND	0.26	2	7/8/21 22:40	BRF	
m&p-Xylene	0.30	0.20		1.3	0.87	2	7/8/21 22:40	BRF	
o-Xylene	0.13	0.10		0.57	0.43	2	7/8/21 22:40	BRF	

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	91.8	70-130	7/8/21 22:40

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

**Sample Extraction Data**
**Prep Method: TO-15 Prep**
**Analytical Method: EP**

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
21G0029-01 [SG-1]	B285631	1.5	1	N/A	1000	200	150	07/08/21
21G0029-02 [SG-2]	B285631	1.5	1	N/A	1000	200	150	07/08/21
21G0029-03 [SG-4]	B285631	1.5	1	N/A	1000	200	150	07/08/21
21G0029-04 [SG-5]	B285631	1.5	1	N/A	1000	200	150	07/08/21

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## QUALITY CONTROL

## Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result	Limits	RPD	Limit		
<b>Batch B285631 - TO-15 Prep</b>											
<b>Blank (B285631-BLK1)</b>						Prepared & Analyzed: 07/08/21					
Acetone	ND	0.80									
Benzene	ND	0.020									
Benzyl chloride	ND	0.020									
Bromodichloromethane	ND	0.020									
Bromoform	ND	0.020									
Bromomethane	ND	0.020									
1,3-Butadiene	ND	0.020									
2-Butanone (MEK)	ND	0.80									
Carbon Disulfide	ND	0.20									
Carbon Tetrachloride	ND	0.020									
Chlorobenzene	ND	0.020									
Chloroethane	ND	0.020									
Chloroform	ND	0.020									
Chloromethane	ND	0.040									
Cyclohexane	ND	0.020									
Dibromochloromethane	ND	0.020									
1,2-Dibromoethane (EDB)	ND	0.020									
1,2-Dichlorobenzene	ND	0.020									
1,3-Dichlorobenzene	ND	0.020									
1,4-Dichlorobenzene	ND	0.020									
Dichlorodifluoromethane (Freon 12)	ND	0.020									
1,1-Dichloroethane	ND	0.020									
1,2-Dichloroethane	ND	0.020									
1,1-Dichloroethylene	ND	0.020									
cis-1,2-Dichloroethylene	ND	0.020									
trans-1,2-Dichloroethylene	ND	0.020									
1,2-Dichloropropane	ND	0.020									
cis-1,3-Dichloropropene	ND	0.020									
trans-1,3-Dichloropropene	ND	0.020									
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.020									
1,4-Dioxane	ND	0.20									
Ethanol	ND	0.80									
Ethyl Acetate	ND	0.20									
Ethylbenzene	ND	0.020									
4-Ethyltoluene	ND	0.020									
Heptane	ND	0.020									
Hexachlorobutadiene	ND	0.020									
Hexane	ND	0.80									
2-Hexanone (MBK)	ND	0.020									
Isopropanol	ND	0.80									
Methyl tert-Butyl Ether (MTBE)	ND	0.020									
Methylene Chloride	ND	0.20									
4-Methyl-2-pentanone (MIBK)	ND	0.020									
Naphthalene	ND	0.020									
Propene	ND	0.80									
Styrene	ND	0.020									

Z-01

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**QUALITY CONTROL**
**Air Toxics by EPA Compendium Methods - Quality Control**

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	RPD	RPD	Limit	Flag/Qual
	Results	RL	Results	RL	ppbv	Result	%REC	Limits			
<b>Batch B285631 - TO-15 Prep</b>											
<b>Blank (B285631-BLK1)</b>						Prepared & Analyzed: 07/08/21					
1,1,2,2-Tetrachloroethane	ND	0.020									
Tetrachloroethylene	ND	0.020									
Tetrahydrofuran	ND	0.20									
Toluene	ND	0.020									
1,2,4-Trichlorobenzene	ND	0.020									V-34, Z-01
1,1,1-Trichloroethane	ND	0.020									
1,1,2-Trichloroethane	ND	0.020									
Trichloroethylene	ND	0.020									
Trichlorofluoromethane (Freon 11)	ND	0.080									
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.080									
1,2,4-Trimethylbenzene	ND	0.020									
1,3,5-Trimethylbenzene	ND	0.020									
Vinyl Acetate	ND	0.40									V-05
Vinyl Chloride	ND	0.020									
m&p-Xylene	ND	0.040									
o-Xylene	ND	0.020									
<i>Surrogate: 4-Bromofluorobenzene (1)</i>	<i>7.27</i>				<i>8.00</i>		<i>90.9</i>		<i>70-130</i>		
<b>LCS (B285631-BS1)</b>						Prepared & Analyzed: 07/08/21					
Acetone	4.76				5.00		95.1		70-130		
Benzene	4.64				5.00		92.8		70-130		
Benzyl chloride	5.25				5.00		105		70-130		
Bromodichloromethane	5.05				5.00		101		70-130		
Bromoform	4.95				5.00		99.1		70-130		
Bromomethane	3.96				5.00		79.2		70-130		
1,3-Butadiene	3.86				5.00		77.1		70-130		
2-Butanone (MEK)	4.68				5.00		93.6		70-130		
Carbon Disulfide	4.58				5.00		91.5		70-130		
Carbon Tetrachloride	4.68				5.00		93.5		70-130		
Chlorobenzene	4.45				5.00		89.0		70-130		
Chloroethane	4.12				5.00		82.4		70-130		
Chloroform	4.30				5.00		86.0		70-130		
Chloromethane	4.43				5.00		88.5		70-130		
Cyclohexane	4.38				5.00		87.7		70-130		
Dibromochloromethane	4.75				5.00		94.9		70-130		
1,2-Dibromoethane (EDB)	4.75				5.00		95.0		70-130		
1,2-Dichlorobenzene	4.91				5.00		98.2		70-130		
1,3-Dichlorobenzene	5.05				5.00		101		70-130		
1,4-Dichlorobenzene	4.86				5.00		97.2		70-130		
Dichlorodifluoromethane (Freon 12)	4.07				5.00		81.4		70-130		
1,1-Dichloroethane	4.33				5.00		86.7		70-130		
1,2-Dichloroethane	4.38				5.00		87.6		70-130		
1,1-Dichloroethylene	4.67				5.00		93.5		70-130		
cis-1,2-Dichloroethylene	4.26				5.00		85.2		70-130		
trans-1,2-Dichloroethylene	4.21				5.00		84.2		70-130		
1,2-Dichloropropane	4.78				5.00		95.7		70-130		

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**QUALITY CONTROL**
**Air Toxics by EPA Compendium Methods - Quality Control**

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result	Limits	RPD	Limit		
<b>Batch B285631 - TO-15 Prep</b>											
<b>LCS (B285631-BS1)</b>						Prepared & Analyzed: 07/08/21					
cis-1,3-Dichloropropene	4.44				5.00		88.8	70-130			
trans-1,3-Dichloropropene	4.88				5.00		97.6	70-130			
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	3.85				5.00		77.1	70-130			
1,4-Dioxane	4.88				5.00		97.6	70-130			
Ethanol	5.22				5.00		104	70-130			
Ethyl Acetate	3.98				5.00		79.7	70-130			
Ethylbenzene	4.48				5.00		89.6	70-130			
4-Ethyltoluene	4.51				5.00		90.2	70-130			
Heptane	4.93				5.00		98.6	70-130			
Hexachlorobutadiene	4.46				5.00		89.2	70-130			
Hexane	4.61				5.00		92.2	70-130			
2-Hexanone (MBK)	5.81				5.00		116	70-130			
Isopropanol	4.07				5.00		81.5	70-130			
Methyl tert-Butyl Ether (MTBE)	3.77				5.00		75.4	70-130			
Methylene Chloride	5.17				5.00		103	70-130			
4-Methyl-2-pentanone (MIBK)	5.18				5.00		104	70-130			
Naphthalene	3.04				5.00		<b>60.7</b> *	70-130			Z-01
Propene	4.06				5.00		81.2	70-130			
Styrene	4.52				5.00		90.4	70-130			
1,1,2,2-Tetrachloroethane	5.08				5.00		102	70-130			
Tetrachloroethylene	4.43				5.00		88.6	70-130			
Tetrahydrofuran	4.13				5.00		82.5	70-130			
Toluene	4.44				5.00		88.7	70-130			
1,2,4-Trichlorobenzene	3.37				5.00		<b>67.4</b> *	70-130			Z-01, V-34
1,1,1-Trichloroethane	4.62				5.00		92.5	70-130			
1,1,2-Trichloroethane	4.80				5.00		95.9	70-130			
Trichloroethylene	4.82				5.00		96.4	70-130			
Trichlorofluoromethane (Freon 11)	4.12				5.00		82.4	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	4.39				5.00		87.8	70-130			
1,2,4-Trimethylbenzene	4.54				5.00		90.8	70-130			
1,3,5-Trimethylbenzene	4.69				5.00		93.8	70-130			
Vinyl Acetate	4.54				5.00		90.7	70-130			V-05
Vinyl Chloride	4.19				5.00		83.9	70-130			
m&p-Xylene	9.74				10.0		97.4	70-130			
o-Xylene	4.76				5.00		95.2	70-130			
<i>Surrogate: 4-Bromofluorobenzene (1)</i>	<i>7.69</i>				<i>8.00</i>		<i>96.2</i>	<i>70-130</i>			

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**QUALITY CONTROL**
**Air Toxics by EPA Compendium Methods - Quality Control**

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result	Limits	RPD	Limit	
<b>Batch B285631 - TO-15 Prep</b>										
<b>Duplicate (B285631-DUP1)</b>		<b>Source: 21G0029-02</b>				<b>Prepared &amp; Analyzed: 07/08/21</b>				
Acetone	4.9	4.0	12	9.5		4.8		0.0412	25	
Benzene	ND	0.10	ND	0.32		ND			25	
Benzyl chloride	ND	0.10	ND	0.52		ND			25	
Bromodichloromethane	ND	0.10	ND	0.67		ND			25	
Bromoform	ND	0.10	ND	1.0		ND			25	
Bromomethane	ND	0.10	ND	0.39		ND			25	
1,3-Butadiene	ND	0.10	ND	0.22		ND			25	
2-Butanone (MEK)	ND	4.0	ND	12		ND			25	
Carbon Disulfide	ND	1.0	ND	3.1		ND			25	
Carbon Tetrachloride	ND	0.10	ND	0.63		ND			25	
Chlorobenzene	ND	0.10	ND	0.46		ND			25	
Chloroethane	ND	0.10	ND	0.26		ND			25	
Chloroform	0.36	0.10	1.7	0.49		0.38		5.43	25	
Chloromethane	ND	0.20	ND	0.41		ND			25	
Cyclohexane	ND	0.10	ND	0.34		ND			25	
Dibromochloromethane	ND	0.10	ND	0.85		ND			25	
1,2-Dibromoethane (EDB)	ND	0.10	ND	0.77		ND			25	
1,2-Dichlorobenzene	ND	0.10	ND	0.60		ND			25	
1,3-Dichlorobenzene	ND	0.10	ND	0.60		ND			25	
1,4-Dichlorobenzene	0.43	0.10	2.6	0.60		0.44		3.69	25	
Dichlorodifluoromethane (Freon 12)	ND	0.10	ND	0.49		ND			25	
1,1-Dichloroethane	ND	0.10	ND	0.40		ND			25	
1,2-Dichloroethane	ND	0.10	ND	0.40		ND			25	
1,1-Dichloroethylene	ND	0.10	ND	0.40		ND			25	
cis-1,2-Dichloroethylene	ND	0.10	ND	0.40		ND			25	
trans-1,2-Dichloroethylene	ND	0.10	ND	0.40		ND			25	
1,2-Dichloropropane	ND	0.10	ND	0.46		ND			25	
cis-1,3-Dichloropropene	ND	0.10	ND	0.45		ND			25	
trans-1,3-Dichloropropene	ND	0.10	ND	0.45		ND			25	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.10	ND	0.70		ND			25	
1,4-Dioxane	ND	1.0	ND	3.6		ND			25	
Ethanol	33	4.0	62	7.5		33		0.472	25	
Ethyl Acetate	ND	1.0	ND	3.6		ND			25	
Ethylbenzene	0.13	0.10	0.55	0.43		0.14		7.63	25	
4-Ethyltoluene	ND	0.10	ND	0.49		ND			25	
Heptane	ND	0.10	ND	0.41		ND			25	
Hexachlorobutadiene	ND	0.10	ND	1.1		ND			25	
Hexane	0.40	4.0	1.4	14		0.40		1.50	25	
2-Hexanone (MBK)	ND	0.10	ND	0.41		ND			25	
Isopropanol	ND	4.0	ND	9.8		ND			25	
Methyl tert-Butyl Ether (MTBE)	ND	0.10	ND	0.36		ND			25	
Methylene Chloride	ND	1.0	ND	3.5		ND			25	
4-Methyl-2-pentanone (MIBK)	ND	0.10	ND	0.41		ND			25	
Naphthalene	ND	0.10	ND	0.52		ND			25	Z-01
Propene	ND	4.0	ND	6.9		ND			25	
Styrene	0.11	0.10	0.45	0.43		0.10		5.83	25	

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**QUALITY CONTROL**
**Air Toxics by EPA Compendium Methods - Quality Control**

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	RPD	RPD Limit	Flag/Qual
	Results	RL	Results	RL	ppbv	Result	%REC Limits	RPD		
<b>Batch B285631 - TO-15 Prep</b>										
<b>Duplicate (B285631-DUP1)</b>		<b>Source: 21G0029-02</b>				<b>Prepared &amp; Analyzed: 07/08/21</b>				
1,1,2,2-Tetrachloroethane	ND	0.10	ND	0.69		ND			25	
Tetrachloroethylene	2.6	0.10	18	0.68		2.6		0.304	25	
Tetrahydrofuran	ND	1.0	ND	2.9		ND			25	
Toluene	0.44	0.10	1.7	0.38		0.42		4.16	25	
1,2,4-Trichlorobenzene	ND	0.10	ND	0.74		ND			25	V-34, Z-01
1,1,1-Trichloroethane	ND	0.10	ND	0.55		ND			25	
1,1,2-Trichloroethane	ND	0.10	ND	0.55		ND			25	
Trichloroethylene	0.19	0.10	1.0	0.54		0.23		15.2	25	
Trichlorofluoromethane (Freon 11)	0.39	0.40	2.2	2.2		0.38		1.04	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.40	ND	3.1		ND			25	
1,2,4-Trimethylbenzene	ND	0.10	ND	0.49		ND			25	
1,3,5-Trimethylbenzene	ND	0.10	ND	0.49		ND			25	
Vinyl Acetate	ND	2.0	ND	7.0		ND			25	V-05
Vinyl Chloride	ND	0.10	ND	0.26		ND			25	
m&p-Xylene	0.39	0.20	1.7	0.87		0.39		0.00	25	
o-Xylene	0.19	0.10	0.83	0.43		0.20		3.08	25	
<i>Surrogate: 4-Bromofluorobenzene (1)</i>	<i>6.95</i>					<i>8.00</i>		<i>86.9</i>	<i>70-130</i>	

**FLAG/QUALIFIER SUMMARY**

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.
Z-01	Compound fails the method requirement of 70-130% recovery for the LCS. Is classified by the lab as a difficult compound and passes the in house limits of 50-150%.

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**INTERNAL STANDARD AREA AND RT SUMMARY**
**EPA TO-15**

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>Initial Cal Check (S052381-ICV1 )</b>			Lab File ID: J2025821.D			Analyzed: 09/14/20 23:22			
Bromochloromethane (1)	159501	2.873	155833	2.873	102	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	756714	3.475	745760	3.475	101	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	686740	5.06	671608	5.057	102	60 - 140	0.0030	+/-0.50	

**INTERNAL STANDARD AREA AND RT SUMMARY**
**EPA TO-15**

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>Calibration Check (S061346-CCV1 )</b>			Lab File ID: J21A189004.D			Analyzed: 07/08/21 11:41			
Bromochloromethane (1)	157356	2.87	155833	2.873	101	60 - 140	-0.0030	+/-0.50	
1,4-Difluorobenzene (1)	638767	3.472	745760	3.475	86	60 - 140	-0.0030	+/-0.50	
Chlorobenzene-d5 (1)	572744	5.057	671608	5.057	85	60 - 140	0.0000	+/-0.50	
<b>LCS (B285631-BS1 )</b>			Lab File ID: J21A189005.D			Analyzed: 07/08/21 12:08			
Bromochloromethane (1)	154718	2.867	157356	2.87	98	60 - 140	-0.0030	+/-0.50	
1,4-Difluorobenzene (1)	629101	3.472	638767	3.472	98	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	564227	5.057	572744	5.057	99	60 - 140	0.0000	+/-0.50	
<b>Blank (B285631-BLK1 )</b>			Lab File ID: J21A189008.D			Analyzed: 07/08/21 13:37			
Bromochloromethane (1)	153553	2.853	157356	2.87	98	60 - 140	-0.0170	+/-0.50	
1,4-Difluorobenzene (1)	568518	3.465	638767	3.472	89	60 - 140	-0.0070	+/-0.50	
Chlorobenzene-d5 (1)	521545	5.053	572744	5.057	91	60 - 140	-0.0040	+/-0.50	
<b>SG-1 (21G0029-01 )</b>			Lab File ID: J21A189019.D			Analyzed: 07/08/21 19:38			
Bromochloromethane (1)	156119	2.86	157356	2.87	99	60 - 140	-0.0100	+/-0.50	
1,4-Difluorobenzene (1)	569826	3.465	638767	3.472	89	60 - 140	-0.0070	+/-0.50	
Chlorobenzene-d5 (1)	520091	5.053	572744	5.057	91	60 - 140	-0.0040	+/-0.50	
<b>SG-2 (21G0029-02 )</b>			Lab File ID: J21A189021.D			Analyzed: 07/08/21 20:30			
Bromochloromethane (1)	151655	2.86	157356	2.87	96	60 - 140	-0.0100	+/-0.50	
1,4-Difluorobenzene (1)	554837	3.468	638767	3.472	87	60 - 140	-0.0040	+/-0.50	
Chlorobenzene-d5 (1)	524986	5.054	572744	5.057	92	60 - 140	-0.0030	+/-0.50	
<b>Duplicate (B285631-DUP1 )</b>			Lab File ID: J21A189022.D			Analyzed: 07/08/21 20:57			
Bromochloromethane (1)	150490	2.86	157356	2.87	96	60 - 140	-0.0100	+/-0.50	
1,4-Difluorobenzene (1)	555730	3.468	638767	3.472	87	60 - 140	-0.0040	+/-0.50	
Chlorobenzene-d5 (1)	530318	5.054	572744	5.057	93	60 - 140	-0.0030	+/-0.50	
<b>SG-4 (21G0029-03 )</b>			Lab File ID: J21A189024.D			Analyzed: 07/08/21 21:49			
Bromochloromethane (1)	143197	2.86	157356	2.87	91	60 - 140	-0.0100	+/-0.50	
1,4-Difluorobenzene (1)	550533	3.475	638767	3.472	86	60 - 140	0.0030	+/-0.50	
Chlorobenzene-d5 (1)	539904	5.057	572744	5.057	94	60 - 140	0.0000	+/-0.50	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

**INTERNAL STANDARD AREA AND RT SUMMARY**
**EPA TO-15**

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
<b>SG-5 (21G0029-04)</b>		Lab File ID: J21A189026.D			Analyzed: 07/08/21 22:40				
Bromochloromethane (1)	146505	2.86	157356	2.87	93	60 - 140	-0.0100	+/-0.50	
1,4-Difluorobenzene (1)	519978	3.465	638767	3.472	81	60 - 140	-0.0070	+/-0.50	
Chlorobenzene-d5 (1)	479500	5.054	572744	5.057	84	60 - 140	-0.0030	+/-0.50	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

## CONTINUING CALIBRATION CHECK

## EPA TO-15

## S061346-CCV1

COMPOUND	TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.00	4.86	0.9103154	0.8850047		-2.8	30
Benzene	A	5.00	4.78	0.6606025	0.6318197		-4.4	30
Benzyl chloride	A	5.00	4.94	0.5965762	0.5894319		-1.2	30
Bromodichloromethane	A	5.00	5.16	0.4537953	0.4678914		3.1	30
Bromoform	A	5.00	4.98	0.6600998	0.6568519		-0.5	30
Bromomethane	A	5.00	3.96	1.001177	0.7927807		-20.8	30
1,3-Butadiene	A	5.00	4.14	0.6246902	0.5173594		-17.2	30
2-Butanone (MEK)	A	5.00	4.58	1.30749	1.197997		-8.4	30
Carbon Disulfide	A	5.00	4.65	2.466469	2.291731		-7.1	30
Carbon Tetrachloride	A	5.00	4.77	0.5064752	0.4835616		-4.5	30
Chlorobenzene	A	5.00	4.53	0.7751296	0.7019848		-9.4	30
Chloroethane	A	5.00	4.05	0.5001442	0.4055517		-18.9	30
Chloroform	A	5.00	4.33	2.018779	1.748219		-13.4	30
Chloromethane	A	5.00	4.45	0.6141491	0.5465518		-11.0	30
Cyclohexane	A	5.00	4.45	0.2849344	0.2536061		-11.0	30
Dibromochloromethane	A	5.00	4.81	0.6429615	0.6185409		-3.8	30
1,2-Dibromoethane (EDB)	A	5.00	4.91	0.4841019	0.4754375		-1.8	30
1,2-Dichlorobenzene	A	5.00	4.75	0.6846313	0.6505552		-5.0	30
1,3-Dichlorobenzene	A	5.00	4.99	0.7215992	0.7200117		-0.2	30
1,4-Dichlorobenzene	A	5.00	4.81	0.7134896	0.6866453		-3.8	30
Dichlorodifluoromethane (Freon 12)	A	5.00	4.11	2.507091	2.06234		-17.7	30
1,1-Dichloroethane	A	5.00	4.31	1.545303	1.333354		-13.7	30
1,2-Dichloroethane	A	5.00	4.39	1.058805	0.9295407		-12.2	30
1,1-Dichloroethylene	A	5.00	4.59	1.160287	1.065569		-8.2	30
cis-1,2-Dichloroethylene	A	5.00	4.18	1.114268	0.9326927		-16.3	30
trans-1,2-Dichloroethylene	A	5.00	4.31	1.201908	1.035146		-13.9	30
1,2-Dichloropropane	A	5.00	4.83	0.2231134	0.2155903		-3.4	30
cis-1,3-Dichloropropene	A	5.00	4.48	0.3628898	0.3254896		-10.3	30
trans-1,3-Dichloropropene	A	5.00	4.68	0.3055463	0.2857505		-6.5	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	A	5.00	4.12	2.650055	2.185475		-17.5	30
1,4-Dioxane	A	5.00	4.59	0.139387	0.1278714		-8.3	30
Ethanol	A	5.00	4.16	0.1702165	0.1415898		-16.8	30
Ethyl Acetate	A	5.00	5.04	0.2280188	0.2298584		0.8	30
Ethylbenzene	A	5.00	4.62	1.161395	1.073599		-7.6	30
4-Ethyltoluene	A	5.00	4.58	1.262817	1.157501		-8.3	30
Heptane	A	5.00	5.01	0.1688454	0.1692536		0.2	30
Hexachlorobutadiene	A	5.00	4.59	0.6918294	0.6350314		-8.2	30
Hexane	L	5.00	4.53	0.6531603	0.5889016		-9.4	30

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

## CONTINUING CALIBRATION CHECK

## EPA TO-15

## S061346-CCV1

COMPOUND	TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
2-Hexanone (MBK)	A	5.00	5.80	0.280065	0.3247831		16.0	30
Isopropanol	A	5.00	5.12	1.001981	1.026442		2.4	30
Methyl tert-Butyl Ether (MTBE)	A	5.00	3.89	2.512535	1.952871		-22.3	30
Methylene Chloride	A	5.00	5.07	0.6621826	0.6719439		1.5	30
4-Methyl-2-pentanone (MIBK)	A	5.00	5.24	0.1531114	0.1603289		4.7	30
Naphthalene	A	5.00	3.90	1.086932	0.8469012		-22.1	30
Propene	A	5.00	4.30	0.4641749	0.3992781		-14.0	30
Styrene	A	5.00	4.54	0.7056488	0.6404174		-9.2	30
1,1,2,2-Tetrachloroethane	A	5.00	5.07	0.638583	0.6475493		1.4	30
Tetrachloroethylene	A	5.00	4.58	0.5546794	0.5080748		-8.4	30
Tetrahydrofuran	A	5.00	4.29	0.7143044	0.6124813		-14.3	30
Toluene	A	5.00	4.55	0.9345011	0.8510525		-8.9	30
1,2,4-Trichlorobenzene	A	5.00	3.58	0.4260284	0.3054852		-28.3	30
1,1,1-Trichloroethane	A	5.00	4.92	0.4496133	0.4424098		-1.6	30
1,1,2-Trichloroethane	A	5.00	4.75	0.3281373	0.3119718		-4.9	30
Trichloroethylene	A	5.00	4.98	0.2979469	0.2969421		-0.3	30
Trichlorofluoromethane (Freon 11)	A	5.00	4.16	2.536841	2.10891		-16.9	30
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	A	5.00	4.34	1.957735	1.701182		-13.1	30
1,2,4-Trimethylbenzene	A	5.00	4.59	1.026744	0.9424916		-8.2	30
1,3,5-Trimethylbenzene	A	5.00	4.85	1.080978	1.048239		-3.0	30
Vinyl Acetate	A	5.00	3.20	1.400965	0.8956201		-36.1	30 *
Vinyl Chloride	A	5.00	4.28	0.8554634	0.7320471		-14.4	30
m&p-Xylene	A	10.0	9.93	0.9185043	0.9116743		-0.7	30
o-Xylene	A	5.00	4.86	0.899786	0.8744486		-2.8	30

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

\* Values outside of QC limits

**CERTIFICATIONS**
**Certified Analyses included in this Report**

Analyte	Certifications
<i>EPA TO-15 in Air</i>	
Acetone	AIHA,NY,ME,NH
Benzene	AIHA,FL,NJ,NY,ME,NH,VA
Benzyl chloride	AIHA,FL,NJ,NY,ME,NH,VA
Bromodichloromethane	AIHA,NJ,NY,ME,NH,VA
Bromoform	AIHA,NJ,NY,ME,NH,VA
Bromomethane	AIHA,FL,NJ,NY,ME,NH
1,3-Butadiene	AIHA,NJ,NY,ME,NH,VA
2-Butanone (MEK)	AIHA,FL,NJ,NY,ME,NH,VA
Carbon Disulfide	AIHA,NJ,NY,ME,NH,VA
Carbon Tetrachloride	AIHA,FL,NJ,NY,ME,NH,VA
Chlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
Chloroethane	AIHA,FL,NJ,NY,ME,NH,VA
Chloroform	AIHA,FL,NJ,NY,ME,NH,VA
Chloromethane	AIHA,FL,NJ,NY,ME,NH,VA
Cyclohexane	AIHA,NJ,NY,ME,NH,VA
Dibromochloromethane	AIHA,NY,ME,NH
1,2-Dibromoethane (EDB)	AIHA,NJ,NY,ME,NH
1,2-Dichlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
1,3-Dichlorobenzene	AIHA,NJ,NY,ME,NH
1,4-Dichlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
Dichlorodifluoromethane (Freon 12)	AIHA,NY,ME,NH
1,1-Dichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,2-Dichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1-Dichloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
cis-1,2-Dichloroethylene	AIHA,FL,NY,ME,NH,VA
trans-1,2-Dichloroethylene	AIHA,NJ,NY,ME,NH,VA
1,2-Dichloropropane	AIHA,FL,NJ,NY,ME,NH,VA
cis-1,3-Dichloropropene	AIHA,FL,NJ,NY,ME,NH,VA
trans-1,3-Dichloropropene	AIHA,NY,ME,NH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	AIHA,NJ,NY,ME,NH,VA
1,4-Dioxane	AIHA,NJ,NY,ME,NH,VA
Ethanol	AIHA
Ethyl Acetate	AIHA
Ethylbenzene	AIHA,FL,NJ,NY,ME,NH,VA
4-Ethyltoluene	AIHA,NJ
Heptane	AIHA,NJ,NY,ME,NH,VA
Hexachlorobutadiene	AIHA,NJ,NY,ME,NH,VA
Hexane	AIHA,FL,NJ,NY,ME,NH,VA
2-Hexanone (MBK)	AIHA
Isopropanol	AIHA,NY,ME,NH
Methyl tert-Butyl Ether (MTBE)	AIHA,FL,NJ,NY,ME,NH,VA
Methylene Chloride	AIHA,FL,NJ,NY,ME,NH,VA
4-Methyl-2-pentanone (MIBK)	AIHA,FL,NJ,NY,ME,NH
Naphthalene	NY,ME,NH
Propene	AIHA
Styrene	AIHA,FL,NJ,NY,ME,NH,VA
1,1,2,2-Tetrachloroethane	AIHA,FL,NJ,NY,ME,NH,VA

**CERTIFICATIONS**
**Certified Analyses included in this Report**

Analyte	Certifications
<i>EPA TO-15 in Air</i>	
Tetrachloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
Tetrahydrofuran	AIHA
Toluene	AIHA,FL,NJ,NY,ME,NH,VA
1,2,4-Trichlorobenzene	AIHA,NJ,NY,ME,NH,VA
1,1,1-Trichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1,2-Trichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
Trichloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
Trichlorofluoromethane (Freon 11)	AIHA,NY,ME,NH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	AIHA,NJ,NY,ME,NH,VA
1,2,4-Trimethylbenzene	AIHA,NJ,NY,ME,NH
1,3,5-Trimethylbenzene	AIHA,NJ,NY,ME,NH
Vinyl Acetate	AIHA,FL,NJ,NY,ME,NH,VA
Vinyl Chloride	AIHA,FL,NJ,NY,ME,NH,VA
m&p-Xylene	AIHA,FL,NJ,NY,ME,NH,VA
o-Xylene	AIHA,FL,NJ,NY,ME,NH,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2022
FL	Florida Department of Health	E871027 NELAP	06/30/2022
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2022
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021

215003 DITE

Phone: 413-525-2332

Fax: 413-525-6405

Email: info@contestlabs.com

CHAIN OF CUSTODY RECORD (AIR)

39 Spruce Street  
East Longmeadow, MA 01028

ANALYSIS REQUESTED

**Requested Turnaround Time**  
 7-Day  10-Day   
 Due Date: Standard turnaround

**Rush Approval Required**  
 1-Day  3-Day   
 2-Day  4-Day

**Data Delivery**  
 Format: PDF  EXCEL   
 Other: \_\_\_\_\_  
 CLP Like Data Pkg Required:   
 Email To: beames@nobis-group.com  
 Fax To #: \_\_\_\_\_

Company Name: \_\_\_\_\_  
 Address: Nobis  
 Phone: 603-224-4182  
 Project Name: Robin Rug  
 Project Location: Bastol RI  
 Project Number: 095560.26  
 Project Manager: Bettina Beames  
 Con-Test Quote Name/Number: order# 2106449  
 Invoice Recipient: Accounts Payable - Nobis  
 Sampled By: Saran Powers

" Hg			Lab Receipt Pressure		Please fill out completely, sign, date and retain the yellow copy for your records	
Initial Pressure	Final Pressure		Summa Can ID	Flow Controller ID	Summa canisters and flow controllers must be returned within 15 days of receipt or rental fees will apply	
					For summa canister and flow controller information please refer to Con-Test's Air Media Agreement	

Lab Use	Client Use	Collection Data		Duration	Flow Rate	Matrix	Volume	T-O-I	Initial Pressure	Final Pressure	Lab Receipt Pressure	Summa Can ID	Flow Controller ID
Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Total Minutes Sampled	<input type="checkbox"/> m <sup>3</sup> /min <input checked="" type="checkbox"/> L/min	Code	<input type="checkbox"/> Liters <input checked="" type="checkbox"/> m <sup>3</sup>						
01	SG-1	6/30/21 1345	6/30/21 1416	30	0.2 L/min	SS	6	✓	-30	-7	5.8	2057	4067
02	SG-2	6/30/21 1427	6/30/21 1457	30	0.2 L/min	SS	6	✓	-28	-4	2.6	1641	4076
03	SG-4	6/30/21 1457	6/30/21 1527	30	0.2 L/min	SS	6	✓	-29	-4	2.5	2205	4311
04	SG-5	6/30/21 1528	6/30/21 1558	30	0.2 L/min	SS	6	✓	-28	-5	2.4	2010	4213

Comments:

Please use the following codes to indicate possible sample concentration within the Conc Code column above:  
 H - High; M - Medium; L - Low; C - Clean; U - Unknown

Matrix Codes:

- SG = SOIL GAS
- IA = INDOOR AIR
- AMB = AMBIENT
- SS = SUB SLAB
- D = DUP
- BL = BLANK
- O = Other \_\_\_\_\_

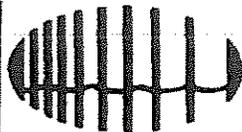
Retinquished by (signature)	Date/Time:	Detection Limit Requirements	Special Requirements
<u>Saran Powers</u>	6/30/21 2030	MA	<input type="checkbox"/> MA MCP Required
<u>[Signature]</u>	7/1/21 1125		<input type="checkbox"/> MCP Certification Form Required
<u>[Signature]</u>	7/1/21 1605	01	<input type="checkbox"/> CT RCP Required
<u>[Signature]</u>	7/1/21 1605	Other:	<input type="checkbox"/> RCP Certification Form Required
<u>[Signature]</u>			<input type="checkbox"/> Other



NELAC and AIHA-LAP, LLC Accredited

Retinquished by (signature)	Date/Time:	Project Entity				Other	PCB ONLY
<u>[Signature]</u>		<input type="checkbox"/> Government	<input type="checkbox"/> Municipality	<input type="checkbox"/> MWRA	<input type="checkbox"/> WRTA	<input type="checkbox"/> Chromatogram	<input type="checkbox"/> Soxhlet
<u>[Signature]</u>		<input type="checkbox"/> Federal	<input type="checkbox"/> 21 J	<input type="checkbox"/> School		<input type="checkbox"/> AIHA-LAP, LLC	<input type="checkbox"/> Non Soxhlet
<u>[Signature]</u>		<input type="checkbox"/> City	<input type="checkbox"/> Brownfield	<input type="checkbox"/> MBTA			

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples \_\_\_\_\_



**con-test**  
ANALYTICAL LABORATORY

Doc# 278 Rev 6 2017

**Air Media Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False**

Client Woods

Received By RLF Date 7/1/21 Time 1605  
 How were the samples received? In Cooler NA On Ice NA No Ice NA  
 In Box T Ambient NA Melted Ice NA  
 Were samples within Temperature Compliance? 2-6°C NA By Gun # NA Actual Temp - NA  
 By Blank # NA Actual Temp - NA  
 Was Custody Seal Intact? NA Were Samples Tampered with? NA  
 Was COC Relinquished? T Does Chain Agree With Samples? T  
 Are there any loose caps/valves on any samples? F  
 Is COC in ink/ Legible? T  
 Did COC Include all Client T Analysis T Sampler Name T  
 Pertinent Information? Project T ID's T Collection Dates/Times T  
 Are Sample Labels filled out and legible? T  
 Are there Rushes? F Who was notified? \_\_\_\_\_  
 Samples are received within holding time? T  
 Proper Media Used? T Individually Certified Cans? F  
 Are there Trip Blanks? F Is there enough Volume? T

Containers:	#	Size	Regulator	Duration	Accessories:		
Summa Cans	5	6L	5	30min	Nut/Ferrule	5	IC Train
Tedlar Bags					Tubing		
TO-17 Tubes					T-Connector		Shipping Charges
Radiello					Syringe		
Pufs/TO-11s					Tedlar		

Can #'s	Reg #'s
2057	4067
11641	4076
2205	4311
2010	4213
Unused Media	Pufs/TO-17's
2144 (29.5) 4039	

Comments:

July 13, 2021

Bettina Eames  
Nobis Engineering - NH  
18 Chenell Drive  
Concord, NH 03301

Project Location: 125 Thames St, Bristol, RI  
Client Job Number:  
Project Number: 095560.260  
Laboratory Work Order Number: 21G0028

Enclosed are results of analyses for samples received by the laboratory on July 1, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jessica L. Hoffman  
Project Manager

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39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Nobis Engineering - NH  
 18 Chenell Drive  
 Concord, NH 03301  
 ATTN: Bettina Eames

REPORT DATE: 7/13/2021

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 095560.260

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 21G0028

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: 125 Thames St, Bristol, RI

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
WS-1	21G0028-01	Wipe		SW-846 8082A	
WS-2	21G0028-02	Wipe		SW-846 8082A	
WS-3	21G0028-03	Wipe		SW-846 8082A	
WS-4	21G0028-04	Wipe		SW-846 8082A	
CW-1	21G0028-05	Wipe		SW-846 8082A	
CW-2	21G0028-06	Wipe		SW-846 8082A	
CW-3	21G0028-07	Wipe		SW-846 8082A	
CW-4	21G0028-08	Wipe		SW-846 8082A	
CW-5	21G0028-09	Wipe		SW-846 8082A	
CW-6	21G0028-10	Wipe		SW-846 8082A	
CW-7	21G0028-11	Wipe		SW-846 8082A	
CW-8	21G0028-12	Wipe		SW-846 8082A	
CW-9	21G0028-13	Wipe		SW-846 8082A	

**CASE NARRATIVE SUMMARY**

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

**SW-846 8082A**

**Qualifications:**

**R-05**

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

**Analyte & Samples(s) Qualified:**

**Aroclor-1016**

21G0028-01[WS-1], 21G0028-02[WS-2], 21G0028-03[WS-3], 21G0028-04[WS-4], 21G0028-05[CW-1], 21G0028-06[CW-2], 21G0028-07[CW-3], 21G0028-08[CW-4], 21G0028-09[CW-5], 21G0028-10[CW-6], 21G0028-11[CW-7], 21G0028-12[CW-8], 21G0028-13[CW-9], B285514-BLK1, B285514-BS1, B285514-BSD1

**Aroclor-1016 [2C]**

21G0028-01[WS-1], 21G0028-02[WS-2], 21G0028-03[WS-3], 21G0028-04[WS-4], 21G0028-05[CW-1], 21G0028-06[CW-2], 21G0028-07[CW-3], 21G0028-08[CW-4], 21G0028-09[CW-5], 21G0028-10[CW-6], 21G0028-11[CW-7], 21G0028-12[CW-8], 21G0028-13[CW-9], B285514-BLK1, B285514-BS1, B285514-BSD1

**Aroclor-1260**

21G0028-01[WS-1], 21G0028-02[WS-2], 21G0028-03[WS-3], 21G0028-04[WS-4], 21G0028-05[CW-1], 21G0028-06[CW-2], 21G0028-07[CW-3], 21G0028-08[CW-4], 21G0028-09[CW-5], 21G0028-10[CW-6], 21G0028-11[CW-7], 21G0028-12[CW-8], 21G0028-13[CW-9], B285514-BLK1, B285514-BS1, B285514-BSD1

**Aroclor-1260 [2C]**

21G0028-01[WS-1], 21G0028-02[WS-2], 21G0028-03[WS-3], 21G0028-04[WS-4], 21G0028-05[CW-1], 21G0028-06[CW-2], 21G0028-07[CW-3], 21G0028-08[CW-4], 21G0028-09[CW-5], 21G0028-10[CW-6], 21G0028-11[CW-7], 21G0028-12[CW-8], 21G0028-13[CW-9], B285514-BLK1, B285514-BS1, B285514-BSD1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington  
Technical Representative

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 125 Thames St, Bristol, RI

Sample Description:

Work Order: 21G0028

Date Received: 7/1/2021

Field Sample #: WS-1

Sampled: 6/28/2021 13:00

Sample ID: 21G0028-01

Sample Matrix: Wipe

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/Wipe	1	R-05	SW-846 8082A	7/8/21	7/13/21 8:25	SFM
Aroclor-1221 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 8:25	SFM
Aroclor-1232 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 8:25	SFM
Aroclor-1242 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 8:25	SFM
Aroclor-1248 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 8:25	SFM
Aroclor-1254 [1]	0.25	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 8:25	SFM
Aroclor-1260 [1]	ND	0.20	µg/Wipe	1	R-05	SW-846 8082A	7/8/21	7/13/21 8:25	SFM
Aroclor-1262 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 8:25	SFM
Aroclor-1268 [2]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 8:25	SFM
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		71.8	30-150					7/13/21 8:25	
Decachlorobiphenyl [2]		67.9	30-150					7/13/21 8:25	
Tetrachloro-m-xylene [1]		68.0	30-150					7/13/21 8:25	
Tetrachloro-m-xylene [2]		68.0	30-150					7/13/21 8:25	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 125 Thames St, Bristol, RI

Sample Description:

Work Order: 21G0028

Date Received: 7/1/2021

Field Sample #: WS-2

Sampled: 6/28/2021 12:55

Sample ID: 21G0028-02

Sample Matrix: Wipe

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/Wipe	1	R-05	SW-846 8082A	7/8/21	7/13/21 8:43	SFM
Aroclor-1221 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 8:43	SFM
Aroclor-1232 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 8:43	SFM
Aroclor-1242 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 8:43	SFM
Aroclor-1248 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 8:43	SFM
Aroclor-1254 [2]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 8:43	SFM
Aroclor-1260 [1]	ND	0.20	µg/Wipe	1	R-05	SW-846 8082A	7/8/21	7/13/21 8:43	SFM
Aroclor-1262 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 8:43	SFM
Aroclor-1268 [2]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 8:43	SFM
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		77.5	30-150					7/13/21 8:43	
Decachlorobiphenyl [2]		74.1	30-150					7/13/21 8:43	
Tetrachloro-m-xylene [1]		72.3	30-150					7/13/21 8:43	
Tetrachloro-m-xylene [2]		72.1	30-150					7/13/21 8:43	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 125 Thames St, Bristol, RI

Sample Description:

Work Order: 21G0028

Date Received: 7/1/2021

Sampled: 6/28/2021 13:10

Field Sample #: WS-3

Sample ID: 21G0028-03

Sample Matrix: Wipe

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/Wipe	1	R-05	SW-846 8082A	7/8/21	7/13/21 9:00	SFM
Aroclor-1221 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:00	SFM
Aroclor-1232 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:00	SFM
Aroclor-1242 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:00	SFM
Aroclor-1248 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:00	SFM
Aroclor-1254 [2]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:00	SFM
Aroclor-1260 [1]	ND	0.20	µg/Wipe	1	R-05	SW-846 8082A	7/8/21	7/13/21 9:00	SFM
Aroclor-1262 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:00	SFM
Aroclor-1268 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:00	SFM
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		83.9	30-150					7/13/21 9:00	
Decachlorobiphenyl [2]		80.1	30-150					7/13/21 9:00	
Tetrachloro-m-xylene [1]		82.5	30-150					7/13/21 9:00	
Tetrachloro-m-xylene [2]		82.2	30-150					7/13/21 9:00	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 125 Thames St, Bristol, RI

Sample Description:

Work Order: 21G0028

Date Received: 7/1/2021

Field Sample #: WS-4

Sampled: 6/28/2021 13:20

Sample ID: 21G0028-04

Sample Matrix: Wipe

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/Wipe	1	R-05	SW-846 8082A	7/8/21	7/13/21 9:18	SFM
Aroclor-1221 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:18	SFM
Aroclor-1232 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:18	SFM
Aroclor-1242 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:18	SFM
Aroclor-1248 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:18	SFM
Aroclor-1254 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:18	SFM
Aroclor-1260 [2]	0.20	0.20	µg/Wipe	1	R-05	SW-846 8082A	7/8/21	7/13/21 9:18	SFM
Aroclor-1262 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:18	SFM
Aroclor-1268 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:18	SFM
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		68.7	30-150					7/13/21 9:18	
Decachlorobiphenyl [2]		65.3	30-150					7/13/21 9:18	
Tetrachloro-m-xylene [1]		69.3	30-150					7/13/21 9:18	
Tetrachloro-m-xylene [2]		69.4	30-150					7/13/21 9:18	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 125 Thames St, Bristol, RI

Sample Description:

Work Order: 21G0028

Date Received: 7/1/2021

Field Sample #: CW-1

Sampled: 6/28/2021 14:00

Sample ID: 21G0028-05

Sample Matrix: Wipe

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/Wipe	1	R-05	SW-846 8082A	7/8/21	7/13/21 9:36	SFM
Aroclor-1221 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:36	SFM
Aroclor-1232 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:36	SFM
Aroclor-1242 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:36	SFM
Aroclor-1248 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:36	SFM
Aroclor-1254 [2]	0.32	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:36	SFM
Aroclor-1260 [2]	ND	0.20	µg/Wipe	1	R-05	SW-846 8082A	7/8/21	7/13/21 9:36	SFM
Aroclor-1262 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:36	SFM
Aroclor-1268 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:36	SFM
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		89.0	30-150					7/13/21 9:36	
Decachlorobiphenyl [2]		91.9	30-150					7/13/21 9:36	
Tetrachloro-m-xylene [1]		85.1	30-150					7/13/21 9:36	
Tetrachloro-m-xylene [2]		84.2	30-150					7/13/21 9:36	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 125 Thames St, Bristol, RI

Sample Description:

Work Order: 21G0028

Date Received: 7/1/2021

Field Sample #: CW-2

Sampled: 6/28/2021 15:00

Sample ID: 21G0028-06

Sample Matrix: Wipe

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/Wipe	1	R-05	SW-846 8082A	7/8/21	7/13/21 9:53	SFM
Aroclor-1221 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:53	SFM
Aroclor-1232 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:53	SFM
Aroclor-1242 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:53	SFM
Aroclor-1248 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:53	SFM
Aroclor-1254 [2]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:53	SFM
Aroclor-1260 [2]	ND	0.20	µg/Wipe	1	R-05	SW-846 8082A	7/8/21	7/13/21 9:53	SFM
Aroclor-1262 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:53	SFM
Aroclor-1268 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 9:53	SFM
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		87.6	30-150					7/13/21 9:53	
Decachlorobiphenyl [2]		83.5	30-150					7/13/21 9:53	
Tetrachloro-m-xylene [1]		85.7	30-150					7/13/21 9:53	
Tetrachloro-m-xylene [2]		84.6	30-150					7/13/21 9:53	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 125 Thames St, Bristol, RI

Sample Description:

Work Order: 21G0028

Date Received: 7/1/2021

Field Sample #: CW-3

Sampled: 6/28/2021 14:05

Sample ID: 21G0028-07

Sample Matrix: Wipe

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/Wipe	1	R-05	SW-846 8082A	7/8/21	7/13/21 10:11	SFM
Aroclor-1221 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 10:11	SFM
Aroclor-1232 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 10:11	SFM
Aroclor-1242 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 10:11	SFM
Aroclor-1248 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 10:11	SFM
Aroclor-1254 [2]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 10:11	SFM
Aroclor-1260 [2]	ND	0.20	µg/Wipe	1	R-05	SW-846 8082A	7/8/21	7/13/21 10:11	SFM
Aroclor-1262 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 10:11	SFM
Aroclor-1268 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 10:11	SFM
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		88.5	30-150					7/13/21 10:11	
Decachlorobiphenyl [2]		84.3	30-150					7/13/21 10:11	
Tetrachloro-m-xylene [1]		78.3	30-150					7/13/21 10:11	
Tetrachloro-m-xylene [2]		79.0	30-150					7/13/21 10:11	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 125 Thames St, Bristol, RI

Sample Description:

Work Order: 21G0028

Date Received: 7/1/2021

Field Sample #: CW-4

Sampled: 6/28/2021 15:10

Sample ID: 21G0028-08

Sample Matrix: Wipe

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/Wipe	1	R-05	SW-846 8082A	7/8/21	7/13/21 10:29	SFM
Aroclor-1221 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 10:29	SFM
Aroclor-1232 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 10:29	SFM
Aroclor-1242 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 10:29	SFM
Aroclor-1248 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 10:29	SFM
Aroclor-1254 [2]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 10:29	SFM
Aroclor-1260 [1]	ND	0.20	µg/Wipe	1	R-05	SW-846 8082A	7/8/21	7/13/21 10:29	SFM
Aroclor-1262 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 10:29	SFM
Aroclor-1268 [2]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 10:29	SFM
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		70.0	30-150					7/13/21 10:29	
Decachlorobiphenyl [2]		66.8	30-150					7/13/21 10:29	
Tetrachloro-m-xylene [1]		75.4	30-150					7/13/21 10:29	
Tetrachloro-m-xylene [2]		75.3	30-150					7/13/21 10:29	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 125 Thames St, Bristol, RI

Sample Description:

Work Order: 21G0028

Date Received: 7/1/2021

Field Sample #: CW-5

Sampled: 6/28/2021 14:35

Sample ID: 21G0028-09

Sample Matrix: Wipe

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/Wipe	1	R-05	SW-846 8082A	7/8/21	7/13/21 10:46	SFM
Aroclor-1221 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 10:46	SFM
Aroclor-1232 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 10:46	SFM
Aroclor-1242 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 10:46	SFM
Aroclor-1248 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 10:46	SFM
Aroclor-1254 [2]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 10:46	SFM
Aroclor-1260 [1]	ND	0.20	µg/Wipe	1	R-05	SW-846 8082A	7/8/21	7/13/21 10:46	SFM
Aroclor-1262 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 10:46	SFM
Aroclor-1268 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 10:46	SFM
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		92.6	30-150					7/13/21 10:46	
Decachlorobiphenyl [2]		85.4	30-150					7/13/21 10:46	
Tetrachloro-m-xylene [1]		78.9	30-150					7/13/21 10:46	
Tetrachloro-m-xylene [2]		79.3	30-150					7/13/21 10:46	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 125 Thames St, Bristol, RI

Sample Description:

Work Order: 21G0028

Date Received: 7/1/2021

Field Sample #: CW-6

Sampled: 6/28/2021 14:30

Sample ID: 21G0028-10

Sample Matrix: Wipe

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/Wipe	1	R-05	SW-846 8082A	7/8/21	7/13/21 11:04	SFM
Aroclor-1221 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:04	SFM
Aroclor-1232 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:04	SFM
Aroclor-1242 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:04	SFM
Aroclor-1248 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:04	SFM
Aroclor-1254 [2]	0.27	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:04	SFM
Aroclor-1260 [1]	ND	0.20	µg/Wipe	1	R-05	SW-846 8082A	7/8/21	7/13/21 11:04	SFM
Aroclor-1262 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:04	SFM
Aroclor-1268 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:04	SFM
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		102	30-150					7/13/21 11:04	
Decachlorobiphenyl [2]		97.2	30-150					7/13/21 11:04	
Tetrachloro-m-xylene [1]		94.3	30-150					7/13/21 11:04	
Tetrachloro-m-xylene [2]		94.0	30-150					7/13/21 11:04	

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: 125 Thames St, Bristol, RI

Sample Description:

Work Order: 21G0028

Date Received: 7/1/2021

Field Sample #: CW-7

Sampled: 6/28/2021 15:20

Sample ID: 21G0028-11

Sample Matrix: Wipe

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/Wipe	1	R-05	SW-846 8082A	7/8/21	7/13/21 11:22	SFM
Aroclor-1221 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:22	SFM
Aroclor-1232 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:22	SFM
Aroclor-1242 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:22	SFM
Aroclor-1248 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:22	SFM
Aroclor-1254 [2]	0.47	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:22	SFM
Aroclor-1260 [1]	ND	0.20	µg/Wipe	1	R-05	SW-846 8082A	7/8/21	7/13/21 11:22	SFM
Aroclor-1262 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:22	SFM
Aroclor-1268 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:22	SFM
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		96.1	30-150					7/13/21 11:22	
Decachlorobiphenyl [2]		86.7	30-150					7/13/21 11:22	
Tetrachloro-m-xylene [1]		85.2	30-150					7/13/21 11:22	
Tetrachloro-m-xylene [2]		85.8	30-150					7/13/21 11:22	

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Project Location: 125 Thames St, Bristol, RI

Sample Description:

Work Order: 21G0028

Date Received: 7/1/2021

Field Sample #: CW-8

Sampled: 6/28/2021 15:30

Sample ID: 21G0028-12

Sample Matrix: Wipe

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/Wipe	1	R-05	SW-846 8082A	7/8/21	7/13/21 11:39	SFM
Aroclor-1221 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:39	SFM
Aroclor-1232 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:39	SFM
Aroclor-1242 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:39	SFM
Aroclor-1248 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:39	SFM
Aroclor-1254 [2]	0.40	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:39	SFM
Aroclor-1260 [2]	0.35	0.20	µg/Wipe	1	R-05	SW-846 8082A	7/8/21	7/13/21 11:39	SFM
Aroclor-1262 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:39	SFM
Aroclor-1268 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:39	SFM
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]	75.0		30-150				7/13/21 11:39		
Decachlorobiphenyl [2]	71.6		30-150				7/13/21 11:39		
Tetrachloro-m-xylene [1]	75.8		30-150				7/13/21 11:39		
Tetrachloro-m-xylene [2]	76.3		30-150				7/13/21 11:39		

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Project Location: 125 Thames St, Bristol, RI

Sample Description:

Work Order: 21G0028

Date Received: 7/1/2021

Field Sample #: CW-9

Sampled: 6/28/2021 15:05

Sample ID: 21G0028-13

Sample Matrix: Wipe

**Polychlorinated Biphenyls with 3540 Soxhlet Extraction**

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/Wipe	1	R-05	SW-846 8082A	7/8/21	7/13/21 11:57	SFM
Aroclor-1221 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:57	SFM
Aroclor-1232 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:57	SFM
Aroclor-1242 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:57	SFM
Aroclor-1248 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:57	SFM
Aroclor-1254 [2]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:57	SFM
Aroclor-1260 [1]	ND	0.20	µg/Wipe	1	R-05	SW-846 8082A	7/8/21	7/13/21 11:57	SFM
Aroclor-1262 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:57	SFM
Aroclor-1268 [1]	ND	0.20	µg/Wipe	1		SW-846 8082A	7/8/21	7/13/21 11:57	SFM
Surrogates		% Recovery	Recovery Limits		Flag/Qual				
Decachlorobiphenyl [1]		89.0	30-150					7/13/21 11:57	
Decachlorobiphenyl [2]		83.1	30-150					7/13/21 11:57	
Tetrachloro-m-xylene [1]		91.0	30-150					7/13/21 11:57	
Tetrachloro-m-xylene [2]		90.9	30-150					7/13/21 11:57	

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**Sample Extraction Data**

Prep Method: SW-846 3540C Analytical Method: SW-846 8082A

Lab Number [Field ID]	Batch	Initial [Wipe]	Final [mL]	Date
21G0028-01 [WS-1]	B285514	1.00	10.0	07/08/21
21G0028-02 [WS-2]	B285514	1.00	10.0	07/08/21
21G0028-03 [WS-3]	B285514	1.00	10.0	07/08/21
21G0028-04 [WS-4]	B285514	1.00	10.0	07/08/21
21G0028-05 [CW-1]	B285514	1.00	10.0	07/08/21
21G0028-06 [CW-2]	B285514	1.00	10.0	07/08/21
21G0028-07 [CW-3]	B285514	1.00	10.0	07/08/21
21G0028-08 [CW-4]	B285514	1.00	10.0	07/08/21
21G0028-09 [CW-5]	B285514	1.00	10.0	07/08/21
21G0028-10 [CW-6]	B285514	1.00	10.0	07/08/21
21G0028-11 [CW-7]	B285514	1.00	10.0	07/08/21
21G0028-12 [CW-8]	B285514	1.00	10.0	07/08/21
21G0028-13 [CW-9]	B285514	1.00	10.0	07/08/21

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**QUALITY CONTROL**
**Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B285514 - SW-846 3540C</b>										
<b>Blank (B285514-BLK1)</b>										
Prepared: 07/08/21 Analyzed: 07/13/21										
Aroclor-1016	ND	0.20	µg/Wipe							R-05
Aroclor-1016 [2C]	ND	0.20	µg/Wipe							R-05
Aroclor-1221	ND	0.20	µg/Wipe							
Aroclor-1221 [2C]	ND	0.20	µg/Wipe							
Aroclor-1232	ND	0.20	µg/Wipe							
Aroclor-1232 [2C]	ND	0.20	µg/Wipe							
Aroclor-1242	ND	0.20	µg/Wipe							
Aroclor-1242 [2C]	ND	0.20	µg/Wipe							
Aroclor-1248	ND	0.20	µg/Wipe							
Aroclor-1248 [2C]	ND	0.20	µg/Wipe							
Aroclor-1254	ND	0.20	µg/Wipe							
Aroclor-1254 [2C]	ND	0.20	µg/Wipe							
Aroclor-1260	ND	0.20	µg/Wipe							R-05
Aroclor-1260 [2C]	ND	0.20	µg/Wipe							R-05
Aroclor-1262	ND	0.20	µg/Wipe							
Aroclor-1262 [2C]	ND	0.20	µg/Wipe							
Aroclor-1268	ND	0.20	µg/Wipe							
Aroclor-1268 [2C]	ND	0.20	µg/Wipe							
Surrogate: Decachlorobiphenyl	1.60		µg/Wipe	2.00		80.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.53		µg/Wipe	2.00		76.4	30-150			
Surrogate: Tetrachloro-m-xylene	1.54		µg/Wipe	2.00		76.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.53		µg/Wipe	2.00		76.7	30-150			
<b>LCS (B285514-BS1)</b>										
Prepared: 07/08/21 Analyzed: 07/13/21										
Aroclor-1016	0.49	0.20	µg/Wipe	0.500		97.3	40-140			R-05
Aroclor-1016 [2C]	0.48	0.20	µg/Wipe	0.500		96.9	40-140			R-05
Aroclor-1260	0.48	0.20	µg/Wipe	0.500		96.7	40-140			R-05
Aroclor-1260 [2C]	0.44	0.20	µg/Wipe	0.500		87.5	40-140			R-05
Surrogate: Decachlorobiphenyl	1.93		µg/Wipe	2.00		96.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.84		µg/Wipe	2.00		92.0	30-150			
Surrogate: Tetrachloro-m-xylene	1.73		µg/Wipe	2.00		86.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.72		µg/Wipe	2.00		86.1	30-150			
<b>LCS Dup (B285514-BSD1)</b>										
Prepared: 07/08/21 Analyzed: 07/13/21										
Aroclor-1016	0.35	0.20	µg/Wipe	0.500		69.1	40-140	33.9 *	30	R-05
Aroclor-1016 [2C]	0.35	0.20	µg/Wipe	0.500		70.2	40-140	31.9 *	30	R-05
Aroclor-1260	0.32	0.20	µg/Wipe	0.500		64.5	40-140	40.0 *	30	R-05
Aroclor-1260 [2C]	0.28	0.20	µg/Wipe	0.500		56.8	40-140	42.5 *	30	R-05
Surrogate: Decachlorobiphenyl	1.20		µg/Wipe	2.00		59.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.15		µg/Wipe	2.00		57.7	30-150			
Surrogate: Tetrachloro-m-xylene	1.23		µg/Wipe	2.00		61.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.24		µg/Wipe	2.00		61.9	30-150			

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## IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

WS-1

*SW-846 8082A*

 Lab Sample ID: 21G0028-01 Date(s) Analyzed: 07/13/2021 07/13/2021

Instrument ID (1): \_\_\_\_\_ Instrument ID (2): \_\_\_\_\_

GC Column (1): ID: \_\_\_\_\_ (mm) GC Column (2): ID: \_\_\_\_\_ (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.25	
	2	0.000	0.000	0.000	0.21	17.4

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## IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

CW-1

*SW-846 8082A*

 Lab Sample ID: 21G0028-05 Date(s) Analyzed: 07/13/2021 07/13/2021

Instrument ID (1): \_\_\_\_\_ Instrument ID (2): \_\_\_\_\_

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.25	
	2	0.000	0.000	0.000	0.32	24.6

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## IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

**CW-7**
*SW-846 8082A*

 Lab Sample ID: 21G0028-11 Date(s) Analyzed: 07/13/2021 07/13/2021

Instrument ID (1): \_\_\_\_\_ Instrument ID (2): \_\_\_\_\_

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1254	1	0.000	0.000	0.000	0.45	
	2	0.000	0.000	0.000	0.47	4.4

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## IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

**CW-8**
*SW-846 8082A*

 Lab Sample ID: 21G0028-12 Date(s) Analyzed: 07/13/2021 07/13/2021

Instrument ID (1): \_\_\_\_\_ Instrument ID (2): \_\_\_\_\_

GC Column (1): \_\_\_\_\_ ID: \_\_\_\_\_ (mm) GC Column (2): \_\_\_\_\_ ID: \_\_\_\_\_ (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1260	1	0.000	0.000	0.000	0.30	
	2	0.000	0.000	0.000	0.35	15.4



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## IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

**LCS Dup**

*SW-846 8082A*

 Lab Sample ID:                     B285514-BSD1                          Date(s) Analyzed:           07/13/2021                     07/13/2021          

Instrument ID (1): \_\_\_\_\_      Instrument ID (2): \_\_\_\_\_

GC Column (1):                      ID:                      (mm)      GC Column (2):                      ID:                      (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.35	
	2	0.000	0.000	0.000	0.35	0.0
Aroclor-1260	1	0.000	0.000	0.000	0.32	
	2	0.000	0.000	0.000	0.28	13.3

**FLAG/QUALIFIER SUMMARY**

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
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**No certified Analyses included in this Report**

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2022
CT	Connecticut Department of Public Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2022
FL	Florida Department of Health	E871027 NELAP	06/30/2022
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2022
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021



