ICOR LTD

July 27, 2018

Commonwealth of Virginia Department of Environmental Quality
Northern Regional Office: Petroleum Remediation
13901 Crown Court
Woodbridge, Virginia 22193

Commonwealth of Virginia Department of Environmental Quality
Office of Remediation Programs
629 East Main Street
Richmond, Virginia 23219

Attention: Mr. Alexander Wardle, Project Manager
Mr. Vincent Maiden, Brownfields Program Coordinator

Subject: **Second Post Site Characterization Monitoring Report**, Former Robinson Terminal North Property, 500 and 501 North Union Street, Alexandria, Virginia

Reference: VDEQ PC No. 2016-3090
VRP Site No. 00673
ICOR Project No. 13-CI.001

Dear Mr. Wardle and Mr. Maiden:

Attached for your review is the second *Post Site Characterization Monitoring Report* (PSCMR) prepared by ICOR, Ltd. (ICOR) for the Former Robinson Terminal North property (herein referred to as the SITE) located at 500 and 501 North Union Street in Alexandria, Virginia. The PSCMR summarizes the June 2018 groundwater sampling activities conducted by ICOR at the SITE. The post site characterization activities were conducted to further assess soil and groundwater quality at the SITE and to address a Commonwealth of Virginia Department of Environmental Quality directive dated September 18, 2017.

If you have any questions concerning the PSCMR, please feel free to contact me at (703) 608-5969.

Sincerely,

Michael A. Bruzzesi, CPG
Project Manager
VA CPG No. 2801 001428

Attachment

Second Post Site Characterization Monitoring Report

cc: Mr. Russ Wheeler, Alexandria North Terminal, LLC
Mr. Frank Craighill, Alexandria North Terminal, LLC
Mr. Jim Thornhill, McGuire Woods, LLP
Mr. William Skrabak, City of Alexandria

SECOND POST SITE CHARACTERIZATION MONITORING REPORT

FORMER ROBINSON TERMINAL NORTH PROPERTY
500 AND 501 NORTH UNION STREET
ALEXANDRIA, VIRGINIA

VDEQ VRP# 00673
VDEQ PC# 2016-3090

Prepared for:

Commonwealth of Virginia Department of Environmental Quality
Office of Remediation Programs
629 East Main Street
Richmond, Virginia 23219
(804) 698-4021

On Behalf of:

Alexandria North Terminal, LLC
2900 K Street, NW, Suite 401
Washington, DC 20007
(202) 944-4710

Prepared by:

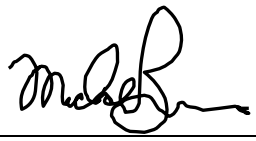
ICOR, Ltd.
PO Box 406
Middleburg, Virginia 20118
(703) 980-8515

ICOR Project No. 13-CI.01

JULY 27, 2018

SIGNATURE SHEET

This second *Post Site Characterization Monitoring Report* (PSCMR) for the Former Robinson Terminal North property located at 500 and 501 North Union Street in Alexandria, Virginia, was prepared by:



July 27, 2018

Michael A. Bruzzesi, CPG Date
Project Manager/Senior Geologist
VA CPG No. 2801 001428

The PSCMR was reviewed and approved for release by:

July 27, 2018

Ike L. Singh
Program Manager

TABLE OF CONTENTS

FIGURES

TABLES

ATTACHMENT

LIST OF ACRONYMS AND ABBREVIATIONS

ANT	Alexandria North Terminal, LLC
DO	dissolved oxygen
EPA	United States Environmental Protection Agency
ICOR	ICOR, Ltd.
mg/l	milligram per liter
ORP	oxygen reduction potential
PC#	Pollution Compliant number
PCE	tetrachloroethene
PSCM	Post Site Characterization Monitoring
PSCMR	Post Site Characterization Monitoring Report
PSTP	Petroleum Storage Tank Program
RL	analytical method reporting limit
SCR	Site Characterization Report
SCS	Site Characterization Study
SVOC	semi-VOC
TCE	trichloroethene
TCL	Target Compound List
TOC	top of casing
TPH	total petroleum hydrocarbons
TPH-DRO	diesel range TPH
TPH-GRO	gasoline range TPH
ug/l	microgram per liter
UST	underground storage tank
VDEQ	Commonwealth of Virginia Department of Environmental Quality
VDEQ-PDS	VDEQ general permit discharge standard for petroleum contaminated
VDEQ-T2PWSSL	VDEQ Tier II public water supply screening level
VDEQ-T2SWFSL	VDEQ Tier II surface water fresh screening level
VDEQ-T3CDSL	VDEQ Tier III construction direct (<15 feet) screening level
VDEQ-T3IGSL	VDEQ Tier III industrial groundwater vapor intrusion screening level
VDEQ-T3RGSL	VDEQ Tier III residential groundwater vapor intrusion screening level
VOC	volatile organic compound
VRP	Voluntary Remediation Program
WP	Work Plan

1.0 INTRODUCTION

This report summarizes the Post Site Characterization Monitoring (PSCM) activities conducted by ICOR, Ltd. (ICOR) in June 2018 at the Former Robinson Terminal North property (herein referred to as the SITE) located at 500 and 501 North Union Street in Alexandria, Virginia. The PSCM activities were conducted on behalf of Alexandria North Terminal, LLC (ANT) a potential developer of the SITE. The PSCM activities performed included completion of the second of two planned groundwater sampling events. The post site characterization activities were conducted to further assess soil and groundwater quality at the SITE and to address a Commonwealth of Virginia Department of Environmental Quality (VDEQ) directive dated September 18, 2017.

The directive was associated with VDEQ Pollution Compliant number (PC#) 2016-3090, assigned to the SITE to address a suspect release of petroleum from past storage tanks. When the SITE was assigned the PC#, the VDEQ mandated that a Site Characterization Study (SCS) be conducted to address the suspect release. The SITE was also entered into the VDEQ's Voluntary Remediation Program (VRP) in 2016 and was assigned VRP number 00673. The SITE was entered into the VRP to address non-petroleum impacts, which are not typically addressed through the VDEQ's Petroleum Storage Tank Program (PSTP). The SCS was completed in February 2017 and a Final Site Characterization Report (SCR) was submitted and accepted in August 2017. The SCS was conducted and the SCR was prepared to satisfy PSTP and VRP SCS and SCR requirements.

The PSCM activities were conducted in conformance with ICOR's VDEQ-approved SCS Work Plan (WP). The PSCM activities were conducted to further evaluate the type, degree, and extent of soil and groundwater impacts and to further evaluate general risks posed by the impacts to current and future site users. The PSCM was conducted in phases with the first phase consisting of installing new wells and collecting groundwater samples from existing and newly-installed wells. The new well locations were selected to evaluate the potential for petroleum migration toward Oronoco Bay and the Potomac River. The new well locations were selected by ICOR and were approved by the VDEQ. The new well installation and first groundwater sampling event results were discussed in the first PSCM Report (PSCMR) dated May 25, 2018. The findings of the SCS and follow-up PSCM will be used to develop a remedial approach that allows for successful development of the SITE and minimization of risks to human health and the environment.

The history of the SITE and detailed discussion of the SCS activities and findings were provided in the SCR. This report only details the findings of the second groundwater sampling event associated with PSCM.

2.0 BACKGROUND

The SITE is located in a mixed commercial and residential land use area and is currently improved with two vacant warehouses, small shed, railroad spur, paved parking lots, dock (pier), and landscaping. The proposed development of the SITE has not been finalized, but is

anticipated to include construction of mixed residential, retail, and/or commercial use multi-story structures and will entail removal of most of the existing structures and features and mass grading and excavation. Based on the findings of past and recent environmental assessments, soil and groundwater beneath the SITE have been impacted by the past uses of the SITE, which included bulk oil storage, fertilizer storage, coal storage, chemical mixing and manufacturing, and warehouse operations. Contributions from adjacent and nearby properties that were used in the past for fertilizer storage, city gas works, chemical manufacturing and mixing, and bulk oil storage are also suspected. Constituents of concern identified at elevated concentrations in soil, groundwater, and soil gas at the SITE include gasoline and diesel range total petroleum hydrocarbons (TPH-GRO and TPH-DRO, respectively), volatile organic compounds (VOCs), semi-VOCs (SVOCs), and metals.

3.0 SITE DESCRIPTION

The SITE is located at 500 and 501 North Union Street in Alexandria, Virginia, at the intersection of Oronoco Street and North Union Street. The SITE is comprised of two parcels, the 500 and 501 North Union Street parcels (herein referred to as the 500 and 501 Parcels, respectively), separated by North Union Street. The two parcels comprise approximately 3.2 acres of land. In past reports, the parcel addresses have also been listed as 1 and 101 Oronoco Street (corresponding to the 500 and 501 Parcels, respectively). A site location map is included as Figure 1. The SITE is situated in a mixed commercial and residential land use area. Adjacent property use is depicted on the aerial photograph included as Figure 2.

The SITE is currently improved with two 1-story, slab-on-grade brick, concrete, and steel warehouses, a large concrete dock (pier), railroad spur, a small wood-frame shed (near the dock), gravel and asphalt and concrete-paved parking areas, and landscaping. The warehouses were constructed in 1966. The warehouse situated on the 500 Parcel is referred to as Warehouse #16. The warehouse situated on the 501 Parcel is referred to as Warehouse #10, #11, and #12. Three diesel underground storage tanks (USTs) were formerly buried on the northeastern portion of the 501 Parcel. The USTs were formerly used to store and dispense diesel fuel via two dispensers located on the east-central portion of the 501 Parcel (next to the small wood shed). The tanks were removed in 2016. A site plan depicting existing conditions is included as Figure 3.

Topography at SITE is relatively flat. The SITE is bound to the north by Pendleton Street and railroad tracks across which is Oronoco Bay Park and Oronoco Bay, to the east and northeast by the Potomac River, to the south by Oronoco Street across which is Founders Park and a residential building, and to the west by Dalton Wharf Office Center and North Union Street.

4.0 POST SITE CHARACTERIZATION MONITORING ACTIVITIES

The PSCM activities conducted at the SITE by ICOR included advancement of test borings, installation of new permanent groundwater monitoring wells, and collection of soil and groundwater samples for field screening and laboratory analysis. The PSCM activities were conducted using the same methods and protocols as similar activities proposed in the SCS WP

and SCS WP Addendum and were conducted under the direct supervision of a Commonwealth of Virginia Certified Professional Geologist. Test boring advancement test borings, installation of new permanent groundwater monitoring wells, collection of soil samples for field screening and laboratory analysis, and the collection of groundwater samples during the first PSCM event for laboratory analysis were discussed in the May 2018 PSCMR. This PSCMR summarizes the June 2018 groundwater sampling activities conducted at the SITE by ICOR.

Groundwater samples were collected for laboratory analysis from existing wells TEC-MW2, TEC-MW4, ECS-MW4, MiHpt-5, MiHpt-7, MiHpt-8, MiHpt-14, MiHpt-15, MiHpt-20, MiHpt-21, MiHpt-22, MW23, MW24, and MW25. Well construction information for all existing wells is provided on Table 1.

Sampling was performed using a peristaltic pump fitted with new, dedicated, and disposable high-density polyethylene tubing. Before sampling each well, the depth to petroleum free product and groundwater was measured to the nearest 0.01 foot from the well's top of casing (TOC) using an oil/water interface probe. The well measurements recorded before sampling the wells are summarized on Table 2. The sample tubing inlet was placed at a depth corresponding to the center of each monitoring well's submerged screen interval. The samples were collected at a low flow rate (less than 250 milliliters per minute) to minimize agitation and aeration. Sampling was conducted in accordance with low-flow purging and sampling protocols recommended by the United States Environmental protection Agency (EPA).

The groundwater samples were collected after field parameters stabilized during purging. The following field parameters were monitored during purging: temperature, pH, specific conductivity, dissolved oxygen (DO), oxygen reduction potential (ORP), and turbidity. All of these parameters were measured using a multi-meter and low volume flow cell. Purging was considered complete when temperature, pH, specific conductivity, DO, ORP, and turbidity readings (an acceptable EPA, subset of parameters) stabilized for a minimum of three consecutive readings. It should be noted that wells TEC-MW2 and MiHpt-22 went dry during sampling. Samples were collected from the wells that went dry after they were allowed to recharge. Field parameter readings recorded at stabilization are summarized on Table 3.

The samples were transferred to appropriate sample containers directly from the discharge tubing and were grab samples. The groundwater samples were analyzed for TPH-GRO and TPH-DRO using EPA Method 8015C, TCL VOCs using EPA Method 8260B, and TCL SVOCs using EPA Method 8270C.

All purge water generated during sampling was stored in a 55-gallon drum pending proper disposal.

The relative elevations of the TOCs of the newly-installed permanent wells were surveyed in conjunction with the second groundwater sampling event by a Commonwealth of Virginia-licensed surveyor. The elevations of existing and newly-installed wells are presented on Table 2.

5.0 GROUNDWATER QUALITY

Based on the recent and historical groundwater measurements obtained from monitoring wells, the depth to groundwater at the SITE ranges from approximately 3 to 11 feet below grade and groundwater flow is to the north-northeast towards Oronoco Bay and the Potomac River. Oronoco Bay and the Potomac River are tidally influenced; however, data collected to date does not suggest that tidal change has a significant effect of groundwater flow. Recent and historical groundwater measurements obtained from the site wells are summarized on Table 2. A groundwater contour map generated from the recent groundwater sampling event is included as Figure 5.

Petroleum odors were noted during collection of groundwater samples from wells MiHpt-5, MiHpt-7, MiHpt-14, MiHpt-15, MiHpt-20, MiHpt-21, and MiHpt-22. A petroleum sheen was also observed during collection of groundwater samples from wells MiHpt-21 and MiHpt-22. The groundwater samples were analyzed for TPH-GRO, TPH-DRO, TCL VOCs, and TCL SVOCs. The recent and historical groundwater analytical results for these target constituents are summarized on Table 4. A copy of the laboratory report of analysis is included in Attachment 1.

The groundwater analytical results were compared to the most-current VDEQ Tier III residential groundwater vapor intrusion screening level (VDEQ-T3RGSLs), VDEQ Tier III industrial groundwater vapor intrusion screening level (VDEQ-T3IGSLs), and VDEQ Tier III construction direct (<15 feet) screening level (VDEQ-T3CDSLs). The most-recent analytical results were also compared to surface water screening levels including VDEQ general permit discharge standards for petroleum contaminated water (VDEQ-PDSs), VDEQ Tier II public water supply screening level (VDEQ-T2PWSSLs), and VDEQ Tier II surface water fresh screening level (VDEQ-T2SWFSLs). It should be noted that VDEQ groundwater and surface water screening levels have not been developed for many of the target constituents detected.

TPH-GRO, TPH-DRO, 15 VOCs, and 14 SVOCs were detected in the groundwater samples at concentrations above the RL. Ten VOCs and four SVOCs were detected at concentrations above VDEQ groundwater and/or surface water screening levels. A list of the constituents detected above screening levels is detailed below.

Constituents Detected Above VDEQ-T3RGSLs

- **Benzene** was detected above VDEQ-T3RGSLs in the groundwater samples collected from wells MiHpt-5, MiHpt-7, MiHpt-14, MiHpt-20, MiHpt-21, MiHpt-22, and MW-25.
- **Biphenyl** was detected above VDEQ-T3RGSLs in the groundwater sample collected from well MiHpt-7.
- **Chloroform** was detected above VDEQ-T3RGSLs in the groundwater sample collected from wells MiHpt-15 and MiHpt-21.
- **Cyclohexane** was detected above VDEQ-T3RGSLs in the groundwater sample collected from well MiHpt-21.
- **Ethylbenzene** was detected above VDEQ-T3RGSLs in the groundwater samples collected from wells MiHpt-7 and MiHpt-21.

- **Naphthalene** (as a VOC and SVOC) was detected above VDEQ-T3RGSLs in the groundwater samples collected from wells MiHpt-5, MiHpt-7, MiHpt-8, MiHpt-14, and MW-25.
- **Tetrachloroethene (PCE)** was detected above VDEQ-T3RGSLs in the groundwater sample collected from well MiHpt-21.
- **Tricholoroethene (TCE)** was detected above VDEQ-T3RGSLs in the groundwater sample collected from well MiHpt-21.
- **Xylenes** were detected above VDEQ-T3RGSLs in the groundwater samples collected from wells MiHpt-5, MiHpt-7, and MiHpt-21.

Constituents Detected Above VDEQ-T3IGSLs

- **Benzene** was detected above VDEQ-TRIGSLs in the groundwater samples collected from wells MiHpt-5, MiHpt-7, MiHpt-14, MiHpt-21, and MiHpt-22.
- **Chloroform** was detected above VDEQ-TRIGSLs in the groundwater sample collected from well MiHpt-15.
- **Cyclohexane** was detected above VDEQ-TRIGSLs in the groundwater sample collected from well MiHpt-21.
- **Naphthalene** (as a VOC and SVOC) was detected above VDEQ-TRIGSLs in the groundwater samples collected from wells MiHpt-5, MiHpt-7, and MW-25.
- **PCE** was detected above VDEQ-TRIGSLs in the groundwater sample collected from well MiHpt-21.
- **TCE** was detected above VDEQ-TRIGSLs in the groundwater sample collected from well MiHpt-21.

Constituents Detected Above VDEQ-T3CDSLs

- **Benzene** was detected above VDEQ-T3CDSLs in the groundwater samples collected from wells MiHpt-5, MiHpt-7, MiHpt-14, MiHpt-20, MiHpt-21, MiHpt-22, and MW-25.
- **Biphenyl** was detected above VDEQ-T3CDSLs in the groundwater sample collected from well MiHpt-7.
- **Naphthalene** (as a VOC and SVOC) was detected above VDEQ-T3CDSLs in the groundwater samples collected from wells MiHpt-5, MiHpt-7, MiHpt-8, MiHpt-14, MiHpt-21, MW-23, MW-24, and MW-25.
- **Pentachlorophenol** was detected above VDEQ-T3CDSLs in the groundwater sample collected from well MiHpt-21.
- **PCE** was detected above VDEQ-T3CDSLs in the groundwater sample collected from well MiHpt-21.
- **TCE** was detected above VDEQ-T3CDSLs in the groundwater sample collected from well MiHpt-21.
- **Xylenes** were detected above VDEQ-T3CDSLs in the groundwater samples collected from wells MiHpt-5, MiHpt-7, and MiHpt-21.

Constituents Detected Above VDEQ-PDSs

- **Benzene** was detected above VDEQ-PDSs in the groundwater samples collected from wells MiHpt-5, MiHpt-7, MiHpt-14, MiHpt-21, MiHpt-22, and MW-25.
- **Ethylbenzene** was detected above VDEQ-PDSs in the groundwater samples collected from wells MiHpt-5, MiHpt-7, MiHpt-14, and MiHpt-21.
- **Naphthalene** (as a VOC and SVOC) was detected above VDEQ-PDSs in the groundwater samples collected from wells MiHpt-5, MiHpt-7, MiHpt-8, MiHpt-14, MiHpt-21, and MW-25.
- **PCE** was detected above VDEQ-PDSs in the groundwater sample collected from well MiHpt-21.
- **TCE** was detected above VDEQ-PDSs in the groundwater sample collected from well MiHpt-21.
- **Toluene** was detected above VDEQ-PDSs in the groundwater sample collected from well MiHpt-21.
- **Xylenes** were detected above VDEQ-PDSs in the groundwater samples collected from wells MiHpt-5, MiHpt-7, and MiHpt-21.

Constituents Detected Above VDEQ-T2SWSSLs

- **Benzene** was detected above VDEQ-T2PWSSLs in the groundwater samples collected from wells MiHpt-5, MiHpt-7, MiHpt-14, MiHpt-21, and MiHpt-22.
- **PCE** was detected above VDEQ-T2PWSSLs in the groundwater sample collected from well MiHpt-21.
- **2,4-Dichlorophenol** was detected above VDEQ-T2PWSSLs in the groundwater sample collected from well MiHpt-21.
- **Pentachlorophenol** was detected above VDEQ-T2PWSSLs in the groundwater sample collected from well MiHpt-21.

Constituents Detected Above VDEQ-*T2SWFSLs*

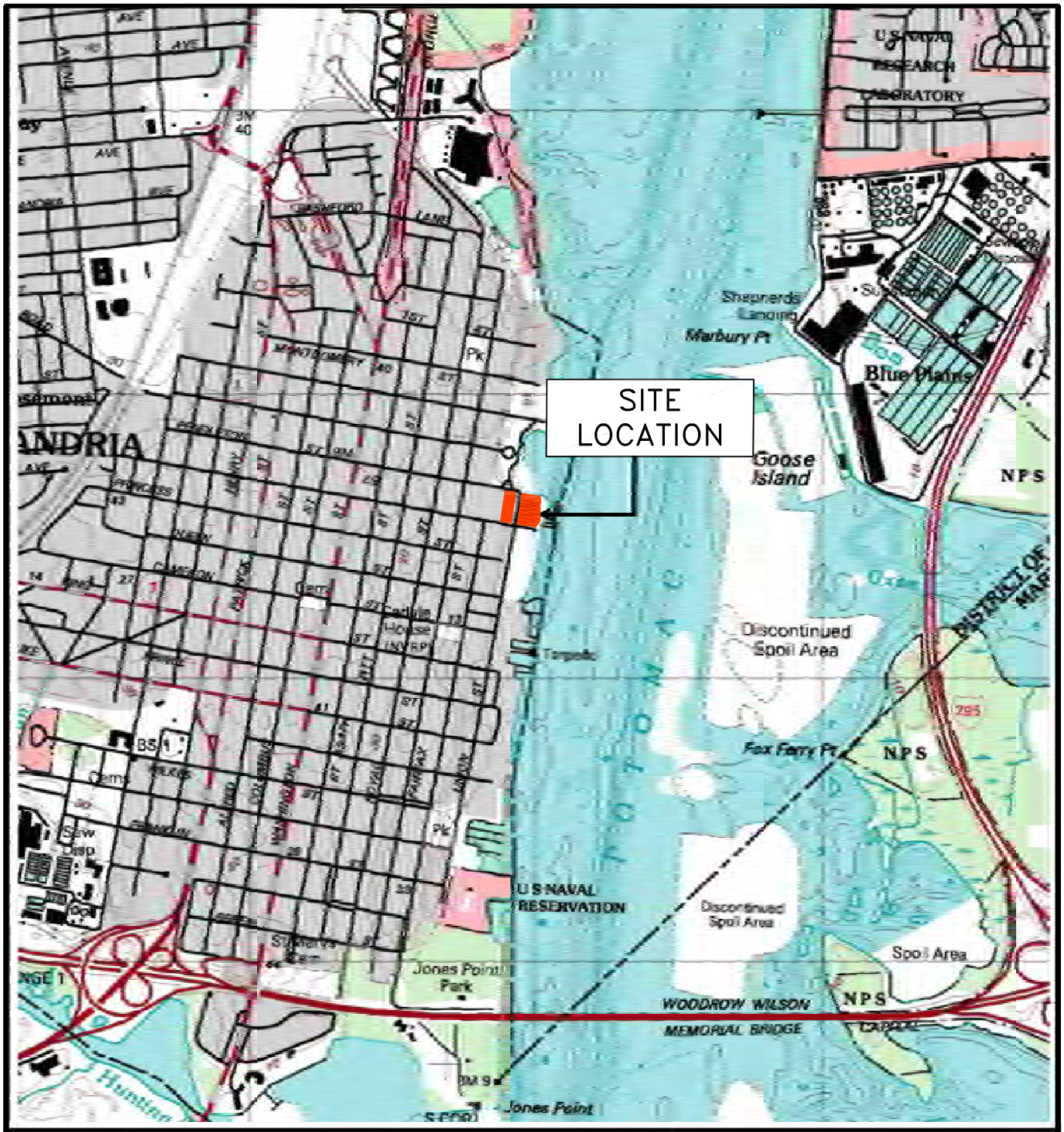
- **PCE** was detected above VDEQ-T2SWFSLs in the groundwater sample collected from well MiHpt-21.
- **2,4-Dichlorophenol** was detected above VDEQ-T2SWFSLs in the groundwater sample collected from well MiHpt-21.
- **Pentachlorophenol** was detected above VDEQ-T2SWFSLs in the groundwater sample collected from well MiHpt-21.

In general, the concentrations of TPH-GRO, TPH-DRO, and VOCs detected in groundwater appear to be relatively stable and the concentrations of SVOCs have decreased over time. The highest concentrations of target constituents detected were on the western and southern portions of the SITE. Isoconcentration maps prepared from the recent groundwater analytical data for TPH-GRO, TPH-DRO, benzene, and naphthalene are included as Figures 6 through 9.

6.0 CONCLUSIONS AND RECOMMENDATIONS

As indicated in the first PSCMR, visual and olfactory evidence of soil impacts in newly-assessed areas of the SITE were noted during implementation of the PSCM activities. Target constituents were also detected in soil and groundwater samples collected from the newly-assessed areas above VDEQ screening levels established for residential and industrial land use and/or surface water. As stated in the SCR, the presence of impacted soil, groundwater, and soil gas warrants remediation, engineering controls, and institutional controls under proposed (future) land use scenario. ICOR believes that warranted and required remediation, engineering controls, and institutional controls can be implemented in conjunction with future development; however, remediation, engineering controls, and institutional controls may also be warranted under the current land use scenario and should be further evaluated via a quantitative risk assessment conducted using PSTP and VRP guidance. The potential for migration of constituents in groundwater and the potential for discharge to surface water should also be modelled using PSTP and VRP-approved computer models as part of the risk assessment.

FIGURES



REFERENCE:
7.5 MINUTE SERIES TOPOGRAPHIC QUADRANGLE
ALEXANDRIA, VIRGINIA
PHOTOREVISED 1994 SCALE 1:24,000

N

0 1000 2000 4000
SCALE, FEET

SITE LOCATION

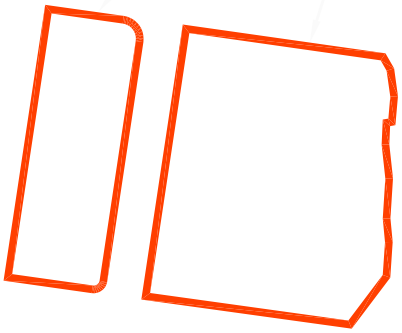
DESIGNED BRUZZESI	DATE 04/04/17
DRAWN CONNELLY	DATE 04/04/17

ICOR LTD.
PO BOX 406
MIDDLEBURG, VIRGINIA 20118

FORMER ROBINSON TERMINAL NORTH
500 AND 501 NORTH UNION STREET
ALEXANDRIA, VA

PROJECT NO. 16.CI.001	SCALE: AS SHOWN
DRAWING NO.	FIGURE 1

16-CI-001-RTN SCR01-SITE LOC.DWG – July 6, 2016



MICROSOFT CORPORATION 2016

0 125 250 500

SCALE IN FEET

AERIAL PHOTOGRAPH

DESIGNED BRUZZESI	DATE 04/04/17
DRAWN CONNELLY	DATE 04/04/17

ICOR LTD.
PO BOX 406
MIDDLEBURG, VIRGINIA 20118

FORMER ROBINSON TERMINAL NORTH
500 AND 501 NORTH UNION STREET
ALEXANDRIA, VA

PROJECT NO. 16.CI.001	SCALE: AS SHOWN
DRAWING NO.	FIGURE 2

16-CI-001-RTN SCR02-AERIAL.DWG — July 6, 2016

TRACT I
LOT 601

LANDS OF
RTN WEST LLC
TM: 065.01-04-12
ZONING: W-1
USE: VACANT LAND
COMMERCIAL
AREA: 43,512 S.F. 0.998 AC.

TRACT II
PARCEL "A", "B-1", "B-2", "C" & "D"

LANDS OF
RTN EAST LLC
ZONING: W-1
USE: VACANT LAND COMMERCIAL
TM: 065.01-04-13
TOTAL AREA: 101,406 S.F. 2.32 AC.

PARCEL "B-2"
AREA: 4,843 S.F. 0.111 AC.

PARCEL "A"
AREA: 42,650 S.F. 0.979 AC.

PARCEL "B-1"
AREA: 4,872 S.F.
0.112 AC.

PARCEL "C"
AREA: 9,691 S.F. 0.222 AC.

PARCEL "D"
AREA: 39,050 S.F. 0.896 AC.

2 STORY BRICK & ALUMINUM BUILDING
36,552 S.F. OR 0.839 AC.
BUILDING HT.=±37.8'

1 STORY WAREHOUSE

POTOMAC RIVER
OPEN WATER

POTOMAC
RIVER
OPEN WATER

POTOMAC RIVER
OPEN WATER

LIMITS OF DISTURBANCE = 213,444 SF OR 4.9 AC.

0 30 60 120
SCALE IN FEET

SITE PLAN (EXISTING CONDITIONS)

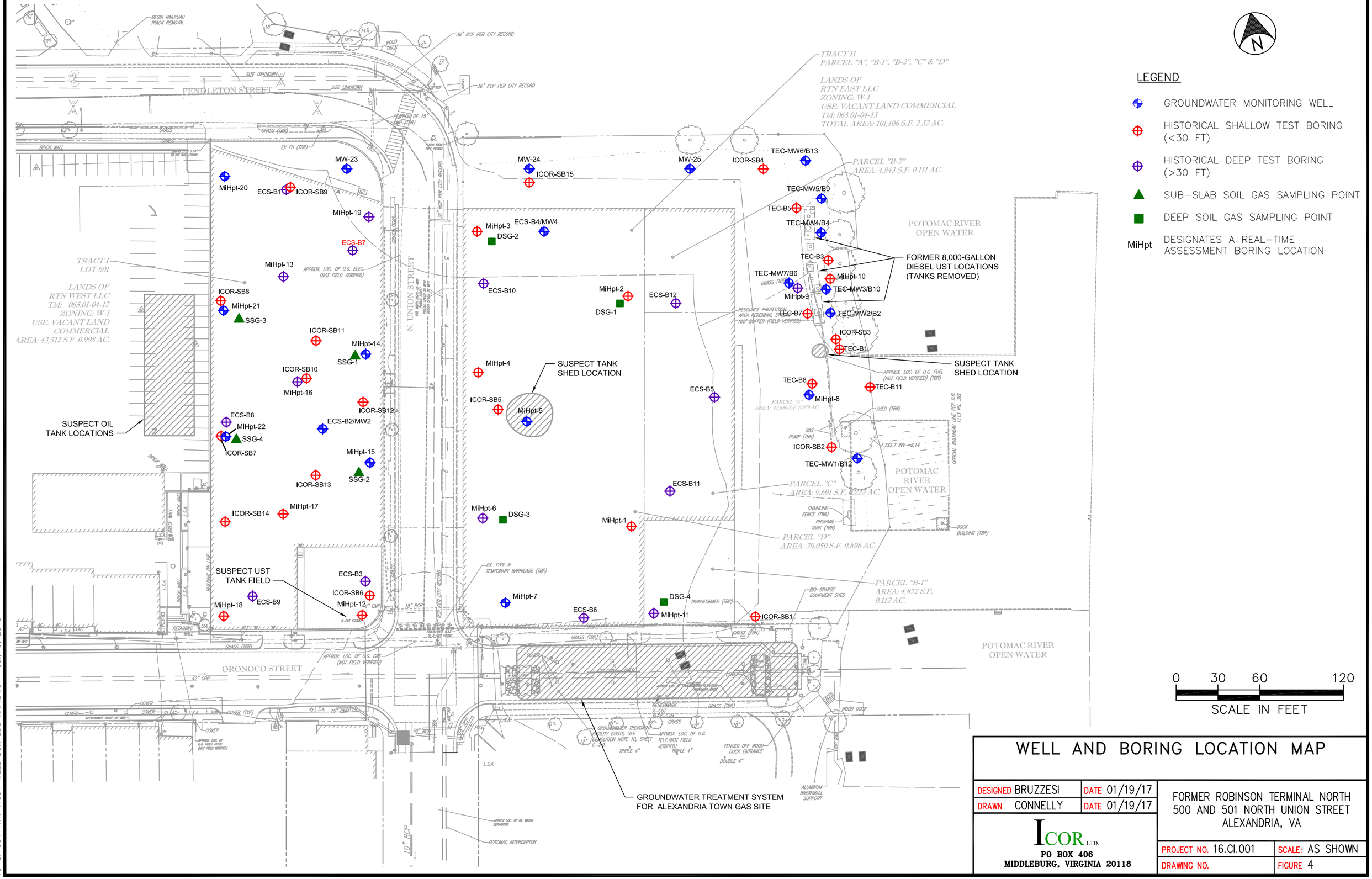
DESIGNED	BRUZZESI	DATE	04/04/17
DRAWN	CONNELLY	DATE	04/04/17

ICOR LTD.
PO BOX 406
MIDDLEBURG, VIRGINIA 20118

FORMER ROBINSON TERMINAL NORTH
500 AND 501 NORTH UNION STREET
ALEXANDRIA, VA

PROJECT NO. 16.CI.001	SCALE: AS SHOWN
DRAWING NO.	FIGURE 3

16-CI-001-RTN SCR03-EXIST SITE.DWG — July 6, 2016



WELL AND BORING LOCATION MAP

DESIGNED	BRUZZESI	DATE	01/19/17
DRAWN	CONNELLY	DATE	01/19/17

ICOR LTD.
PO BOX 406
MIDDLEBURG, VIRGINIA 20118

FORMER ROBINSON TERMINAL NORTH
500 AND 501 NORTH UNION STREET
ALEXANDRIA, VA

PROJECT NO. 16.CI.001	SCALE: AS SHOWN
DRAWING NO.	FIGURE 4

16-CI-001-RTN-FIG04-WELL BOR LOC MAP.DWG — July 6, 2016

N

Legend

- Site Property
- Groundwater Contour (6/2018)
- Groundwater Flow Direction
- Groundwater Monitoring Well

Notes:
DRY - Well was dry.

0 25 50 100 Feet

GROUNDWATER CONTOUR MAP (6/7/18)

DESIGNED BRUZZESI	DATE 7/31/18
DRAWN CONNELLY	DATE 7/31/18

ICOR LTD.
PO BOX 406
MIDDLEBURG, VIRGINIA 20118

FORMER ROBINSON TERMINAL NORTH
500 AND 501 NORTH UNION STREET
ALEXANDRIA, VA

PROJECT NO. 16.CI.001	SCALE: AS SHOWN
DRAWING NO.	FIGURE 5

16-CI-001-RTN-180607-SCR5-GW CONT MAP.DWG -- July 6, 2016

	VDEQ-PDS
TPH-GRO (C6-C10)	15 mg/L

MiHpt-20
ND

MW-23
ND

MW-24
ND

MW-25
0.16 mg/L

TEC-MW6/B13

ECS-B4/MW4
ND

TEC-MW5/B9

MiHpt-21
12 mg/L

TEC-MW4/B4
ND

TEC-MW7/B6

MiHpt-14
0.41 mg/L

MiHpt-10

MiHpt-22
0.56 mg/L

ECS-B2/MW2

MiHpt-5
0.95 mg/L

MiHpt-8
ND

TEC-MW3/B10

TEC-MW2/B2
ND

MiHpt-15
ND

TEC-MW1/B12

MiHpt-7
2.1 mg/L

N

Legend

- Site Property
- Groundwater Monitoring Well

Isoconcentration (TPH-GRO)

- 0.15 mg/L
- 1.5 mg/L

Sample ID
TPH-GRO Concentration (mg/L)

Notes:
ND - Non-Detect
VDEQ-PDS = general permit discharge standard for petroleum contaminated water

0 25 50 100
Feet

TPH–GRO IN GROUNDWATER ISOCONCENTRATION MAP (6/7/18)

DESIGNED BRUZZESI	DATE 7/31/18
DRAWN CONNELLY	DATE 7/31/18

ICOR LTD.
PO BOX 406
MIDDLEBURG, VIRGINIA 20118

FORMER ROBINSON TERMINAL NORTH
500 AND 501 NORTH UNION STREET
ALEXANDRIA, VA

PROJECT NO. 16.CI.001	SCALE: AS SHOWN
DRAWING NO.	FIGURE 6

	VDEQ-PDS
TPH-DRO (C10-C28)	**15 mg/L**

MiHpt-20
ND

MW-23
0.15 mg/L

MW-24
0.61 mg/L

MW-25
0.33 mg/L

TEC-MW6/B13

ECS-B4/MW4
ND

TEC-MW5/B9

MiHpt-21
2.4 mg/L

TEC-MW4/B4
0.17 mg/L

MiHpt-14
1.3 mg/L

TEC-MW7/B6

MiHpt-10

MiHpt-22
0.38 mg/L

MiHpt-5
0.48 mg/L

TEC-MW3/B10

ECS-B2/MW2

MiHpt-8
0.17 mg/L

TEC-MW2/B2
0.22 mg/L

MiHpt-15
ND

TEC-MW1/B12

MiHpt-7
3.6 mg/L

N

Legend

- Site Property
- Groundwater Monitoring Well

Isoconcentration (TPH-DRO)

- 0.15 mg/L
- 1.5 mg/L

Sample ID
TPH-DRO Concentration (mg/L)

Notes:
ND - Non-Detect
VDEQ-PDS = general permit discharge standard for petroleum contaminated water

0 25 50 100
Feet

TPH–DRO IN GROUNDWATER ISOCONCENTRATION MAP (6/7/18)

DESIGNED	BRUZZESI	DATE	7/31/18
DRAWN	CONNELLY	DATE	7/31/18

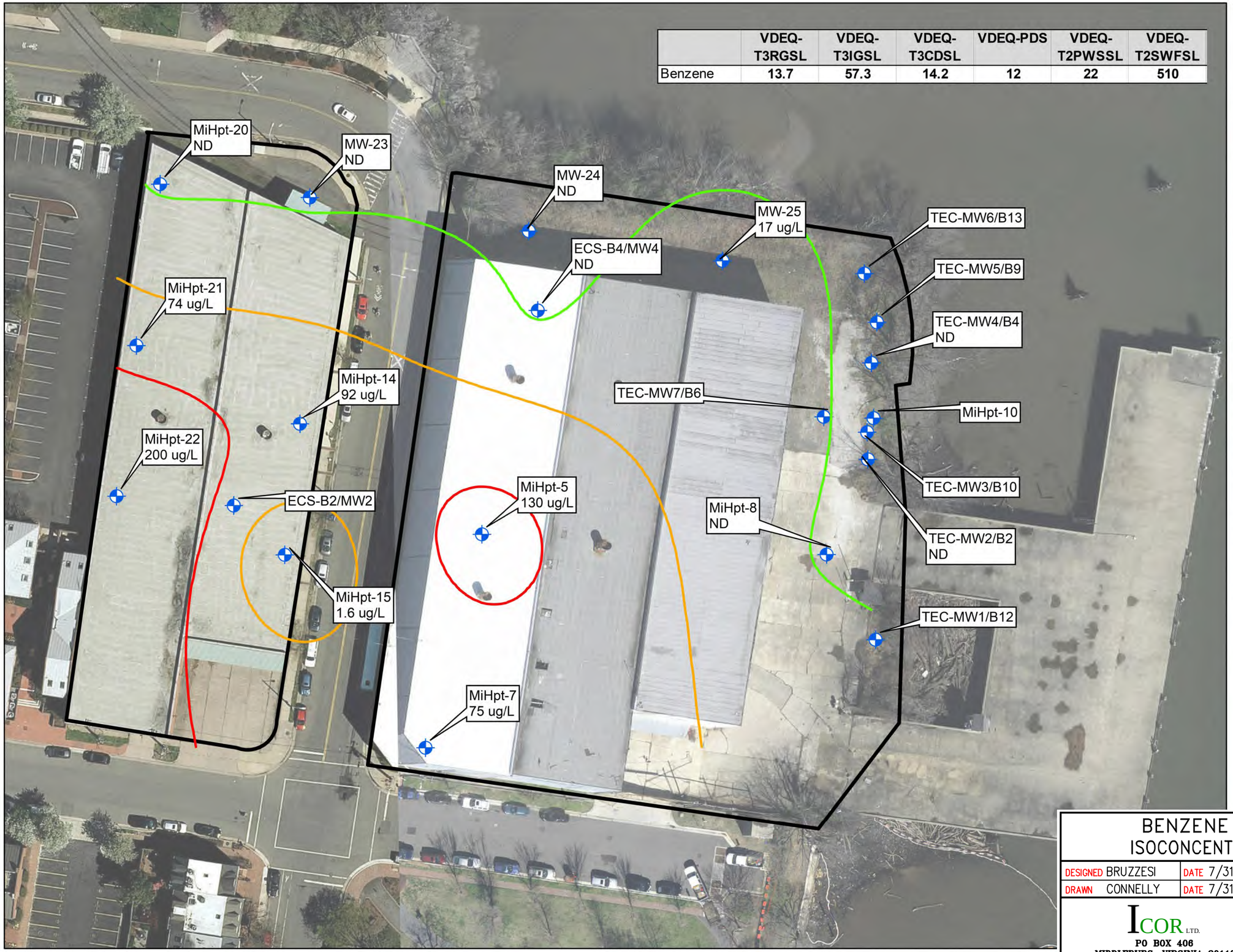
ICOR LTD.
PO BOX 406
MIDDLEBURG, VIRGINIA 20118

FORMER ROBINSON TERMINAL NORTH
500 AND 501 NORTH UNION STREET
ALEXANDRIA, VA

PROJECT NO. 16.CI.001	SCALE: AS SHOWN
DRAWING NO.	FIGURE 7

16-CI-001-RTN-180607-SCR7-TPH DRO GW.DWG — July 6, 2016

	VDEQ-T3RGSL	VDEQ-T3IGSL	VDEQ-T3CDSL	VDEQ-PDS	VDEQ-T2PWSSL	VDEQ-T2SWFSL
Benzene	13.7	57.3	14.2	12	22	510



N

Legend

- Site Property
- Groundwater Monitoring Well

Isoconcentration (Benzene)

- 5 ug/L
- 50 ug/L
- 100 ug/L

Sample ID
Benzene Concentration (ug/L)

Notes:
ND - Non-Detect
VDEQ-T3RGSL = VDEQ Tier III residential groundwater vapor intrusion screening level
VDEQ-T3CGSL = VDEQ Tier III industrial groundwater vapor intrusion screening level
VDEQ-T3CDSL = VDEQ Tier III construction direct (<15 feet) screening level
VDEQ-PDS = general permit discharge standard for petroleum contaminated water
VDEQ-T2PWSSL = VDEQ Tier II public water supply screening level
VDEQ-T2SWFSL = VDEQ Tier II surface water fresh screening level

0 25 50 100 Feet

BENZENE IN GROUNDWATER ISOCONCENTRATION MAP (6/7/18)

DESIGNED BRUZZESI	DATE 7/31/18
DRAWN CONNELLY	DATE 7/31/18

ICOR LTD.
PO BOX 406
MIDDLEBURG, VIRGINIA 20118

FORMER ROBINSON TERMINAL NORTH
500 AND 501 NORTH UNION STREET
ALEXANDRIA, VA

PROJECT NO. 16.CI.001	SCALE: AS SHOWN
DRAWING NO.	FIGURE 8

16-CI-001-RTN-180607-SCR08-BENZENE GW.DWG — July 6, 2016

	VDEQ-T3RGSL	VDEQ-T3IGSL	VDEQ-T3CDSL	VDEQ-PDS
Naphthalene	17.2	72.3	0.722	8.9

MiHpt-20
0.52 ug/L

MW-23
1.3 ug/L

MW-24
3.4 ug/L

MW-25
77 ug/L

TEC-MW6/B13

ECS-B4/MW4
ND

TEC-MW5/B9

MiHpt-21
26 ug/L

TEC-MW4/B4
ND

MiHpt-14
62 ug/L

TEC-MW7/B6

MiHpt-10

MiHpt-22
ND

MiHpt-5
340 ug/L

TEC-MW3/B10

ECS-B2/MW2

MiHpt-8
21 ug/L

TEC-MW2/B2
ND

MiHpt-15
ND

TEC-MW1/B12

MiHpt-7
1400 ug/L

N

Site Property

Groundwater Monitoring Well

Isoconcentration (Naphthalene)

5 ug/L

50 ug/L

500 ug/L

Sample ID
Naphthalene Concentration (ug/L)

Notes:
ND - Non-Detect
VDEQ-T3RGSL = VDEQ Tier III residential groundwater vapor intrusion screening level
VDEQ-T3CGSL = VDEQ Tier III industrial groundwater vapor intrusion screening level
VDEQ-T3CDSL = VDEQ Tier III construction direct (<15 feet) screening level
VDEQ-PDS = general permit discharge standard for petroleum contaminated water

0 25 50 100
Feet

NAPHTHALENE IN GROUNDWATER ISOCONCENTRATION MAP (6/7/18)

DESIGNED BRUZZESI	DATE 7/31/18
DRAWN CONNELLY	DATE 7/31/18

ICOR LTD.
PO BOX 406
MIDDLEBURG, VIRGINIA 20118

FORMER ROBINSON TERMINAL NORTH
500 AND 501 NORTH UNION STREET
ALEXANDRIA, VA

PROJECT NO. 16.CI.001	SCALE: AS SHOWN
DRAWING NO.	FIGURE 9

16-CI-001-RTN-180607-SCR09-NAPH GW.DWG - July 6, 2016

TABLES

TABLE 1. WELL CONSTRUCTION INFORMATION

FORMER ROBINSON TERMINAL NORTH
500 AND 501 NORTH UNION STREET
ALEXANDRIA, VA

Well ID	Date Installed	Well Diameter (inches ID)	Well Material	Total Depth (feet bgs)	Screen Interval (feet bgs)
TEC-MW1	4/27/06	1	PVC	10.0	UKN
TEC-MW2	4/27/06	1	PVC	16.0	UKN
TEC-MW3	UKN	1	PVC	UKN	UKN
TEC-MW4	4/27/06	1	PVC	12.0	UKN
TEC-MW5	4/27/06	1	PVC	16.0	UKN
TEC-MW6	4/28/06	1	PVC	16.0	UKN
TEC-MW7	4/27/06	1	PVC	12.0	UKN
ECS-MW2	12/20/07	1	PVC	UKN	UKN
ECS-MW4	12/27/07	1	PVC	UKN	UKN
MiHpt-5	9/7/16	1	PVC	16.0	6.0 - 16.0
MiHpt-7	9/6/16	1	PVC	17.0	7.0 - 17.0
MiHpt-8	9/6/16	1	PVC	20.0	10.0 - 20.0
MiHpt-14	9/8/16	1	PVC	16.0	6.0 - 16.0
MiHpt-15	9/8/16	1	PVC	16.0	6.0 - 16.0
MiHpt-20	9/8/16	1	PVC	18.0	8.0 - 18.0
MiHpt-21	9/9/16	1	PVC	16.0	6.0 - 16.0
MiHpt-22	9/9/16	1	PVC	16.0	6.0 - 16.0
MW23	1/22/18	1	PVC	19.8	4.8 - 19.8
MW24	1/22/18	1	PVC	19.0	4.0 - 19.0
MW25	1/22/18	1	PVC	19.0	4.0 - 19.0

NOTES:
ID = inner diameter
bgs = below surface grade
UKN = unknown

TABLE 2. HISTORICAL GROUNDWATER MEASUREMENTS

FORMER ROBINSON TERMINAL NORTH
500 AND 501 NORTH UNION STREET
ALEXANDRIA, VA

Well ID	Well TOC Elevation (feet)	Date	Total Well Depth (feet bgs)	Depth to Groundwater (feet bgs)	Groundwater Elevation (feet)
TEC-MW1	7.92	5/4/06	10.0	5.64	2.28
TEC-MW2	9.26	5/4/06	16.0	6.79	2.47
		9/21/16		6.74	2.52
		2/7/17		7.21	2.05
		1/29/18		7.81	1.45
		6/7/18		6.32	2.94
TEC-MW3	9.47	5/4/06	UKN	7.00	2.47
		9/21/16		7.22	2.25
		2/7/17		7.44	2.03
		1/29/18		OBS	OBS
		6/7/18		6.39	3.08
TEC-MW4	9.51	5/4/06	12.0	7.05	2.46
		9/21/16		7.23	2.28
		2/7/17		7.50	2.01
		1/29/18		8.12	1.39
		6/7/18		6.45	3.06
TEC-MW5	8.02	5/4/06	16.0	7.89	0.13
		9/21/16		7.58	0.44
		2/7/17		6.83	1.19
		1/29/18		6.31	1.71
TEC-MW6	7.52	5/4/06	16.0	6.40	1.12
TEC-MW7	8.70	5/4/06	12.0	6.49	2.21
ECS-MW2	11.48	12/20/07	UKN	10.08	1.40
		9/21/16		6.97	4.51
		2/7/17		6.53	4.95
		1/29/18		DRY	DRY
		6/7/18		DRY	DRY
ECS-MW4	8.76	12/20/07	UKN	9.15	-0.39
		9/21/16		2.98	5.78
		2/7/17		3.38	5.38
		1/29/18		4.65	4.11
		6/7/18		2.73	6.03
MiHpt-5	8.82	9/21/16	16.0	5.37	3.45
		2/7/17		6.62	2.20
		1/29/18		6.31	2.51
		6/7/18		4.52	4.30
MiHpt-7	8.97	9/21/16	17.0	5.18	3.79
		2/7/17		5.07	3.90
		1/29/17		6.11	2.86
		6/7/18		4.50	4.47

TABLE 2. HISTORICAL GROUNDWATER MEASUREMENTS

FORMER ROBINSON TERMINAL NORTH
500 AND 501 NORTH UNION STREET
ALEXANDRIA, VA

Well ID	Well TOC Elevation (feet)	Date	Total Well Depth (feet bgs)	Depth to Groundwater (feet bgs)	Groundwater Elevation (feet)
MiHpt-8	8.21	9/21/16	20.0	5.99	2.22
		2/7/17		6.19	2.02
		1/29/18		6.16	2.05
		6/7/18		5.13	3.08
MiHpt-14	11.48	9/21/16	16.0	7.90	3.58
		2/7/17		7.62	3.86
		1/29/18		8.95	2.53
		6/7/18		7.39	4.09
MiHpt-15	11.54	9/21/16	16.0	7.22	4.32
		2/7/17		6.59	4.95
		1/29/17		8.11	3.43
		6/7/18		6.58	4.96
MiHpt-20	11.59	9/21/16	18.0	9.41	2.18
		2/7/17		9.50	2.09
		1/29/18		10.57	1.02
		6/7/18		8.14	3.45
MiHpt-21	11.56	9/21/16	16.0	7.19	4.37
		2/7/17		6.99	4.57
		1/29/18		11.05	0.51
		6/7/18		6.70	4.86
MiHpt-22	11.63	9/21/16	16.0	7.30	4.33
		2/7/17		6.99	4.64
		1/29/18		8.10	3.53
		6/7/18		6.57	5.06
MW23	9.12	1/29/18	19.8	8.27	0.85
		6/7/18		6.43	2.69
MW24	8.62	1/29/18	19.0	7.61	1.01
		6/7/18		5.79	2.83
MW25	7.73	1/29/18	19.0	6.49	1.24
		6/7/18		4.85	2.88

NOTES:
All survey data generated by a professional surveyor
TOC = top of casing
bgs = below ground surface
UKN = unknown
OBS = obstructed
DRY = well dry

TABLE 3. GROUNDWATER PARAMETER READINGS AT STABLIZATION

FORMER ROBINSON TERMINAL NORTH
500 AND 501 NORTH UNION STREET
ALEXANDRIA, VA

Well ID	Date Measurement Collected	Time to Stabilization (minutes)	Temperature (°C)	Specific Conductance (mS/cm)	pH	Oxygen Reduction Potential (mv)	Dissolved Oxygen (mg/l)	Turbidity (NTU)
TEC-MW2	1/29/18	10/DRY	12.68	0.413	6.80	-145	8.5	113.0
	6/7/18	15/DRY	16.32	1.010	6.67	-70	1.0	22.0
TEC-MW4	1/29/18	35	14.00	0.888	6.81	-109	0.0	3.3
	6/7/18	30	15.43	0.722	6.67	-67	0.0	11.0
ECS-MW4	1/29/18	35	15.74	0.485	6.60	-92	0.0	10.3
	6/7/18	30	17.43	0.565	6.72	-145	0.0	4.7
MiHpt-5	1/29/18	35	14.18	0.843	2.37	351	4.8	410.0
	6/7/18	30	15.55	0.779	2.66	322	0.0	0.0
MiHpt-7	1/29/18	35	15.69	0.469	6.81	-116	0.0	15.5
	6/7/18	25	16.70	0.486	6.76	-138	0.0	9.0
MiHpt-8	1/29/18	40	12.01	1.870	7.08	-245	7.5	3.5
	6/7/18	40	18.07	1.120	6.67	-419	0.0	9.2
MiHpt-14	1/29/18	35	15.83	1.330	5.81	-6	0.0	33.2
	6/7/18	25	16.99	1.050	6.00	-8	0.0	2.0
MiHpt-15	1/29/18	25	13.50	0.592	6.19	52	0.0	18.1
	6/7/18	25	18.03	0.903	6.16	50	0.0	70.5
MiHpt-20	1/29/18	35	16.12	0.754	6.43	19	0.0	11.2
	6/7/18	30	16.37	0.947	5.92	119	0.1	115.0
MiHpt-21	1/29/18	10/DRY	15.48	0.948	6.26	-25	0.0	148.0
	6/7/18	10/DRY	17.06	1.150	6.41	-22	2.7	437.0
MiHpt-22	1/29/18	15/DRY	14.72	0.654	6.26	-24	0.0	28.6
	6/7/18	25	17.10	0.772	6.50	-48	0.0	170.0
MW-23	1/29/18	35	15.78	0.536	6.66	-74	0.0	60.7
	6/7/18	30	17.58	0.730	6.48	-40	0.0	5.2
MW-24	1/29/18	35	12.40	0.570	6.63	-132	0.0	3.1
	6/7/18	30	12.51	0.597	6.20	-31	0.0	3.3
MW-25	1/29/18	35	14.78	2.380	4.39	75	0.00	6.3
	6/7/18	30	15.13	2.390	4.16	85	0.00	2.3

NOTES:
°C = degrees Celcius
mS/cm = milliSiemens per cubic meter
mv = millivolts
mg/l = milligrams per liter
NTU = Nephelometric Turbidity Units
NM = not measured
DRY = well went dry

TABLE 4. GROUNDWATER ANALYTICAL RESULTS (DETECTIONS ONLY)

FORMER ROBINSON TERMINAL NORTH
500 AND 501 NORTH UNION STREET
ALEXANDRIA, VA

Sample ID:	Units	CAS No.	VDEQ-T3RGSL	VDEQ-T3IGSL	VDEQ-T3CDSL	VDEQ-PDS	VDEQ-T2PWSSL	VDEQ-T2SWFSL	TEC-MW2				TEC-MW4				ECS-MW4			
Sample Date:									9/21/16	2/7/17	1/29/18	6/7/18	9/21/16	2/7/17	1/29/18	6/7/18	9/21/16	2/7/17	1/29/18	6/71/18
TPH 8015																				
TPH-GRO (C6-C10)	mg/L	C6C10GRO	**NE**	**NE**	**NE**	**15**	**NE**	**NE**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TPH-DRO (C10-C28)	mg/L	C10C28DRO	**NE**	**NE**	**NE**	**15**	**NE**	**NE**	**0.21**	**0.18**	**0.28**	**0.22**	**0.21**	**0.26**	**0.30**	**0.17**	<0.10	<0.10	**0.11**	<0.10
TCL VOCs 8260B																				
Acetone	ug/L	67-64-1	**2240000**	**9780000**	**13400**	**NE**	**NE**	**NE**	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Benzene	ug/L	71-43-2	**13.7**	**57.3**	**14.2**	**12**	**22**	**510**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroform	ug/L	67-66-3	**8**	**35.3**	**54.3**	**80**	**340**	**11000**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Cyclohexane	ug/L	110-82-7	**103**	**424**	**3330**	**NE**	**NE**	**NE**	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	100-41-4	**34.1**	**152**	**591**	**4.3**	**530**	**2100**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Isopropylbenzene	ug/L	98-82-8	**89.3**	**383**	**19.9**	**NE**	**NE**	**NE**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl-t-butyl ether	ug/L	1634-04-4	**4580**	**19600**	**524**	**15**	**NE**	**NE**	**2.5**	**2.8**	**2.3**	**1.5**	<1.0	<1.0	<1.0	<1.0	**3.7**	**4.7**	**4.9**	**4.8**
Methylcyclohexane	ug/L	108-87-2	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Naphthalene	ug/L	91-20-3	**17.2**	**72.3**	**0.722**	**8.9**	**NE**	**NE**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene (PCE)	ug/L	127-18-4	**5.8**	**24.9**	**10.4**	**5**	**6.9**	**33**	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<5.0	<1.0
Toluene	ug/L	108-88-3	**1920**	**8100**	**949**	**43**	**510**	**6000**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene (TCE)	ug/L	79-01-6	**0.521**	**2.19**	**0.46**	**5**	**25**	**300**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	ug/L	156-59-2	**NE**	**NE**	**2260**	**70**	**NE**	**NE**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene	ug/L	156-60-5	**NE**	**NE**	**157**	**100**	**140**	**10000**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
m,p-Xylenes	ug/L	108-38-3	**150**	**1290**	**20.8**	**33**	**NE**	**NE**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	ug/L	95-47-6	**47.2**	**208**	**20.9**	**33**	**NE**	**NE**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
TCL SVOCs 8270C																				
2,4,5-Trichlorophenol	ug/L	95-95-4	**NE**	**NE**	**7860**	**NE**	**300**	**600**	NA	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2,4-Dichlorophenol	ug/L	120-83-2	**NE**	**NE**	**1060**	**NE**	**77**	**290**	NA	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2-Chlorophenol	ug/L	95-57-8	**NE**	**NE**	**1110**	**NE**	**81**	**150**	NA	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2-Methylnaphthalene	ug/L	91-57-6	**NE**	**NE**	**59**	**NE**	**NE**	**NE**	NA	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50
Acenaphthene	ug/L	83-32-9	**NE**	**NE**	**2950**	**NE**	**670**	**990**	NA	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50	<5.0	**2.5**	**2.1**	**1.1**
Acenaphthylene	ug/L	208-96-8	**NE**	**NE**	**1430**	**NE**	**NE**	**NE**	NA	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50
Anthracene	ug/L	120-12-7	**NE**	**NE**	**7850**	**NE**	**8300**	**40000**	NA	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50
Biphenyl (Diphenyl)	ug/L	92-52-4	**3.34**	**14.3**	**1.18**	**NE**	**NE**	**NE**	NA	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Carbazole	ug/L	86-74-8	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	NA	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Dibenzofuran	ug/L	132-64-9	**NE**	**NE**	**48.4**	**NE**	**NE**	**NE**	NA	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Fluoranthene	ug/L	206-44-0	**NE**	**NE**	**311**	**NE**	**130**	**140**	NA	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50
Fluorene	ug/L	86-73-7	**NE**	**NE**	**4370**	**NE**	**1100**	**5300**	NA	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50	<5.0	**0.75**	**0.66**	<0.50
Naphthalene	ug/L	91-20-3	**17.2**	**72.3**	**0.722**	**8.9**	**NE**	**NE**	NA	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50
Pentachlorophenol	ug/L	87-86-5	**NE**	**NE**	**5.54**	**NE**	**0.03**	**0.04**	NA	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Phenanthrene	ug/L	85-01-8	**NE**	**NE**	**1430**	**NE**	**NE**	**NE**	NA	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50
Pyrene	ug/L	129-00-0	**NE**	**NE**	**1430**	**NE**	**830**	**4000**	NA	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50

NOTES:
TPH = total petroleum hydrocarbons
TPH-DRO = diesel range TPH
TPH-GRO = gasoline range TPH
TCL = Target Compound List
VOCs = volatile organic compounds
SVOCs = semi-VOCs
EPA 8260B = United States Environmental Protection Agency SW-846 analytical method
ug/L = micrograms per liter
mg/L = milligrams per liter
<1.0 = not detected above analytical method reporting limit (RL)
VDEQ = Commonwealth of Virginia Department of Environmental Quality
VDEQ-T3RGSL = VDEQ Tier III residential groundwater vapor intrusion screening level
VDEQ-T3CGSL = VDEQ Tier III industrial groundwater vapor intrusion screening level
VDEQ-T3CDSL = VDEQ Tier III construction direct (<15 feet) screening level
VDEQ-PDS = general permit discharge standard for petroleum contaminated water
VDEQ-T2PWSSL = VDEQ Tier II public water supply screening level
VDEQ-T2SWFSL = VDEQ Tier II surface water fresh screening level
NE = not established
Bold and right justification designates target compound was detected at a concentration above RL
Yellow highlighting designates target compound was detected at a concentration above the VDEQ groundwater screening level in at least 1 sample
Blue highlighting designates target compound was detected at a concentration above the VDEQ surface water screening level in at least 1 sample
Green highlighting designates target compound was detected at a concentration above the VDEQ groundwater and surface water screening level in at least 1 sample

TABLE 4. GROUNDWATER ANALYTICAL RESULTS (DETECTIONS ONLY)

FORMER ROBINSON TERMINAL NORTH
500 AND 501 NORTH UNION STREET
ALEXANDRIA, VA

Sample ID:	Units	CAS No.	VDEQ-T3RGSL	VDEQ-T3IGSL	VDEQ-T3CDSL	VDEQ-PDS	VDEQ-T2PWSSL	VDEQ-T2SWFSL	MiHpt-05				MiHpt-07				MiHpt-08			
Sample Date:									9/21/16	2/7/17	1/29/18	6/7/18	9/21/16	2/7/17	1/29/18	6/7/18	9/21/16	2/7/17	1/29/18	6/7/18
TPH 8015																				
TPH-GRO (C6-C10)	mg/L	C6C10GRO	NE	NE	NE	15	NE	NE	0.81	0.79	0.6	0.95	0.88	0.89	1.4	2.1	<0.1	<0.1	<0.1	<0.1
TPH-DRO (C10-C28)	mg/L	C10C28DRO	NE	NE	NE	15	NE	NE	0.52	0.41	0.41	0.48	2.0	1.8	2.6	3.6	0.15	0.20	0.22	0.17
TCL VOCs 8260B																				
Acetone	ug/L	67-64-1	2240000	9780000	13400	NE	NE	NE	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Benzene	ug/L	71-43-2	13.7	57.3	14.2	12	22	510	110	150	130	130	25	31	59	75	<1.0	<1.0	<1.0	<1.0
Chloroform	ug/L	67-66-3	8	35.3	54.3	80	340	11000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Cyclohexane	ug/L	110-82-7	103	424	3330	NE	NE	NE	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	100-41-4	34.1	152	591	4.3	530	2100	26	14	13	24	61	57	94	110	<1.0	<1.0	<1.0	<1.0
Isopropylbenzene	ug/L	98-82-8	89.3	383	19.9	NE	NE	NE	4.5	4.4	5.5	7.9	12	13	15	23	<1.0	<1.0	<1.0	<1.0
Methyl-t-butyl ether	ug/L	1634-04-4	4580	19600	524	15	NE	NE	<1.0	<1.0	<1.0	<1.0	1.0	1.6	1.4	1.7	<1.0	<1.0	<1.0	<1.0
Methylcyclohexane	ug/L	108-87-2	NE	NE	NE	NE	NE	NE	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Naphthalene	ug/L	91-20-3	17.2	72.3	0.722	8.9	NE	NE	170	250	220	340	830	720	970	1400	14	14	<1.0	21
Tetrachloroethene (PCE)	ug/L	127-18-4	5.8	24.9	10.4	5	6.9	33	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<5.0	<1.0
Toluene	ug/L	108-88-3	1920	8100	949	43	510	6000	2.4	1.0	1.5	2.6	3.7	2.7	2.9	2.9	<1.0	<1.0	<1.0	<1.0
Trichloroethene (TCE)	ug/L	79-01-6	0.521	2.19	0.46	5	25	300	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	ug/L	156-59-2	NE	NE	2260	70	NE	NE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene	ug/L	156-60-5	NE	NE	157	100	140	10000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
m,p-Xylenes	ug/L	108-38-3	150	1290	20.8	33	NE	NE	12	18	19	22	32	30	39	52	<2.0	<2.0	<2.0	<2.0
o-Xylene	ug/L	95-47-6	47.2	208	20.9	33	NE	NE	23	38	39	37	32	38	56	61	<1.0	<1.0	<1.0	<1.0
TCL SVOCs 8270C																				
2,4,5-Trichlorophenol	ug/L	95-95-4	NE	NE	7860	NE	300	600	<5.3	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.3	<5.0	<5.0	<5.0
2,4-Dichlorophenol	ug/L	120-83-2	NE	NE	1060	NE	77	290	<5.3	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.3	<5.0	<5.0	<5.0
2-Chlorophenol	ug/L	95-57-8	NE	NE	1110	NE	81	150	<5.3	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.3	<5.0	<5.0	<5.0
2-Methylnaphthalene	ug/L	91-57-6	NE	NE	59	NE	NE	NE	16	1.9	1.4	8.0	40	28	4.7	37	<5.3	<0.50	<0.50	0.74
Acenaphthene	ug/L	83-32-9	NE	NE	2950	NE	670	990	<5.3	1.0	<0.50	1.7	36	38	14	25	<5.3	1.6	0.66	1.4
Acenaphthylene	ug/L	208-96-8	NE	NE	1430	NE	NE	NE	<5.3	<0.50	<0.50	<0.50	<5.0	1.2	<0.50	0.57	<5.3	<0.50	<0.50	<0.50
Anthracene	ug/L	120-12-7	NE	NE	7850	NE	8300	40000	<5.3	<0.50	<0.50	<0.50	<5.0	1.6	0.61	1.7	<5.3	<0.50	<0.50	<0.50
Biphenyl (Diphenyl)	ug/L	92-52-4	3.34	14.3	1.18	NE	NE	NE	<5.3	<5.0	<5.0	<5.0	7.0	7.1	<5.0	5.4	<5.3	<5.0	<5.0	<5.0
Carbazole	ug/L	86-74-8	NE	NE	NE	NE	NE	NE	<5.3	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.3	<5.0	<5.0	<5.0
Dibenzofuran	ug/L	132-64-9	NE	NE	48.4	NE	NE	NE	<5.3	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.3	<5.0	<5.0	<5.0
Fluoranthene	ug/L	206-44-0	NE	NE	311	NE	130	140	<5.3	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50	<5.3	<0.50	<0.50	<0.50
Fluorene	ug/L	86-73-7	NE	NE	4370	NE	1100	5300	<5.3	1.1	<0.50	1.3	8.2	9.5	3.5	7.2	<5.3	0.51	<0.50	0.68
Naphthalene	ug/L	91-20-3	17.2	72.3	0.722	8.9	NE	NE	83	47	16	48	200	170	73	170	<5.3	2.2	<0.50	4.1
Pentachlorophenol	ug/L	87-86-5	NE	NE	5.54	NE	0.03	0.04	<5.3	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.3	<5.0	<5.0	<5.0
Phenanthrene	ug/L	85-01-8	NE	NE	1430	NE	NE	NE	<5.3	<0.50	<0.50	0.55	8.7	8.8	3.2	8.3	<5.3	<0.50	<0.50	<0.50
Pyrene	ug/L	129-00-0	NE	NE	1430	NE	830	4000	<5.3	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50	<5.3	<0.50	<0.50	<0.50

NOTES:
TPH = total petroleum hydrocarbons
TPH-DRO = diesel range TPH
TPH-GRO = gasoline range TPH
TCL = Target Compound List
VOCs = volatile organic compounds
SVOCs = semi-VOCs
EPA 8260B = United States Environmental Protection Agency SW-846 analytical method
ug/L = micrograms per liter
mg/L = milligrams per liter
<1.0 = not detected above analytical method reporting limit (RL)
VDEQ = Commonwealth of Virginia Department of Environmental Quality
VDEQ-T3RGSL = VDEQ Tier III residential groundwater vapor intrusion screening level
VDEQ-T3CGSL = VDEQ Tier III industrial groundwater vapor intrusion screening level
VDEQ-T3CDSL = VDEQ Tier III construction direct (<15 feet) screening level
VDEQ-PDS = general permit discharge standard for petroleum contaminated water
VDEQ-T2PWSSL = VDEQ Tier II public water supply screening level
VDEQ-T2SWFSL = VDEQ Tier II surface water fresh screening level
NE = not established
Bold and right justification designates target compound was detected at a concentration above RL
Yellow highlighting designates target compound was detected at a concentration above the VDEQ groundwater screening level in at least 1 sample
Blue highlighting designates target compound was detected at a concentration above the VDEQ surface water screening level in at least 1 sample
Green highlighting designates target compound was detected at a concentration above the VDEQ groundwater and surface water screening level in at least 1 sample

TABLE 4. GROUNDWATER ANALYTICAL RESULTS (DETECTIONS ONLY)

FORMER ROBINSON TERMINAL NORTH
500 AND 501 NORTH UNION STREET
ALEXANDRIA, VA

Sample ID:	Units	CAS No.	VDEQ-T3RGSL	VDEQ-T3IGSL	VDEQ-T3CDSL	VDEQ-PDS	VDEQ-T2PWSSL	VDEQ-T2SWFSL	MiHpt-14				MiHpt-15				MiHpt-20			
Sample Date:									9/21/16	2/7/17	1/29/18	6/7/18	9/21/16	2/7/17	1/29/18	6/7/18	9/21/16	2/7/17	1/29/18	6/7/18
TPH 8015																				
TPH-GRO (C6-C10)	mg/L	C6C10GRO	NE	NE	NE	15	NE	NE	0.33	0.41	0.28	0.41	<0.1	<0.1	<0.1	<0.1	0.18	0.14	0.16	<0.1
TPH-DRO (C10-C28)	mg/L	C10C28DRO	NE	NE	NE	15	NE	NE	0.75	1.2	1.5	1.3	<0.10	<0.10	<0.10	<0.10	0.72	0.62	0.77	<0.10
TCL VOCs 8260B																				
Acetone	ug/L	67-64-1	2240000	9780000	13400	NE	NE	NE	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Benzene	ug/L	71-43-2	13.7	57.3	14.2	12	22	510	66	70	66	92	9.9	6.2	<1.0	1.6	14	13	14	<1.0
Chloroform	ug/L	67-66-3	8	35.3	54.3	80	340	11000	1.4	1.3	2.2	1.1	7.7	63	12	43	<1.0	<1.0	<1.0	1.2
Cyclohexane	ug/L	110-82-7	103	424	3330	NE	NE	NE	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	100-41-4	34.1	152	591	4.3	530	2100	5.4	7.4	6.0	9.8	<1.0	<1.0	<1.0	<1.0	1.4	<1.0	1.5	<1.0
Isopropylbenzene	ug/L	98-82-8	89.3	383	19.9	NE	NE	NE	<1.0	<1.0	<1.0	1.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl-t-butyl ether	ug/L	1634-04-4	4580	19600	524	15	NE	NE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methylcyclohexane	ug/L	108-87-2	NE	NE	NE	NE	NE	NE	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Naphthalene	ug/L	91-20-3	17.2	72.3	0.722	8.9	NE	NE	37	48	48	62	<1.0	1.1	<1.0	<1.0	67	42	64	<1.0
Tetrachloroethene (PCE)	ug/L	127-18-4	5.8	24.9	10.4	5	6.9	33	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<5.0	<1.0
Toluene	ug/L	108-88-3	1920	8100	949	43	510	6000	5.6	5.6	4.7	6.1	<1.0	<1.0	<1.0	<1.0	2.6	2.0	2.2	<1.0
Trichloroethene (TCE)	ug/L	79-01-6	0.521	2.19	0.46	5	25	300	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	ug/L	156-59-2	NE	NE	2260	70	NE	NE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene	ug/L	156-60-5	NE	NE	157	100	140	10000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
m,p-Xylenes	ug/L	108-38-3	150	1290	20.8	33	NE	NE	2.8	4.5	3.8	4.9	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	ug/L	95-47-6	47.2	208	20.9	33	NE	NE	4.8	7.4	5.7	8.5	<1.0	<1.0	<1.0	<1.0	1.4	1.1	1.6	<1.0
TCL SVOCs 8270C																				
2,4,5-Trichlorophenol	ug/L	95-95-4	NE	NE	7860	NE	300	600	<5.0	<5.0	<5.3	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2,4-Dichlorophenol	ug/L	120-83-2	NE	NE	1060	NE	77	290	13	<5.0	<5.3	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2-Chlorophenol	ug/L	95-57-8	NE	NE	1110	NE	81	150	<5.0	<5.0	<5.3	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2-Methylnaphthalene	ug/L	91-57-6	NE	NE	59	NE	NE	NE	<5.0	0.68	<0.53	0.54	<5.0	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50
Acenaphthene	ug/L	83-32-9	NE	NE	2950	NE	670	990	12	8.5	2.5	5.9	<5.0	<0.50	<0.50	<0.50	6.3	1.7	2.0	<0.50
Acenaphthylene	ug/L	208-96-8	NE	NE	1430	NE	NE	NE	<5.0	<0.50	<0.53	<0.50	<5.0	<0.50	<0.50	<0.50	<5.0	0.94	1.2	<0.50
Anthracene	ug/L	120-12-7	NE	NE	7850	NE	8300	40000	6.3	2.4	0.83	1.6	<5.0	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50
Biphenyl (Diphenyl)	ug/L	92-52-4	3.34	14.3	1.18	NE	NE	NE	<5.0	<5.0	<5.3	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Carbazole	ug/L	86-74-8	NE	NE	NE	NE	NE	NE	7.4	<5.0	<5.3	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Dibenzofuran	ug/L	132-64-9	NE	NE	48.4	NE	NE	NE	13	7.2	<5.3	<5.0	<5.0	<5.0	<5.0	<5.0	11	<5.0	<5.0	<5.0
Fluoranthene	ug/L	206-44-0	NE	NE	311	NE	130	140	<5.0	1.9	0.60	1.1	<5.0	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50
Fluorene	ug/L	86-73-7	NE	NE	4370	NE	1100	5300	18	9.6	2.9	6.0	<5.0	<0.50	<0.50	<0.50	12	2.5	<0.50	<0.50
Naphthalene	ug/L	91-20-3	17.2	72.3	0.722	8.9	NE	NE	10	8.8	2.9	7.1	<5.0	1.7	1.8	<0.50	13	4.3	5.7	0.52
Pentachlorophenol	ug/L	87-86-5	NE	NE	5.54	NE	0.03	0.04	<5.0	<5.0	<5.3	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Phenanthrene	ug/L	85-01-8	NE	NE	1430	NE	NE	NE	21	6.9	2.3	4.1	<5.0	<0.50	<0.50	<0.50	10	1.5	1.7	<0.50
Pyrene	ug/L	129-00-0	NE	NE	1430	NE	830	4000	<5.0	1.3	<0.53	0.71	<5.0	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50

NOTES:
TPH = total petroleum hydrocarbons
TPH-DRO = diesel range TPH
TPH-GRO = gasoline range TPH
TCL = Target Compound List
VOCs = volatile organic compounds
SVOCs = semi-VOCs
EPA 8260B = United States Environmental Protection Agency SW-846 analytical method
ug/L = micrograms per liter
mg/L = milligrams per liter
<1.0 = not detected above analytical method reporting limit (RL)
VDEQ = Commonwealth of Virginia Department of Environmental Quality
VDEQ-T3RGSL = VDEQ Tier III residential groundwater vapor intrusion screening level
VDEQ-T3CGSL = VDEQ Tier III industrial groundwater vapor intrusion screening level
VDEQ-T3CDSL = VDEQ Tier III construction direct (<15 feet) screening level
VDEQ-PDS = general permit discharge standard for petroleum contaminated water
VDEQ-T2PWSSL = VDEQ Tier II public water supply screening level
VDEQ-T2SWFSL = VDEQ Tier II surface water fresh screening level
NE = not established
Bold and right justification designates target compound was detected at a concentration above RL
Yellow highlighting designates target compound was detected at a concentration above the VDEQ groundwater screening level in at least 1 sample
Blue highlighting designates target compound was detected at a concentration above the VDEQ surface water screening level in at least 1 sample
Green highlighting designates target compound was detected at a concentration above the VDEQ groundwater and surface water screening level in at least 1 sample

TABLE 4. GROUNDWATER ANALYTICAL RESULTS (DETECTIONS ONLY)

FORMER ROBINSON TERMINAL NORTH
500 AND 501 NORTH UNION STREET
ALEXANDRIA, VA

Sample ID:	Units	CAS No.	VDEQ-T3RGSL	VDEQ-T3IGSL	VDEQ-T3CDSL	VDEQ-PDS	VDEQ-T2PWSSL	VDEQ-T2SWFSL	MiHpt-21				MiHpt-22				MW-23		MW-24	
Sample Date:									9/21/16	2/7/17	1/29/18	6/7/18	9/21/16	2/7/17	1/29/18	6/7/18	1/29/18	6/7/18	1/29/18	6/7/18
TPH 8015																				
TPH-GRO (C6-C10)	mg/L	C6C10GRO	**NE**	**NE**	**NE**	**15**	**NE**	**NE**	**7.5**	**15**	**4.5**	**12**	**0.38**	**2.3**	**0.27**	**0.56**	<0.1	<0.1	<0.1	<0.1
TPH-DRO (C10-C28)	mg/L	C10C28DRO	**NE**	**NE**	**NE**	**15**	**NE**	**NE**	**1.7**	**1.2**	**2.3**	**2.4**	**0.27**	**0.19**	**33**	**0.38**	**0.28**	**0.15**	**1.1**	**0.61**
TCL VOCs 8260B																				
Acetone	ug/L	67-64-1	**2240000**	**9780000**	**13400**	**NE**	**NE**	**NE**	<50	<100	**19**	<10	<10	<10	<10	<10	<10	<10	<10	<10
Benzene	ug/L	71-43-2	**13.7**	**57.3**	**14.2**	**12**	**22**	**510**	**58**	**59**	**75**	**74**	**130**	**630**	**34**	**200**	<1.0	<1.0	<1.0	<1.0
Chloroform	ug/L	67-66-3	**8**	**35.3**	**54.3**	**80**	**340**	**11000**	<5.0	<10	<1.0	**8.4**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Cyclohexane	ug/L	110-82-7	**103**	**424**	**3330**	**NE**	**NE**	**NE**	**560**	**710**	**460**	**1200**	**10**	<10	<10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	100-41-4	**34.1**	**152**	**591**	**4.3**	**530**	**2100**	**150**	**160**	**73**	**140**	**1.6**	**16**	<1.0	**2.1**	<1.0	<1.0	<1.0	<1.0
Isopropylbenzene	ug/L	98-82-8	**89.3**	**383**	**19.9**	**NE**	**NE**	**NE**	**17**	**15**	**8.4**	**15**	<1.0	**1.6**	**1.2**	<1.0	<1.0	<1.0	**1.7**	**2.7**
Methyl-t-butyl ether	ug/L	1634-04-4	**4580**	**19600**	**524**	**15**	**NE**	**NE**	<5.0	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**4.3**	**5.5**	**3.9**	**1.9**
Methylcyclohexane	ug/L	108-87-2	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**460**	**690**	**340**	**670**	<10	<10	<10	<10	<10	<10	<10	<10
Naphthalene	ug/L	91-20-3	**17.2**	**72.3**	**0.722**	**8.9**	**NE**	**NE**	**6.4**	<10	**3.2**	**3.2**	<1.0	**3.1**	**1.3**	<1.0	**1.4**	**1.3**	**2.6**	**3.4**
Tetrachloroethene (PCE)	ug/L	127-18-4	**5.8**	**24.9**	**10.4**	**5**	**6.9**	**33**	**47**	**64**	**26**	**60**	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0	<5.0	<1.0
Toluene	ug/L	108-88-3	**1920**	**8100**	**949**	**43**	**510**	**6000**	**45**	**44**	**31**	**46**	<1.0	**3.5**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene (TCE)	ug/L	79-01-6	**0.521**	**2.19**	**0.46**	**5**	**25**	**300**	**10**	**11**	**10**	**14**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	ug/L	156-59-2	**NE**	**NE**	**2260**	**70**	**NE**	**NE**	<1.0	<1.0	**2.1**	**2.1**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene	ug/L	156-60-5	**NE**	**NE**	**157**	**100**	**140**	**10000**	<1.0	<1.0	<1.0	**1.3**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
m,p-Xylenes	ug/L	108-38-3	**150**	**1290**	**20.8**	**33**	**NE**	**NE**	**190**	**240**	**110**	**200**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
o-Xylene	ug/L	95-47-6	**47.2**	**208**	**20.9**	**33**	**NE**	**NE**	**9.1**	**11**	**4.6**	**7.6**	<1.0	**8.4**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
TCL SVOCs 8270C																				
2,4,5-Trichlorophenol	ug/L	95-95-4	**NE**	**NE**	**7860**	**NE**	**300**	**600**	**53**	**19**	**11**	**32**	<5.0	<5.0	<5.6	<5.0	<5.0	<5.0	<5.0	<5.0
2,4-Dichlorophenol	ug/L	120-83-2	**NE**	**NE**	**1060**	**NE**	**77**	**290**	**710**	**220**	**120**	**370**	<5.0	<5.0	<5.6	<5.0	<5.0	<5.0	<5.0	<5.0
2-Chlorophenol	ug/L	95-57-8	**NE**	**NE**	**1110**	**NE**	**81**	**150**	**8.3**	<5.0	<5.0	**5.1**	<5.0	<5.0	<5.6	<5.0	<5.0	<5.0	<5.0	<5.0
2-Methylnaphthalene	ug/L	91-57-6	**NE**	**NE**	**59**	**NE**	**NE**	**NE**	<5.0	<0.50	<0.50	<0.50	<5.0	<0.50	<0.56	<0.50	<0.50	<0.50	<0.50	<0.50
Acenaphthene	ug/L	83-32-9	**NE**	**NE**	**2950**	**NE**	**670**	**990**	<5.0	<0.50	<0.50	<0.50	<5.0	<0.50	<0.56	<0.50	**0.90**	**1.5**	**2.5**	**8.3**
Acenaphthylene	ug/L	208-96-8	**NE**	**NE**	**1430**	**NE**	**NE**	**NE**	<5.0	<0.50	<0.50	<0.50	<5.0	<0.50	<0.56	<0.50	<0.50	<0.50	<0.50	<0.50
Anthracene	ug/L	120-12-7	**NE**	**NE**	**7850**	**NE**	**8300**	**40000**	<5.0	<0.50	<0.50	<0.50	<5.0	<0.50	<0.56	<0.50	<0.50	<0.50	**0.55**	**1.1**
Biphenyl (Diphenyl)	ug/L	92-52-4	**3.34**	**14.3**	**1.18**	**NE**	**NE**	**NE**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.6	<5.0	<5.0	<5.0	<5.0	<5.0
Carbazole	ug/L	86-74-8	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.6	<5.0	<5.0	<5.0	<5.0	<5.0
Dibenzofuran	ug/L	132-64-9	**NE**	**NE**	**48.4**	**NE**	**NE**	**NE**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.6	<5.0	<5.0	<5.0	<5.0	<5.0
Fluoranthene	ug/L	206-44-0	**NE**	**NE**	**311**	**NE**	**130**	**140**	<5.0	<0.50	<0.50	<0.50	<5.0	<0.50	<0.56	<0.50	<0.50	<0.50	**1.1**	**0.91**
Fluorene	ug/L	86-73-7	**NE**	**NE**	**4370**	**NE**	**1100**	**5300**	<5.0	<0.50	<0.50	<0.50	<5.0	<0.50	<0.56	<0.50	**0.52**	**0.77**	**1.3**	**3.9**
Naphthalene	ug/L	91-20-3	**17.2**	**72.3**	**0.722**	**8.9**	**NE**	**NE**	**35**	**0.66**	<0.50	**26**	<5.0	<0.50	<0.56	<0.50	<0.50	<0.50	<0.50	<0.50
Pentachlorophenol	ug/L	87-86-5	**NE**	**NE**	**5.54**	**NE**	**0.03**	**0.04**	**13**	<5.0	<5.0	**6.8**	<5.0	<5.0	<5.6	<5.0	<5.0	<5.0	<5.0	<5.0
Phenanthrene	ug/L	85-01-8	**NE**	**NE**	**1430**	**NE**	**NE**	**NE**	<5.0	<0.50	<0.50	<0.50	<5.0	<0.50	<0.56	<0.50	**0.60**	<0.50	**2.2**	**5.8**
Pyrene	ug/L	129-00-0	**NE**	**NE**	**1430**	**NE**	**830**	**4000**	<5.0	<0.50	<0.50	<0.50	<5.0	<0.50	<0.56	<0.50	<0.50	<0.50	**0.88**	**0.59**

NOTES:
TPH = total petroleum hydrocarbons
TPH-DRO = diesel range TPH
TPH-GRO = gasoline range TPH
TCL = Target Compound List
VOCs = volatile organic compounds
SVOCs = semi-VOCs
EPA 8260B = United States Environmental Protection Agency SW-846 analytical method
ug/L = micrograms per liter
mg/L = milligrams per liter
<1.0 = not detected above analytical method reporting limit (RL)
VDEQ = Commonwealth of Virginia Department of Environmental Quality
VDEQ-T3RGSL = VDEQ Tier III residential groundwater vapor intrusion screening level
VDEQ-T3CGSL = VDEQ Tier III industrial groundwater vapor intrusion screening level
VDEQ-T3CDSL = VDEQ Tier III construction direct (<15 feet) screening level
VDEQ-PDS = general permit discharge standard for petroleum contaminated water
VDEQ-T2PWSSL = VDEQ Tier II public water supply screening level
VDEQ-T2SWFSL = VDEQ Tier II surface water fresh screening level
NE = not established
Bold and right justification designates target compound was detected at a concentration above RL
Yellow highlighting designates target compound was detected at a concentration above the VDEQ groundwater screening level in at least 1 sample
Blue highlighting designates target compound was detected at a concentration above the VDEQ surface water screening level in at least 1 sample
Green highlighting designates target compound was detected at a concentration above the VDEQ groundwater and surface water screening level in at least 1 sample

TABLE 4. GROUNDWATER ANALYTICAL RESULTS (DETECTIONS ONLY)

FORMER ROBINSON TERMINAL NORTH
500 AND 501 NORTH UNION STREET
ALEXANDRIA, VA

Sample ID:	Units	CAS No.	VDEQ-T3RGSL	VDEQ-T3IGSL	VDEQ-T3CDSL	VDEQ-PDS	VDEQ-T2PWSSL	VDEQ-T2SWFSL	MW-25	
Sample Date:									1/29/18	6/7/18
TPH 8015										
TPH-GRO (C6-C10)	mg/L	C6C10GRO	**NE**	**NE**	**NE**	**15**	**NE**	**NE**	**0.11**	**0.16**
TPH-DRO (C10-C28)	mg/L	C10C28DRO	**NE**	**NE**	**NE**	**15**	**NE**	**NE**	**0.45**	**0.33**
TCL VOCs 8260B										
Acetone	ug/L	67-64-1	**2240000**	**9780000**	**13400**	**NE**	**NE**	**NE**	<10	<10
Benzene	ug/L	71-43-2	**13.7**	**57.3**	**14.2**	**12**	**22**	**510**	**14**	**17**
Chloroform	ug/L	67-66-3	**8**	**35.3**	**54.3**	**80**	**340**	**11000**	<1.0	<1.0
Cyclohexane	ug/L	110-82-7	**103**	**424**	**3330**	**NE**	**NE**	**NE**	<10	<10
Ethylbenzene	ug/L	100-41-4	**34.1**	**152**	**591**	**4.3**	**530**	**2100**	**2.3**	**2.1**
Isopropylbenzene	ug/L	98-82-8	**89.3**	**383**	**19.9**	**NE**	**NE**	**NE**	**1.6**	**1.7**
Methyl-t-butyl ether	ug/L	1634-04-4	**4580**	**19600**	**524**	**15**	**NE**	**NE**	<1.0	<1.0
Methylcyclohexane	ug/L	108-87-2	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	<10	<10
Naphthalene	ug/L	91-20-3	**17.2**	**72.3**	**0.722**	**8.9**	**NE**	**NE**	**83**	**77**
Tetrachloroethene (PCE)	ug/L	127-18-4	**5.8**	**24.9**	**10.4**	**5**	**6.9**	**33**	<5.0	<1.0
Toluene	ug/L	108-88-3	**1920**	**8100**	**949**	**43**	**510**	**6000**	<1.0	<1.0
Trichloroethene (TCE)	ug/L	79-01-6	**0.521**	**2.19**	**0.46**	**5**	**25**	**300**	<1.0	<1.0
cis-1,2-Dichloroethene	ug/L	156-59-2	**NE**	**NE**	**2260**	**70**	**NE**	**NE**	<1.0	<1.0
trans-1,2-Dichloroethene	ug/L	156-60-5	**NE**	**NE**	**157**	**100**	**140**	**10000**	<1.0	<1.0
m,p-Xylenes	ug/L	108-38-3	**150**	**1290**	**20.8**	**33**	**NE**	**NE**	<2.0	<2.0
o-Xylene	ug/L	95-47-6	**47.2**	**208**	**20.9**	**33**	**NE**	**NE**	**2.4**	**1.9**
TCL SVOCs 8270C										
2,4,5-Trichlorophenol	ug/L	95-95-4	**NE**	**NE**	**7860**	**NE**	**300**	**600**	<5.0	<5.0
2,4-Dichlorophenol	ug/L	120-83-2	**NE**	**NE**	**1060**	**NE**	**77**	**290**	<5.0	<5.0
2-Chlorophenol	ug/L	95-57-8	**NE**	**NE**	**1110**	**NE**	**81**	**150**	<5.0	<5.0
2-Methylnaphthalene	ug/L	91-57-6	**NE**	**NE**	**59**	**NE**	**NE**	**NE**	<0.50	**0.58**
Acenaphthene	ug/L	83-32-9	**NE**	**NE**	**2950**	**NE**	**670**	**990**	**0.81**	**1.5**
Acenaphthylene	ug/L	208-96-8	**NE**	**NE**	**1430**	**NE**	**NE**	**NE**	<0.50	<0.50
Anthracene	ug/L	120-12-7	**NE**	**NE**	**7850**	**NE**	**8300**	**40000**	<0.50	<0.50
Biphenyl (Diphenyl)	ug/L	92-52-4	**3.34**	**14.3**	**1.18**	**NE**	**NE**	**NE**	<5.0	<5.0
Carbazole	ug/L	86-74-8	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	<5.0	<5.0
Dibenzofuran	ug/L	132-64-9	**NE**	**NE**	**48.4**	**NE**	**NE**	**NE**	<5.0	<5.0
Fluoranthene	ug/L	206-44-0	**NE**	**NE**	**311**	**NE**	**130**	**140**	<0.50	<0.50
Fluorene	ug/L	86-73-7	**NE**	**NE**	**4370**	**NE**	**1100**	**5300**	<0.50	**0.75**
Naphthalene	ug/L	91-20-3	**17.2**	**72.3**	**0.722**	**8.9**	**NE**	**NE**	**3.5**	**6.1**
Pentachlorophenol	ug/L	87-86-5	**NE**	**NE**	**5.54**	**NE**	**0.03**	**0.04**	<5.0	<5.0
Phenanthrene	ug/L	85-01-8	**NE**	**NE**	**1430**	**NE**	**NE**	**NE**	<0.50	**1.1**
Pyrene	ug/L	129-00-0	**NE**	**NE**	**1430**	**NE**	**830**	**4000**	<0.50	<0.50

NOTES:
TPH = total petroleum hydrocarbons
TPH-DRO = diesel range TPH
TPH-GRO = gasoline range TPH
TCL = Target Compound List
VOCs = volatile organic compounds
SVOCs = semi-VOCs
EPA 8260B = United States Environmental Protection Agency SW-846 analytical method
ug/L = micrograms per liter
mg/L = milligrams per liter
<1.0 = not detected above analytical method reporting limit (RL)
VDEQ = Commonwealth of Virginia Department of Environmental Quality
VDEQ-T3RGSL = VDEQ Tier III residential groundwater vapor intrusion screening level
VDEQ-T3CGSL = VDEQ Tier III industrial groundwater vapor intrusion screening level
VDEQ-T3CDSL = VDEQ Tier III construction direct (<15 feet) screening level
VDEQ-PDS = general permit discharge standard for petroleum contaminated water
VDEQ-T2PWSSL = VDEQ Tier II public water supply screening level
VDEQ-T2SWFSL = VDEQ Tier II surface water fresh screening level
NE = not established
Bold and right justification designates target compound was detected at a concentration above RL
Yellow highlighting designates target compound was detected at a concentration above the VDEQ groundwater screening level in at least 1 sample
Blue highlighting designates target compound was detected at a concentration above the VDEQ surface water screening level in at least 1 sample
Green highlighting designates target compound was detected at a concentration above the VDEQ groundwater and surface water screening level in at least 1 sample

ATTACHMENT 1

LABORATORY REPORT OF ANALYSIS

Analytical Report for

A-Zone Environmental Services

Certificate of Analysis No.: 18060820

Project Manager: Mike Bruzzesi

Project Name : RTN

Project Location: Alexandria, VA

June 15, 2018

Phase Separation Science, Inc.

6630 Baltimore National Pike
Baltimore, MD 21228
Phone: (410) 747-8770
Fax: (410) 788-8723

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

June 15, 2018

Mike Bruzzesi
A-Zone Environmental Services
2181 Berryville Pike
Charles Town, WV 25414

Reference: PSS Work Order(s) No: **18060820**
Project Name: RTN
Project Location: Alexandria, VA

Dear Mike Bruzzesi :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order(s) numbered **18060820**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on July 13, 2018, with the exception of air canisters which are cleaned immediately following analysis. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt , the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or info@phaseonline.com.

Sincerely,

Dan Prucnal
Laboratory Manager

Sample Summary

Client Name: A-Zone Environmental Services

Project Name: RTN

Work Order Number(s): 18060820

The following samples were received under chain of custody by Phase Separation Science (PSS) on 06/08/2018 at 01:25 pm

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
18060820-001	TEC-MW2	GROUND WATER	06/07/18 08:55
18060820-002	TEC-MW4	GROUND WATER	06/07/18 08:45
18060820-003	ECS-MW4	GROUND WATER	06/07/18 09:28
18060820-004	MiHpt-5	GROUND WATER	06/07/18 09:50
18060820-005	MiHpt-7	GROUND WATER	06/07/18 10:13
18060820-006	MiHpt-8	GROUND WATER	06/07/18 08:23
18060820-007	MiHpt-14	GROUND WATER	06/07/18 12:10
18060820-008	MiHpt-15	GROUND WATER	06/07/18 12:12
18060820-009	MiHpt-20	GROUND WATER	06/07/18 11:10
18060820-010	MiHpt-21	GROUND WATER	06/07/18 11:25
18060820-011	MiHpt-22	GROUND WATER	06/07/18 11:03
18060820-012	MW23	GROUND WATER	06/07/18 11:04
18060820-013	MW24	GROUND WATER	06/07/18 09:43
18060820-014	MW25	GROUND WATER	06/07/18 08:35

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

Notes:

1. The presence of a common laboratory contaminant such as methylene chloride may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. Unless otherwise noted in the case narrative, results are reported on a dry weight basis with the exception of pH, flashpoint, moisture, and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminates, and part 141.3, for the secondary drinking water contaminates.
5. Sample prepared under EPA 3550C with concentrations greater than 20 mg/Kg should employ the microtip extraction procedure if required to meet data quality objectives.
6. The analysis of acrolein by EPA 624 must be analyzed within three days of sampling unless pH is adjusted to 4-5 units [40 CFR part 136.3(e)].
7. Method 180.1, The Determination of Turbidity by Nephelometry, recommends samples over 40 NTU be diluted until the turbidity falls below 40 units. Routine samples over 40 NTU may not be diluted as long as the data quality objectives are not affected.
8. Alkalinity results analyzed by EPA 310.2 that are reported by dilution are estimated and are not in compliance with method requirements.

Standard Flags/Abbreviations:

B	A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
C	Results Pending Final Confirmation.
E	The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
Fail	The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
J	The target analyte was positively identified below the reporting limit but greater than the MDL.
MDL	This is the Laboratory Method Detection Limit which is equivalent to the Limit of Detection (LOD). The LOD is an estimate of the minimum amount of a substance that an analytical process can reliably detect. This value will remain constant across multiple similar instrumentation and among different analysts. An LOD is analyte and matrix specific.
ND	Not Detected at or above the reporting limit.
RL	PSS Reporting Limit.
U	Not detected.

Sample Summary

Client Name: A-Zone Environmental Services

Project Name: RTN

Work Order Number(s): 18060820

Certifications:

NELAP Certifications: PA 68-03330, VA 460156
State Certifications: MD 179, WV 303
Regulated Soil Permit: P330-12-00268
NSWC USCG Accepted Laboratory
LDBE MWAA LD1997-0041-2015

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: TEC-MW2 **Date/Time Sampled: 06/07/2018 08:55** **PSS Sample ID: 18060820-001**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**0.22**	mg/L	0.10		1	06/11/18	06/12/18 12:01	1059

Total Petroleum Hydrocarbons-GRO — Analytical Method: SW-846 8015C — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	ND	ug/L	100		1	06/08/18	06/09/18 00:57	1035

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: TEC-MW2 **Date/Time Sampled: 06/07/2018 08:55** **PSS Sample ID: 18060820-001**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/L	10		1	06/11/18	06/11/18 20:46	1011
Benzene	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
Bromochloromethane	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
Bromodichloromethane	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
Bromoform	ND	ug/L	5.0		1	06/11/18	06/11/18 20:46	1011
Bromomethane	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
2-Butanone (MEK)	ND	ug/L	10		1	06/11/18	06/11/18 20:46	1011
Carbon Disulfide	ND	ug/L	10		1	06/11/18	06/11/18 20:46	1011
Carbon tetrachloride	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
Chlorobenzene	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
Chloroethane	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
Chloroform	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
Chloromethane	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
Cyclohexane	ND	ug/L	10		1	06/11/18	06/11/18 20:46	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	06/11/18	06/11/18 20:46	1011
Dibromochloromethane	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
Ethylbenzene	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: TEC-MW2 **Date/Time Sampled: 06/07/2018 08:55** **PSS Sample ID: 18060820-001**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
2-Hexanone (MBK)	ND	ug/L	5.0		1	06/11/18	06/11/18 20:46	1011
Isopropylbenzene	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
Methyl Acetate	ND	ug/L	10		1	06/11/18	06/11/18 20:46	1011
Methylcyclohexane	ND	ug/L	10		1	06/11/18	06/11/18 20:46	1011
Methylene chloride	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	06/11/18	06/11/18 20:46	1011
Methyl-t-Butyl Ether	**1.5**	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
Naphthalene	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
Styrene	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
Tetrachloroethene	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
Toluene	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
Trichloroethene	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	06/11/18	06/11/18 20:46	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
Vinyl chloride	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011
m&p-Xylene	ND	ug/L	2.0		1	06/11/18	06/11/18 20:46	1011
o-Xylene	ND	ug/L	1.0		1	06/11/18	06/11/18 20:46	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: TEC-MW2 **Date/Time Sampled: 06/07/2018 08:55** **PSS Sample ID: 18060820-001**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds | Analytical Method: SW-846 8270 C | Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:08	1055
Acenaphthylene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:08	1055
Acetophenone	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
Anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:08	1055
Atrazine	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
Benzo(a)anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:08	1055
Benzo(a)pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:08	1055
Benzo(b)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:08	1055
Benzo(g,h,i)perylene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:08	1055
Benzo(k)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:08	1055
Biphenyl (Diphenyl)	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
Butyl benzyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
bis(2-chloroethyl) ether	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
4-Bromophenylphenyl ether	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
Di-n-butyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
Carbazole	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
Caprolactam	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
4-Chloroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
2-Chloronaphthalene	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
2-Chlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
Chrysene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:08	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:08	1055
Dibenzofuran	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
3,3-Dichlorobenzidine	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
2,4-Dichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: TEC-MW2 **Date/Time Sampled: 06/07/2018 08:55** **PSS Sample ID: 18060820-001**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds | Analytical Method: SW-846 8270 C | Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Diethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
Dimethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
2,4-Dimethylphenol	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
2,4-Dinitrophenol	ND	ug/L	10		1	06/11/18	06/11/18 16:08	1055
2,4-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
2,6-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
Fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:08	1055
Fluorene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:08	1055
Hexachlorobenzene	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
Hexachlorobutadiene	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
Hexachlorocyclopentadiene	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
Hexachloroethane	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:08	1055
Isophorone	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
2-Methylnaphthalene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:08	1055
2-Methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
3&4-Methylphenol	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
Naphthalene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:08	1055
2-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
3-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
4-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
Nitrobenzene	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
2-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
4-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
N-Nitrosodiphenylamine	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
Di-n-octyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
Pentachlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
Phenanthrene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:08	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: TEC-MW2 **Date/Time Sampled: 06/07/2018 08:55** **PSS Sample ID: 18060820-001**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
Pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:08	1055
Pyridine	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
2,4,5-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055
2,4,6-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 16:08	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: TEC-MW4 **Date/Time Sampled: 06/07/2018 08:45** **PSS Sample ID: 18060820-002**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**0.17**	mg/L	0.10		1	06/11/18	06/12/18 12:26	1059

Total Petroleum Hydrocarbons-GRO — Analytical Method: SW-846 8015C — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	ND	ug/L	100		1	06/08/18	06/09/18 01:23	1035

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: TEC-MW4 **Date/Time Sampled: 06/07/2018 08:45** **PSS Sample ID: 18060820-002**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/L	10		1	06/11/18	06/11/18 21:07	1011
Benzene	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
Bromochloromethane	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
Bromodichloromethane	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
Bromoform	ND	ug/L	5.0		1	06/11/18	06/11/18 21:07	1011
Bromomethane	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
2-Butanone (MEK)	ND	ug/L	10		1	06/11/18	06/11/18 21:07	1011
Carbon Disulfide	ND	ug/L	10		1	06/11/18	06/11/18 21:07	1011
Carbon tetrachloride	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
Chlorobenzene	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
Chloroethane	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
Chloroform	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
Chloromethane	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
Cyclohexane	ND	ug/L	10		1	06/11/18	06/11/18 21:07	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	06/11/18	06/11/18 21:07	1011
Dibromochloromethane	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
Ethylbenzene	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: TEC-MW4 **Date/Time Sampled: 06/07/2018 08:45** **PSS Sample ID: 18060820-002**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
2-Hexanone (MBK)	ND	ug/L	5.0		1	06/11/18	06/11/18 21:07	1011
Isopropylbenzene	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
Methyl Acetate	ND	ug/L	10		1	06/11/18	06/11/18 21:07	1011
Methylcyclohexane	ND	ug/L	10		1	06/11/18	06/11/18 21:07	1011
Methylene chloride	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	06/11/18	06/11/18 21:07	1011
Methyl-t-Butyl Ether	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
Naphthalene	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
Styrene	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
Tetrachloroethene	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
Toluene	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
Trichloroethene	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	06/11/18	06/11/18 21:07	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
Vinyl chloride	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011
m&p-Xylene	ND	ug/L	2.0		1	06/11/18	06/11/18 21:07	1011
o-Xylene	ND	ug/L	1.0		1	06/11/18	06/11/18 21:07	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: TEC-MW4 **Date/Time Sampled: 06/07/2018 08:45** **PSS Sample ID: 18060820-002**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds | Analytical Method: SW-846 8270 C | Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:40	1055
Acenaphthylene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:40	1055
Acetophenone	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
Anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:40	1055
Atrazine	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
Benzo(a)anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:40	1055
Benzo(a)pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:40	1055
Benzo(b)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:40	1055
Benzo(g,h,i)perylene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:40	1055
Benzo(k)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:40	1055
Biphenyl (Diphenyl)	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
Butyl benzyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
bis(2-chloroethyl) ether	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
4-Bromophenylphenyl ether	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
Di-n-butyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
Carbazole	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
Caprolactam	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
4-Chloroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
2-Chloronaphthalene	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
2-Chlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
Chrysene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:40	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:40	1055
Dibenzofuran	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
3,3-Dichlorobenzidine	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
2,4-Dichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: TEC-MW4 **Date/Time Sampled: 06/07/2018 08:45** **PSS Sample ID: 18060820-002**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds | Analytical Method: SW-846 8270 C | Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Diethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
Dimethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
2,4-Dimethylphenol	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
2,4-Dinitrophenol	ND	ug/L	10		1	06/11/18	06/11/18 16:40	1055
2,4-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
2,6-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
Fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:40	1055
Fluorene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:40	1055
Hexachlorobenzene	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
Hexachlorobutadiene	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
Hexachlorocyclopentadiene	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
Hexachloroethane	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:40	1055
Isophorone	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
2-Methylnaphthalene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:40	1055
2-Methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
3&4-Methylphenol	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
Naphthalene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:40	1055
2-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
3-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
4-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
Nitrobenzene	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
2-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
4-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
N-Nitrosodiphenylamine	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
Di-n-octyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
Pentachlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
Phenanthrene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:40	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: TEC-MW4 **Date/Time Sampled: 06/07/2018 08:45** **PSS Sample ID: 18060820-002**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
Pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 16:40	1055
Pyridine	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
2,4,5-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055
2,4,6-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 16:40	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: ECS-MW4 **Date/Time Sampled: 06/07/2018 09:28** **PSS Sample ID: 18060820-003**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	ND	mg/L	0.10		1	06/11/18	06/12/18 12:51	1059

Total Petroleum Hydrocarbons-GRO — Analytical Method: SW-846 8015C — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	ND	ug/L	100		1	06/08/18	06/09/18 01:50	1035

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: ECS-MW4 **Date/Time Sampled: 06/07/2018 09:28** **PSS Sample ID: 18060820-003**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds | Analytical Method: SW-846 8260 B | Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/L	10		1	06/13/18	06/13/18 10:10	1011
Benzene	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
Bromochloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
Bromodichloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
Bromoform	ND	ug/L	5.0		1	06/13/18	06/13/18 10:10	1011
Bromomethane	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
2-Butanone (MEK)	ND	ug/L	10		1	06/13/18	06/13/18 10:10	1011
Carbon Disulfide	ND	ug/L	10		1	06/13/18	06/13/18 10:10	1011
Carbon tetrachloride	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
Chlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
Chloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
Chloroform	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
Chloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
Cyclohexane	ND	ug/L	10		1	06/13/18	06/13/18 10:10	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	06/13/18	06/13/18 10:10	1011
Dibromochloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
Ethylbenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: ECS-MW4 **Date/Time Sampled: 06/07/2018 09:28** **PSS Sample ID: 18060820-003**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
2-Hexanone (MBK)	ND	ug/L	5.0		1	06/13/18	06/13/18 10:10	1011
Isopropylbenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
Methyl Acetate	ND	ug/L	10		1	06/13/18	06/13/18 10:10	1011
Methylcyclohexane	ND	ug/L	10		1	06/13/18	06/13/18 10:10	1011
Methylene chloride	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	06/13/18	06/13/18 10:10	1011
Methyl-t-Butyl Ether	**4.8**	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
Naphthalene	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
Styrene	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
Tetrachloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
Toluene	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
Trichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	06/13/18	06/13/18 10:10	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
Vinyl chloride	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011
m&p-Xylene	ND	ug/L	2.0		1	06/13/18	06/13/18 10:10	1011
o-Xylene	ND	ug/L	1.0		1	06/13/18	06/13/18 10:10	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: ECS-MW4 **Date/Time Sampled: 06/07/2018 09:28** **PSS Sample ID: 18060820-003**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	**1.1**	ug/L	0.50		1	06/11/18	06/11/18 18:26	1055
Acenaphthylene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:26	1055
Acetophenone	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
Anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:26	1055
Atrazine	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
Benzo(a)anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:26	1055
Benzo(a)pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:26	1055
Benzo(b)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:26	1055
Benzo(g,h,i)perylene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:26	1055
Benzo(k)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:26	1055
Biphenyl (Diphenyl)	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
Butyl benzyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
bis(2-chloroethyl) ether	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
4-Bromophenylphenyl ether	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
Di-n-butyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
Carbazole	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
Caprolactam	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
4-Chloroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
2-Chloronaphthalene	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
2-Chlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
Chrysene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:26	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:26	1055
Dibenzofuran	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
3,3-Dichlorobenzidine	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
2,4-Dichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: ECS-MW4 **Date/Time Sampled: 06/07/2018 09:28** **PSS Sample ID: 18060820-003**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Diethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
Dimethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
2,4-Dimethylphenol	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
2,4-Dinitrophenol	ND	ug/L	10		1	06/11/18	06/11/18 18:26	1055
2,4-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
2,6-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
Fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:26	1055
Fluorene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:26	1055
Hexachlorobenzene	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
Hexachlorobutadiene	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
Hexachlorocyclopentadiene	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
Hexachloroethane	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:26	1055
Isophorone	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
2-Methylnaphthalene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:26	1055
2-Methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
3&4-Methylphenol	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
Naphthalene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:26	1055
2-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
3-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
4-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
Nitrobenzene	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
2-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
4-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
N-Nitrosodiphenylamine	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
Di-n-octyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
Pentachlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
Phenanthrene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:26	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: ECS-MW4 **Date/Time Sampled: 06/07/2018 09:28** **PSS Sample ID: 18060820-003**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
Pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:26	1055
Pyridine	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
2,4,5-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055
2,4,6-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 18:26	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-5 **Date/Time Sampled: 06/07/2018 09:50** **PSS Sample ID: 18060820-004**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3510C

LF/DF - Lighter fuel/oil and No. 2/diesel fuel patterns observed in sample.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**0.48**	mg/L	0.10	LF	1	06/11/18	06/12/18 13:16	1059

Total Petroleum Hydrocarbons-GRO — Analytical Method: SW-846 8015C — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	**950**	ug/L	100		1	06/08/18	06/09/18 02:17	1035

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-5 **Date/Time Sampled: 06/07/2018 09:50** **PSS Sample ID: 18060820-004**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/L	10		1	06/13/18	06/13/18 12:14	1011
Benzene	**130**	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
Bromochloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
Bromodichloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
Bromoform	ND	ug/L	5.0		1	06/13/18	06/13/18 12:14	1011
Bromomethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
2-Butanone (MEK)	ND	ug/L	10		1	06/13/18	06/13/18 12:14	1011
Carbon Disulfide	ND	ug/L	10		1	06/13/18	06/13/18 12:14	1011
Carbon tetrachloride	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
Chlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
Chloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
Chloroform	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
Chloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
Cyclohexane	ND	ug/L	10		1	06/13/18	06/13/18 12:14	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	06/13/18	06/13/18 12:14	1011
Dibromochloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
Ethylbenzene	**24**	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-5 **Date/Time Sampled: 06/07/2018 09:50** **PSS Sample ID: 18060820-004**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
2-Hexanone (MBK)	ND	ug/L	5.0		1	06/13/18	06/13/18 12:14	1011
Isopropylbenzene	**7.9**	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
Methyl Acetate	ND	ug/L	10		1	06/13/18	06/13/18 12:14	1011
Methylcyclohexane	ND	ug/L	10		1	06/13/18	06/13/18 12:14	1011
Methylene chloride	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	06/13/18	06/13/18 12:14	1011
Methyl-t-Butyl Ether	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
Naphthalene	**340**	ug/L	10		10	06/13/18	06/14/18 13:32	1011
Styrene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
Tetrachloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
Toluene	**2.6**	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
Trichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	06/13/18	06/13/18 12:14	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
Vinyl chloride	ND	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011
m&p-Xylene	**22**	ug/L	2.0		1	06/13/18	06/13/18 12:14	1011
o-Xylene	**37**	ug/L	1.0		1	06/13/18	06/13/18 12:14	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-5 **Date/Time Sampled: 06/07/2018 09:50** **PSS Sample ID: 18060820-004**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	**1.7**	ug/L	0.50		1	06/11/18	06/11/18 18:52	1055
Acenaphthylene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:52	1055
Acetophenone	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
Anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:52	1055
Atrazine	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
Benzo(a)anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:52	1055
Benzo(a)pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:52	1055
Benzo(b)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:52	1055
Benzo(g,h,i)perylene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:52	1055
Benzo(k)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:52	1055
Biphenyl (Diphenyl)	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
Butyl benzyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
bis(2-chloroethyl) ether	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
4-Bromophenylphenyl ether	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
Di-n-butyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
Carbazole	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
Caprolactam	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
4-Chloroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
2-Chloronaphthalene	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
2-Chlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
Chrysene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:52	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:52	1055
Dibenzofuran	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
3,3-Dichlorobenzidine	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
2,4-Dichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-5 **Date/Time Sampled: 06/07/2018 09:50** **PSS Sample ID: 18060820-004**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Diethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
Dimethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
2,4-Dimethylphenol	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
2,4-Dinitrophenol	ND	ug/L	10		1	06/11/18	06/11/18 18:52	1055
2,4-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
2,6-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
Fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:52	1055
Fluorene	**1.3**	ug/L	0.50		1	06/11/18	06/11/18 18:52	1055
Hexachlorobenzene	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
Hexachlorobutadiene	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
Hexachlorocyclopentadiene	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
Hexachloroethane	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:52	1055
Isophorone	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
2-Methylnaphthalene	**8.0**	ug/L	0.50		1	06/11/18	06/11/18 18:52	1055
2-Methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
3&4-Methylphenol	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
Naphthalene	**48**	ug/L	0.50		1	06/11/18	06/11/18 18:52	1055
2-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
3-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
4-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
Nitrobenzene	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
2-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
4-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
N-Nitrosodiphenylamine	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
Di-n-octyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
Pentachlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
Phenanthrene	**0.55**	ug/L	0.50		1	06/11/18	06/11/18 18:52	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-5 **Date/Time Sampled: 06/07/2018 09:50** **PSS Sample ID: 18060820-004**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
Pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 18:52	1055
Pyridine	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
2,4,5-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055
2,4,6-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 18:52	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-7 **Date/Time Sampled: 06/07/2018 10:13** **PSS Sample ID: 18060820-005**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3510C

LF/DF - Lighter fuel/oil and No. 2/diesel fuel patterns observed in sample.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**3.6**	mg/L	0.10	LF	1	06/11/18	06/12/18 13:40	1059

Total Petroleum Hydrocarbons-GRO — Analytical Method: SW-846 8015C — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	**2,100**	ug/L	100		1	06/08/18	06/09/18 02:44	1035

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-7 **Date/Time Sampled: 06/07/2018 10:13** **PSS Sample ID: 18060820-005**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds | Analytical Method: SW-846 8260 B | Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/L	10		1	06/13/18	06/13/18 12:35	1011
Benzene	**75**	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
Bromochloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
Bromodichloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
Bromoform	ND	ug/L	5.0		1	06/13/18	06/13/18 12:35	1011
Bromomethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
2-Butanone (MEK)	ND	ug/L	10		1	06/13/18	06/13/18 12:35	1011
Carbon Disulfide	ND	ug/L	10		1	06/13/18	06/13/18 12:35	1011
Carbon tetrachloride	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
Chlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
Chloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
Chloroform	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
Chloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
Cyclohexane	ND	ug/L	10		1	06/13/18	06/13/18 12:35	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	06/13/18	06/13/18 12:35	1011
Dibromochloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
Ethylbenzene	**110**	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-7 **Date/Time Sampled: 06/07/2018 10:13** **PSS Sample ID: 18060820-005**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
2-Hexanone (MBK)	ND	ug/L	5.0		1	06/13/18	06/13/18 12:35	1011
Isopropylbenzene	**23**	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
Methyl Acetate	ND	ug/L	10		1	06/13/18	06/13/18 12:35	1011
Methylcyclohexane	ND	ug/L	10		1	06/13/18	06/13/18 12:35	1011
Methylene chloride	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	06/13/18	06/13/18 12:35	1011
Methyl-t-Butyl Ether	**1.7**	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
Naphthalene	**1,400**	ug/L	10		10	06/13/18	06/14/18 13:53	1011
Styrene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
Tetrachloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
Toluene	**2.9**	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
Trichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	06/13/18	06/13/18 12:35	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
Vinyl chloride	ND	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011
m&p-Xylene	**52**	ug/L	2.0		1	06/13/18	06/13/18 12:35	1011
o-Xylene	**61**	ug/L	1.0		1	06/13/18	06/13/18 12:35	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-7 **Date/Time Sampled: 06/07/2018 10:13** **PSS Sample ID: 18060820-005**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	**25**	ug/L	0.50		1	06/11/18	06/11/18 19:19	1055
Acenaphthylene	**0.57**	ug/L	0.50		1	06/11/18	06/11/18 19:19	1055
Acetophenone	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
Anthracene	**1.7**	ug/L	0.50		1	06/11/18	06/11/18 19:19	1055
Atrazine	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
Benzo(a)anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 19:19	1055
Benzo(a)pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 19:19	1055
Benzo(b)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 19:19	1055
Benzo(g,h,i)perylene	ND	ug/L	0.50		1	06/11/18	06/11/18 19:19	1055
Benzo(k)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 19:19	1055
Biphenyl (Diphenyl)	**5.4**	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
Butyl benzyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
bis(2-chloroethyl) ether	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
4-Bromophenylphenyl ether	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
Di-n-butyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
Carbazole	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
Caprolactam	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
4-Chloroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
2-Chloronaphthalene	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
2-Chlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
Chrysene	ND	ug/L	0.50		1	06/11/18	06/11/18 19:19	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 19:19	1055
Dibenzofuran	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
3,3-Dichlorobenzidine	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
2,4-Dichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-7 **Date/Time Sampled: 06/07/2018 10:13** **PSS Sample ID: 18060820-005**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds | Analytical Method: SW-846 8270 C | Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Diethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
Dimethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
2,4-Dimethylphenol	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
2,4-Dinitrophenol	ND	ug/L	10		1	06/11/18	06/11/18 19:19	1055
2,4-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
2,6-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
Fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 19:19	1055
Fluorene	**7.2**	ug/L	0.50		1	06/11/18	06/11/18 19:19	1055
Hexachlorobenzene	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
Hexachlorobutadiene	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
Hexachlorocyclopentadiene	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
Hexachloroethane	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 19:19	1055
Isophorone	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
2-Methylnaphthalene	**37**	ug/L	0.50		1	06/11/18	06/11/18 19:19	1055
2-Methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
3&4-Methylphenol	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
Naphthalene	**170**	ug/L	2.5		5	06/11/18	06/12/18 14:00	1055
2-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
3-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
4-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
Nitrobenzene	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
2-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
4-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
N-Nitrosodiphenylamine	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
Di-n-octyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
Pentachlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
Phenanthrene	**8.3**	ug/L	0.50		1	06/11/18	06/11/18 19:19	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-7 **Date/Time Sampled: 06/07/2018 10:13** **PSS Sample ID: 18060820-005**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
Pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 19:19	1055
Pyridine	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
2,4,5-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055
2,4,6-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 19:19	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-8 **Date/Time Sampled: 06/07/2018 08:23** **PSS Sample ID: 18060820-006**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**0.17**	mg/L	0.10		1	06/11/18	06/12/18 14:55	1059

Total Petroleum Hydrocarbons-GRO — Analytical Method: SW-846 8015C — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	ND	ug/L	100		1	06/08/18	06/09/18 03:11	1035

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-8 **Date/Time Sampled: 06/07/2018 08:23** **PSS Sample ID: 18060820-006**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/L	10		1	06/13/18	06/13/18 13:37	1011
Benzene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
Bromochloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
Bromodichloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
Bromoform	ND	ug/L	5.0		1	06/13/18	06/13/18 13:37	1011
Bromomethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
2-Butanone (MEK)	ND	ug/L	10		1	06/13/18	06/13/18 13:37	1011
Carbon Disulfide	ND	ug/L	10		1	06/13/18	06/13/18 13:37	1011
Carbon tetrachloride	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
Chlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
Chloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
Chloroform	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
Chloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
Cyclohexane	ND	ug/L	10		1	06/13/18	06/13/18 13:37	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	06/13/18	06/13/18 13:37	1011
Dibromochloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
Ethylbenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-8 **Date/Time Sampled: 06/07/2018 08:23** **PSS Sample ID: 18060820-006**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
2-Hexanone (MBK)	ND	ug/L	5.0		1	06/13/18	06/13/18 13:37	1011
Isopropylbenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
Methyl Acetate	ND	ug/L	10		1	06/13/18	06/13/18 13:37	1011
Methylcyclohexane	ND	ug/L	10		1	06/13/18	06/13/18 13:37	1011
Methylene chloride	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	06/13/18	06/13/18 13:37	1011
Methyl-t-Butyl Ether	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
Naphthalene	**21**	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
Styrene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
Tetrachloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
Toluene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
Trichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	06/13/18	06/13/18 13:37	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
Vinyl chloride	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011
m&p-Xylene	ND	ug/L	2.0		1	06/13/18	06/13/18 13:37	1011
o-Xylene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:37	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-8 **Date/Time Sampled: 06/07/2018 08:23** **PSS Sample ID: 18060820-006**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds | Analytical Method: SW-846 8270 C | Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	**1.4**	ug/L	0.50		1	06/11/18	06/12/18 13:33	1055
Acenaphthylene	ND	ug/L	0.50		1	06/11/18	06/12/18 13:33	1055
Acetophenone	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
Anthracene	ND	ug/L	0.50		1	06/11/18	06/12/18 13:33	1055
Atrazine	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
Benzo(a)anthracene	ND	ug/L	0.50		1	06/11/18	06/12/18 13:33	1055
Benzo(a)pyrene	ND	ug/L	0.50		1	06/11/18	06/12/18 13:33	1055
Benzo(b)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/12/18 13:33	1055
Benzo(g,h,i)perylene	ND	ug/L	0.50		1	06/11/18	06/12/18 13:33	1055
Benzo(k)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/12/18 13:33	1055
Biphenyl (Diphenyl)	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
Butyl benzyl phthalate	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
bis(2-chloroethyl) ether	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
4-Bromophenylphenyl ether	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
Di-n-butyl phthalate	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
Carbazole	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
Caprolactam	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
4-Chloroaniline	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
2-Chloronaphthalene	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
2-Chlorophenol	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
Chrysene	ND	ug/L	0.50		1	06/11/18	06/12/18 13:33	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.50		1	06/11/18	06/12/18 13:33	1055
Dibenzofuran	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
3,3-Dichlorobenzidine	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
2,4-Dichlorophenol	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-8 **Date/Time Sampled: 06/07/2018 08:23** **PSS Sample ID: 18060820-006**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds | Analytical Method: SW-846 8270 C | Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Diethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
Dimethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
2,4-Dimethylphenol	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
2,4-Dinitrophenol	ND	ug/L	10		1	06/11/18	06/12/18 13:33	1055
2,4-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
2,6-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
Fluoranthene	ND	ug/L	0.50		1	06/11/18	06/12/18 13:33	1055
Fluorene	**0.68**	ug/L	0.50		1	06/11/18	06/12/18 13:33	1055
Hexachlorobenzene	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
Hexachlorobutadiene	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
Hexachlorocyclopentadiene	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
Hexachloroethane	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.50		1	06/11/18	06/12/18 13:33	1055
Isophorone	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
2-Methylnaphthalene	**0.74**	ug/L	0.50		1	06/11/18	06/12/18 13:33	1055
2-Methyl phenol	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
3&4-Methylphenol	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
Naphthalene	**4.1**	ug/L	0.50		1	06/11/18	06/12/18 13:33	1055
2-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
3-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
4-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
Nitrobenzene	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
2-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
4-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
N-Nitrosodiphenylamine	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
Di-n-octyl phthalate	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
Pentachlorophenol	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
Phenanthrene	ND	ug/L	0.50		1	06/11/18	06/12/18 13:33	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-8 **Date/Time Sampled: 06/07/2018 08:23** **PSS Sample ID: 18060820-006**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Phenol	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
Pyrene	ND	ug/L	0.50		1	06/11/18	06/12/18 13:33	1055
Pyridine	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
2,4,5-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055
2,4,6-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/12/18 13:33	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-14 **Date/Time Sampled: 06/07/2018 12:10** **PSS Sample ID: 18060820-007**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**1.3**	mg/L	0.10		1	06/11/18	06/12/18 15:21	1059

Total Petroleum Hydrocarbons-GRO — Analytical Method: SW-846 8015C — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	**410**	ug/L	100		1	06/08/18	06/09/18 03:38	1035

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-14 **Date/Time Sampled: 06/07/2018 12:10** **PSS Sample ID: 18060820-007**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds | Analytical Method: SW-846 8260 B | Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/L	10		1	06/13/18	06/13/18 13:58	1011
Benzene	**92**	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
Bromochloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
Bromodichloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
Bromoform	ND	ug/L	5.0		1	06/13/18	06/13/18 13:58	1011
Bromomethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
2-Butanone (MEK)	ND	ug/L	10		1	06/13/18	06/13/18 13:58	1011
Carbon Disulfide	ND	ug/L	10		1	06/13/18	06/13/18 13:58	1011
Carbon tetrachloride	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
Chlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
Chloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
Chloroform	**1.1**	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
Chloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
Cyclohexane	ND	ug/L	10		1	06/13/18	06/13/18 13:58	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	06/13/18	06/13/18 13:58	1011
Dibromochloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
Ethylbenzene	**9.8**	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-14 **Date/Time Sampled: 06/07/2018 12:10** **PSS Sample ID: 18060820-007**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
2-Hexanone (MBK)	ND	ug/L	5.0		1	06/13/18	06/13/18 13:58	1011
Isopropylbenzene	**1.3**	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
Methyl Acetate	ND	ug/L	10		1	06/13/18	06/13/18 13:58	1011
Methylcyclohexane	ND	ug/L	10		1	06/13/18	06/13/18 13:58	1011
Methylene chloride	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	06/13/18	06/13/18 13:58	1011
Methyl-t-Butyl Ether	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
Naphthalene	**62**	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
Styrene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
Tetrachloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
Toluene	**6.1**	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
Trichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	06/13/18	06/13/18 13:58	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
Vinyl chloride	ND	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011
m&p-Xylene	**4.9**	ug/L	2.0		1	06/13/18	06/13/18 13:58	1011
o-Xylene	**8.5**	ug/L	1.0		1	06/13/18	06/13/18 13:58	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-14 **Date/Time Sampled: 06/07/2018 12:10** **PSS Sample ID: 18060820-007**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds | Analytical Method: SW-846 8270 C | Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	**5.9**	ug/L	0.50		1	06/11/18	06/11/18 20:12	1055
Acenaphthylene	ND	ug/L	0.50		1	06/11/18	06/11/18 20:12	1055
Acetophenone	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
Anthracene	**1.6**	ug/L	0.50		1	06/11/18	06/11/18 20:12	1055
Atrazine	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
Benzo(a)anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 20:12	1055
Benzo(a)pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 20:12	1055
Benzo(b)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 20:12	1055
Benzo(g,h,i)perylene	ND	ug/L	0.50		1	06/11/18	06/11/18 20:12	1055
Benzo(k)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 20:12	1055
Biphenyl (Diphenyl)	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
Butyl benzyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
bis(2-chloroethyl) ether	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
4-Bromophenylphenyl ether	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
Di-n-butyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
Carbazole	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
Caprolactam	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
4-Chloroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
2-Chloronaphthalene	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
2-Chlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
Chrysene	ND	ug/L	0.50		1	06/11/18	06/11/18 20:12	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 20:12	1055
Dibenzofuran	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
3,3-Dichlorobenzidine	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
2,4-Dichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-14 **Date/Time Sampled: 06/07/2018 12:10** **PSS Sample ID: 18060820-007**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Diethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
Dimethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
2,4-Dimethylphenol	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
2,4-Dinitrophenol	ND	ug/L	10		1	06/11/18	06/11/18 20:12	1055
2,4-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
2,6-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
Fluoranthene	**1.1**	ug/L	0.50		1	06/11/18	06/11/18 20:12	1055
Fluorene	**6.0**	ug/L	0.50		1	06/11/18	06/11/18 20:12	1055
Hexachlorobenzene	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
Hexachlorobutadiene	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
Hexachlorocyclopentadiene	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
Hexachloroethane	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 20:12	1055
Isophorone	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
2-Methylnaphthalene	**0.54**	ug/L	0.50		1	06/11/18	06/11/18 20:12	1055
2-Methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
3&4-Methylphenol	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
Naphthalene	**7.1**	ug/L	0.50		1	06/11/18	06/11/18 20:12	1055
2-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
3-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
4-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
Nitrobenzene	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
2-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
4-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
N-Nitrosodiphenylamine	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
Di-n-octyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
Pentachlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
Phenanthrene	**4.1**	ug/L	0.50		1	06/11/18	06/11/18 20:12	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-14 **Date/Time Sampled: 06/07/2018 12:10** **PSS Sample ID: 18060820-007**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
Pyrene	**0.71**	ug/L	0.50		1	06/11/18	06/11/18 20:12	1055
Pyridine	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
2,4,5-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055
2,4,6-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 20:12	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-15 **Date/Time Sampled: 06/07/2018 12:12** **PSS Sample ID: 18060820-008**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	ND	mg/L	0.10		1	06/11/18	06/12/18 14:06	1059

Total Petroleum Hydrocarbons-GRO — Analytical Method: SW-846 8015C — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	ND	ug/L	100		1	06/08/18	06/09/18 04:06	1035

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-15 **Date/Time Sampled: 06/07/2018 12:12** **PSS Sample ID: 18060820-008**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds | Analytical Method: SW-846 8260 B | Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/L	10		1	06/14/18	06/14/18 10:46	1011
Benzene	**1.6**	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
Bromochloromethane	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
Bromodichloromethane	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
Bromoform	ND	ug/L	5.0		1	06/14/18	06/14/18 10:46	1011
Bromomethane	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
2-Butanone (MEK)	ND	ug/L	10		1	06/14/18	06/14/18 10:46	1011
Carbon Disulfide	ND	ug/L	10		1	06/14/18	06/14/18 10:46	1011
Carbon tetrachloride	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
Chlorobenzene	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
Chloroethane	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
Chloroform	**43**	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
Chloromethane	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
Cyclohexane	ND	ug/L	10		1	06/14/18	06/14/18 10:46	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	06/14/18	06/14/18 10:46	1011
Dibromochloromethane	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
Ethylbenzene	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-15 **Date/Time Sampled: 06/07/2018 12:12** **PSS Sample ID: 18060820-008**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
2-Hexanone (MBK)	ND	ug/L	5.0		1	06/14/18	06/14/18 10:46	1011
Isopropylbenzene	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
Methyl Acetate	ND	ug/L	10		1	06/14/18	06/14/18 10:46	1011
Methylcyclohexane	ND	ug/L	10		1	06/14/18	06/14/18 10:46	1011
Methylene chloride	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	06/14/18	06/14/18 10:46	1011
Methyl-t-Butyl Ether	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
Naphthalene	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
Styrene	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
Tetrachloroethene	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
Toluene	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
Trichloroethene	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	06/14/18	06/14/18 10:46	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
Vinyl chloride	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011
m&p-Xylene	ND	ug/L	2.0		1	06/14/18	06/14/18 10:46	1011
o-Xylene	ND	ug/L	1.0		1	06/14/18	06/14/18 10:46	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-15 **Date/Time Sampled: 06/07/2018 12:12** **PSS Sample ID: 18060820-008**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds | Analytical Method: SW-846 8270 C | Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	ND	ug/L	0.50		1	06/11/18	06/11/18 20:38	1055
Acenaphthylene	ND	ug/L	0.50		1	06/11/18	06/11/18 20:38	1055
Acetophenone	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
Anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 20:38	1055
Atrazine	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
Benzo(a)anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 20:38	1055
Benzo(a)pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 20:38	1055
Benzo(b)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 20:38	1055
Benzo(g,h,i)perylene	ND	ug/L	0.50		1	06/11/18	06/11/18 20:38	1055
Benzo(k)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 20:38	1055
Biphenyl (Diphenyl)	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
Butyl benzyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
bis(2-chloroethyl) ether	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
4-Bromophenylphenyl ether	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
Di-n-butyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
Carbazole	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
Caprolactam	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
4-Chloroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
2-Chloronaphthalene	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
2-Chlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
Chrysene	ND	ug/L	0.50		1	06/11/18	06/11/18 20:38	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 20:38	1055
Dibenzofuran	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
3,3-Dichlorobenzidine	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
2,4-Dichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-15 **Date/Time Sampled: 06/07/2018 12:12** **PSS Sample ID: 18060820-008**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds | Analytical Method: SW-846 8270 C | Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Diethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
Dimethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
2,4-Dimethylphenol	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
2,4-Dinitrophenol	ND	ug/L	10		1	06/11/18	06/11/18 20:38	1055
2,4-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
2,6-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
Fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 20:38	1055
Fluorene	ND	ug/L	0.50		1	06/11/18	06/11/18 20:38	1055
Hexachlorobenzene	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
Hexachlorobutadiene	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
Hexachlorocyclopentadiene	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
Hexachloroethane	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 20:38	1055
Isophorone	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
2-Methylnaphthalene	ND	ug/L	0.50		1	06/11/18	06/11/18 20:38	1055
2-Methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
3&4-Methylphenol	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
Naphthalene	ND	ug/L	0.50		1	06/11/18	06/11/18 20:38	1055
2-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
3-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
4-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
Nitrobenzene	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
2-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
4-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
N-Nitrosodiphenylamine	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
Di-n-octyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
Pentachlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
Phenanthrene	ND	ug/L	0.50		1	06/11/18	06/11/18 20:38	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-15 **Date/Time Sampled: 06/07/2018 12:12** **PSS Sample ID: 18060820-008**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
Pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 20:38	1055
Pyridine	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
2,4,5-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055
2,4,6-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 20:38	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-20 **Date/Time Sampled: 06/07/2018 11:10** **PSS Sample ID: 18060820-009**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	ND	mg/L	0.10		1	06/11/18	06/12/18 14:55	1059

Total Petroleum Hydrocarbons-GRO — Analytical Method: SW-846 8015C — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	ND	ug/L	100		1	06/08/18	06/09/18 04:33	1035

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-20 **Date/Time Sampled: 06/07/2018 11:10** **PSS Sample ID: 18060820-009**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds | Analytical Method: SW-846 8260 B | Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/L	10		1	06/13/18	06/13/18 14:40	1011
Benzene	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
Bromochloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
Bromodichloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
Bromoform	ND	ug/L	5.0		1	06/13/18	06/13/18 14:40	1011
Bromomethane	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
2-Butanone (MEK)	ND	ug/L	10		1	06/13/18	06/13/18 14:40	1011
Carbon Disulfide	ND	ug/L	10		1	06/13/18	06/13/18 14:40	1011
Carbon tetrachloride	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
Chlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
Chloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
Chloroform	**1.2**	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
Chloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
Cyclohexane	ND	ug/L	10		1	06/13/18	06/13/18 14:40	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	06/13/18	06/13/18 14:40	1011
Dibromochloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
Ethylbenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-20 **Date/Time Sampled: 06/07/2018 11:10** **PSS Sample ID: 18060820-009**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
2-Hexanone (MBK)	ND	ug/L	5.0		1	06/13/18	06/13/18 14:40	1011
Isopropylbenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
Methyl Acetate	ND	ug/L	10		1	06/13/18	06/13/18 14:40	1011
Methylcyclohexane	ND	ug/L	10		1	06/13/18	06/13/18 14:40	1011
Methylene chloride	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	06/13/18	06/13/18 14:40	1011
Methyl-t-Butyl Ether	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
Naphthalene	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
Styrene	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
Tetrachloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
Toluene	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
Trichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	06/13/18	06/13/18 14:40	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
Vinyl chloride	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011
m&p-Xylene	ND	ug/L	2.0		1	06/13/18	06/13/18 14:40	1011
o-Xylene	ND	ug/L	1.0		1	06/13/18	06/13/18 14:40	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-20 **Date/Time Sampled: 06/07/2018 11:10** **PSS Sample ID: 18060820-009**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds | Analytical Method: SW-846 8270 C | Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:05	1055
Acenaphthylene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:05	1055
Acetophenone	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
Anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:05	1055
Atrazine	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
Benzo(a)anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:05	1055
Benzo(a)pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:05	1055
Benzo(b)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:05	1055
Benzo(g,h,i)perylene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:05	1055
Benzo(k)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:05	1055
Biphenyl (Diphenyl)	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
Butyl benzyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
bis(2-chloroethyl) ether	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
4-Bromophenylphenyl ether	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
Di-n-butyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
Carbazole	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
Caprolactam	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
4-Chloroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
2-Chloronaphthalene	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
2-Chlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
Chrysene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:05	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:05	1055
Dibenzofuran	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
3,3-Dichlorobenzidine	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
2,4-Dichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-20 **Date/Time Sampled: 06/07/2018 11:10** **PSS Sample ID: 18060820-009**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Diethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
Dimethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
2,4-Dimethylphenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
2,4-Dinitrophenol	ND	ug/L	10		1	06/11/18	06/11/18 21:05	1055
2,4-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
2,6-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
Fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:05	1055
Fluorene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:05	1055
Hexachlorobenzene	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
Hexachlorobutadiene	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
Hexachlorocyclopentadiene	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
Hexachloroethane	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:05	1055
Isophorone	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
2-Methylnaphthalene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:05	1055
2-Methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
3&4-Methylphenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
Naphthalene	**0.52**	ug/L	0.50		1	06/11/18	06/11/18 21:05	1055
2-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
3-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
4-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
Nitrobenzene	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
2-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
4-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
N-Nitrosodiphenylamine	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
Di-n-octyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
Pentachlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
Phenanthrene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:05	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-20 **Date/Time Sampled: 06/07/2018 11:10** **PSS Sample ID: 18060820-009**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
Pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:05	1055
Pyridine	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
2,4,5-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055
2,4,6-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:05	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-21 **Date/Time Sampled: 06/07/2018 11:25** **PSS Sample ID: 18060820-010**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3510C

LF/DF - Lighter fuel/oil and No. 2/diesel fuel patterns observed in sample.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**2.4**	mg/L	0.10	LF	1	06/11/18	06/12/18 15:21	1059

Total Petroleum Hydrocarbons-GRO — Analytical Method: SW-846 8015C — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	**12,000**	ug/L	100		1	06/08/18	06/09/18 04:59	1035

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-21 **Date/Time Sampled: 06/07/2018 11:25** **PSS Sample ID: 18060820-010**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/L	10		1	06/13/18	06/13/18 16:24	1011
Benzene	**74**	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
Bromochloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
Bromodichloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
Bromoform	ND	ug/L	5.0		1	06/13/18	06/13/18 16:24	1011
Bromomethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
2-Butanone (MEK)	ND	ug/L	10		1	06/13/18	06/13/18 16:24	1011
Carbon Disulfide	ND	ug/L	10		1	06/13/18	06/13/18 16:24	1011
Carbon tetrachloride	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
Chlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
Chloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
Chloroform	**8.4**	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
Chloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
Cyclohexane	**1,200**	ug/L	100		10	06/13/18	06/13/18 17:06	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	06/13/18	06/13/18 16:24	1011
Dibromochloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
cis-1,2-Dichloroethene	**2.1**	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
trans-1,2-Dichloroethene	**1.3**	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
Ethylbenzene	**140**	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-21 **Date/Time Sampled: 06/07/2018 11:25** **PSS Sample ID: 18060820-010**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
2-Hexanone (MBK)	ND	ug/L	5.0		1	06/13/18	06/13/18 16:24	1011
Isopropylbenzene	**15**	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
Methyl Acetate	ND	ug/L	10		1	06/13/18	06/13/18 16:24	1011
Methylcyclohexane	**670**	ug/L	100		10	06/13/18	06/13/18 17:06	1011
Methylene chloride	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	06/13/18	06/13/18 16:24	1011
Methyl-t-Butyl Ether	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
Naphthalene	**3.2**	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
Styrene	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
Tetrachloroethene	**60**	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
Toluene	**46**	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
Trichloroethene	**14**	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	06/13/18	06/13/18 16:24	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
Vinyl chloride	ND	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011
m&p-Xylene	**200**	ug/L	2.0		1	06/13/18	06/13/18 16:24	1011
o-Xylene	**7.6**	ug/L	1.0		1	06/13/18	06/13/18 16:24	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-21 **Date/Time Sampled: 06/07/2018 11:25** **PSS Sample ID: 18060820-010**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:31	1055
Acenaphthylene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:31	1055
Acetophenone	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
Anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:31	1055
Atrazine	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
Benzo(a)anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:31	1055
Benzo(a)pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:31	1055
Benzo(b)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:31	1055
Benzo(g,h,i)perylene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:31	1055
Benzo(k)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:31	1055
Biphenyl (Diphenyl)	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
Butyl benzyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
bis(2-chloroethyl) ether	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
4-Bromophenylphenyl ether	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
Di-n-butyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
Carbazole	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
Caprolactam	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
4-Chloroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
2-Chloronaphthalene	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
2-Chlorophenol	**5.1**	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
Chrysene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:31	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:31	1055
Dibenzofuran	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
3,3-Dichlorobenzidine	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
2,4-Dichlorophenol	**370**	ug/L	25		5	06/11/18	06/12/18 14:26	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-21 **Date/Time Sampled: 06/07/2018 11:25** **PSS Sample ID: 18060820-010**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Diethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
Dimethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
2,4-Dimethylphenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
2,4-Dinitrophenol	ND	ug/L	10		1	06/11/18	06/11/18 21:31	1055
2,4-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
2,6-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
Fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:31	1055
Fluorene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:31	1055
Hexachlorobenzene	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
Hexachlorobutadiene	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
Hexachlorocyclopentadiene	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
Hexachloroethane	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:31	1055
Isophorone	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
2-Methylnaphthalene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:31	1055
2-Methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
3&4-Methylphenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
Naphthalene	**26**	ug/L	0.50		1	06/11/18	06/11/18 21:31	1055
2-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
3-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
4-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
Nitrobenzene	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
2-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
4-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
N-Nitrosodiphenylamine	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
Di-n-octyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
Pentachlorophenol	**6.8**	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
Phenanthrene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:31	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-21 **Date/Time Sampled: 06/07/2018 11:25** **PSS Sample ID: 18060820-010**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
Pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:31	1055
Pyridine	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
2,4,5-Trichlorophenol	**32**	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055
2,4,6-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:31	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-22 **Date/Time Sampled: 06/07/2018 11:03** **PSS Sample ID: 18060820-011**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**0.38**	mg/L	0.10		1	06/11/18	06/12/18 14:06	1059

Total Petroleum Hydrocarbons-GRO — Analytical Method: SW-846 8015C — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	**560**	ug/L	100		1	06/08/18	06/09/18 05:26	1035

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-22 **Date/Time Sampled: 06/07/2018 11:03** **PSS Sample ID: 18060820-011**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/L	10		1	06/13/18	06/13/18 15:01	1011
Benzene	**200**	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
Bromochloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
Bromodichloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
Bromoform	ND	ug/L	5.0		1	06/13/18	06/13/18 15:01	1011
Bromomethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
2-Butanone (MEK)	ND	ug/L	10		1	06/13/18	06/13/18 15:01	1011
Carbon Disulfide	ND	ug/L	10		1	06/13/18	06/13/18 15:01	1011
Carbon tetrachloride	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
Chlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
Chloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
Chloroform	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
Chloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
Cyclohexane	ND	ug/L	10		1	06/13/18	06/13/18 15:01	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	06/13/18	06/13/18 15:01	1011
Dibromochloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
Ethylbenzene	**2.1**	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-22 **Date/Time Sampled: 06/07/2018 11:03** **PSS Sample ID: 18060820-011**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
2-Hexanone (MBK)	ND	ug/L	5.0		1	06/13/18	06/13/18 15:01	1011
Isopropylbenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
Methyl Acetate	ND	ug/L	10		1	06/13/18	06/13/18 15:01	1011
Methylcyclohexane	ND	ug/L	10		1	06/13/18	06/13/18 15:01	1011
Methylene chloride	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	06/13/18	06/13/18 15:01	1011
Methyl-t-Butyl Ether	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
Naphthalene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
Styrene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
Tetrachloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
Toluene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
Trichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	06/13/18	06/13/18 15:01	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
Vinyl chloride	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011
m&p-Xylene	ND	ug/L	2.0		1	06/13/18	06/13/18 15:01	1011
o-Xylene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:01	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-22 **Date/Time Sampled: 06/07/2018 11:03** **PSS Sample ID: 18060820-011**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds | Analytical Method: SW-846 8270 C | Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:58	1055
Acenaphthylene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:58	1055
Acetophenone	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
Anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:58	1055
Atrazine	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
Benzo(a)anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:58	1055
Benzo(a)pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:58	1055
Benzo(b)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:58	1055
Benzo(g,h,i)perylene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:58	1055
Benzo(k)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:58	1055
Biphenyl (Diphenyl)	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
Butyl benzyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
bis(2-chloroethyl) ether	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
4-Bromophenylphenyl ether	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
Di-n-butyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
Carbazole	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
Caprolactam	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
4-Chloroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
2-Chloronaphthalene	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
2-Chlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
Chrysene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:58	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:58	1055
Dibenzofuran	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
3,3-Dichlorobenzidine	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
2,4-Dichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-22 **Date/Time Sampled: 06/07/2018 11:03** **PSS Sample ID: 18060820-011**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds | Analytical Method: SW-846 8270 C | Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Diethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
Dimethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
2,4-Dimethylphenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
2,4-Dinitrophenol	ND	ug/L	10		1	06/11/18	06/11/18 21:58	1055
2,4-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
2,6-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
Fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:58	1055
Fluorene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:58	1055
Hexachlorobenzene	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
Hexachlorobutadiene	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
Hexachlorocyclopentadiene	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
Hexachloroethane	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:58	1055
Isophorone	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
2-Methylnaphthalene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:58	1055
2-Methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
3&4-Methylphenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
Naphthalene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:58	1055
2-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
3-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
4-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
Nitrobenzene	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
2-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
4-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
N-Nitrosodiphenylamine	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
Di-n-octyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
Pentachlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
Phenanthrene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:58	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MiHpt-22 **Date/Time Sampled: 06/07/2018 11:03** **PSS Sample ID: 18060820-011**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
Pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 21:58	1055
Pyridine	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
2,4,5-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055
2,4,6-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 21:58	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW23 **Date/Time Sampled: 06/07/2018 11:04** **PSS Sample ID: 18060820-012**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**0.15**	mg/L	0.10		1	06/11/18	06/12/18 14:31	1059

Total Petroleum Hydrocarbons-GRO — Analytical Method: SW-846 8015C — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	ND	ug/L	100		1	06/08/18	06/09/18 05:53	1035

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW23 **Date/Time Sampled: 06/07/2018 11:04** **PSS Sample ID: 18060820-012**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/L	10		1	06/13/18	06/13/18 15:21	1011
Benzene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
Bromochloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
Bromodichloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
Bromoform	ND	ug/L	5.0		1	06/13/18	06/13/18 15:21	1011
Bromomethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
2-Butanone (MEK)	ND	ug/L	10		1	06/13/18	06/13/18 15:21	1011
Carbon Disulfide	ND	ug/L	10		1	06/13/18	06/13/18 15:21	1011
Carbon tetrachloride	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
Chlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
Chloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
Chloroform	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
Chloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
Cyclohexane	ND	ug/L	10		1	06/13/18	06/13/18 15:21	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	06/13/18	06/13/18 15:21	1011
Dibromochloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
Ethylbenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW23 **Date/Time Sampled: 06/07/2018 11:04** **PSS Sample ID: 18060820-012**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
2-Hexanone (MBK)	ND	ug/L	5.0		1	06/13/18	06/13/18 15:21	1011
Isopropylbenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
Methyl Acetate	ND	ug/L	10		1	06/13/18	06/13/18 15:21	1011
Methylcyclohexane	ND	ug/L	10		1	06/13/18	06/13/18 15:21	1011
Methylene chloride	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	06/13/18	06/13/18 15:21	1011
Methyl-t-Butyl Ether	**5.5**	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
Naphthalene	**1.3**	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
Styrene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
Tetrachloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
Toluene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
Trichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	06/13/18	06/13/18 15:21	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
Vinyl chloride	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011
m&p-Xylene	ND	ug/L	2.0		1	06/13/18	06/13/18 15:21	1011
o-Xylene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:21	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW23 **Date/Time Sampled: 06/07/2018 11:04** **PSS Sample ID: 18060820-012**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	**1.5**	ug/L	0.50		1	06/11/18	06/11/18 22:24	1055
Acenaphthylene	ND	ug/L	0.50		1	06/11/18	06/11/18 22:24	1055
Acetophenone	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
Anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 22:24	1055
Atrazine	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
Benzo(a)anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 22:24	1055
Benzo(a)pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 22:24	1055
Benzo(b)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 22:24	1055
Benzo(g,h,i)perylene	ND	ug/L	0.50		1	06/11/18	06/11/18 22:24	1055
Benzo(k)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 22:24	1055
Biphenyl (Diphenyl)	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
Butyl benzyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
bis(2-chloroethyl) ether	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
4-Bromophenylphenyl ether	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
Di-n-butyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
Carbazole	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
Caprolactam	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
4-Chloroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
2-Chloronaphthalene	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
2-Chlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
Chrysene	ND	ug/L	0.50		1	06/11/18	06/11/18 22:24	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 22:24	1055
Dibenzofuran	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
3,3-Dichlorobenzidine	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
2,4-Dichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW23 **Date/Time Sampled: 06/07/2018 11:04** **PSS Sample ID: 18060820-012**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Diethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
Dimethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
2,4-Dimethylphenol	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
2,4-Dinitrophenol	ND	ug/L	10		1	06/11/18	06/11/18 22:24	1055
2,4-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
2,6-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
Fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 22:24	1055
Fluorene	**0.77**	ug/L	0.50		1	06/11/18	06/11/18 22:24	1055
Hexachlorobenzene	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
Hexachlorobutadiene	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
Hexachlorocyclopentadiene	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
Hexachloroethane	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 22:24	1055
Isophorone	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
2-Methylnaphthalene	ND	ug/L	0.50		1	06/11/18	06/11/18 22:24	1055
2-Methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
3&4-Methylphenol	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
Naphthalene	ND	ug/L	0.50		1	06/11/18	06/11/18 22:24	1055
2-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
3-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
4-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
Nitrobenzene	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
2-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
4-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
N-Nitrosodiphenylamine	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
Di-n-octyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
Pentachlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
Phenanthrene	ND	ug/L	0.50		1	06/11/18	06/11/18 22:24	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW23 **Date/Time Sampled: 06/07/2018 11:04** **PSS Sample ID: 18060820-012**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
Pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 22:24	1055
Pyridine	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
2,4,5-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055
2,4,6-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 22:24	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW24 **Date/Time Sampled: 06/07/2018 09:43** **PSS Sample ID: 18060820-013**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**0.61**	mg/L	0.10		1	06/11/18	06/12/18 14:31	1059

Total Petroleum Hydrocarbons-GRO — Analytical Method: SW-846 8015C — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	ND	ug/L	100		1	06/08/18	06/09/18 06:20	1035

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW24 **Date/Time Sampled: 06/07/2018 09:43** **PSS Sample ID: 18060820-013**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds | Analytical Method: SW-846 8260 B | Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/L	10		1	06/13/18	06/13/18 15:42	1011
Benzene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
Bromochloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
Bromodichloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
Bromoform	ND	ug/L	5.0		1	06/13/18	06/13/18 15:42	1011
Bromomethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
2-Butanone (MEK)	ND	ug/L	10		1	06/13/18	06/13/18 15:42	1011
Carbon Disulfide	ND	ug/L	10		1	06/13/18	06/13/18 15:42	1011
Carbon tetrachloride	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
Chlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
Chloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
Chloroform	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
Chloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
Cyclohexane	ND	ug/L	10		1	06/13/18	06/13/18 15:42	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	06/13/18	06/13/18 15:42	1011
Dibromochloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
Ethylbenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW24 **Date/Time Sampled: 06/07/2018 09:43** **PSS Sample ID: 18060820-013**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
2-Hexanone (MBK)	ND	ug/L	5.0		1	06/13/18	06/13/18 15:42	1011
Isopropylbenzene	**2.7**	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
Methyl Acetate	ND	ug/L	10		1	06/13/18	06/13/18 15:42	1011
Methylcyclohexane	ND	ug/L	10		1	06/13/18	06/13/18 15:42	1011
Methylene chloride	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	06/13/18	06/13/18 15:42	1011
Methyl-t-Butyl Ether	**1.9**	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
Naphthalene	**3.4**	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
Styrene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
Tetrachloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
Toluene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
Trichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	06/13/18	06/13/18 15:42	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
Vinyl chloride	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011
m&p-Xylene	ND	ug/L	2.0		1	06/13/18	06/13/18 15:42	1011
o-Xylene	ND	ug/L	1.0		1	06/13/18	06/13/18 15:42	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW24 **Date/Time Sampled: 06/07/2018 09:43** **PSS Sample ID: 18060820-013**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds | Analytical Method: SW-846 8270 C | Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	**8.3**	ug/L	0.50		1	06/11/18	06/11/18 22:51	1055
Acenaphthylene	ND	ug/L	0.50		1	06/11/18	06/11/18 22:51	1055
Acetophenone	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
Anthracene	**1.1**	ug/L	0.50		1	06/11/18	06/11/18 22:51	1055
Atrazine	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
Benzo(a)anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 22:51	1055
Benzo(a)pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 22:51	1055
Benzo(b)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 22:51	1055
Benzo(g,h,i)perylene	ND	ug/L	0.50		1	06/11/18	06/11/18 22:51	1055
Benzo(k)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 22:51	1055
Biphenyl (Diphenyl)	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
Butyl benzyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
bis(2-chloroethyl) ether	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
4-Bromophenylphenyl ether	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
Di-n-butyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
Carbazole	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
Caprolactam	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
4-Chloroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
2-Chloronaphthalene	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
2-Chlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
Chrysene	ND	ug/L	0.50		1	06/11/18	06/11/18 22:51	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 22:51	1055
Dibenzofuran	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
3,3-Dichlorobenzidine	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
2,4-Dichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW24 **Date/Time Sampled: 06/07/2018 09:43** **PSS Sample ID: 18060820-013**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Diethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
Dimethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
2,4-Dimethylphenol	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
2,4-Dinitrophenol	ND	ug/L	10		1	06/11/18	06/11/18 22:51	1055
2,4-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
2,6-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
Fluoranthene	**0.91**	ug/L	0.50		1	06/11/18	06/11/18 22:51	1055
Fluorene	**3.9**	ug/L	0.50		1	06/11/18	06/11/18 22:51	1055
Hexachlorobenzene	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
Hexachlorobutadiene	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
Hexachlorocyclopentadiene	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
Hexachloroethane	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 22:51	1055
Isophorone	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
2-Methylnaphthalene	ND	ug/L	0.50		1	06/11/18	06/11/18 22:51	1055
2-Methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
3&4-Methylphenol	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
Naphthalene	ND	ug/L	0.50		1	06/11/18	06/11/18 22:51	1055
2-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
3-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
4-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
Nitrobenzene	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
2-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
4-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
N-Nitrosodiphenylamine	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
Di-n-octyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
Pentachlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
Phenanthrene	**5.8**	ug/L	0.50		1	06/11/18	06/11/18 22:51	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW24 **Date/Time Sampled: 06/07/2018 09:43** **PSS Sample ID: 18060820-013**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
Pyrene	**0.59**	ug/L	0.50		1	06/11/18	06/11/18 22:51	1055
Pyridine	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
2,4,5-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055
2,4,6-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 22:51	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW25 **Date/Time Sampled: 06/07/2018 08:35** **PSS Sample ID: 18060820-014**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**0.33**	mg/L	0.10		1	06/11/18	06/12/18 15:45	1059

Total Petroleum Hydrocarbons-GRO — Analytical Method: SW-846 8015C — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	**160**	ug/L	100		1	06/08/18	06/09/18 06:48	1035

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW25 **Date/Time Sampled: 06/07/2018 08:35** **PSS Sample ID: 18060820-014**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/L	10		1	06/13/18	06/13/18 16:03	1011
Benzene	**17**	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
Bromochloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
Bromodichloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
Bromoform	ND	ug/L	5.0		1	06/13/18	06/13/18 16:03	1011
Bromomethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
2-Butanone (MEK)	ND	ug/L	10		1	06/13/18	06/13/18 16:03	1011
Carbon Disulfide	ND	ug/L	10		1	06/13/18	06/13/18 16:03	1011
Carbon tetrachloride	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
Chlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
Chloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
Chloroform	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
Chloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
Cyclohexane	ND	ug/L	10		1	06/13/18	06/13/18 16:03	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	06/13/18	06/13/18 16:03	1011
Dibromochloromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
Ethylbenzene	**2.1**	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW25 **Date/Time Sampled: 06/07/2018 08:35** **PSS Sample ID: 18060820-014**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
2-Hexanone (MBK)	ND	ug/L	5.0		1	06/13/18	06/13/18 16:03	1011
Isopropylbenzene	**1.7**	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
Methyl Acetate	ND	ug/L	10		1	06/13/18	06/13/18 16:03	1011
Methylcyclohexane	ND	ug/L	10		1	06/13/18	06/13/18 16:03	1011
Methylene chloride	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	06/13/18	06/13/18 16:03	1011
Methyl-t-Butyl Ether	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
Naphthalene	**77**	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
Styrene	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
Tetrachloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
Toluene	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
Trichloroethene	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	06/13/18	06/13/18 16:03	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
Vinyl chloride	ND	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011
m&p-Xylene	ND	ug/L	2.0		1	06/13/18	06/13/18 16:03	1011
o-Xylene	**1.9**	ug/L	1.0		1	06/13/18	06/13/18 16:03	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW25 **Date/Time Sampled: 06/07/2018 08:35** **PSS Sample ID: 18060820-014**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	**1.5**	ug/L	0.50		1	06/11/18	06/11/18 23:18	1055
Acenaphthylene	ND	ug/L	0.50		1	06/11/18	06/11/18 23:18	1055
Acetophenone	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
Anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 23:18	1055
Atrazine	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
Benzo(a)anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 23:18	1055
Benzo(a)pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 23:18	1055
Benzo(b)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 23:18	1055
Benzo(g,h,i)perylene	ND	ug/L	0.50		1	06/11/18	06/11/18 23:18	1055
Benzo(k)fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 23:18	1055
Biphenyl (Diphenyl)	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
Butyl benzyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
bis(2-chloroethyl) ether	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
4-Bromophenylphenyl ether	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
Di-n-butyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
Carbazole	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
Caprolactam	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
4-Chloroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
2-Chloronaphthalene	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
2-Chlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
Chrysene	ND	ug/L	0.50		1	06/11/18	06/11/18 23:18	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.50		1	06/11/18	06/11/18 23:18	1055
Dibenzofuran	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
3,3-Dichlorobenzidine	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
2,4-Dichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW25 **Date/Time Sampled: 06/07/2018 08:35** **PSS Sample ID: 18060820-014**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Diethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
Dimethyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
2,4-Dimethylphenol	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
2,4-Dinitrophenol	ND	ug/L	10		1	06/11/18	06/11/18 23:18	1055
2,4-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
2,6-Dinitrotoluene	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
Fluoranthene	ND	ug/L	0.50		1	06/11/18	06/11/18 23:18	1055
Fluorene	**0.75**	ug/L	0.50		1	06/11/18	06/11/18 23:18	1055
Hexachlorobenzene	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
Hexachlorobutadiene	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
Hexachlorocyclopentadiene	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
Hexachloroethane	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 23:18	1055
Isophorone	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
2-Methylnaphthalene	**0.58**	ug/L	0.50		1	06/11/18	06/11/18 23:18	1055
2-Methyl phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
3&4-Methylphenol	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
Naphthalene	**6.1**	ug/L	0.50		1	06/11/18	06/11/18 23:18	1055
2-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
3-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
4-Nitroaniline	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
Nitrobenzene	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
2-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
4-Nitrophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
N-Nitrosodiphenylamine	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
Di-n-octyl phthalate	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
Pentachlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
Phenanthrene	**1.1**	ug/L	0.50		1	06/11/18	06/11/18 23:18	1055

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 18060820

A-Zone Environmental Services, Charles Town, WV

June 15, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW25 **Date/Time Sampled: 06/07/2018 08:35** **PSS Sample ID: 18060820-014**

Matrix: GROUND WATER **Date/Time Received: 06/08/2018 13:25**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Phenol	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
Pyrene	ND	ug/L	0.50		1	06/11/18	06/11/18 23:18	1055
Pyridine	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
2,4,5-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055
2,4,6-Trichlorophenol	ND	ug/L	5.0		1	06/11/18	06/11/18 23:18	1055

Case Narrative Summary

Client Name: A-Zone Environmental Services

Project Name: RTN

Work Order Number(s): 18060820

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

The analyses of chlorine, pH, dissolved oxygen, temperature and sulfite for drinking water and non-potable samples tested for compliance have a maximum holding time of 15 minutes. As such, all laboratory analyses for these analytes exceed holding times.

Matrix spike and matrix spike duplicate analyses may not be performed due to insufficient sample quantity. In these instances, a laboratory control sample and laboratory control sample duplicate are analyzed unless otherwise noted or specified in the method.

Unless otherwise noted, surrogate recoveries outside of the acceptance criteria are most often the result of sample matrix interference and/or sample dilution.

Quality control samples that display a high bias will not be narrated when sample target compounds are not detected.

Sample Receipt:

All sample receipt conditions were acceptable.

General Comments:

Received one 1L amber for samples MiHPt-21 and MiHPt-22 at 1200 on 6/8/18.

NELAP accreditation was held for all analyses performed unless noted below. See www.phaseonline.com for complete PSS scope of accreditation.

Analytical Data Package Information Summary

Work Order(s): 18060820
Report Prepared For: A-Zone Environmental Services, Charles Tow
Project Name: RTN
Project Manager: Mike Bruzzesi

Method	Client Sample Id	Analysis Type	Lab Sample Id	Analyst	Mtx	Prep Batch	Analytical Batch	Sampled	Prepared	Analyzed
SW-846 8015 C	TEC-MW2	Initial	18060820-001	1059	W	71824	154256	06/07/2018	06/11/2018 09:12	06/12/2018 12:01
	TEC-MW4	Initial	18060820-002	1059	W	71824	154256	06/07/2018	06/11/2018 09:12	06/12/2018 12:26
	ECS-MW4	Initial	18060820-003	1059	W	71824	154256	06/07/2018	06/11/2018 09:12	06/12/2018 12:51
	MiHpt-5	Initial	18060820-004	1059	W	71824	154256	06/07/2018	06/11/2018 09:12	06/12/2018 13:16
	MiHpt-7	Initial	18060820-005	1059	W	71824	154256	06/07/2018	06/11/2018 09:12	06/12/2018 13:40
	MiHpt-8	Initial	18060820-006	1059	W	71824	154256	06/07/2018	06/11/2018 09:12	06/12/2018 14:55
	MiHpt-21	Initial	18060820-010	1059	W	71824	154256	06/07/2018	06/11/2018 09:12	06/12/2018 15:21
	MiHpt-22	Initial	18060820-011	1059	W	71824	154256	06/07/2018	06/11/2018 09:12	06/12/2018 14:06
	MW24	Initial	18060820-013	1059	W	71824	154256	06/07/2018	06/11/2018 09:12	06/12/2018 14:31
	MiHpt-14	Initial	18060820-007	1059	W	71824	154257	06/07/2018	06/11/2018 09:12	06/12/2018 15:21
	MiHpt-15	Initial	18060820-008	1059	W	71824	154257	06/07/2018	06/11/2018 09:12	06/12/2018 14:06
	MiHpt-20	Initial	18060820-009	1059	W	71824	154257	06/07/2018	06/11/2018 09:12	06/12/2018 14:55
	MW23	Initial	18060820-012	1059	W	71824	154257	06/07/2018	06/11/2018 09:12	06/12/2018 14:31
	MW25	Initial	18060820-014	1059	W	71824	154257	06/07/2018	06/11/2018 09:12	06/12/2018 15:45
	71824-1-BKS	BKS	71824-1-BKS	1059	W	71824	154257	--------	06/11/2018 09:12	06/12/2018 12:26
	71824-1-BLK	BLK	71824-1-BLK	1059	W	71824	154257	--------	06/11/2018 09:12	06/12/2018 12:01
	71824-1-BSD	BSD	71824-1-BSD	1059	W	71824	154257	--------	06/11/2018 09:12	06/12/2018 12:51
SW-846 8015C	TEC-MW2	Initial	18060820-001	1035	W	71836	154171	06/07/2018	06/08/2018 21:48	06/09/2018 00:57
	TEC-MW4	Initial	18060820-002	1035	W	71836	154171	06/07/2018	06/08/2018 21:48	06/09/2018 01:23
	ECS-MW4	Initial	18060820-003	1035	W	71836	154171	06/07/2018	06/08/2018 21:48	06/09/2018 01:50
	MiHpt-5	Initial	18060820-004	1035	W	71836	154171	06/07/2018	06/08/2018 21:48	06/09/2018 02:17
	MiHpt-7	Initial	18060820-005	1035	W	71836	154171	06/07/2018	06/08/2018 21:48	06/09/2018 02:44
	MiHpt-8	Initial	18060820-006	1035	W	71836	154171	06/07/2018	06/08/2018 21:48	06/09/2018 03:11
	MiHpt-14	Initial	18060820-007	1035	W	71836	154171	06/07/2018	06/08/2018 21:48	06/09/2018 03:38
	MiHpt-15	Initial	18060820-008	1035	W	71836	154171	06/07/2018	06/08/2018 21:48	06/09/2018 04:06
	MiHpt-20	Initial	18060820-009	1035	W	71836	154171	06/07/2018	06/08/2018 21:48	06/09/2018 04:33
	MiHpt-21	Initial	18060820-010	1035	W	71836	154171	06/07/2018	06/08/2018 21:48	06/09/2018 04:59
	MiHpt-22	Initial	18060820-011	1035	W	71836	154171	06/07/2018	06/08/2018 21:48	06/09/2018 05:26
	MW23	Initial	18060820-012	1035	W	71836	154171	06/07/2018	06/08/2018 21:48	06/09/2018 05:53

Analytical Data Package Information Summary

Work Order(s): 18060820
Report Prepared For: A-Zone Environmental Services, Charles Tow
Project Name: RTN
Project Manager: Mike Bruzzesi

Method	Client Sample Id	Analysis Type	Lab Sample Id	Analyst	Mtx	Prep Batch	Analytical Batch	Sampled	Prepared	Analyzed
SW-846 8015C	MW24	Initial	18060820-013	1035	W	71836	154171	06/07/2018	06/08/2018 21:48	06/09/2018 06:20
	MW25	Initial	18060820-014	1035	W	71836	154171	06/07/2018	06/08/2018 21:48	06/09/2018 06:48
	71836-2-BKS	BKS	71836-2-BKS	1035	W	71836	154171	--------	06/08/2018 21:48	06/09/2018 00:03
	71836-2-BLK	BLK	71836-2-BLK	1035	W	71836	154171	--------	06/08/2018 21:48	06/08/2018 23:36
	TEC-MW2 S	MS	18060820-001 S	1035	W	71836	154171	06/07/2018	06/08/2018 21:48	06/09/2018 07:15
	TEC-MW2 SD	MSD	18060820-001 SD	1035	W	71836	154171	06/07/2018	06/08/2018 21:48	06/09/2018 07:41
SW-846 8260 B	TEC-MW2	Initial	18060820-001	1011	W	71850	154209	06/07/2018	06/11/2018 10:06	06/11/2018 20:46
	TEC-MW4	Initial	18060820-002	1011	W	71850	154209	06/07/2018	06/11/2018 10:06	06/11/2018 21:07
	71850-1-BKS	BKS	71850-1-BKS	1011	W	71850	154209	--------	06/11/2018 10:06	06/11/2018 11:13
	71850-1-BLK	BLK	71850-1-BLK	1011	W	71850	154209	--------	06/11/2018 10:06	06/11/2018 12:15
	11526-Eff-6/18 S	MS	18060714-001 S	1011	W	71850	154209	06/06/2018	06/11/2018 10:06	06/11/2018 16:37
	11526-Eff-6/18 SD	MSD	18060714-001 SD	1011	W	71850	154209	06/06/2018	06/11/2018 10:06	06/11/2018 16:58
	ECS-MW4	Initial	18060820-003	1011	W	71869	154245	06/07/2018	06/13/2018 07:35	06/13/2018 10:10
	MiHpt-5	Initial	18060820-004	1011	W	71869	154245	06/07/2018	06/13/2018 07:35	06/13/2018 12:14
	MiHpt-7	Initial	18060820-005	1011	W	71869	154245	06/07/2018	06/13/2018 07:35	06/13/2018 12:35
	MiHpt-8	Initial	18060820-006	1011	W	71869	154245	06/07/2018	06/13/2018 07:35	06/13/2018 13:37
	MiHpt-14	Initial	18060820-007	1011	W	71869	154245	06/07/2018	06/13/2018 07:35	06/13/2018 13:58
	MiHpt-20	Initial	18060820-009	1011	W	71869	154245	06/07/2018	06/13/2018 07:35	06/13/2018 14:40
	MiHpt-21	Initial	18060820-010	1011	W	71869	154245	06/07/2018	06/13/2018 07:35	06/13/2018 16:24
	MiHpt-22	Initial	18060820-011	1011	W	71869	154245	06/07/2018	06/13/2018 07:35	06/13/2018 15:01
	MW23	Initial	18060820-012	1011	W	71869	154245	06/07/2018	06/13/2018 07:35	06/13/2018 15:21
	MW24	Initial	18060820-013	1011	W	71869	154245	06/07/2018	06/13/2018 07:35	06/13/2018 15:42
	MW25	Initial	18060820-014	1011	W	71869	154245	06/07/2018	06/13/2018 07:35	06/13/2018 16:03
	71869-1-BKS	BKS	71869-1-BKS	1011	W	71869	154245	--------	06/13/2018 07:35	06/13/2018 08:40
	71869-1-BLK	BLK	71869-1-BLK	1011	W	71869	154245	--------	06/13/2018 07:35	06/13/2018 09:42
	ECS-MW4 S	MS	18060820-003 S	1011	W	71869	154245	06/07/2018	06/13/2018 07:35	06/13/2018 10:51
	ECS-MW4 SD	MSD	18060820-003 SD	1011	W	71869	154245	06/07/2018	06/13/2018 07:35	06/13/2018 11:12
	MiHpt-21	Reanalysis	18060820-010	1011	W	71869	154245	06/07/2018	06/13/2018 07:35	06/13/2018 17:06
	MiHpt-15	Initial	18060820-008	1011	W	71919	154341	06/07/2018	06/14/2018 07:48	06/14/2018 10:46

Analytical Data Package Information Summary

Work Order(s): 18060820
Report Prepared For: A-Zone Environmental Services, Charles Tow
Project Name: RTN
Project Manager: Mike Bruzzesi

Method	Client Sample Id	Analysis Type	Lab Sample Id	Analyst	Mtx	Prep Batch	Analytical Batch	Sampled	Prepared	Analyzed
SW-846 8260 B	71919-1-BKS	BKS	71919-1-BKS	1011	W	71919	154341	--------	06/14/2018 07:48	06/14/2018 08:54
	71919-1-BLK	BLK	71919-1-BLK	1011	W	71919	154341	--------	06/14/2018 07:48	06/14/2018 10:07
	MiHpt-15 S	MS	18060820-008 S	1011	W	71919	154341	06/07/2018	06/14/2018 07:48	06/14/2018 14:14
	MiHpt-15 SD	MSD	18060820-008 SD	1011	W	71919	154341	06/07/2018	06/14/2018 07:48	06/14/2018 14:35
	MiHpt-5	Reanalysis	18060820-004	1011	W	71869	154341	06/07/2018	06/13/2018 07:35	06/14/2018 13:32
	MiHpt-7	Reanalysis	18060820-005	1011	W	71869	154341	06/07/2018	06/13/2018 07:35	06/14/2018 13:53
SW-846 8270 C	TEC-MW2	Initial	18060820-001	1055	W	71827	154221	06/07/2018	06/11/2018 09:17	06/11/2018 16:08
	TEC-MW4	Initial	18060820-002	1055	W	71827	154221	06/07/2018	06/11/2018 09:17	06/11/2018 16:40
	ECS-MW4	Initial	18060820-003	1055	W	71827	154221	06/07/2018	06/11/2018 09:17	06/11/2018 18:26
	MiHpt-5	Initial	18060820-004	1055	W	71827	154221	06/07/2018	06/11/2018 09:17	06/11/2018 18:52
	MiHpt-7	Initial	18060820-005	1055	W	71827	154221	06/07/2018	06/11/2018 09:17	06/11/2018 19:19
	MiHpt-14	Initial	18060820-007	1055	W	71827	154221	06/07/2018	06/11/2018 09:17	06/11/2018 20:12
	MiHpt-15	Initial	18060820-008	1055	W	71827	154221	06/07/2018	06/11/2018 09:17	06/11/2018 20:38
	MiHpt-20	Initial	18060820-009	1055	W	71827	154221	06/07/2018	06/11/2018 09:17	06/11/2018 21:05
	MiHpt-21	Initial	18060820-010	1055	W	71827	154221	06/07/2018	06/11/2018 09:17	06/11/2018 21:31
	MiHpt-22	Initial	18060820-011	1055	W	71827	154221	06/07/2018	06/11/2018 09:17	06/11/2018 21:58
	MW23	Initial	18060820-012	1055	W	71827	154221	06/07/2018	06/11/2018 09:17	06/11/2018 22:24
	MW24	Initial	18060820-013	1055	W	71827	154221	06/07/2018	06/11/2018 09:17	06/11/2018 22:51
	MW25	Initial	18060820-014	1055	W	71827	154221	06/07/2018	06/11/2018 09:17	06/11/2018 23:18
	71827-1-BKS	BKS	71827-1-BKS	1055	W	71827	154221	--------	06/11/2018 09:17	06/11/2018 14:48
	71827-1-BLK	BLK	71827-1-BLK	1055	W	71827	154221	--------	06/11/2018 09:17	06/11/2018 14:22
	71827-1-BSD	BSD	71827-1-BSD	1055	W	71827	154221	--------	06/11/2018 09:17	06/11/2018 15:15
	MiHpt-8	Initial	18060820-006	1055	W	71827	154237	06/07/2018	06/11/2018 09:17	06/12/2018 13:33
	MiHpt-7	Reanalysis	18060820-005	1055	W	71827	154237	06/07/2018	06/11/2018 09:17	06/12/2018 14:00
	MiHpt-21	Reanalysis	18060820-010	1055	W	71827	154237	06/07/2018	06/11/2018 09:17	06/12/2018 14:26

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services

RTN

Analytical Method: SW-846 8270 C Prep Method: SW3510C

Seq Number: 154221 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-001

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	56		35-107	%	06/11/18 16:08
2-Fluorophenol	52		32-106	%	06/11/18 16:08
Nitrobenzene-d5	56		34-123	%	06/11/18 16:08
Phenol-d6	55		36-111	%	06/11/18 16:08
Terphenyl-D14	70		43-143	%	06/11/18 16:08
2,4,6-Tribromophenol	78		26-122	%	06/11/18 16:08

Analytical Method: SW-846 8015 C Prep Method: SW3510C

Seq Number: 154256 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-001

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	97		46-111	%	06/12/18 12:01

Analytical Method: SW-846 8015C Prep Method: SW5030B

Seq Number: 154171 Matrix: Ground Water Date Prep: 06/08/2018

PSS Sample ID: 18060820-001

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	83		56-107	%	06/09/18 00:57

Analytical Method: SW-846 8260 B Prep Method: SW5030B

Seq Number: 154209 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-001

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	101		87-109	%	06/11/18 20:46
Dibromofluoromethane	98		93-111	%	06/11/18 20:46
Toluene-D8	101		91-109	%	06/11/18 20:46

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services

RTN

Analytical Method: SW-846 8270 C Prep Method: SW3510C

Seq Number: 154221 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-002

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	53		35-107	%	06/11/18 16:40
2-Fluorophenol	50		32-106	%	06/11/18 16:40
Nitrobenzene-d5	54		34-123	%	06/11/18 16:40
Phenol-d6	52		36-111	%	06/11/18 16:40
Terphenyl-D14	61		43-143	%	06/11/18 16:40
2,4,6-Tribromophenol	61		26-122	%	06/11/18 16:40

Analytical Method: SW-846 8015 C Prep Method: SW3510C

Seq Number: 154256 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-002

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	95		46-111	%	06/12/18 12:26

Analytical Method: SW-846 8015C Prep Method: SW5030B

Seq Number: 154171 Matrix: Ground Water Date Prep: 06/08/2018

PSS Sample ID: 18060820-002

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	88		56-107	%	06/09/18 01:23

Analytical Method: SW-846 8260 B Prep Method: SW5030B

Seq Number: 154209 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-002

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	100		87-109	%	06/11/18 21:07
Dibromofluoromethane	101		93-111	%	06/11/18 21:07
Toluene-D8	106		91-109	%	06/11/18 21:07

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services

RTN

Analytical Method: SW-846 8270 C Prep Method: SW3510C

Seq Number: 154221 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-003

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	39		35-107	%	06/11/18 18:26
2-Fluorophenol	39		32-106	%	06/11/18 18:26
Nitrobenzene-d5	40		34-123	%	06/11/18 18:26
Phenol-d6	40		36-111	%	06/11/18 18:26
Terphenyl-D14	86		43-143	%	06/11/18 18:26
2,4,6-Tribromophenol	60		26-122	%	06/11/18 18:26

Analytical Method: SW-846 8015 C Prep Method: SW3510C

Seq Number: 154256 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-003

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	100		46-111	%	06/12/18 12:51

Analytical Method: SW-846 8015C Prep Method: SW5030B

Seq Number: 154171 Matrix: Ground Water Date Prep: 06/08/2018

PSS Sample ID: 18060820-003

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	84		56-107	%	06/09/18 01:50

Analytical Method: SW-846 8260 B Prep Method: SW5030B

Seq Number: 154245 Matrix: Ground Water Date Prep: 06/13/2018

PSS Sample ID: 18060820-003

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	103		87-109	%	06/13/18 10:10
Dibromofluoromethane	101		93-111	%	06/13/18 10:10
Toluene-D8	100		91-109	%	06/13/18 10:10

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services

RTN

Analytical Method: SW-846 8270 C Prep Method: SW3510C

Seq Number: 154221 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-004

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	60		35-107	%	06/11/18 18:52
2-Fluorophenol	60		32-106	%	06/11/18 18:52
Nitrobenzene-d5	61		34-123	%	06/11/18 18:52
Phenol-d6	62		36-111	%	06/11/18 18:52
Terphenyl-D14	81		43-143	%	06/11/18 18:52
2,4,6-Tribromophenol	75		26-122	%	06/11/18 18:52

Analytical Method: SW-846 8015 C Prep Method: SW3510C

Seq Number: 154256 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-004

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	97		46-111	%	06/12/18 13:16

Analytical Method: SW-846 8015C Prep Method: SW5030B

Seq Number: 154171 Matrix: Ground Water Date Prep: 06/08/2018

PSS Sample ID: 18060820-004

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	83		56-107	%	06/09/18 02:17

Analytical Method: SW-846 8260 B Prep Method: SW5030B

Seq Number: 154245 Matrix: Ground Water Date Prep: 06/13/2018

PSS Sample ID: 18060820-004

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	100		87-109	%	06/13/18 12:14
Dibromofluoromethane	102		93-111	%	06/13/18 12:14
Toluene-D8	100		91-109	%	06/13/18 12:14

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services

RTN

Analytical Method: SW-846 8270 C Prep Method: SW3510C

Seq Number: 154221 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-005

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	51		35-107	%	06/11/18 19:19
2-Fluorophenol	48		32-106	%	06/11/18 19:19
Nitrobenzene-d5	52		34-123	%	06/11/18 19:19
Phenol-d6	51		36-111	%	06/11/18 19:19
Terphenyl-D14	80		43-143	%	06/11/18 19:19
2,4,6-Tribromophenol	81		26-122	%	06/11/18 19:19

Analytical Method: SW-846 8015 C Prep Method: SW3510C

Seq Number: 154256 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-005

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	102		46-111	%	06/12/18 13:40

Analytical Method: SW-846 8015C Prep Method: SW5030B

Seq Number: 154171 Matrix: Ground Water Date Prep: 06/08/2018

PSS Sample ID: 18060820-005

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	84		56-107	%	06/09/18 02:44

Analytical Method: SW-846 8260 B Prep Method: SW5030B

Seq Number: 154245 Matrix: Ground Water Date Prep: 06/13/2018

PSS Sample ID: 18060820-005

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	99		87-109	%	06/13/18 12:35
Dibromofluoromethane	101		93-111	%	06/13/18 12:35
Toluene-D8	100		91-109	%	06/13/18 12:35

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services

RTN

Analytical Method: SW-846 8270 C Prep Method: SW3510C

Seq Number: 154237 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-006

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	62		35-107	%	06/12/18 13:33
2-Fluorophenol	58		32-106	%	06/12/18 13:33
Nitrobenzene-d5	62		34-123	%	06/12/18 13:33
Phenol-d6	60		36-111	%	06/12/18 13:33
Terphenyl-D14	74		43-143	%	06/12/18 13:33
2,4,6-Tribromophenol	85		26-122	%	06/12/18 13:33

Analytical Method: SW-846 8015 C Prep Method: SW3510C

Seq Number: 154256 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-006

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	103		46-111	%	06/12/18 14:55

Analytical Method: SW-846 8015C Prep Method: SW5030B

Seq Number: 154171 Matrix: Ground Water Date Prep: 06/08/2018

PSS Sample ID: 18060820-006

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	83		56-107	%	06/09/18 03:11

Analytical Method: SW-846 8260 B Prep Method: SW5030B

Seq Number: 154245 Matrix: Ground Water Date Prep: 06/13/2018

PSS Sample ID: 18060820-006

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	103		87-109	%	06/13/18 13:37
Dibromofluoromethane	100		93-111	%	06/13/18 13:37
Toluene-D8	100		91-109	%	06/13/18 13:37

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services

RTN

Analytical Method: SW-846 8270 C Prep Method: SW3510C

Seq Number: 154221 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-007

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	62		35-107	%	06/11/18 20:12
2-Fluorophenol	59		32-106	%	06/11/18 20:12
Nitrobenzene-d5	65		34-123	%	06/11/18 20:12
Phenol-d6	62		36-111	%	06/11/18 20:12
Terphenyl-D14	80		43-143	%	06/11/18 20:12
2,4,6-Tribromophenol	86		26-122	%	06/11/18 20:12

Analytical Method: SW-846 8015 C Prep Method: SW3510C

Seq Number: 154257 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-007

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	90		46-111	%	06/12/18 15:21

Analytical Method: SW-846 8015C Prep Method: SW5030B

Seq Number: 154171 Matrix: Ground Water Date Prep: 06/08/2018

PSS Sample ID: 18060820-007

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	83		56-107	%	06/09/18 03:38

Analytical Method: SW-846 8260 B Prep Method: SW5030B

Seq Number: 154245 Matrix: Ground Water Date Prep: 06/13/2018

PSS Sample ID: 18060820-007

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	101		87-109	%	06/13/18 13:58
Dibromofluoromethane	101		93-111	%	06/13/18 13:58
Toluene-D8	100		91-109	%	06/13/18 13:58

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services

RTN

Analytical Method: SW-846 8270 C Prep Method: SW3510C

Seq Number: 154221 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-008

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	58		35-107	%	06/11/18 20:38
2-Fluorophenol	56		32-106	%	06/11/18 20:38
Nitrobenzene-d5	60		34-123	%	06/11/18 20:38
Phenol-d6	59		36-111	%	06/11/18 20:38
Terphenyl-D14	64		43-143	%	06/11/18 20:38
2,4,6-Tribromophenol	63		26-122	%	06/11/18 20:38

Analytical Method: SW-846 8015 C Prep Method: SW3510C

Seq Number: 154257 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-008

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	94		46-111	%	06/12/18 14:06

Analytical Method: SW-846 8015C Prep Method: SW5030B

Seq Number: 154171 Matrix: Ground Water Date Prep: 06/08/2018

PSS Sample ID: 18060820-008

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	83		56-107	%	06/09/18 04:06

Analytical Method: SW-846 8260 B Prep Method: SW5030B

Seq Number: 154341 Matrix: Ground Water Date Prep: 06/14/2018

PSS Sample ID: 18060820-008

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	103		87-109	%	06/14/18 10:46
Dibromofluoromethane	102		93-111	%	06/14/18 10:46
Toluene-D8	100		91-109	%	06/14/18 10:46

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services

RTN

Analytical Method: SW-846 8270 C Prep Method: SW3510C

Seq Number: 154221 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-009

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	62		35-107	%	06/11/18 21:05
2-Fluorophenol	60		32-106	%	06/11/18 21:05
Nitrobenzene-d5	64		34-123	%	06/11/18 21:05
Phenol-d6	62		36-111	%	06/11/18 21:05
Terphenyl-D14	75		43-143	%	06/11/18 21:05
2,4,6-Tribromophenol	74		26-122	%	06/11/18 21:05

Analytical Method: SW-846 8015 C Prep Method: SW3510C

Seq Number: 154257 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-009

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	83		46-111	%	06/12/18 14:55

Analytical Method: SW-846 8015C Prep Method: SW5030B

Seq Number: 154171 Matrix: Ground Water Date Prep: 06/08/2018

PSS Sample ID: 18060820-009

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	82		56-107	%	06/09/18 04:33

Analytical Method: SW-846 8260 B Prep Method: SW5030B

Seq Number: 154245 Matrix: Ground Water Date Prep: 06/13/2018

PSS Sample ID: 18060820-009

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	104		87-109	%	06/13/18 14:40
Dibromofluoromethane	100		93-111	%	06/13/18 14:40
Toluene-D8	100		91-109	%	06/13/18 14:40

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services

RTN

Analytical Method: SW-846 8270 C Prep Method: SW3510C

Seq Number: 154221 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-010

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	63		35-107	%	06/11/18 21:31
2-Fluorophenol	58		32-106	%	06/11/18 21:31
Nitrobenzene-d5	67		34-123	%	06/11/18 21:31
Phenol-d6	65		36-111	%	06/11/18 21:31
Terphenyl-D14	74		43-143	%	06/11/18 21:31
2,4,6-Tribromophenol	88		26-122	%	06/11/18 21:31

Analytical Method: SW-846 8015 C Prep Method: SW3510C

Seq Number: 154256 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-010

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	108		46-111	%	06/12/18 15:21

Analytical Method: SW-846 8015C Prep Method: SW5030B

Seq Number: 154171 Matrix: Ground Water Date Prep: 06/08/2018

PSS Sample ID: 18060820-010

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	90		56-107	%	06/09/18 04:59

Analytical Method: SW-846 8260 B Prep Method: SW5030B

Seq Number: 154245 Matrix: Ground Water Date Prep: 06/13/2018

PSS Sample ID: 18060820-010

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	100		87-109	%	06/13/18 16:24
Dibromofluoromethane	88	*	93-111	%	06/13/18 16:24
Toluene-D8	101		91-109	%	06/13/18 16:24

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services

RTN

Analytical Method: SW-846 8270 C Prep Method: SW3510C

Seq Number: 154221 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-011

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	44		35-107	%	06/11/18 21:58
2-Fluorophenol	41		32-106	%	06/11/18 21:58
Nitrobenzene-d5	44		34-123	%	06/11/18 21:58
Phenol-d6	43		36-111	%	06/11/18 21:58
Terphenyl-D14	80		43-143	%	06/11/18 21:58
2,4,6-Tribromophenol	74		26-122	%	06/11/18 21:58

Analytical Method: SW-846 8015 C Prep Method: SW3510C

Seq Number: 154256 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-011

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	96		46-111	%	06/12/18 14:06

Analytical Method: SW-846 8015C Prep Method: SW5030B

Seq Number: 154171 Matrix: Ground Water Date Prep: 06/08/2018

PSS Sample ID: 18060820-011

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	83		56-107	%	06/09/18 05:26

Analytical Method: SW-846 8260 B Prep Method: SW5030B

Seq Number: 154245 Matrix: Ground Water Date Prep: 06/13/2018

PSS Sample ID: 18060820-011

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	103		87-109	%	06/13/18 15:01
Dibromofluoromethane	101		93-111	%	06/13/18 15:01
Toluene-D8	100		91-109	%	06/13/18 15:01

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services

RTN

Analytical Method: SW-846 8270 C Prep Method: SW3510C

Seq Number: 154221 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-012

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	71		35-107	%	06/11/18 22:24
2-Fluorophenol	69		32-106	%	06/11/18 22:24
Nitrobenzene-d5	73		34-123	%	06/11/18 22:24
Phenol-d6	72		36-111	%	06/11/18 22:24
Terphenyl-D14	83		43-143	%	06/11/18 22:24
2,4,6-Tribromophenol	81		26-122	%	06/11/18 22:24

Analytical Method: SW-846 8015 C Prep Method: SW3510C

Seq Number: 154257 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-012

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	85		46-111	%	06/12/18 14:31

Analytical Method: SW-846 8015C Prep Method: SW5030B

Seq Number: 154171 Matrix: Ground Water Date Prep: 06/08/2018

PSS Sample ID: 18060820-012

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	83		56-107	%	06/09/18 05:53

Analytical Method: SW-846 8260 B Prep Method: SW5030B

Seq Number: 154245 Matrix: Ground Water Date Prep: 06/13/2018

PSS Sample ID: 18060820-012

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	101		87-109	%	06/13/18 15:21
Dibromofluoromethane	100		93-111	%	06/13/18 15:21
Toluene-D8	100		91-109	%	06/13/18 15:21

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services

RTN

Analytical Method: SW-846 8270 C Prep Method: SW3510C

Seq Number: 154221 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-013

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	56		35-107	%	06/11/18 22:51
2-Fluorophenol	56		32-106	%	06/11/18 22:51
Nitrobenzene-d5	59		34-123	%	06/11/18 22:51
Phenol-d6	58		36-111	%	06/11/18 22:51
Terphenyl-D14	73		43-143	%	06/11/18 22:51
2,4,6-Tribromophenol	71		26-122	%	06/11/18 22:51

Analytical Method: SW-846 8015 C Prep Method: SW3510C

Seq Number: 154256 Matrix: Ground Water Date Prep: 06/11/2018

PSS Sample ID: 18060820-013

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	102		46-111	%	06/12/18 14:31

Analytical Method: SW-846 8015C Prep Method: SW5030B

Seq Number: 154171 Matrix: Ground Water Date Prep: 06/08/2018

PSS Sample ID: 18060820-013

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	83		56-107	%	06/09/18 06:20

Analytical Method: SW-846 8260 B Prep Method: SW5030B

Seq Number: 154245 Matrix: Ground Water Date Prep: 06/13/2018

PSS Sample ID: 18060820-013

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	102		87-109	%	06/13/18 15:42
Dibromofluoromethane	101		93-111	%	06/13/18 15:42
Toluene-D8	100		91-109	%	06/13/18 15:42

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services
RTN

Analytical Method: SW-846 8270 C Prep Method: SW3510C
Seq Number: 154221 Matrix: Ground Water Date Prep: 06/11/2018
PSS Sample ID: 18060820-014

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	62		35-107	%	06/11/18 23:18
2-Fluorophenol	60		32-106	%	06/11/18 23:18
Nitrobenzene-d5	66		34-123	%	06/11/18 23:18
Phenol-d6	63		36-111	%	06/11/18 23:18
Terphenyl-D14	87		43-143	%	06/11/18 23:18
2,4,6-Tribromophenol	89		26-122	%	06/11/18 23:18

Analytical Method: SW-846 8015 C Prep Method: SW3510C
Seq Number: 154257 Matrix: Ground Water Date Prep: 06/11/2018
PSS Sample ID: 18060820-014

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	82		46-111	%	06/12/18 15:45

Analytical Method: SW-846 8015C Prep Method: SW5030B
Seq Number: 154171 Matrix: Ground Water Date Prep: 06/08/2018
PSS Sample ID: 18060820-014

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	81		56-107	%	06/09/18 06:48

Analytical Method: SW-846 8260 B Prep Method: SW5030B
Seq Number: 154245 Matrix: Ground Water Date Prep: 06/13/2018
PSS Sample ID: 18060820-014

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	101		87-109	%	06/13/18 16:03
Dibromofluoromethane	101		93-111	%	06/13/18 16:03
Toluene-D8	101		91-109	%	06/13/18 16:03

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
H= Recovery of BS,BSD or both exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services

RTN

Analytical Method: SW-846 8015 C Prep Method: SW3510C

Seq Number: 154257 Matrix: Water Date Prep: 06/11/18

MB Sample Id: 71824-1-BLK LCS Sample Id: 71824-1-BKS LCSD Sample Id: 71824-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-DRO (Diesel Range Organics)	<0.1000	1.000	0.9780	98	0.9988	100	41-123	2	20	mg/L	06/12/18 12:26	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	LCSD Result	LCSD Flag	Limits	Units	Analysis Date
o-Terphenyl	98		91		91		46-111	%	06/12/18 12:26

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services

RTN

Analytical Method: SW-846 8270 C Prep Method: SW3510C

Seq Number: 154221 Matrix: Water Date Prep: 06/11/18

MB Sample Id: 71827-1-BLK LCS Sample Id: 71827-1-BKS LCSD Sample Id: 71827-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Acenaphthene	<0.5000	40.00	29.89	75	32.51	81	67-110	8	20	ug/L	06/11/18 14:48	
Acenaphthylene	<0.5000	40.00	32.84	82	35.73	89	69-106	8	20	ug/L	06/11/18 14:48	
Acetophenone	<5.000	40.00	31.79	79	35.06	88	67-107	10	20	ug/L	06/11/18 14:48	
Anthracene	<0.5000	40.00	32.98	82	35.63	89	79-108	8	20	ug/L	06/11/18 14:48	
Atrazine	<5.000	40.00	76.18	190	78.92	197	17-98	4	20	ug/L	06/11/18 14:48	H
Benzo(a)anthracene	<0.5000	40.00	33.58	84	36.45	91	76-109	8	20	ug/L	06/11/18 14:48	
Benzo(a)pyrene	<0.5000	40.00	33.97	85	36.69	92	76-114	8	20	ug/L	06/11/18 14:48	
Benzo(b)fluoranthene	<0.5000	40.00	33.34	83	38.83	97	67-121	15	20	ug/L	06/11/18 14:48	
Benzo(g,h,i)perylene	<0.5000	40.00	31.82	80	33.12	83	75-107	4	20	ug/L	06/11/18 14:48	
Benzo(k)fluoranthene	<0.5000	40.00	36.54	91	38.23	96	62-132	5	20	ug/L	06/11/18 14:48	
Biphenyl (Diphenyl)	<5.000	40.00	32.73	82	37.18	93	71-108	13	20	ug/L	06/11/18 14:48	
Butyl benzyl phthalate	<5.000	40.00	37.85	95	44.20	111	74-117	15	20	ug/L	06/11/18 14:48	
bis(2-chloroethoxy) methane	<5.000	40.00	32.70	82	35.84	90	69-111	9	20	ug/L	06/11/18 14:48	
bis(2-chloroethyl) ether	<5.000	40.00	31.90	80	35.14	88	62-103	10	20	ug/L	06/11/18 14:48	
bis(2-chloroisopropyl) ether	<5.000	40.00	30.48	76	33.78	84	50-103	10	20	ug/L	06/11/18 14:48	
bis(2-ethylhexyl) phthalate	<5.000	40.00	35.80	90	41.34	103	78-114	14	20	ug/L	06/11/18 14:48	
4-Bromophenylphenyl ether	<5.000	40.00	34.08	85	37.39	93	82-108	9	20	ug/L	06/11/18 14:48	
Di-n-butyl phthalate	<5.000	40.00	36.53	91	39.38	98	71-115	8	20	ug/L	06/11/18 14:48	
Carbazole	<5.000	40.00	36.56	91	39.04	98	52-134	7	20	ug/L	06/11/18 14:48	
Caprolactam	<5.000	40.00	42.93	107	47.81	120	50-125	11	20	ug/L	06/11/18 14:48	
4-Chloro-3-methyl phenol	<5.000	40.00	37.15	93	40.01	100	72-121	7	20	ug/L	06/11/18 14:48	
4-Chloroaniline	<5.000	40.00	28.70	72	32.11	80	54-103	11	20	ug/L	06/11/18 14:48	
2-Chloronaphthalene	<5.000	40.00	29.95	75	33.31	83	66-105	11	20	ug/L	06/11/18 14:48	
2-Chlorophenol	<5.000	40.00	33.52	84	36.38	91	63-109	8	20	ug/L	06/11/18 14:48	
4-Chlorophenyl Phenyl ether	<5.000	40.00	32.61	82	35.35	88	73-100	8	20	ug/L	06/11/18 14:48	
Chrysene	<0.5000	40.00	33.42	84	36.19	90	78-111	8	20	ug/L	06/11/18 14:48	
Dibenz(a,h)Anthracene	<0.5000	40.00	34.26	86	35.77	89	76-106	4	20	ug/L	06/11/18 14:48	
Dibenzofuran	<5.000	40.00	31.11	78	33.98	85	70-111	9	20	ug/L	06/11/18 14:48	
3,3-Dichlorobenzidine	<5.000	40.00	41.59	104	45.88	115	79-132	10	20	ug/L	06/11/18 14:48	
2,4-Dichlorophenol	<5.000	40.00	33.31	83	36.69	92	65-118	10	20	ug/L	06/11/18 14:48	
Diethyl phthalate	<5.000	40.00	36.17	90	36.97	92	60-114	2	20	ug/L	06/11/18 14:48	
Dimethyl phthalate	<5.000	40.00	34.28	86	36.82	92	66-107	7	20	ug/L	06/11/18 14:48	
2,4-Dimethylphenol	<5.000	40.00	36.41	91	39.82	100	60-119	9	20	ug/L	06/11/18 14:48	
4,6-Dinitro-2-methyl phenol	<5.000	40.00	32.42	81	33.71	84	60-130	4	20	ug/L	06/11/18 14:48	
2,4-Dinitrophenol	<10.00	40.00	32.07	80	33.14	83	36-136	3	20	ug/L	06/11/18 14:48	
2,4-Dinitrotoluene	<5.000	40.00	37.13	93	39.52	99	70-119	6	20	ug/L	06/11/18 14:48	
2,6-Dinitrotoluene	<5.000	40.00	36.49	91	38.18	95	68-117	5	20	ug/L	06/11/18 14:48	
Fluoranthene	<0.5000	40.00	34.65	87	37.08	93	79-112	7	20	ug/L	06/11/18 14:48	
Fluorene	<0.5000	40.00	31.11	78	33.78	84	71-109	8	20	ug/L	06/11/18 14:48	
Hexachlorobenzene	<5.000	40.00	34.64	87	36.92	92	76-110	6	20	ug/L	06/11/18 14:48	
Hexachlorobutadiene	<5.000	40.00	32.02	80	34.95	87	64-113	9	20	ug/L	06/11/18 14:48	
Hexachlorocyclopentadiene	<5.000	40.00	29.39	73	32.18	80	49-124	9	20	ug/L	06/11/18 14:48	
Hexachloroethane	<5.000	40.00	32.46	81	35.51	89	62-105	9	20	ug/L	06/11/18 14:48	
Indeno(1,2,3-c,d)Pyrene	<0.5000	40.00	30.05	75	31.10	78	69-120	3	20	ug/L	06/11/18 14:48	
Isophorone	<5.000	40.00	32.02	80	35.12	88	68-108	9	20	ug/L	06/11/18 14:48	
2-Methylnaphthalene	<0.5000	40.00	31.72	79	34.94	87	64-117	10	20	ug/L	06/11/18 14:48	
2-Methyl phenol	<5.000	40.00	33.34	83	36.31	91	67-111	9	20	ug/L	06/11/18 14:48	
3&4-Methylphenol	<5.000	40.00	33.29	83	36.48	91	67-107	9	20	ug/L	06/11/18 14:48	
Naphthalene	<0.5000	40.00	29.32	73	32.27	81	65-103	10	20	ug/L	06/11/18 14:48	
2-Nitroaniline	<5.000	40.00	34.33	86	37.57	94	59-114	9	20	ug/L	06/11/18 14:48	
3-Nitroaniline	<5.000	40.00	32.29	81	34.61	87	60-109	7	20	ug/L	06/11/18 14:48	

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services

RTN

Analytical Method: SW-846 8270 C Prep Method: SW3510C

Seq Number: 154221 Matrix: Water Date Prep: 06/11/18

MB Sample Id: 71827-1-BLK LCS Sample Id: 71827-1-BKS LCSD Sample Id: 71827-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
4-Nitroaniline	<5.000	40.00	39.60	99	40.33	101	51-125	2	20	ug/L	06/11/18 14:48	
Nitrobenzene	<5.000	40.00	31.25	78	34.69	87	60-107	10	20	ug/L	06/11/18 14:48	
2-Nitrophenol	<5.000	40.00	34.45	86	37.91	95	65-119	10	20	ug/L	06/11/18 14:48	
4-Nitrophenol	<5.000	40.00	34.65	87	36.05	90	46-121	4	20	ug/L	06/11/18 14:48	
N-Nitrosodi-n-propyl amine	<5.000	40.00	32.80	82	35.80	90	60-98	9	20	ug/L	06/11/18 14:48	
N-Nitrosodiphenylamine	<5.000	40.00	34.52	86	36.08	90	68-106	4	20	ug/L	06/11/18 14:48	
Di-n-octyl phthalate	<5.000	40.00	40.34	101	48.92	122	69-120	19	20	ug/L	06/11/18 14:48	H
Pentachlorophenol	<5.000	40.00	39.75	99	40.59	101	63-119	2	20	ug/L	06/11/18 14:48	
Phenanthrene	<0.5000	40.00	30.89	77	33.45	84	73-109	8	20	ug/L	06/11/18 14:48	
Phenol	<5.000	40.00	33.81	85	37.02	93	65-110	9	20	ug/L	06/11/18 14:48	
Pyrene	<0.5000	40.00	31.20	78	36.00	90	78-111	14	20	ug/L	06/11/18 14:48	
Pyridine	<5.000	40.00	29.38	73	32.57	81	47-105	10	20	ug/L	06/11/18 14:48	
2,4,5-Trichlorophenol	<5.000	40.00	38.84	97	42.29	106	69-114	9	20	ug/L	06/11/18 14:48	
2,4,6-Trichlorophenol	<5.000	40.00	35.41	89	39.50	99	68-118	11	20	ug/L	06/11/18 14:48	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	LCSD Result	LCSD Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	83		82		83		35-107	%	06/11/18 14:48
2-Fluorophenol	90		82		83		32-106	%	06/11/18 14:48
Nitrobenzene-d5	90		84		85		34-123	%	06/11/18 14:48
Phenol-d6	88		83		83		36-111	%	06/11/18 14:48
Terphenyl-D14	80		78		81		43-143	%	06/11/18 14:48
2,4,6-Tribromophenol	72		101		97		26-122	%	06/11/18 14:48

Analytical Method: SW-846 8015C Prep Method: SW5030B

Seq Number: 154171 Matrix: Water Date Prep: 06/08/18

MB Sample Id: 71836-2-BLK LCS Sample Id: 71836-2-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
TPH-GRO (Gasoline Range Organics	<100	5000	4900	98	58-141	ug/L	06/09/18 00:03	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	83		91		56-107	%	06/09/18 00:03

Analytical Method: SW-846 8015C Prep Method: SW5030B

Seq Number: 154171 Matrix: Ground Water Date Prep: 06/08/18

Parent Sample Id: 18060820-001 MS Sample Id: 18060820-001 S MSD Sample Id: 18060820-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-GRO (Gasoline Range Organics	<100	5000	4600	92	4600	92	54-129	0	25	ug/L	06/09/18 07:15	

Surrogate	MS Result	MS Flag	MSD Result	MSD Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	88		89		56-107	%	06/09/18 07:15

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services

RTN

Analytical Method: SW-846 8260 B Prep Method: SW5030B

Seq Number: 154209 Matrix: Water Date Prep: 06/11/18

MB Sample Id: 71850-1-BLK LCS Sample Id: 71850-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Acetone	<10.00	50.00	40.37	81	55-120	ug/L	06/11/18 11:13	
Benzene	<1.000	50.00	52.43	105	87-123	ug/L	06/11/18 11:13	
Bromochloromethane	<1.000	50.00	53.33	107	74-136	ug/L	06/11/18 11:13	
Bromodichloromethane	<1.000	50.00	47.51	95	83-125	ug/L	06/11/18 11:13	
Bromoform	<5.000	50.00	44.70	89	72-129	ug/L	06/11/18 11:13	
Bromomethane	<1.000	50.00	34.55	69	45-167	ug/L	06/11/18 11:13	
2-Butanone (MEK)	<10.00	50.00	40.88	82	45-136	ug/L	06/11/18 11:13	
Carbon Disulfide	<10.00	50.00	44.42	89	87-123	ug/L	06/11/18 11:13	
Carbon tetrachloride	<1.000	50.00	48.76	98	79-133	ug/L	06/11/18 11:13	
Chlorobenzene	<1.000	50.00	53.89	108	87-127	ug/L	06/11/18 11:13	
Chloroethane	<1.000	50.00	55.96	112	81-122	ug/L	06/11/18 11:13	
Chloroform	<1.000	50.00	47.95	96	76-129	ug/L	06/11/18 11:13	
Chloromethane	<1.000	50.00	44.59	89	59-121	ug/L	06/11/18 11:13	
Cyclohexane	<10.00	50.00	63.69	127	83-122	ug/L	06/11/18 11:13	H
1,2-Dibromo-3-chloropropane	<5.000	50.00	41.69	83	63-140	ug/L	06/11/18 11:13	
Dibromochloromethane	<1.000	50.00	45.68	91	73-139	ug/L	06/11/18 11:13	
1,2-Dibromoethane	<1.000	50.00	49.01	98	80-127	ug/L	06/11/18 11:13	
1,2-Dichlorobenzene	<1.000	50.00	55.98	112	82-129	ug/L	06/11/18 11:13	
1,3-Dichlorobenzene	<1.000	50.00	56.20	112	88-127	ug/L	06/11/18 11:13	
Dichlorodifluoromethane	<1.000	50.00	48.24	96	70-131	ug/L	06/11/18 11:13	
1,4-Dichlorobenzene	<1.000	50.00	54.36	109	84-129	ug/L	06/11/18 11:13	
1,1-Dichloroethane	<1.000	50.00	48.63	97	85-120	ug/L	06/11/18 11:13	
1,2-Dichloroethane	<1.000	50.00	52.04	104	86-125	ug/L	06/11/18 11:13	
cis-1,2-Dichloroethene	<1.000	50.00	50.56	101	86-126	ug/L	06/11/18 11:13	
1,1-Dichloroethene	<1.000	50.00	48.42	97	85-123	ug/L	06/11/18 11:13	
1,2-Dichloropropane	<1.000	50.00	52.66	105	83-120	ug/L	06/11/18 11:13	
cis-1,3-Dichloropropene	<1.000	50.00	47.37	95	81-125	ug/L	06/11/18 11:13	
trans-1,3-Dichloropropene	<1.000	50.00	45.91	92	79-121	ug/L	06/11/18 11:13	
trans-1,2-Dichloroethene	<1.000	50.00	49.53	99	87-120	ug/L	06/11/18 11:13	
Ethylbenzene	<1.000	50.00	56.45	113	82-128	ug/L	06/11/18 11:13	
2-Hexanone (MBK)	<5.000	50.00	46.42	93	56-116	ug/L	06/11/18 11:13	
Isopropylbenzene	<1.000	50.00	53.35	107	81-128	ug/L	06/11/18 11:13	
Methyl Acetate	<10.00	50.00	37.56	75	68-129	ug/L	06/11/18 11:13	
Methylcyclohexane	<10.00	50.00	57.77	116	84-127	ug/L	06/11/18 11:13	
Methylene chloride	<1.000	50.00	41.26	83	85-119	ug/L	06/11/18 11:13	L
4-Methyl-2-Pentanone (MIBK)	<5.000	50.00	43.55	87	57-116	ug/L	06/11/18 11:13	
Methyl-t-Butyl Ether	<1.000	50.00	49.60	99	61-130	ug/L	06/11/18 11:13	
Naphthalene	<1.000	50.00	48.75	98	74-114	ug/L	06/11/18 11:13	
Styrene	<1.000	50.00	45.80	92	76-130	ug/L	06/11/18 11:13	
1,1,2,2-Tetrachloroethane	<1.000	50.00	53.35	107	79-131	ug/L	06/11/18 11:13	
Tetrachloroethene	<1.000	50.00	56.23	112	85-131	ug/L	06/11/18 11:13	
Toluene	<1.000	50.00	53.52	107	82-127	ug/L	06/11/18 11:13	
1,2,3-Trichlorobenzene	<1.000	50.00	58.14	116	79-123	ug/L	06/11/18 11:13	
1,2,4-Trichlorobenzene	<1.000	50.00	58.26	117	78-123	ug/L	06/11/18 11:13	
1,1,1-Trichloroethane	<1.000	50.00	48.41	97	87-125	ug/L	06/11/18 11:13	
Trichloroethene	<1.000	50.00	51.86	104	87-124	ug/L	06/11/18 11:13	
1,1,2-Trichloroethane	<1.000	50.00	51.47	103	84-127	ug/L	06/11/18 11:13	
Trichlorofluoromethane	<5.000	50.00	49.16	98	85-130	ug/L	06/11/18 11:13	
1,1,2-Trichlorotrifluoroethane	<1.000	50.00	50.41	101	81-132	ug/L	06/11/18 11:13	
Vinyl chloride	<1.000	50.00	47.41	95	66-133	ug/L	06/11/18 11:13	
m&p-Xylene	<2.000	100	101.9	102	78-126	ug/L	06/11/18 11:13	

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services

RTN

Analytical Method: SW-846 8260 B Prep Method: SW5030B

Seq Number: 154209 Matrix: Water Date Prep: 06/11/18

MB Sample Id: 71850-1-BLK LCS Sample Id: 71850-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
o-Xylene	<1.000	50.00	50.92	102	75-130	ug/L	06/11/18 11:13	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	100		99		87-109	%	06/11/18 11:13
Dibromofluoromethane	98		95		93-111	%	06/11/18 11:13
Toluene-D8	101		99		91-109	%	06/11/18 11:13

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services

RTN

Analytical Method: SW-846 8260 B Prep Method: SW5030B

Seq Number: 154245 Matrix: Water Date Prep: 06/13/18

MB Sample Id: 71869-1-BLK LCS Sample Id: 71869-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Acetone	<10.00	50.00	46.44	93	55-120	ug/L	06/13/18 08:40	
Benzene	<1.000	50.00	50.28	101	87-123	ug/L	06/13/18 08:40	
Bromochloromethane	<1.000	50.00	51.01	102	74-136	ug/L	06/13/18 08:40	
Bromodichloromethane	<1.000	50.00	51.69	103	83-125	ug/L	06/13/18 08:40	
Bromoform	<5.000	50.00	50.76	102	72-129	ug/L	06/13/18 08:40	
Bromomethane	<1.000	50.00	49.44	99	45-167	ug/L	06/13/18 08:40	
2-Butanone (MEK)	<10.00	50.00	43.61	87	45-136	ug/L	06/13/18 08:40	
Carbon Disulfide	<10.00	50.00	48.19	96	87-123	ug/L	06/13/18 08:40	
Carbon tetrachloride	<1.000	50.00	52.67	105	79-133	ug/L	06/13/18 08:40	
Chlorobenzene	<1.000	50.00	50.89	102	87-127	ug/L	06/13/18 08:40	
Chloroethane	<1.000	50.00	48.43	97	81-122	ug/L	06/13/18 08:40	
Chloroform	<1.000	50.00	46.70	93	76-129	ug/L	06/13/18 08:40	
Chloromethane	<1.000	50.00	48.49	97	59-121	ug/L	06/13/18 08:40	
Cyclohexane	<10.00	50.00	53.28	107	83-122	ug/L	06/13/18 08:40	
1,2-Dibromo-3-chloropropane	<5.000	50.00	45.19	90	63-140	ug/L	06/13/18 08:40	
Dibromochloromethane	<1.000	50.00	45.25	91	73-139	ug/L	06/13/18 08:40	
1,2-Dibromoethane	<1.000	50.00	51.47	103	80-127	ug/L	06/13/18 08:40	
1,2-Dichlorobenzene	<1.000	50.00	51.73	103	82-129	ug/L	06/13/18 08:40	
1,3-Dichlorobenzene	<1.000	50.00	51.63	103	88-127	ug/L	06/13/18 08:40	
Dichlorodifluoromethane	<1.000	50.00	51.23	102	70-131	ug/L	06/13/18 08:40	
1,4-Dichlorobenzene	<1.000	50.00	50.88	102	84-129	ug/L	06/13/18 08:40	
1,1-Dichloroethane	<1.000	50.00	51.15	102	85-120	ug/L	06/13/18 08:40	
1,2-Dichloroethane	<1.000	50.00	49.28	99	86-125	ug/L	06/13/18 08:40	
cis-1,2-Dichloroethene	<1.000	50.00	49.97	100	86-126	ug/L	06/13/18 08:40	
1,1-Dichloroethene	<1.000	50.00	50.33	101	85-123	ug/L	06/13/18 08:40	
1,2-Dichloropropane	<1.000	50.00	50.01	100	83-120	ug/L	06/13/18 08:40	
cis-1,3-Dichloropropene	<1.000	50.00	45.32	91	81-125	ug/L	06/13/18 08:40	
trans-1,3-Dichloropropene	<1.000	50.00	44.56	89	79-121	ug/L	06/13/18 08:40	
trans-1,2-Dichloroethene	<1.000	50.00	48.97	98	87-120	ug/L	06/13/18 08:40	
Ethylbenzene	<1.000	50.00	49.75	100	82-128	ug/L	06/13/18 08:40	
2-Hexanone (MBK)	<5.000	50.00	42.33	85	56-116	ug/L	06/13/18 08:40	
Isopropylbenzene	<1.000	50.00	55.85	112	81-128	ug/L	06/13/18 08:40	
Methyl Acetate	<10.00	50.00	48.55	97	68-129	ug/L	06/13/18 08:40	
Methylcyclohexane	<10.00	50.00	48.80	98	84-127	ug/L	06/13/18 08:40	
Methylene chloride	<1.000	50.00	47.22	94	85-119	ug/L	06/13/18 08:40	
4-Methyl-2-Pentanone (MIBK)	<5.000	50.00	41.92	84	57-116	ug/L	06/13/18 08:40	
Methyl-t-Butyl Ether	<1.000	50.00	50.19	100	61-130	ug/L	06/13/18 08:40	
Naphthalene	<1.000	50.00	48.94	98	74-114	ug/L	06/13/18 08:40	
Styrene	<1.000	50.00	47.37	95	76-130	ug/L	06/13/18 08:40	
1,1,2,2-Tetrachloroethane	<1.000	50.00	48.50	97	79-131	ug/L	06/13/18 08:40	
Tetrachloroethene	<1.000	50.00	50.60	101	85-131	ug/L	06/13/18 08:40	
Toluene	<1.000	50.00	51.29	103	82-127	ug/L	06/13/18 08:40	
1,2,3-Trichlorobenzene	<1.000	50.00	53.23	106	79-123	ug/L	06/13/18 08:40	
1,2,4-Trichlorobenzene	<1.000	50.00	52.65	105	78-123	ug/L	06/13/18 08:40	
1,1,1-Trichloroethane	<1.000	50.00	50.61	101	87-125	ug/L	06/13/18 08:40	
Trichloroethene	<1.000	50.00	50.52	101	87-124	ug/L	06/13/18 08:40	
1,1,2-Trichloroethane	<1.000	50.00	50.30	101	84-127	ug/L	06/13/18 08:40	
Trichlorofluoromethane	<5.000	50.00	50.91	102	85-130	ug/L	06/13/18 08:40	
1,1,2-Trichlorotrifluoroethane	<1.000	50.00	50.80	102	81-132	ug/L	06/13/18 08:40	
Vinyl chloride	<1.000	50.00	49.28	99	66-133	ug/L	06/13/18 08:40	
m&p-Xylene	<2.000	100	96.28	96	78-126	ug/L	06/13/18 08:40	

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services

RTN

Analytical Method: SW-846 8260 B Prep Method: SW5030B

Seq Number: 154245 Matrix: Water Date Prep: 06/13/18

MB Sample Id: 71869-1-BLK LCS Sample Id: 71869-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
o-Xylene	<1.000	50.00	47.81	96	75-130	ug/L	06/13/18 08:40	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	104		100		87-109	%	06/13/18 08:40
Dibromofluoromethane	102		99		93-111	%	06/13/18 08:40
Toluene-D8	101		99		91-109	%	06/13/18 08:40

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services

RTN

Analytical Method: SW-846 8260 B Prep Method: SW5030B

Seq Number: 154341 Matrix: Water Date Prep: 06/14/18

MB Sample Id: 71919-1-BLK LCS Sample Id: 71919-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Acetone	<10.00	50.00	47.47	95	55-120	ug/L	06/14/18 08:54	
Benzene	<1.000	50.00	50.67	101	87-123	ug/L	06/14/18 08:54	
Bromochloromethane	<1.000	50.00	52.17	104	74-136	ug/L	06/14/18 08:54	
Bromodichloromethane	<1.000	50.00	52.74	105	83-125	ug/L	06/14/18 08:54	
Bromoform	<5.000	50.00	51.83	104	72-129	ug/L	06/14/18 08:54	
Bromomethane	<1.000	50.00	35.35	71	45-167	ug/L	06/14/18 08:54	
2-Butanone (MEK)	<10.00	50.00	43.65	87	45-136	ug/L	06/14/18 08:54	
Carbon Disulfide	<10.00	50.00	51.31	103	87-123	ug/L	06/14/18 08:54	
Carbon tetrachloride	<1.000	50.00	53.61	107	79-133	ug/L	06/14/18 08:54	
Chlorobenzene	<1.000	50.00	51.23	102	87-127	ug/L	06/14/18 08:54	
Chloroethane	<1.000	50.00	51.55	103	81-122	ug/L	06/14/18 08:54	
Chloroform	<1.000	50.00	47.04	94	76-129	ug/L	06/14/18 08:54	
Chloromethane	<1.000	50.00	44.38	89	59-121	ug/L	06/14/18 08:54	
Cyclohexane	<10.00	50.00	53.00	106	83-122	ug/L	06/14/18 08:54	
1,2-Dibromo-3-chloropropane	<5.000	50.00	43.58	87	63-140	ug/L	06/14/18 08:54	
Dibromochloromethane	<1.000	50.00	45.63	91	73-139	ug/L	06/14/18 08:54	
1,2-Dibromoethane	<1.000	50.00	52.39	105	80-127	ug/L	06/14/18 08:54	
1,2-Dichlorobenzene	<1.000	50.00	51.98	104	82-129	ug/L	06/14/18 08:54	
1,3-Dichlorobenzene	<1.000	50.00	51.17	102	88-127	ug/L	06/14/18 08:54	
Dichlorodifluoromethane	<1.000	50.00	51.26	103	70-131	ug/L	06/14/18 08:54	
1,4-Dichlorobenzene	<1.000	50.00	50.39	101	84-129	ug/L	06/14/18 08:54	
1,1-Dichloroethane	<1.000	50.00	50.47	101	85-120	ug/L	06/14/18 08:54	
1,2-Dichloroethane	<1.000	50.00	50.20	100	86-125	ug/L	06/14/18 08:54	
cis-1,2-Dichloroethene	<1.000	50.00	50.44	101	86-126	ug/L	06/14/18 08:54	
1,1-Dichloroethene	<1.000	50.00	51.91	104	85-123	ug/L	06/14/18 08:54	
1,2-Dichloropropane	<1.000	50.00	50.88	102	83-120	ug/L	06/14/18 08:54	
cis-1,3-Dichloropropene	<1.000	50.00	46.39	93	81-125	ug/L	06/14/18 08:54	
trans-1,3-Dichloropropene	<1.000	50.00	45.34	91	79-121	ug/L	06/14/18 08:54	
trans-1,2-Dichloroethene	<1.000	50.00	50.27	101	87-120	ug/L	06/14/18 08:54	
Ethylbenzene	<1.000	50.00	50.03	100	82-128	ug/L	06/14/18 08:54	
2-Hexanone (MBK)	<5.000	50.00	42.71	85	56-116	ug/L	06/14/18 08:54	
Isopropylbenzene	<1.000	50.00	55.06	110	81-128	ug/L	06/14/18 08:54	
Methyl Acetate	<10.00	50.00	49.50	99	68-129	ug/L	06/14/18 08:54	
Methylcyclohexane	<10.00	50.00	49.43	99	84-127	ug/L	06/14/18 08:54	
Methylene chloride	<1.000	50.00	49.70	99	85-119	ug/L	06/14/18 08:54	
4-Methyl-2-Pentanone (MIBK)	<5.000	50.00	42.29	85	57-116	ug/L	06/14/18 08:54	
Methyl-t-Butyl Ether	<1.000	50.00	52.12	104	61-130	ug/L	06/14/18 08:54	
Naphthalene	<1.000	50.00	48.48	97	74-114	ug/L	06/14/18 08:54	
Styrene	<1.000	50.00	47.87	96	76-130	ug/L	06/14/18 08:54	
1,1,2,2-Tetrachloroethane	<1.000	50.00	48.01	96	79-131	ug/L	06/14/18 08:54	
Tetrachloroethene	<1.000	50.00	51.28	103	85-131	ug/L	06/14/18 08:54	
Toluene	<1.000	50.00	52.75	106	82-127	ug/L	06/14/18 08:54	
1,2,3-Trichlorobenzene	<1.000	50.00	53.37	107	79-123	ug/L	06/14/18 08:54	
1,2,4-Trichlorobenzene	<1.000	50.00	52.90	106	78-123	ug/L	06/14/18 08:54	
1,1,1-Trichloroethane	<1.000	50.00	52.06	104	87-125	ug/L	06/14/18 08:54	
Trichloroethene	<1.000	50.00	51.52	103	87-124	ug/L	06/14/18 08:54	
1,1,2-Trichloroethane	<1.000	50.00	51.03	102	84-127	ug/L	06/14/18 08:54	
Trichlorofluoromethane	<5.000	50.00	52.03	104	85-130	ug/L	06/14/18 08:54	
1,1,2-Trichlorotrifluoroethane	<1.000	50.00	52.64	105	81-132	ug/L	06/14/18 08:54	
Vinyl chloride	<1.000	50.00	48.49	97	66-133	ug/L	06/14/18 08:54	
m&p-Xylene	<2.000	100	97.70	98	78-126	ug/L	06/14/18 08:54	

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services

RTN

Analytical Method: SW-846 8260 B Prep Method: SW5030B

Seq Number: 154341 Matrix: Water Date Prep: 06/14/18

MB Sample Id: 71919-1-BLK LCS Sample Id: 71919-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
o-Xylene	<1.000	50.00	48.41	97	75-130	ug/L	06/14/18 08:54	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	103		98		87-109	%	06/14/18 08:54
Dibromofluoromethane	101		101		93-111	%	06/14/18 08:54
Toluene-D8	100		102		91-109	%	06/14/18 08:54

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services

RTN

Analytical Method: SW-846 8260 B Prep Method: SW5030B

Seq Number: 154245 Matrix: Ground Water Date Prep: 06/13/18

Parent Sample Id: 18060820-003 MS Sample Id: 18060820-003 S MSD Sample Id: 18060820-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Acetone	<10.00	50.00	46.23	92	49.71	99	50-156	7	25	ug/L	06/13/18 10:51	
Benzene	<1.000	50.00	50.05	100	51.37	103	77-143	3	25	ug/L	06/13/18 10:51	
Bromochloromethane	<1.000	50.00	49.48	99	50.70	101	83-133	2	25	ug/L	06/13/18 10:51	
Bromodichloromethane	<1.000	50.00	51.39	103	52.11	104	75-142	1	25	ug/L	06/13/18 10:51	
Bromoform	<5.000	50.00	50.53	101	51.39	103	74-131	2	25	ug/L	06/13/18 10:51	
Bromomethane	<1.000	50.00	48.27	97	50.43	101	48-166	4	25	ug/L	06/13/18 10:51	
2-Butanone (MEK)	<10.00	50.00	44.06	88	47.38	95	68-127	7	25	ug/L	06/13/18 10:51	
Carbon Disulfide	<10.00	50.00	47.57	95	48.54	97	73-148	2	25	ug/L	06/13/18 10:51	
Carbon tetrachloride	<1.000	50.00	51.75	104	52.95	106	76-144	2	25	ug/L	06/13/18 10:51	
Chlorobenzene	<1.000	50.00	50.07	100	50.66	101	73-150	1	25	ug/L	06/13/18 10:51	
Chloroethane	<1.000	50.00	48.60	97	50.26	101	72-142	3	25	ug/L	06/13/18 10:51	
Chloroform	<1.000	50.00	46.33	93	46.97	94	81-134	1	25	ug/L	06/13/18 10:51	
Chloromethane	<1.000	50.00	48.31	97	49.02	98	46-143	1	25	ug/L	06/13/18 10:51	
Cyclohexane	<10.00	50.00	51.93	104	52.71	105	75-138	1	25	ug/L	06/13/18 10:51	
1,2-Dibromo-3-chloropropane	<5.000	50.00	47.25	95	46.81	94	73-135	1	25	ug/L	06/13/18 10:51	
Dibromochloromethane	<1.000	50.00	44.65	89	45.06	90	81-137	1	25	ug/L	06/13/18 10:51	
1,2-Dibromoethane	<1.000	50.00	51.67	103	52.65	105	68-149	2	25	ug/L	06/13/18 10:51	
1,2-Dichlorobenzene	<1.000	50.00	49.78	100	50.12	100	66-146	1	25	ug/L	06/13/18 10:51	
1,3-Dichlorobenzene	<1.000	50.00	49.68	99	50.16	100	61-154	1	25	ug/L	06/13/18 10:51	
Dichlorodifluoromethane	<1.000	50.00	49.07	98	50.33	101	60-148	3	25	ug/L	06/13/18 10:51	
1,4-Dichlorobenzene	<1.000	50.00	48.36	97	48.83	98	64-150	1	25	ug/L	06/13/18 10:51	
1,1-Dichloroethane	<1.000	50.00	48.84	98	49.23	98	76-139	1	25	ug/L	06/13/18 10:51	
1,2-Dichloroethane	<1.000	50.00	49.70	99	50.61	101	81-139	2	25	ug/L	06/13/18 10:51	
cis-1,2-Dichloroethene	<1.000	50.00	49.15	98	49.96	100	80-142	2	25	ug/L	06/13/18 10:51	
1,1-Dichloroethene	<1.000	50.00	49.30	99	50.63	101	74-142	3	25	ug/L	06/13/18 10:51	
1,2-Dichloropropane	<1.000	50.00	49.92	100	50.86	102	73-138	2	25	ug/L	06/13/18 10:51	
cis-1,3-Dichloropropene	<1.000	50.00	44.34	89	45.72	91	64-149	3	25	ug/L	06/13/18 10:51	
trans-1,3-Dichloropropene	<1.000	50.00	43.56	87	44.76	90	67-135	3	25	ug/L	06/13/18 10:51	
trans-1,2-Dichloroethene	<1.000	50.00	48.50	97	49.66	99	75-142	2	25	ug/L	06/13/18 10:51	
Ethylbenzene	<1.000	50.00	49.24	98	49.67	99	68-151	1	25	ug/L	06/13/18 10:51	
2-Hexanone (MBK)	<5.000	50.00	44.38	89	47.17	94	43-147	6	25	ug/L	06/13/18 10:51	
Isopropylbenzene	<1.000	50.00	54.41	109	54.56	109	67-148	0	25	ug/L	06/13/18 10:51	
Methyl Acetate	<10.00	50.00	49.53	99	50.59	101	69-133	2	25	ug/L	06/13/18 10:51	
Methylcyclohexane	<10.00	50.00	46.79	94	47.41	95	62-152	1	25	ug/L	06/13/18 10:51	
Methylene chloride	<1.000	50.00	46.83	94	47.52	95	73-141	1	25	ug/L	06/13/18 10:51	
4-Methyl-2-Pentanone (MIBK)	<5.000	50.00	43.81	88	47.27	95	61-125	8	25	ug/L	06/13/18 10:51	
Methyl-t-Butyl Ether	4.770	50.00	54.52	100	55.90	102	45-143	2	25	ug/L	06/13/18 10:51	
Naphthalene	<1.000	50.00	48.65	97	50.57	101	40-145	4	25	ug/L	06/13/18 10:51	
Styrene	<1.000	50.00	46.23	92	47.18	94	72-135	2	25	ug/L	06/13/18 10:51	
1,1,2,2-Tetrachloroethane	<1.000	50.00	49.24	98	49.94	100	70-150	1	25	ug/L	06/13/18 10:51	
Tetrachloroethene	<1.000	50.00	48.84	98	49.76	100	55-166	2	25	ug/L	06/13/18 10:51	
Toluene	<1.000	50.00	50.77	102	52.10	104	68-152	3	25	ug/L	06/13/18 10:51	
1,2,3-Trichlorobenzene	<1.000	50.00	50.47	101	52.38	105	21-172	4	25	ug/L	06/13/18 10:51	
1,2,4-Trichlorobenzene	<1.000	50.00	49.78	100	51.12	102	16-172	3	25	ug/L	06/13/18 10:51	
1,1,1-Trichloroethane	<1.000	50.00	50.51	101	51.29	103	80-143	2	25	ug/L	06/13/18 10:51	
Trichloroethene	<1.000	50.00	49.28	99	50.79	102	73-148	3	25	ug/L	06/13/18 10:51	
1,1,2-Trichloroethane	<1.000	50.00	50.53	101	51.18	102	68-154	1	25	ug/L	06/13/18 10:51	
Trichlorofluoromethane	<5.000	50.00	50.08	100	51.07	102	80-145	2	25	ug/L	06/13/18 10:51	
1,1,2-Trichlorotrifluoroethane	<1.000	50.00	48.66	97	49.12	98	73-147	1	25	ug/L	06/13/18 10:51	
Vinyl chloride	<1.000	50.00	49.48	99	50.37	101	79-128	2	25	ug/L	06/13/18 10:51	
m&p-Xylene	<2.000	100	95.23	95	96.46	96	70-138	1	25	ug/L	06/13/18 10:51	

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services

RTN

Analytical Method: SW-846 8260 B Prep Method: SW5030B

Seq Number: 154245 Matrix: Ground Water Date Prep: 06/13/18

Parent Sample Id: 18060820-003 MS Sample Id: 18060820-003 S MSD Sample Id: 18060820-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
o-Xylene	<1.000	50.00	47.24	94	47.77	96	71-139	1	25	ug/L	06/13/18 10:51	

Surrogate	MS Result	MS Flag	MSD Result	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	100		98		87-109	%	06/13/18 10:51
Dibromofluoromethane	99		99		93-111	%	06/13/18 10:51
Toluene-D8	100		100		91-109	%	06/13/18 10:51

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services

RTN

Analytical Method: SW-846 8260 B Prep Method: SW5030B

Seq Number: 154341 Matrix: Ground Water Date Prep: 06/14/18

Parent Sample Id: 18060820-008 MS Sample Id: 18060820-008 S MSD Sample Id: 18060820-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Acetone	<10.00	50.00	48.62	97	48.96	98	50-156	1	25	ug/L	06/14/18 14:14	
Benzene	1.610	50.00	55.88	109	55.40	108	77-143	1	25	ug/L	06/14/18 14:14	
Bromochloromethane	<1.000	50.00	54.14	108	53.73	107	83-133	1	25	ug/L	06/14/18 14:14	
Bromodichloromethane	<1.000	50.00	55.65	111	55.86	112	75-142	0	25	ug/L	06/14/18 14:14	
Bromoform	<5.000	50.00	56.34	113	56.59	113	74-131	0	25	ug/L	06/14/18 14:14	
Bromomethane	<1.000	50.00	41.49	83	44.82	90	48-166	8	25	ug/L	06/14/18 14:14	
2-Butanone (MEK)	<10.00	50.00	44.27	89	44.60	89	68-127	1	25	ug/L	06/14/18 14:14	
Carbon Disulfide	<10.00	50.00	53.12	106	52.73	105	73-148	1	25	ug/L	06/14/18 14:14	
Carbon tetrachloride	<1.000	50.00	56.08	112	55.37	111	76-144	1	25	ug/L	06/14/18 14:14	
Chlorobenzene	<1.000	50.00	53.68	107	53.09	106	73-150	1	25	ug/L	06/14/18 14:14	
Chloroethane	<1.000	50.00	51.25	103	51.85	104	72-142	1	25	ug/L	06/14/18 14:14	
Chloroform	43.25	50.00	93.42	100	92.40	98	81-134	1	25	ug/L	06/14/18 14:14	
Chloromethane	<1.000	50.00	47.21	94	47.40	95	46-143	0	25	ug/L	06/14/18 14:14	
Cyclohexane	<10.00	50.00	56.11	112	54.80	110	75-138	2	25	ug/L	06/14/18 14:14	
1,2-Dibromo-3-chloropropane	<5.000	50.00	52.25	105	54.98	110	73-135	5	25	ug/L	06/14/18 14:14	
Dibromochloromethane	<1.000	50.00	49.05	98	48.74	97	81-137	1	25	ug/L	06/14/18 14:14	
1,2-Dibromoethane	<1.000	50.00	55.89	112	56.18	112	68-149	1	25	ug/L	06/14/18 14:14	
1,2-Dichlorobenzene	<1.000	50.00	53.24	106	53.00	106	66-146	0	25	ug/L	06/14/18 14:14	
1,3-Dichlorobenzene	<1.000	50.00	52.99	106	52.36	105	61-154	1	25	ug/L	06/14/18 14:14	
Dichlorodifluoromethane	<1.000	50.00	51.72	103	50.66	101	60-148	2	25	ug/L	06/14/18 14:14	
1,4-Dichlorobenzene	<1.000	50.00	51.30	103	51.21	102	64-150	0	25	ug/L	06/14/18 14:14	
1,1-Dichloroethane	<1.000	50.00	52.67	105	52.27	105	76-139	1	25	ug/L	06/14/18 14:14	
1,2-Dichloroethane	<1.000	50.00	53.62	107	53.20	106	81-139	1	25	ug/L	06/14/18 14:14	
cis-1,2-Dichloroethene	<1.000	50.00	52.70	105	52.71	105	80-142	0	25	ug/L	06/14/18 14:14	
1,1-Dichloroethene	<1.000	50.00	52.55	105	53.03	106	74-142	1	25	ug/L	06/14/18 14:14	
1,2-Dichloropropane	<1.000	50.00	53.90	108	53.72	107	73-138	0	25	ug/L	06/14/18 14:14	
cis-1,3-Dichloropropene	<1.000	50.00	48.58	97	48.71	97	64-149	0	25	ug/L	06/14/18 14:14	
trans-1,3-Dichloropropene	<1.000	50.00	47.68	95	47.79	96	67-135	0	25	ug/L	06/14/18 14:14	
trans-1,2-Dichloroethene	<1.000	50.00	52.42	105	51.62	103	75-142	2	25	ug/L	06/14/18 14:14	
Ethylbenzene	<1.000	50.00	52.41	105	52.15	104	68-151	0	25	ug/L	06/14/18 14:14	
2-Hexanone (MBK)	<5.000	50.00	44.41	89	45.32	91	43-147	2	25	ug/L	06/14/18 14:14	
Isopropylbenzene	<1.000	50.00	57.89	116	57.01	114	67-148	2	25	ug/L	06/14/18 14:14	
Methyl Acetate	<10.00	50.00	55.53	111	56.35	113	69-133	1	25	ug/L	06/14/18 14:14	
Methylcyclohexane	<10.00	50.00	50.39	101	49.26	99	62-152	2	25	ug/L	06/14/18 14:14	
Methylene chloride	<1.000	50.00	52.27	105	51.74	103	73-141	1	25	ug/L	06/14/18 14:14	
4-Methyl-2-Pentanone (MIBK)	<5.000	50.00	44.29	89	44.45	89	61-125	0	25	ug/L	06/14/18 14:14	
Methyl-t-Butyl Ether	<1.000	50.00	54.30	109	54.99	110	45-143	1	25	ug/L	06/14/18 14:14	
Naphthalene	<1.000	50.00	54.91	110	53.92	108	40-145	2	25	ug/L	06/14/18 14:14	
Styrene	<1.000	50.00	49.60	99	48.95	98	72-135	1	25	ug/L	06/14/18 14:14	
1,1,2,2-Tetrachloroethane	<1.000	50.00	52.76	106	53.77	108	70-150	2	25	ug/L	06/14/18 14:14	
Tetrachloroethene	<1.000	50.00	52.44	105	52.65	105	55-166	0	25	ug/L	06/14/18 14:14	
Toluene	<1.000	50.00	54.91	110	54.95	110	68-152	0	25	ug/L	06/14/18 14:14	
1,2,3-Trichlorobenzene	<1.000	50.00	55.61	111	54.50	109	21-172	2	25	ug/L	06/14/18 14:14	
1,2,4-Trichlorobenzene	<1.000	50.00	53.64	107	53.40	107	16-172	0	25	ug/L	06/14/18 14:14	
1,1,1-Trichloroethane	<1.000	50.00	54.37	109	54.06	108	80-143	1	25	ug/L	06/14/18 14:14	
Trichloroethene	<1.000	50.00	53.79	108	54.37	109	73-148	1	25	ug/L	06/14/18 14:14	
1,1,2-Trichloroethane	<1.000	50.00	54.62	109	55.11	110	68-154	1	25	ug/L	06/14/18 14:14	
Trichlorofluoromethane	<5.000	50.00	53.19	106	52.27	105	80-145	2	25	ug/L	06/14/18 14:14	
1,1,2-Trichlorotrifluoroethane	<1.000	50.00	51.95	104	51.16	102	73-147	2	25	ug/L	06/14/18 14:14	
Vinyl chloride	<1.000	50.00	51.56	103	50.38	101	79-128	2	25	ug/L	06/14/18 14:14	
m&p-Xylene	<2.000	100	101.4	101	100.2	100	70-138	1	25	ug/L	06/14/18 14:14	

PHASE SEPARATION SCIENCE, INC.

QC Summary 18060820

A-Zone Environmental Services

RTN

Analytical Method: SW-846 8260 B Prep Method: SW5030B

Seq Number: 154341 Matrix: Ground Water Date Prep: 06/14/18

Parent Sample Id: 18060820-008 MS Sample Id: 18060820-008 S MSD Sample Id: 18060820-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
o-Xylene	<1.000	50.00	50.39	101	49.97	100	71-139	1	25	ug/L	06/14/18 14:14	

Surrogate	MS Result	MS Flag	MSD Result	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	98		98		87-109	%	06/14/18 14:14
Dibromofluoromethane	99		98		93-111	%	06/14/18 14:14
Toluene-D8	100		100		91-109	%	06/14/18 14:14

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
H= Recovery of BS,BSD or both exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

PHASE SEPARATION SCIENCE, INC.

www.phaseonline.com
email: info@phaseonline.com

(1) *CLIENT: AZONE | *OFFICE LOC.: Charles Town, WV

*PROJECT MGR: M. Bruzzesi | *PHONE NO.: 703-608-5969

EMAIL: mbruzzesi@a-zoneenvironmental.com | FAX NO.:

*PROJECT NAME: RTN | PROJECT NO.:

SITE LOCATION: Alexandria, VA | P.O. NO.:

SAMPLERS: M. Bruzzesi, C. Hebert, and R. Pagel | DW CERT NO.:

PSS Work Order #: 1806080 | PAGE 1 OF 2

Matrix Codes: **SW**=Surface Wtr **DW**=Drinking Wtr **GW**=Ground Wtr **WW**=Waste Wtr **O**=Oil **S**=Soil **WL**=Waste Liquid **WS**=Waste Solid **W**= Wipe

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX (See Codes)	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	TPH-GRO 8015C	TPH-DRO 8015C	VOCs 8260B	SVOCs 8270C	Preservative Used	(3) Analysis/ Method Required	REMARKS
1	TEC-MW2	6/7/18	0855	GW	7	G	✓	✓	✓	✓			Click to enter Remarks
2	TEC-MW4	6/7/18	0845	GW	7	G	✓	✓	✓	✓			
3	ECS-MW4	6/7/18	0928	GW	7	G	✓	✓	✓	✓			
4	MiHpt-5	6/7/18	0950	GW	7	G	✓	✓	✓	✓			
5	MiHpt-7	6/7/18	1013	GW	7	G	✓	✓	✓	✓			
6	MiHpt-8	6/7/18	0823	GW	7	G	✓	✓	✓	✓			
7	MiHpt-14	6/7/18	1210	GW	7	G	✓	✓	✓	✓			
8	MiHpt-15	6/7/18	1212	GW	7	G	✓	✓	✓	✓			
9	MiHpt-20	6/7/18	1110	GW	7	G	✓	✓	✓	✓			
10	MiHpt-21	6/7/18	1125	GW	7	G	✓	✓	✓	✓			

(5)

Relinquished By: (1)	Date	Time	Received By:
	6/8/18	0900	Gaua
Relinquished By: (2) Gaua	Date 6/8/18	Time 1305	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:

(4) ***Requested Turnaround Time**

☑ 5-Day ☐ 3-Day ☐ 2-Day
☐ Next Day ☐ Emergency ☐ Other

Data Deliverables Required:

# of Coolers: 4

Custody Seal: ABS

Ice Present: YES Temp: 2°-6°C

Shipping Carrier: FTE

Special Instructions:

SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

PHASE SEPARATION SCIENCE, INC.

www.phaseonline.com
email: info@phaseonline.com

(1)

*CLIENT: AZONE | *OFFICE LOC.: Charles Town, WV

*PROJECT MGR: M. Bruzzesi | *PHONE NO.: 703-608-5969

EMAIL: mbruzzesi@a-zoneenvironmental.com | FAX NO.:

*PROJECT NAME: RTN | PROJECT NO.:

SITE LOCATION: Alexandria, VA | P.O. NO.:

SAMPLERS: M. Bruzzesi, C. Hebert, and R. Pagel | DW CERT NO.:

PSS Work Order #: 1806820 | PAGE 2 OF 2

Matrix Codes:
SW=Surface Wtr **DW**=Drinking Wtr **GW**=Ground Wtr **WW**=Waste Wtr **O**=Oil **S**=Soil **WL**=Waste Liquid **WS**=Waste Solid **W**= Wipe

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX (See Codes)	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	TPH-GRO 8015C	TPH-DRO 8015C	VOCs 8260B	SVOCs 8270C	Preservative Used	* (3) Analysis/ Method Required	REMARKS
11	MiHpt-22	6/7/18	1103	GW	7	G	✓	✓	✓	✓			Click to enter Remarks
12	MW23	6/7/18	1104	GW	7	G	✓	✓	✓	✓			
13	MW24	6/7/18	0943	GW	7	G	✓	✓	✓	✓			
14	MW25	6/7/18	0835	GW	7	G	✓	✓	✓	✓			

(3)

	Date	Time	
Relinquished By: (1)	6/8/18	0800	Received By: Gana
Relinquished By: (2) Gana	6/8/18	1325	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:

(4)

*Requested Turnaround Time
- [x] 5-Day
- [ ] 3-Day
- [ ] 2-Day
- [ ] Next Day
- [ ] Emergency
- [ ] Other

Data Deliverables Required:

# of Coolers: 4

Custody Seal: ABS

Ice Present: PRES Temp: 2°-6°C

Shipping Carrier: FDX

Special Instructions:

6630 Baltimore National Pike • Route 40 West • Baltimore, Maryland 21228 • (410) 747-8770 • (800) 932-9047 • Fax (410) 788-8723

SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

PHASE SEPARATION SCIENCE, INC.

www.phaseonline.com
email: info@phaseonline.com

(1) *CLIENT: AZO,NE *OFFICE LOC.

*PROJECT MGR: Mike Bruzzeri *PHONE NO.: (703) 608-5969

EMAIL: mbruzzeri@a-zoneinc.onmicrosoft.com FAX NO.: ( )

*PROJECT NAME: RNT PROJECT NO.:

SITE LOCATION: Alexandria, VA P.O. NO.:

SAMPLERS: CLH DW CERT NO.:

PSS Work Order #: 1806820 PAGE _____ OF _____

Matrix Codes: **SW**=Surface Wtr **DW**=Drinking Wtr **GW**=Ground Wtr **WW**=Waste Wtr **O**=Oil **S**=Soil **WL**=Waste Liquid **WS**=Waste Solid **W**= Wipe

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX (See Codes)	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	(3) Analysis/ Method Required: DRO	SVOCs	Preservatives Used	REMARKS
10	MiHPt-21	6/7/18	1120	W	1	6	X	X CLH		
11	MiHPt-22	6/7/18	1103	W	1	6	X			

(5)

Relinquished By: (1)	Date	Time	Received By:
CLH	6/8/18	0900	Dan Carter
Relinquished By: (2)	Date	Time	Received By:
Dan Carter	06/08/18	1200	
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:

(4) *Requested Turnaround Time

☐ 5-Day ☐ 3-Day ☐ 2-Day
☐ Next Day ☐ Emergency ☐ Other

Data Deliverables Required:

# of Coolers: 1

Custody Seal: Abs

Ice Present: Pres Temp: 1-3°C

Shipping Carrier: TTE

Special Instructions:
Samples go with sampler submitted by M. Bruzzeri on 6/8/18 for same project.

6630 Baltimore National Pike • Route 40 West • Baltimore, Maryland 21228 • (410) 747-8770 • (800) 932-9047 • Fax (410) 788-8723

* = REQUIRED

Phase Separation Science, Inc

Sample Receipt Checklist

Work Order #	18060820	**Received By**	Thomas Wingate
Client Name	A-Zone Environmental Services	**Date Received**	06/08/2018 01:25:00 PM
Project Name	RTN	**Delivered By**	Trans Time Express
Disposal Date	07/13/2018	**Tracking No**	Not Applicable
		Logged In By	Thomas Wingate

Shipping Container(s)

No. of Coolers 1

		Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	6
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

Documentation

		Sampler Name	Mike Bruzzesi
COC agrees with sample labels?	Yes	MD DW Cert. No.	N/A
Chain of Custody	Yes		

Sample Container

		Custody Seal(s) Intact?	Not Applicable
Appropriate for Specified Analysis?	Yes	Seal(s) Signed / Dated	Not Applicable
Intact?	Yes		
Labeled and Labels Legible?	Yes		

Total No. of Samples Received 14 Total No. of Containers Received 98

Preservation

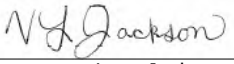
Total Metals	(pH<2)	N/A
Dissolved Metals, filtered within 15 minutes of collection	(pH<2)	N/A
Orthophosphorus, filtered within 15 minutes of collection		N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, DOC (field filtered), COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	Yes
Do VOA vials have zero headspace?		Yes
624 VOC (Rcvd at least one unpreserved VOA vial)		N/A
524 VOC (Rcvd with trip blanks)	(pH<2)	N/A

Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Samples Inspected/Checklist Completed By:  Date: 06/08/2018

Thomas Wingate

PM Review and Approval:  Date: 06/11/2018

Lynn Jackson