



May 25, 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: **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 *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 recent new groundwater monitoring well installation and groundwater sampling activities conducted by ICOR at the SITE. The new wells were installed and the first of two planned groundwater sampling events were conducted to further assess soil and groundwater quality and address a Commonwealth of Virginia Department of Environmental Quality directive dated September 18, 2017. The second groundwater sampling event is scheduled for June 2018.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Michael A. Bruzzesi".

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

*Mr. Wardle
Mr Maiden
May 25, 2018
Page 2*

Attachment

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. Vince Maiden, VDEQ VRP
Mr. William Skrabak, City of Alexandria

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
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On Behalf of:

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Prepared by:

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ICOR Project No. 13-CI.01

MAY 25, 2018

SIGNATURE SHEET

This *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:



May 25, 2018

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

The Draft PSCMR was reviewed and approved for release by:



May 25, 2018

Ike L. Singh
Program Manager

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LIST OF ACRONYMS AND ABBREVIATIONS

ANT	Alexandria North Terminal, LLC
DO	dissolved oxygen
EPA	United States Environmental Protection Agency
ICOR	ICOR, Ltd.
mg/kg	milligram per kilogram
mg/l	milligram per liter
ORP	oxygen reduction potential
PC#	Pollution Compliant number
PCE	tetrachloroethene
PID	photo-ionization detector
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/kg	microgram per kilogram
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-PSSS	VDEQ petroleum saturated soil standards for soil
VDEQ-T2RSL	VDEQ Tier II residential screening level for soil
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-T3ISL	VDEQ Tier III industrial screening level for soil
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) 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 conducted included the installation of three new groundwater monitoring wells and the first of two planned groundwater sampling events. The new wells were installed and groundwater was sampled to further assess soil and groundwater quality and address a VDEQ directive dated September 18, 2017. The second groundwater sampling event is scheduled for June 2018.

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 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 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 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 new well installation and first 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 use 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 recently 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. Photo-documentation of the PSCM activities is included as Attachment 1.

4.1 Test Boring Advancement and Soil Sampling

On January 22, 2018, three test borings were advanced at the SITE in conjunction with new well installation. The borings were advanced on the northern portion of the SITE with one advanced on the 500 Parcel (designated MW-23) and the remaining two advanced on the 501 Parcel (MW-24 and MW-25). The new and historical boring locations are depicted on Figure 4. Soil quality was assessed through the collection of soil samples for visual inspection, field screening, and laboratory analysis. One soil sample was collected for laboratory analysis from each boring from the interval exhibiting the highest degree of impact based on field observations and screening. General boring information, observations made during boring advancement, and types of samples collected is provided on Table 1.

The test borings were advanced using a direct-push sampling rig and were advanced a depth corresponding to approximately 10 feet below the soil/groundwater interface (groundwater table) was encountered. The groundwater table was encountered at all test boring locations at depths ranging from approximately 8 to 10 feet below grade.

Soil samples were collected continuously during advancement of the test borings. In general, bag samples were collected at 2 foot intervals from the soil cores for screening in the field with a photo-ionization (PID). Field screening was performed to check for the presence of volatile organic vapors (VOVs). Observations and field screening readings were recorded on boring logs. Copies of the boring logs are included in Attachment 2. Observations of note such as odors and field screening readings are also summarized on Table 1.

Soil samples were collected for laboratory analysis from soil intervals exhibiting the highest degree of impact and were grab samples. Each sample represented an approximately 1 foot interval of soil. The samples were analyzed for TPH-GRO and TPH-DRO using EPA Method 8015C, Target Compound List (TCL) VOCs using EPA Method 8260B (collected using TerraCore® samplers), and TCL SVOCs using EPA Method 8270C. A list of sampling depths and type of analysis performed on each sample are summarized on Table 1.

All direct-push equipment that came into direct-contact with soil was constructed of steel and was properly decontaminated between boring locations. Decontamination water generated during decontamination of the equipment was contained in a 55-gallon drum and will be properly disposed. Soil generated during advancement of the test borings was also placed in a 55-gallon drum pending proper disposal.

4.2 Well Installation and Groundwater Sampling

Immediately after advancing each test boring, a new permanent well was installed in each boring location. The well designations corresponded to their boring number. The new well locations are depicted on Figure 4. Well construction information for the new wells is provided on Table 2 and boring logs for the wells are included in Attachment 1.

The wells were constructed of new, 1-inch inner diameter polyvinyl chloride well screen and casing. A 15-foot length of well screen was used and was positioned to “straddle” the

soil/groundwater interface. The screen interval was surrounded with a clean sand filter pack. The filter pack was overlain with 2 feet of hydrated bentonite chips and the remaining void was backfilled with grout. The wells were completed with well caps and flush-mount manhole covers anchored in concrete pads.

All wells were properly developed following installation with development consisting of purging a well until a minimum of three well volumes of groundwater were removed and the purge water appeared relatively clear and free of suspended solids (based on a visual inspection). Approximately 1 week following development, groundwater samples were collected for laboratory analysis from the vast majority of the existing and newly-installed permanent wells. Existing wells TEC-MW3 and TEC-MW5 were not sampled and well ECS-MW2 was found to be dry.

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 3. 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 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, MiHpt-21, 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 4.

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. The type of analysis performed on each sample is summarized on Table 1.

The direct-push sampling equipment that came into contact with soil and/or groundwater, water level meter, and multi-meter were properly decontaminated between well locations. All purge water generated during decontamination, development, and sampling was stored in 55-gallon drums pending proper disposal.

The relative elevations of the new permanent wells TOCs will be surveyed in conjunction with the next groundwater sampling event by a Commonwealth of Virginia-licensed surveyor. The

new wells could not be surveyed following first groundwater sampling event because the 501 Parcel entrance was blocked by a remediation contractor conducting dredging and cleanup at the Oronoco Street outfall. The elevations of existing wells are presented on Table 2.

5.0 SOIL AND GROUNDWATER QUALITY

Soil and groundwater quality were further assessed at the SITE through the collection of samples for visual inspection, field screening, and laboratory analysis and comparison of the analytical results to applicable VDEQ screening levels.

5.1 Soil Quality

Based on observations made during the recent test boring advancement, the upper 4.75 to maximum depth of investigation (19 feet) of the newly assessed portion of the SITE is underlain by fill. The fill varied in composition, with sand, silt, clay, brick, glass, organics, what appeared to be metal cuttings, and gravel noted. Beneath the fill materials, alluvial soil characterized by interbedded and alternating layers of sand, silty sand, and sandy gravel with varying amounts of clay were encountered to a depth 20 feet below grade. Geologic information is summarized on the boring logs included as Attachment 2.

Petroleum odors were noted during advancement of all three test borings. Petroleum odors were noted at depths ranging from 0.5 to 1.5 and 11 to 12.5 feet below grade during advancement of boring MW-23, 18 to 19 feet below grade during advancement of boring MW-24, and 9 to 19 feet below grade during advancement of boring MW-25. Black staining was also observed at depths ranging from 11 to 12 feet below grade during advancement of boring MW-23. It should be noted that the intervals exhibiting petroleum odors did not exhibit elevated PID readings. Soil samples collected for laboratory analysis during advancement of the borings were analyzed for TPH-GRO, TPH-DRO, TCL VOCs, and TCL SVOCs. Observations made during advancement of the borings and a list of sampling depths and type of analysis performed on each sample are provided on Table 1.

The soil analytical results are summarized on Tables 5. A copy of the laboratory report of analysis is included in Attachment 3. The soil analytical results were compared to the most-current VDEQ Tier II residential screening levels for soil (VDEQ-T2RSLs) and VDEQ Tier III industrial screening levels for soil (VDEQ-T3ISLs). TPH concentrations were compared to VDEQ petroleum saturated soil standards (VDEQ-PSSSs). It should be noted that VDEQ screening levels have not been developed for a few of the target constituents detected.

TPH-GRO, TPH-DRO, 2 VOCs, and 20 SVOCs were detected in the soil samples at concentrations above the analytical method reporting limit (RL). One VOC and 18 SVOCs were detected at concentrations above VDEQ screening levels. No detections of TPH-GRO and TPH-DRO above VDEQ-PSSSs were noted. A list of the constituents detected above screening levels is detailed below.

Constituents Detected Above VDEQ-T2RSLs

- **Naphthalene** (as a VOC and/or SVOC) was detected above VDEQ-T2RSLs in the soil sample collected from boring MW-23 (from 11.5-12.5 feet below grade).
- **Acenaphthene, Acenaphthylene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Biphenyl (Diphenyl), Dibenz(a,h)anthracene, Dibenzofuran, Fluoranthene, Fluorene, Indeno(1,2,3-c,d)pyrene, Phenanthrene, Pyrene, and 2-Methylnaphthalene** were detected above VDEQ-T2RSLs in the soil sample collected from boring MW-23 (from 11.5-12.5 feet below grade).

Constituents Detected Above VDEQ-T3ISLs

- **Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Biphenyl (Diphenyl), Dibenz(a,h)anthracene, Dibenzofuran, Indeno(1,2,3-c,d)pyrene, and Naphthalene** (as a SVOC only) were detected above VDEQ-T2RSLs in the soil sample collected from boring MW-23 (from 11.5-12.5 feet below grade).

The most significant impacts noted were associated with petroleum odors, black staining, and elevated detections of SVOCs in a relatively thin layer (measuring approximately 1.5 foot in thickness) encountered at a depth of 11 to 12.5 feet below grade at boring location MW-23.

7.3 Groundwater Quality

Based on the recent and historical groundwater measurements obtained from monitoring wells, the depth to groundwater at the SITE ranges from approximately 5 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 3. Groundwater contour generated from the recent groundwater sampling event is depicted on 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 6. A copy of the laboratory report of analysis is included in Attachment 3.

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 16 SVOCs were detected in the groundwater samples at concentrations above the RL. TPH-GRO, TPH-DRO, 10 VOCs, and 4 SVOCs were detected at concentrations above VDEQ groundwater and/or surface water screening levels. No detections above VDEQ-T2SWFSLs were noted. 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.
- **Chloroform** was detected above VDEQ-T3RGSLS in the groundwater sample collected from well MiHpt-15.
- **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-5, MiHpt-7, MiHpt-14, 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-14, MiHpt-20, MiHpt-21, MiHpt-22, MW-23, MW-24, and MW-25.
- **Tetrachloroethene (PCE)** was detected above VDEQ-T3RGSLS in the groundwater sample collected from well MiHpt-21.
- **Trichloroethene (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 and MiHpt-7.

Constituents Detected Above VDEQ-T3IGSLs

- **Benzene** was detected above VDEQ-TRIGSLs in the groundwater samples collected from wells MiHpt-5, MiHpt-7, MiHpt-14, and MiHpt-21.
- **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.
- **Chloroform** was detected above VDEQ-T3CDSLs in the groundwater sample collected from well MiHpt-15.
- **Naphthalene** (as a VOC and SVOC) was detected above VDEQ-T3CDSLs in the groundwater samples collected from wells MiHpt-5, MiHpt-7, MiHpt-14, MiHpt-20, MiHpt-21, MiHpt-22, MW-23, MW-24, and MW-25.
- **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 and MiHpt-7.

Constituents Detected Above VDEQ-PDSs

- **TPH-DRO** was detected above VDEQ-PDSs in the groundwater sample collected from well MiHpt-22.
- **Benzene** was detected above VDEQ-PDSs in the groundwater samples collected from wells MiHpt-5, MiHpt-7, MiHpt-14, MiHpt-20, 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-14, MiHpt-20, MiHpt-21, MiHpt-22, MW-23, MW-24, 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.
- **Xylenes** were detected above VDEQ-PDSs in the groundwater samples collected from wells MiHpt-5 and MiHpt-7.

Constituents Detected Above VDEQ-T2PWSSLs

- **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.

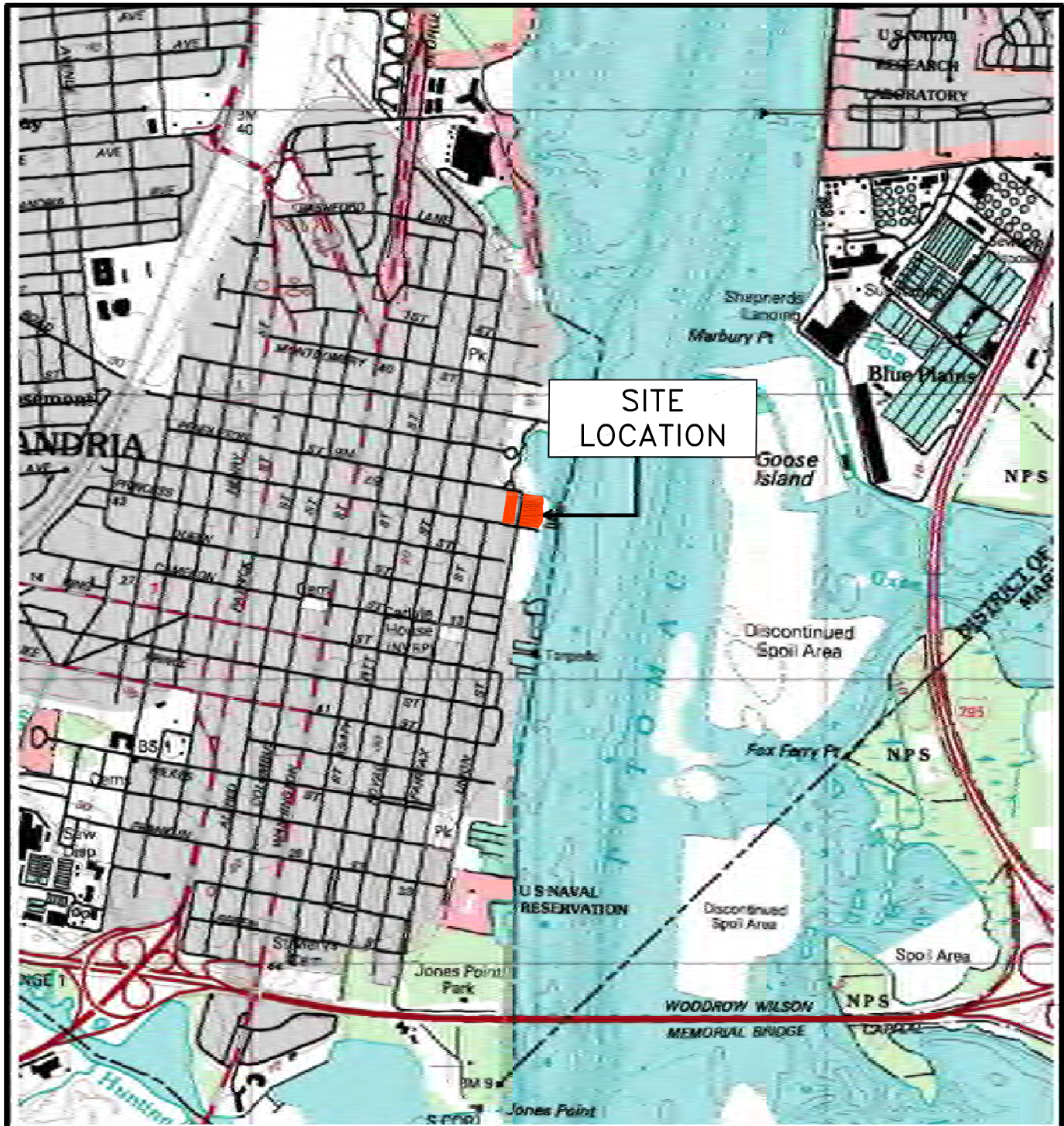
In general, the concentrations of TPH-GRO, TPH-DRO, and VOCs detected in groundwater appear to be relatively stable and the concentrations of SVOCs have decreased over time. The highest concentrations of target constituents detected were on the western and southern portions

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

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. Remediation, engineering controls, and institutional controls may also be warranted under the current land use scenario; however, further study is required and is being conducted as part of the follow-up PSCM activities. Recommendations made in the SCR will be reassessed and potentially revised or modified pending receipt and evaluation of the analytical data and new well survey data collected during the second PSCM groundwater sampling event (scheduled for June 2018).

FIGURES



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

SITE LOCATION

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

ICOR LTD.
PO BOX 406
MIDDLEBURG, VIRGINIA 20118

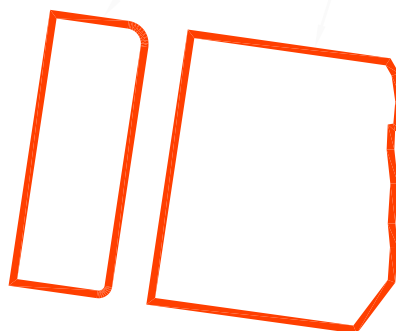
FORMER ROBINSON TERMINAL NORTH
500 AND 501 NORTH UNION STREET
ALEXANDRIA, VA

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

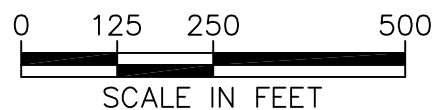


500 N. UNION STREET PARCEL

501 N. UNION STREET PARCEL



MICROSOFT CORPORATION 2016



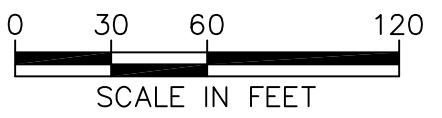
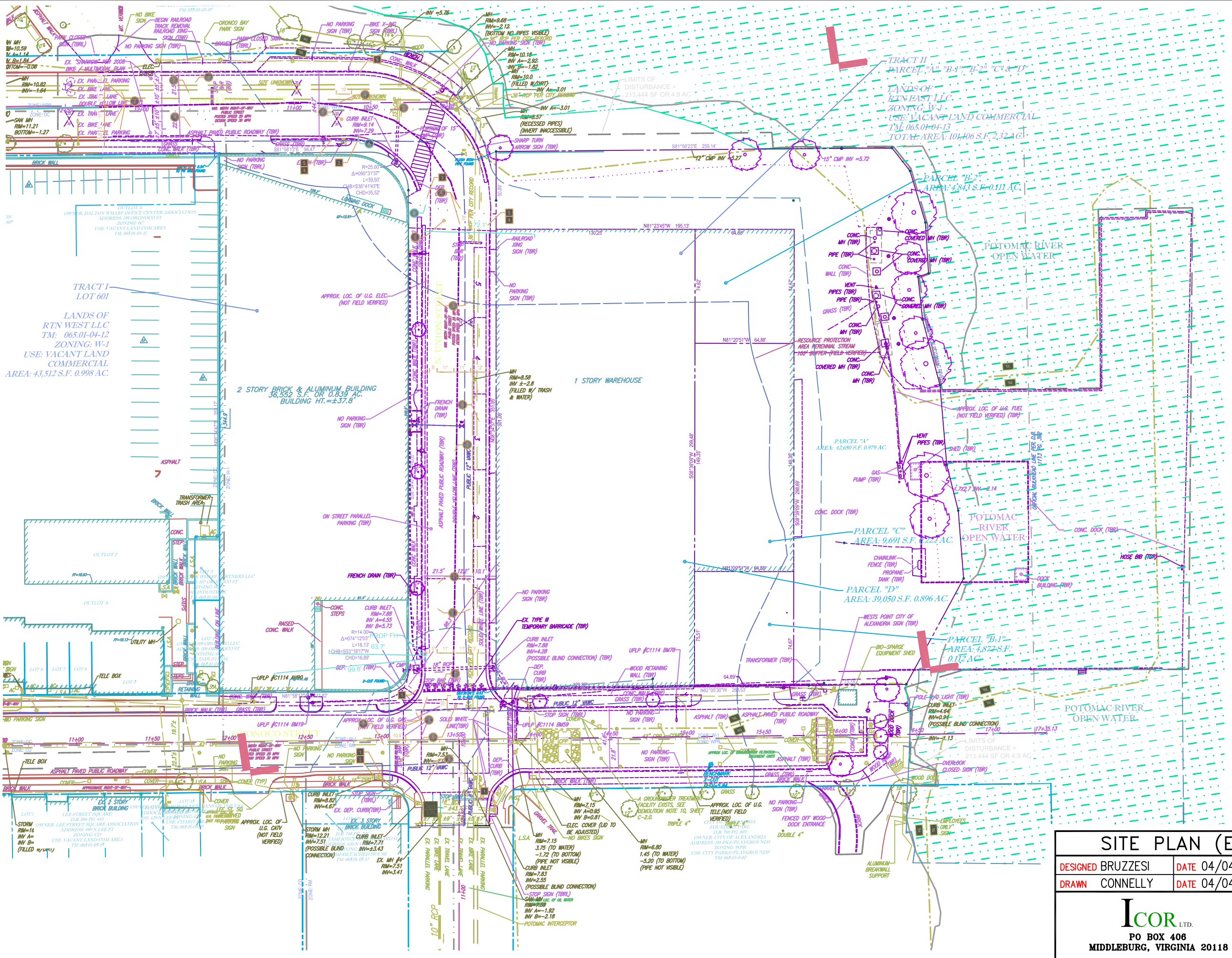
AERIAL PHOTOGRAPH

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

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

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PO BOX 406
MIDDLEBURG, VIRGINIA 20118

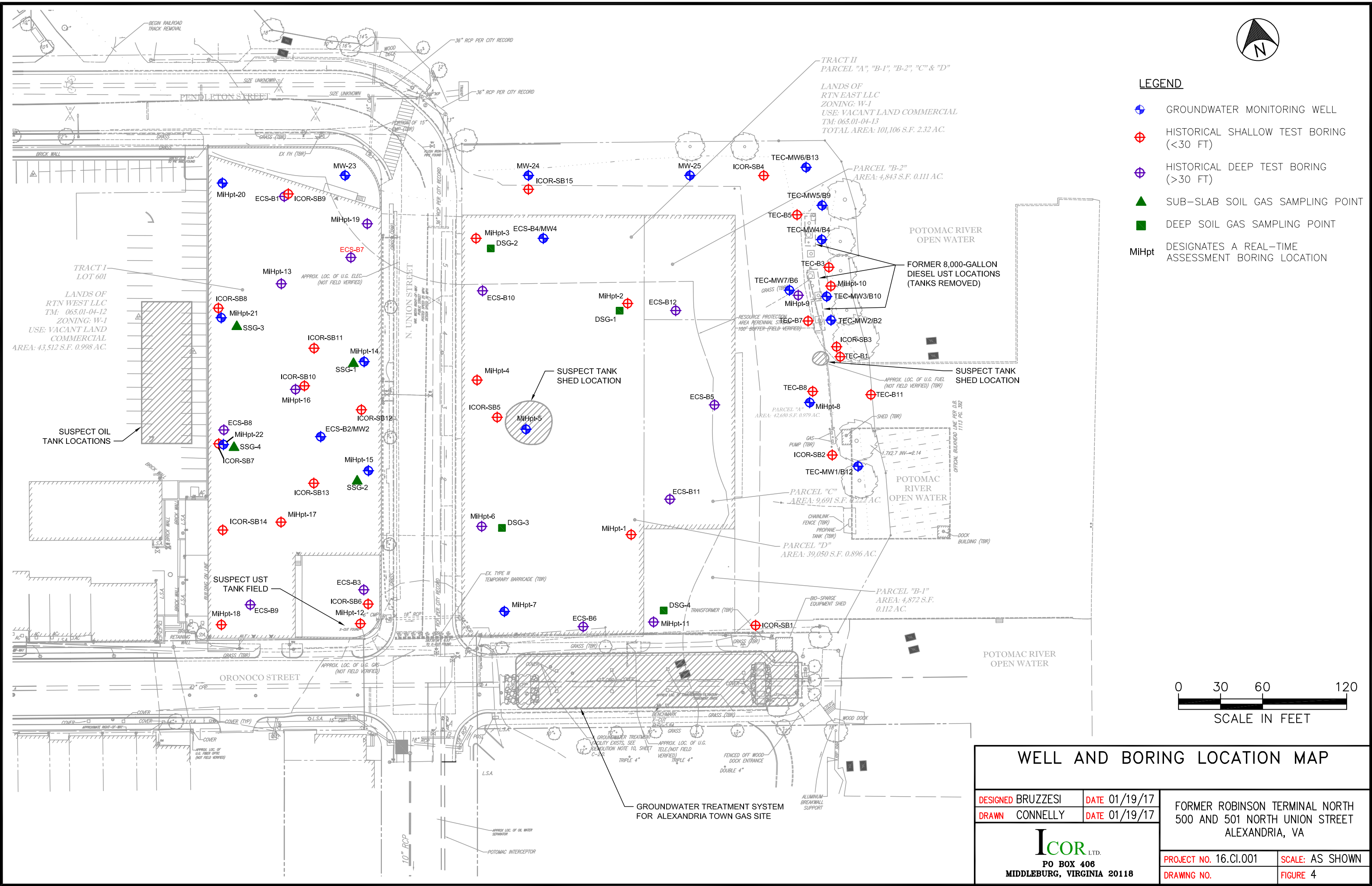
PROJECT NO. 16.CI.001	SCALE: AS SHOWN
DRAWING NO.	FIGURE 2



SITE PLAN (EXISTING CONDITIONS)			
DESIGNED BRUZZESI	DATE 04/04/17	FORMER ROBINSON TERMINAL NORTH 500 AND 501 NORTH UNION STREET ALEXANDRIA, VA	
DRAWN CONNELLY	DATE 04/04/17		
 PO BOX 406 MIDDLEBURG, VIRGINIA 20118		PROJECT NO. 16.CI.001	SCALE: AS SHOWN
		DRAWING NO.	FIGURE 3

16-CI-001-RTN_SCR03-EXIST SITE.DWG - July 6, 2016

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



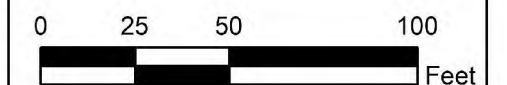
16-CL-001-RTN QR 150129-FIG05-CWCONTMAP.DWG - July 6, 2016



Legend

- Site Property
- Groundwater Contour (1/2018)
- Groundwater Flow Direction
- Groundwater Monitoring Well

Notes:
DRY - Well was dry.
OBS - Well was obstructed.
UNK - Well not surveyed.



GROUNDWATER CONTOUR MAP (1/29/2018)

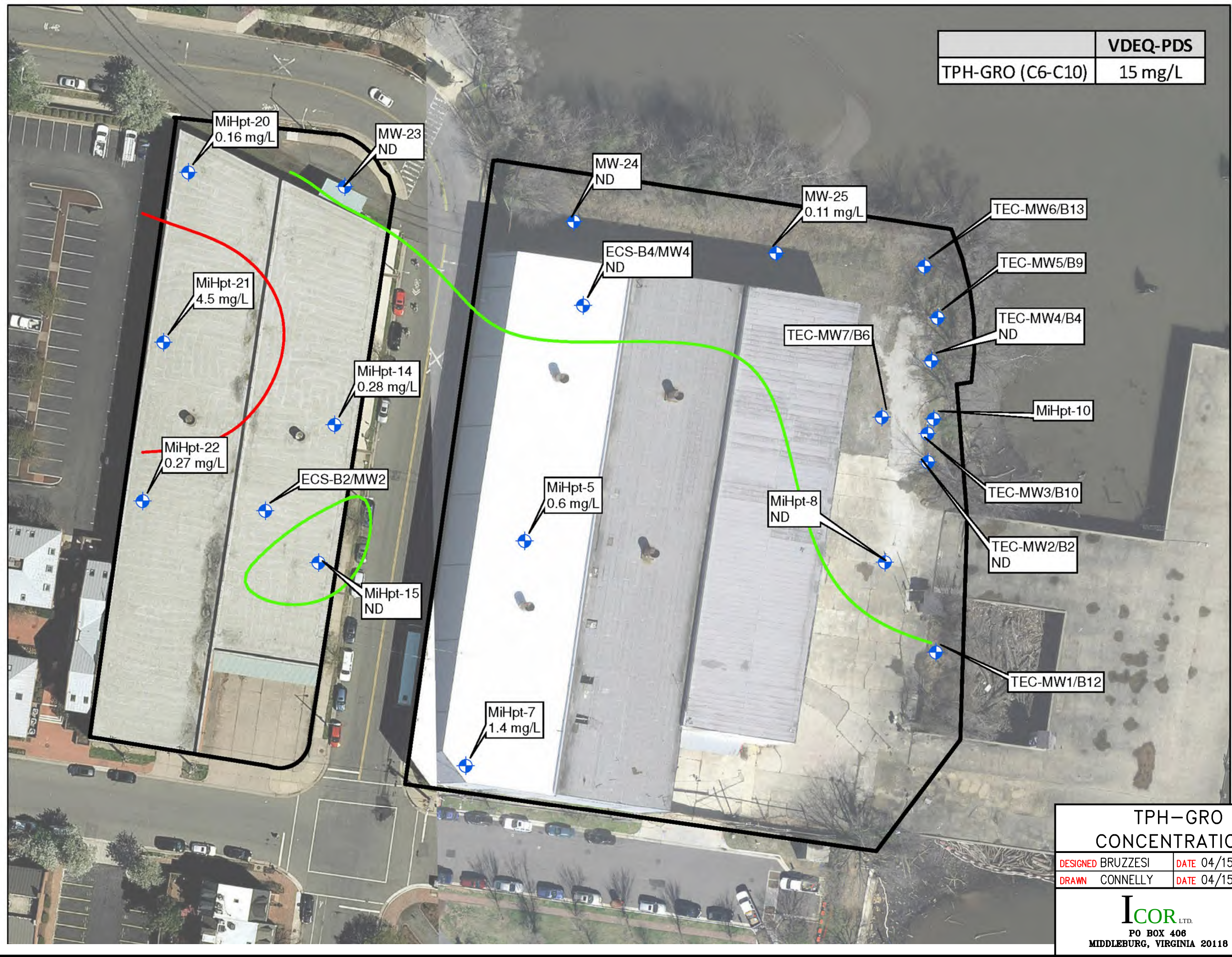
DESIGNED BRUZZESI	DATE 04/15/18
DRAWN CONNELLY	DATE 04/15/18

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

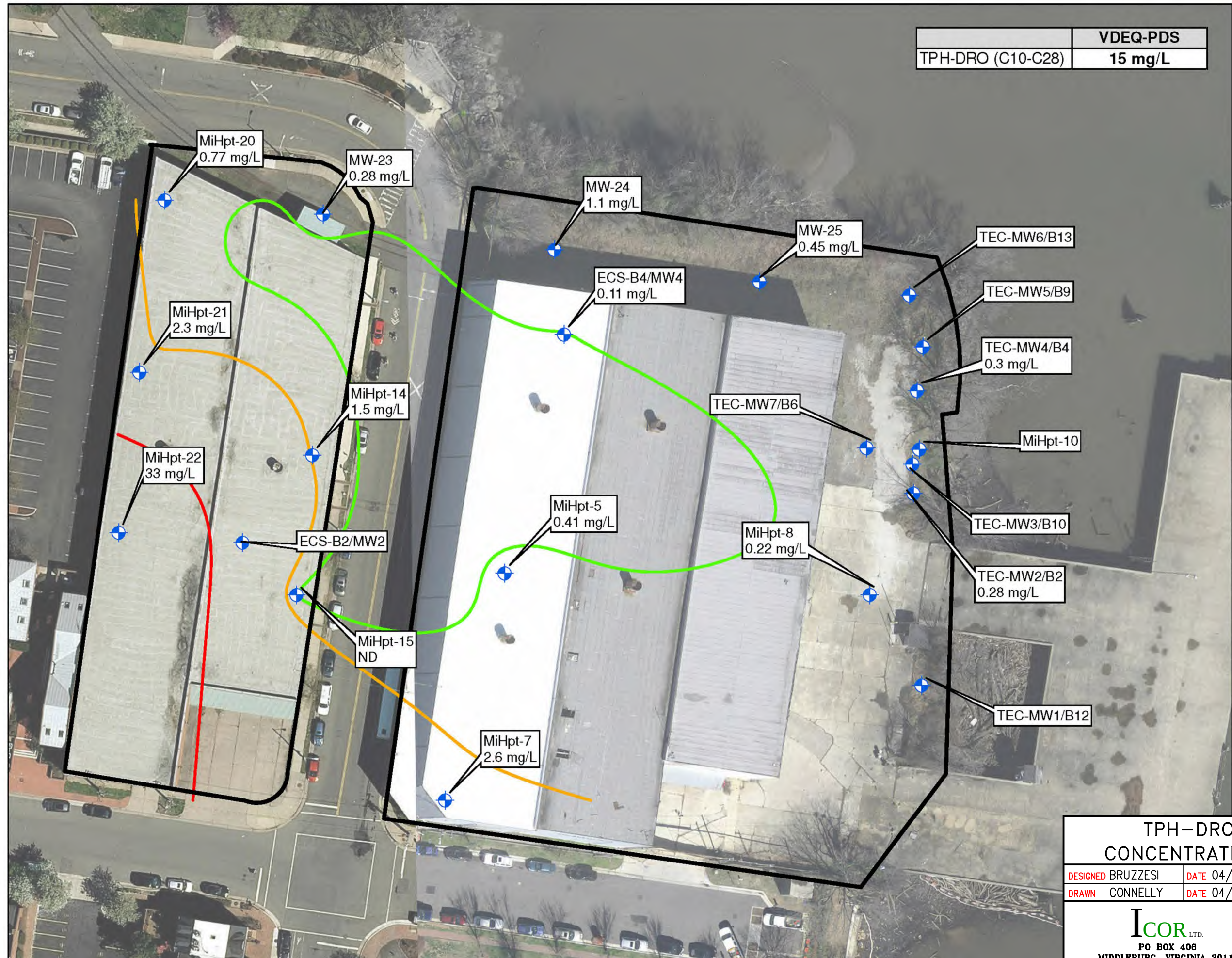
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MIDDLEBURG, VIRGINIA 20118

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

16-CL-001-RTN QR 180129-FIG06-TPH-GRO.DWG - July 6, 2016

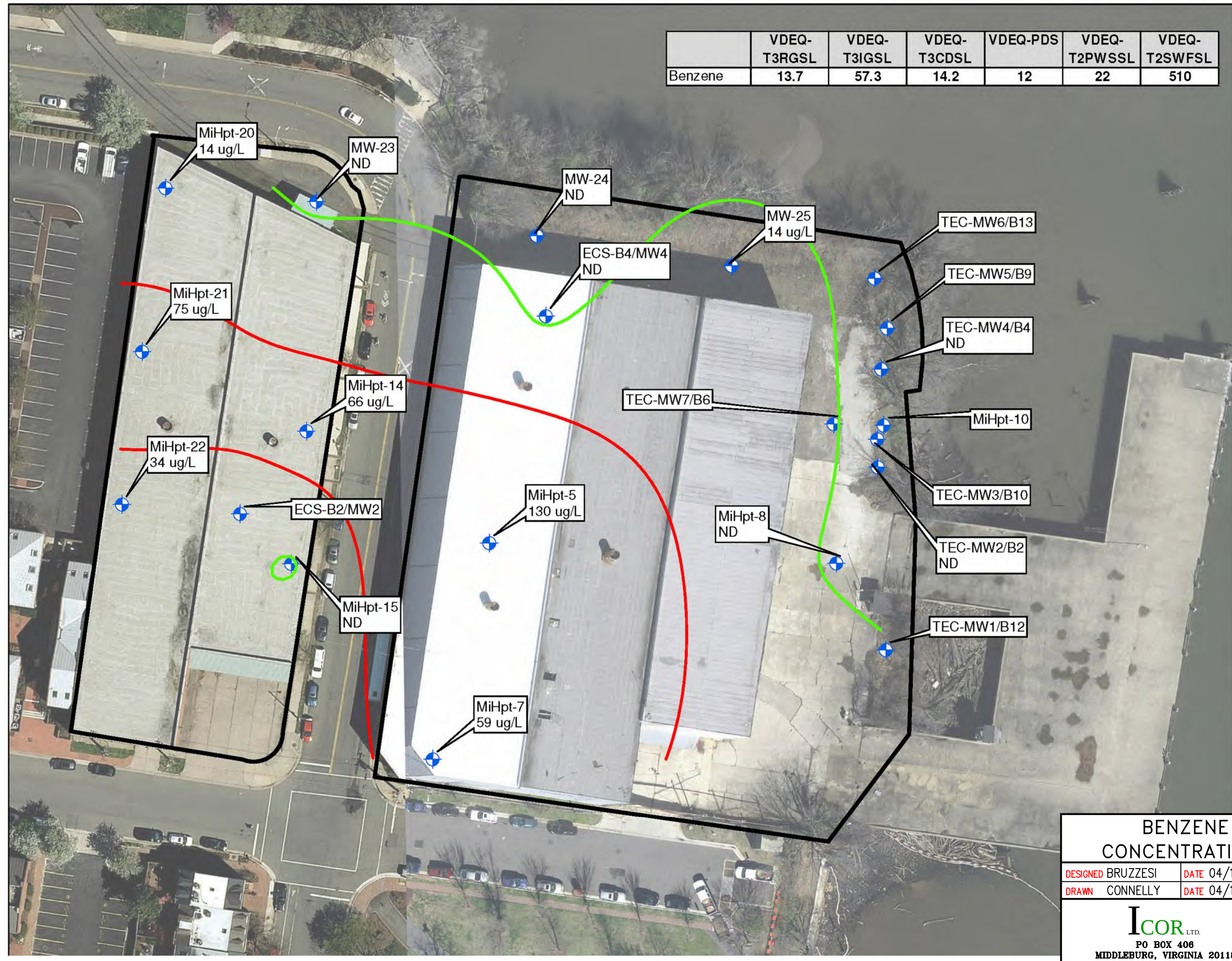


16-CL-001-RTN QR 150129-FIG07-TPH-DRO.DWG -- July 6, 2016



TPH-DRO IN GROUNDWATER CONCENTRATION MAP (1/29/2018)			
DESIGNED BRUZZESI	DATE 04/15/18	FORMER ROBINSON TERMINAL NORTH 500 AND 501 NORTH UNION STREET ALEXANDRIA, VA	
DRAWN CONNELLY	DATE 04/15/18		
ICOR LTD. PO BOX 406 MIDDLEBURG, VIRGINIA 20118		PROJECT NO. 16.CI.001	SCALE: AS SHOWN
		DRAWING NO.	FIGURE 7

16-CL-001-RTN QR 180129-FIG08-BENZ.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)

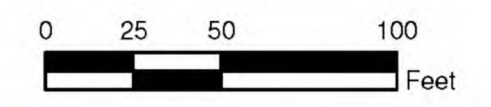
5 ug/L

50 ug/L

Sample ID

Benzene Concentration (ug/L)

Notes:
ND - Non-Detect
VDEQ-T3RGSL = VDEQ Tier III residential groundwater vapor intrusion screening level
VDEQ-T3IGSL = 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



BENZENE IN GROUNDWATER
CONCENTRATION MAP (1/29/2018)

DESIGNED BRUZZESI

DATE 04/15/18

DRAWN CONNELLY

DATE 04/15/18

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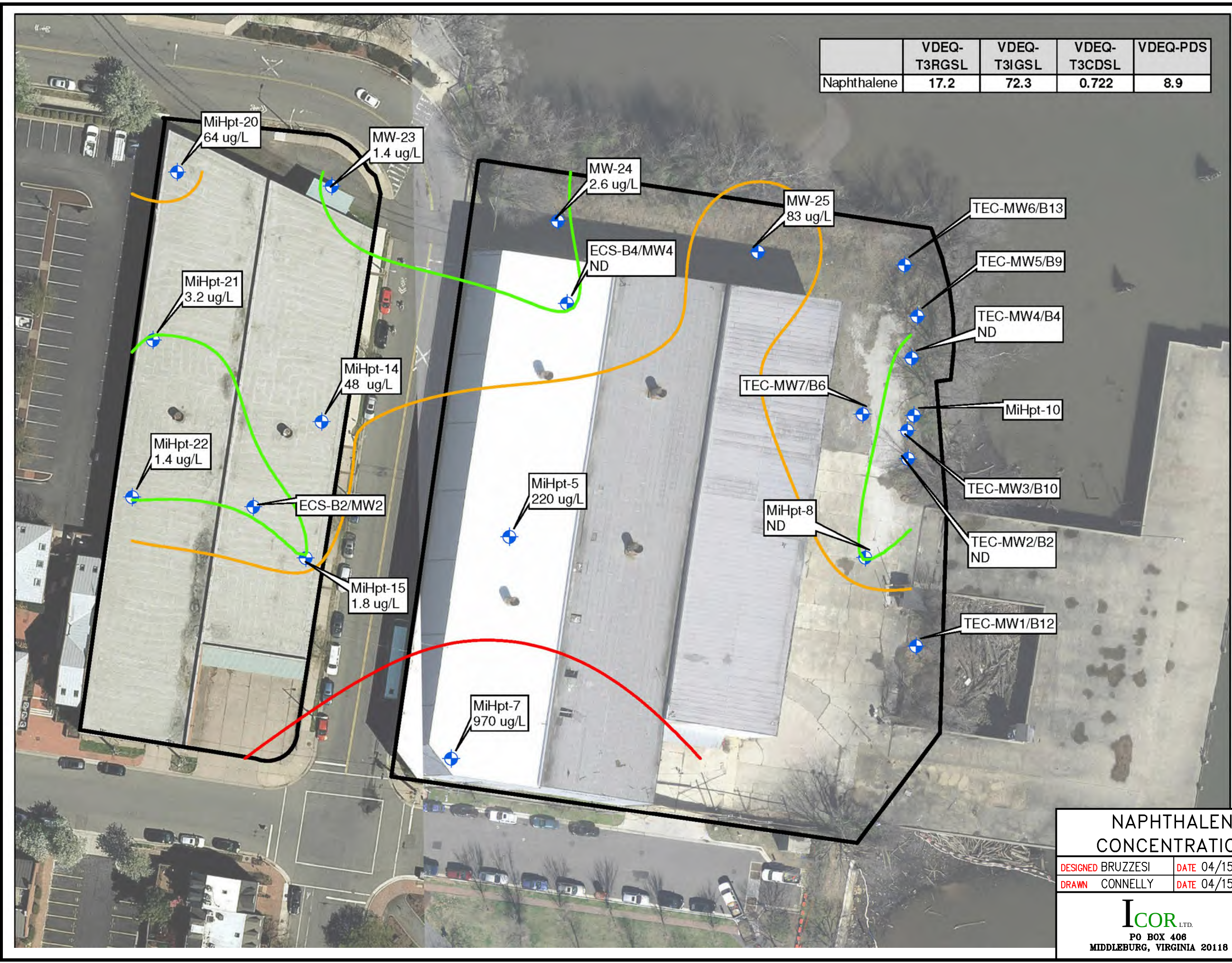
FORMER ROBINSON TERMINAL NORTH
500 AND 501 NORTH UNION STREET
ALEXANDRIA, VA

PROJECT NO. 16.CI.001

SCALE: AS SHOWN

DRAWING NO.

FIGURE 8



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

N

Site Property

Groundwater Monitoring Well

Isoconcentration (Naphthalene)

5 ug/L

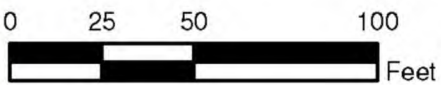
50 ug/L

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



NAPHTHALENE IN GROUNDWATER
CONCENTRATION MAP (1/29/2018)

DESIGNED BRUZZESI

DATE 04/15/18

DRAWN CONNELLY

DATE 04/15/18

ICOR LTD.

PO BOX 408

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

TABLES

TABLE 1. TEST BORING SUMMARY

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

Test Boring ID	Date Advanced	Maximum Depth Investigated (feet bgs)	Soil							Groundwater Information		
			Test Boring Depth (feet bgs)	Staining Observed (feet bgs)	Odors Noted (feet bgs)	PID Reading Range (in ppm)	Date Collected	Laboratory Sample Depth (feet bgs)	Soil Sample Laboratory Analysis	Date Collected	Approximate Depth to Groundwater (feet bgs)	Groundwater Sample Laboratory Analyses
MW23	1/22/18	20.0	16.0	11.0 - 12.0 (black)	0.5-1.5 and 11.0 - 12.5 (petroleum)	0.0 - 0.0	1/22/18	11.5 - 12.5	TPH-GRO, TPH-DRO, VOCs, SVOCs	1/29/18	10.0	TPH-GRO, TPH-DRO, VOCs, SVOCs
MW24	1/22/18	19.0	17.0	NO	18.0 - 19.0 (petroleum)	0.0 - 0.0	1/22/18	8.0 - 9.0	TPH-GRO, TPH-DRO, VOCs, SVOCs	1/29/18	8.0	TPH-GRO, TPH-DRO, VOCs, SVOCs
MW25	1/22/18	19.0	5.0	NO	9.0 - 19.0 (petroleum)	0.0 - 0.0	1/22/18	9.0 - 10.0	TPH-GRO, TPH-DRO, VOCs, SVOCs	1/29/18	8.0	TPH-GRO, TPH-DRO, VOCs, SVOCs

NOTES:

PID = photo-ionization detector

bsg = below surface grade

ppm = parts per million

NO = no indication of condition noted or observed

TPH-GRO = gasoline range total petroleum hydrocarbons

TPH-DRO = diesel range total petroleum hydrocarbons

VOCs = volatile organic compounds

SVOCs = semi-VOCs

Yellow highlighting indicates observation of note

TABLE 2. 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 3. 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
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
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
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
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
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

TABLE 3. 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-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
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
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
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
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
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
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
MW23	UKN	1/29/18	19.8	8.27	UKN
MW24	UKN	1/29/18	19.0	7.61	UKN
MW25	UKN	1/29/18	19.0	6.49	UKN

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 4. 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
TEC-MW4	1/29/18	35	14.00	0.888	6.81	-109	0.0	3.3
ECS-MW4	1/29/18	35	15.74	0.485	6.60	-92	0.0	10.3
MiHpt-5	1/29/18	35	14.18	0.843	2.37	351	4.8	410.0
MiHpt-7	1/29/18	35	15.69	0.469	6.81	-116	0.0	15.5
MiHpt-8	1/29/18	40	12.01	1.870	7.08	-245	7.5	3.5
MiHpt-14	1/29/18	35	15.83	1.330	5.81	-6	0.0	33.2
MiHpt-15	1/29/18	25	13.50	0.592	6.19	52	0.0	18.1
MiHpt-20	1/29/18	35	16.12	0.754	6.43	19	0.0	11.2
MiHpt-21	1/29/18	10/DRY	15.48	0.948	6.26	-25	0.0	148.0
MiHpt-22	1/29/18	15/DRY	14.72	0.654	6.26	-24	0.0	28.6
MW-23	1/29/18	35	15.78	0.536	6.66	-74	0.0	60.7
MW-24	1/29/18	35	12.40	0.570	6.63	-132	0.0	3.1
MW-25	1/29/18	35	14.78	2.380	4.39	75	0.00	6.3

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 5. SOIL ANALYTICAL RESULTS (DETECTIONS ONLY)

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

Sample ID:	Units	CAS No.	VDEQ- PSSS	VDEQ- T2RSL	VDEQ- T3ISL	MW-23(11.5-12.5)	MW-24(8-9)	MW-25(9-10)
Sample Date:						1/22/18	1/22/18	1/22/18
TPH 8015								
TPH-GRO (C6-C10)	mg/kg	C6C10GRO	8300	NE	NE	3.2	<0.11	<0.12
TPH-DRO (C10-C28)	mg/kg	C10C28DRO	11000	NE	NE	9000	58	220
TCL VOCs 8260B								
Acetone	ug/kg	67-64-1	NE	574000	67000000	<3000	34	<25
Naphthalene	ug/kg	91-20-3	NE	40.1	59000	9700	<4.7	<6.2
TCL SVOCs 8270C								
2-Methylnaphthalene	ug/kg	91-57-6	NE	371	300000	16000	<20	<110
Acenaphthene	ug/kg	83-32-9	NE	10900	4500000	850000	35	<110
Acenaphthylene	ug/kg	208-96-8	NE	26100	2300000	52000	57	<110
Anthracene	ug/kg	120-12-7	NE	119000	23000000	780000	100	<110
Benzo(a)anthracene	ug/kg	56-55-3	NE	2120	210000	680000	430	<110
Benzo(a)pyrene	ug/kg	50-32-8	NE	1100	21000	570000	450	<110
Benzo(b)fluoranthene	ug/kg	205-99-2	NE	11000	210000	390000	400	<110
Benzo(g,h,i)perylene	ug/kg	191-24-2	NE	26100	2300000	190000	220	<110
Benzo(k)fluoranthene	ug/kg	207-08-9	NE	110000	2100000	420000	320	<110
Biphenyl (Diphenyl)	ug/kg	92-52-4	NE	17.4	20000	160000	<200	<1100
Carbazole	ug/kg	86-74-8	NE	NE	NE	180000	<200	<1100
Chrysene	ug/kg	218-01-9	NE	1100000	21000000	530000	440	<110
Dibenz(a,h)Anthracene	ug/kg	53-70-3	NE	1100	21000	130000	80	<110
Dibenzofuran	ug/kg	132-64-9	NE	293	100000	600000	<200	<1100
Fluoranthene	ug/kg	206-44-0	NE	178000	3000000	1600000	720	190
Fluorene	ug/kg	86-73-7	NE	10700	3000000	800000	43	<110
Indeno(1,2,3-c,d)Pyrene	ug/kg	193-39-5	NE	11000	210000	280000	280	<110
Naphthalene	ug/kg	91-20-3	NE	40.1	59000	62000	<20	<110
Phenanthrene	ug/kg	85-01-8	NE	26100	2300000	2100000	400	130
Pyrene	ug/kg	129-00-0	NE	26100	2300000	1300000	660	190

NOTES:

(11.5-12.5) = designates depth sample was collected below ground surface

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/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

<1.0 = not detected above analytical method reporting limit (RL)

VDEQ-PSS = Commonwealth of Virginia Department of Environmental Quality (VDEQ) petroleum saturated soil standard

VDEQ-T2RSL = VDEQ Tier II residential screening level

VDEQ-T3ISL = VDEQ Tier III industrial 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 a VDEQ screening concentration in at least 1 sample

TABLE 6. GROUNDWATER ANALYTICAL RESULTS (DETECTIONS ONLY)

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

Sample ID:	Units	CAS No.	VDEQ-T3RGS�	VDEQ-T3IGSL	VDEQ-T3CDSL	VDEQ-PDS	VDEQ-T2PWSSL	VDEQ-T2SWFSL	TEC-MW2			TEC-MW4			ECS-MW4			MiHpt-05			MiHpt-07		
Sample Date:									9/21/16	2/7/17	1/29/18	9/21/16	2/7/17	1/29/18	9/21/16	2/7/17	1/29/18	9/21/16	2/7/17	1/29/18	9/21/16	2/7/17	1/29/18
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	0.81	0.79	0.6	0.88	0.89	1.4
TPH-DRO (C10-C28)	mg/L	C10C28DRO	NE	NE	NE	15	NE	NE	0.21	0.18	0.28	0.21	0.26	0.30	<0.10	<0.10	0.11	0.52	0.41	0.41	2.0	1.8	2.6
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	<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	110	150	130	25	31	59
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	<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	<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	26	14	13	61	57	94
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	4.5	4.4	5.5	12	13	15
Methyl-t-butyl ether	ug/L	1634-04-4	4580	19600	524	15	NE	NE	2.5	2.8	2.3	<1.0	<1.0	<1.0	3.7	4.7	4.9	<1.0	<1.0	<1.0	1.0	1.6	1.4
Methylcyclohexane	ug/L	108-87-2	NE	NE	NE	NE	NE	NE	<10	<10	<10	<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	170	250	220	830	720	970
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	<5.0	<1.0	<1.0	<5.0	<1.0	<1.0	<5.0	<1.0	<1.0	<5.0
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	2.4	1.0	1.5	3.7	2.7	2.9
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	<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	<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	12	18	19	32	30	39
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	23	38	39	32	38	56
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	<5.3	<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	<5.3	<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	<5.3	<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	<5.0	<0.50	<0.50	<5.0	<0.50	<0.50	16	1.9	1.4	40	28	4.7
Acenaphthene	ug/L	83-32-9	NE	NE	2950	NE	670	990	NA	<0.50	<0.50	<5.0	<0.50	<0.50	<5.0	2.5	2.1	<5.3	1.0	<0.50	36	38	14
Acenaphthylene	ug/L	208-96-8	NE	NE	1430	NE	NE	NE	NA	<0.50	<0.50	<5.0	<0.50	<0.50	<5.0	<0.50	<0.50	<5.3	<0.50	<0.50	<5.0	1.2	<0.50
Anthracene	ug/L	120-12-7	NE	NE	7850	NE	8300	40000	NA	<0.50	<0.50	<5.0	<0.50	<0.50	<5.0	<0.50	<0.50	<5.3	<0.50	<0.50	<5.0	1.6	0.61
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	<5.3	<5.0	<5.0	7.0	7.1	<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	<5.3	<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	<5.3	<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	<5.0	<0.50	<0.50	<5.0	<0.50	<0.50	<5.3	<0.50	<0.50	<5.0	<0.50	<0.50
Fluorene	ug/L	86-73-7	NE	NE	4370	NE	1100	5300	NA	<0.50	<0.50	<5.0	<0.50	<0.50	<5.0	0.75	0.66	<5.3	1.1	<0.50	8.2	9.5	3.5
Naphthalene	ug/L	91-20-3	17.2	72.3	0.722	8.9	NE	NE	NA	<0.50	<0.50	<5.0	<0.50	<0.50	<5.0	<0.50	<0.50	83	47	16	200	170	73
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	<5.3	<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	<5.0	<0.50	<0.50	<5.0	<0.50	<0.50	<5.3	<0.50	<0.50	8.7	8.8	3.2
Pyrene	ug/L	129-00-0	NE	NE	1430	NE	830	4000	NA	<0.50	<0.50	<5.0	<0.50	<0.50	<5.0	<0.50	<0.50	<5.3	<0.50	<0.50	<5.0	<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-T3RGS� = 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 6. 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-08			MiHpt-14			MiHpt-15			MiHpt-20			MiHpt-21		
Sample Date:									9/21/16	2/7/17	1/29/18	9/21/16	2/7/17	1/29/18	9/21/16	2/7/17	1/29/18	9/21/16	2/7/17	1/29/18	9/21/16	2/7/17	1/29/18
TPH 8015																							
TPH-GRO (C6-C10)	mg/L	C6C10GRO	NE	NE	NE	15	NE	NE	<0.1	<0.1	<0.1	0.33	0.41	0.28	<0.1	<0.1	<0.1	0.18	0.14	0.16	7.5	15	4.5
TPH-DRO (C10-C28)	mg/L	C10C28DRO	NE	NE	NE	15	NE	NE	0.15	0.20	0.22	0.75	1.2	1.5	<0.10	<0.10	<0.10	0.72	0.62	0.77	1.7	1.2	2.3
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	<50	<100	19
Benzene	ug/L	71-43-2	13.7	57.3	14.2	12	22	510	<1.0	<1.0	<1.0	66	70	66	9.9	6.2	<1.0	14	13	14	58	59	75
Chloroform	ug/L	67-66-3	8	35.3	54.3	80	340	11000	<1.0	<1.0	<1.0	1.4	1.3	2.2	7.7	63	12	<1.0	<1.0	<1.0	<5.0	<10	<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	560	710	460
Ethylbenzene	ug/L	100-41-4	34.1	152	591	4.3	530	2100	<1.0	<1.0	<1.0	5.4	7.4	6.0	<1.0	<1.0	<1.0	1.4	<1.0	1.5	150	160	73
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	17	15	8.4
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	<5.0	<10	<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	460	690	340
Naphthalene	ug/L	91-20-3	17.2	72.3	0.722	8.9	NE	NE	14	14	<1.0	37	48	48	<1.0	1.1	<1.0	67	42	64	6.4	<10	3.2
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	<5.0	<1.0	<1.0	<5.0	<1.0	<1.0	<5.0	47	64	26
Toluene	ug/L	108-88-3	1920	8100	949	43	510	6000	<1.0	<1.0	<1.0	5.6	5.6	4.7	<1.0	<1.0	<1.0	2.6	2.0	2.2	45	44	31
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	10	11	10
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	<1.0	<1.0	2.1
m,p-Xylenes	ug/L	108-38-3	150	1290	20.8	33	NE	NE	<2.0	<2.0	<2.0	2.8	4.5	3.8	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	190	240	110
o-Xylene	ug/L	95-47-6	47.2	208	20.9	33	NE	NE	<1.0	<1.0	<1.0	4.8	7.4	5.7	<1.0	<1.0	<1.0	1.4	1.1	1.6	9.1	11	4.6
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	<5.3	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	53	19	11
2,4-Dichlorophenol	ug/L	120-83-2	NE	NE	1060	NE	77	290	<5.3	<5.0	<5.0	13	<5.0	<5.3	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	710	220	120
2-Chlorophenol	ug/L	95-57-8	NE	NE	1110	NE	81	150	<5.3	<5.0	<5.0	<5.0	<5.0	<5.3	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	8.3	<5.0	<5.0
2-Methylnaphthalene	ug/L	91-57-6	NE	NE	59	NE	NE	NE	<5.3	<0.50	<0.50	<5.0	0.68	<0.53	<5.0	<0.50	<0.50	<5.0	<0.50	<0.50	<5.0	<0.50	<0.50
Acenaphthene	ug/L	83-32-9	NE	NE	2950	NE	670	990	<5.3	1.6	0.66	12	8.5	2.5	<5.0	<0.50	<0.50	6.3	1.7	2.0	<5.0	<0.50	<0.50
Acenaphthylene	ug/L	208-96-8	NE	NE	1430	NE	NE	NE	<5.3	<0.50	<0.50	<5.0	<0.50	<0.53	<5.0	<0.50	<0.50	<5.0	0.94	1.2	<5.0	<0.50	<0.50
Anthracene	ug/L	120-12-7	NE	NE	7850	NE	8300	40000	<5.3	<0.50	<0.50	6.3	2.4	0.83	<5.0	<0.50	<0.50	<5.0	<0.50	<0.50	<5.0	<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	<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	<5.3	<5.0	<5.0	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	<5.3	<5.0	<5.0	13	7.2	<5.3	<5.0	<5.0	<5.0	11	<5.0	<5.0	<5.0	<5.0	<5.0
Fluoranthene	ug/L	206-44-0	NE	NE	311	NE	130	140	<5.3	<0.50	<0.50	<5.0	1.9	0.60	<5.0	<0.50	<0.50	<5.0	<0.50	<0.50	<5.0	<0.50	<0.50
Fluorene	ug/L	86-73-7	NE	NE	4370	NE	1100	5300	<5.3	0.51	<0.50	18	9.6	2.9	<5.0	<0.50	<0.50	12	2.5	<0.50	<5.0	<0.50	<0.50
Naphthalene	ug/L	91-20-3	17.2	72.3	0.722	8.9	NE	NE	<5.3	2.2	<0.50	10	8.8	2.9	<5.0	1.7	1.8	13	4.3	5.7	35	0.66	<0.50
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	<5.3	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	13	<5.0	<5.0
Phenanthrene	ug/L	85-01-8	NE	NE	1430	NE	NE	NE	<5.3	<0.50	<0.50	21	6.9	2.3	<5.0	<0.50	<0.50	10	1.5	1.7	<5.0	<0.50	<0.50
Pyrene	ug/L	129-00-0	NE	NE	1430	NE	830	4000	<5.3	<0.50	<0.50	<5.0	1.3	<0.53	<5.0	<0.50	<0.50	<5.0	<0.50	<0.50	<5.0	<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 6. 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-22			MW-23	MW-24	MW-25
Sample Date:									9/21/16	2/7/17	1/29/18	1/29/18	1/29/18	1/29/18
TPH 8015														
TPH-GRO (C6-C10)	mg/L	C6C10GRO	NE	NE	NE	15	NE	NE	0.38	2.3	0.27	<0.1	<0.1	0.11
TPH-DRO (C10-C28)	mg/L	C10C28DRO	NE	NE	NE	15	NE	NE	0.27	0.19	33	0.28	1.1	0.45
TCL VOCs 8260B														
Acetone	ug/L	67-64-1	2240000	9780000	13400	NE	NE	NE	<10	<10	<10	<10	<10	<10
Benzene	ug/L	71-43-2	13.7	57.3	14.2	12	22	510	130	630	34	<1.0	<1.0	14
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
Cyclohexane	ug/L	110-82-7	103	424	3330	NE	NE	NE	10	<10	<10	<10	<10	<10
Ethylbenzene	ug/L	100-41-4	34.1	152	591	4.3	530	2100	1.6	16	<1.0	<1.0	<1.0	2.3
Isopropylbenzene	ug/L	98-82-8	89.3	383	19.9	NE	NE	NE	<1.0	1.6	1.2	<1.0	1.7	1.6
Methyl-t-butyl ether	ug/L	1634-04-4	4580	19600	524	15	NE	NE	<1.0	<1.0	<1.0	4.3	3.9	<1.0
Methylcyclohexane	ug/L	108-87-2	NE	NE	NE	NE	NE	NE	<10	<10	<10	<10	<10	<10
Naphthalene	ug/L	91-20-3	17.2	72.3	0.722	8.9	NE	NE	<1.0	3.1	1.3	1.4	2.6	83
Tetrachloroethene (PCE)	ug/L	127-18-4	5.8	24.9	10.4	5	6.9	33	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
Toluene	ug/L	108-88-3	1920	8100	949	43	510	6000	<1.0	3.5	<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
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
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
o-Xylene	ug/L	95-47-6	47.2	208	20.9	33	NE	NE	<1.0	8.4	<1.0	<1.0	<1.0	2.4
TCL SVOCs 8270C														
2,4,5-Trichlorophenol	ug/L	95-95-4	NE	NE	7860	NE	300	600	<5.0	<5.0	<5.6	<5.0	<5.0	<5.0
2,4-Dichlorophenol	ug/L	120-83-2	NE	NE	1060	NE	77	290	<5.0	<5.0	<5.6	<5.0	<5.0	<5.0
2-Chlorophenol	ug/L	95-57-8	NE	NE	1110	NE	81	150	<5.0	<5.0	<5.6	<5.0	<5.0	<5.0
2-Methylnaphthalene	ug/L	91-57-6	NE	NE	59	NE	NE	NE	<5.0	<0.50	<0.56	<0.50	<0.50	<0.50
Acenaphthene	ug/L	83-32-9	NE	NE	2950	NE	670	990	<5.0	<0.50	<0.56	0.90	2.5	0.81
Acenaphthylene	ug/L	208-96-8	NE	NE	1430	NE	NE	NE	<5.0	<0.50	<0.56	<0.50	<0.50	<0.50
Anthracene	ug/L	120-12-7	NE	NE	7850	NE	8300	40000	<5.0	<0.50	<0.56	<0.50	0.55	<0.50
Biphenyl (Diphenyl)	ug/L	92-52-4	3.34	14.3	1.18	NE	NE	NE	<5.0	<5.0	<5.6	<5.0	<5.0	<5.0
Carbazole	ug/L	86-74-8	NE	NE	NE	NE	NE	NE	<5.0	<5.0	<5.6	<5.0	<5.0	<5.0
Dibenzofuran	ug/L	132-64-9	NE	NE	48.4	NE	NE	NE	<5.0	<5.0	<5.6	<5.0	<5.0	<5.0
Fluoranthene	ug/L	206-44-0	NE	NE	311	NE	130	140	<5.0	<0.50	<0.56	<0.50	1.1	<0.50
Fluorene	ug/L	86-73-7	NE	NE	4370	NE	1100	5300	<5.0	<0.50	<0.56	0.52	1.3	<0.50
Naphthalene	ug/L	91-20-3	17.2	72.3	0.722	8.9	NE	NE	<5.0	<0.50	<0.56	<0.50	<0.50	3.5
Pentachlorophenol	ug/L	87-86-5	NE	NE	5.54	NE	0.03	0.04	<5.0	<5.0	<5.6	<5.0	<5.0	<5.0
Phenanthrene	ug/L	85-01-8	NE	NE	1430	NE	NE	NE	<5.0	<0.50	<0.56	0.60	2.2	<0.50
Pyrene	ug/L	129-00-0	NE	NE	1430	NE	830	4000	<5.0	<0.50	<0.56	<0.50	0.88	<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

PHOTO-DOCUMENTATION OF RECENT FIELD ACTIVITIES



View of direct-push sampling rig used to advance test borings and install new wells (location MW-23).



View of soil cores generated during advancement of test boring MW-24.



View of test boring and new well location MW-24.



View of soil cores generated during advancement of test boring MW-25.



View of test boring and new well location MW-25.



View of ore encountered at 17'-19' bgs during advancement of test boring MW-25.



View of soil cores generated during advancement of test boring MW-23.



View of well completion (pad, manhole, and well cap).

ATTACHMENT 2

BORING LOGS

Boring Number:		MW23		Page 1 of 1	
Location:		Robinson Terminal North		Date and Time:	1/22/18 9:10
Site Address:		500 N. Union Street		Total Depth of Boring:	20'
		Alexandria, VA		Depth to Groundwater:	10'
Project Number:		16-CI.001		Geologist/Scientist:	M. Bruzzesi
Drill Rig Type:		Direct-Push		Driller:	E. Lindberg
Sampling Equipment:		Track-Mounted GeoProbe 6620DT		ICOR, Ltd. PO Box 406, Middleburg, VA 20118	
Borehole Diameter:		2-inch			
Depth	Sample	PID	USCS	Description	Notes
1	MW-23(11.5-12.5)	0.0		0-6" GRAVEL.	Dry. Faint petro odors. Dry. No odors. Wet at 10'. Faint petro odors from 11'-12'. Wet. Faint petro odors from 12'-12.5'. Wet. No odors. Wet. No odors.
2				6"-1.5' Brown fill comprised of intermixed C.-F. SAND and angular GRAVEL.	
3				1.5'-4.75' Dark brown and light black fill comprised of intermixed M.-F. SAND, little SILT, and some debris (glass).	
4					
5				4.75'-12' Dark reddish brown C.-M. SAND with little F. SAND and a few S. GRAVEL. Minor black staining from 11'-12'.	
6					
7					
8					
9					
10					
11					
12					
13				12'-14.5' Light brown (tan) M.-F. SAND with little C. SAND.	
14					
15				14.5'-19' Light gray silty F. SAND with some CLAY.	
16					
17					
18					
19					
20				19'-20' Light reddish brown (orange) silty M.-F. SAND with little to very little CLAY.	
21					Boring terminated at 20'.
22					Permanent well installed to 19.75'. Well constructed of 1" diameter new, dedicated, and disposable PVC (with 15' of screen).
23					
24					
24					
25					
26					
27					
28					
29					
30					

Boring Number:		MW24			Page 1 of 1				
Location:		Robinson Terminal North			Date and Time:	1/22/18	10:55		
Site Address:		500 N. Union Street			Total Depth of Boring:		19'		
		Alexandria, VA			Depth to Groundwater:		8'		
Project Number:		16-CI.001			Geologist/Scientist:		M. Bruzzesi		
Drill Rig Type:		Direct-Push			Driller:		E. Lindberg		
Sampling Equipment:		Track-Mounted GeoProbe 6620DT			ICOR, Ltd. PO Box 406, Middleburg, VA 20118				
Borehole Diameter:		2-inch							
Depth	Sample	PID	USCS	Description	Notes				
1	MW-24(8-9)	0.0		0-6" GRAVEL and railroad ballast.	Dry. No odors.				
2				6"-8' Black, brown, gray, and dark red fill comprised of intermixed C.-F. SAND and S. GRAVEL with debris (brick) noted from 4'-8'.					
3									
4									
5									
6									
7									
8									
9				8'-13.5' Dark reddish brown M.-F. SAND with little C. SAND.	Wet. No odors.				
10				13.5'-19' Dark gray and black F. SAND and SILT with little CLAY grading into a silty F. SAND with some CLAY and organics. Lower 6" also contained GRAVEL.					
11									
12									
13									
14									
15									
16									
17									
18									
19									
20							Boring terminated at 19'.		
21							Permanent well installed to 19'. Well constructed of 1" diameter new, dedicated, and disposable PVC (with 15' of screen).		
22									
23									
24									
25									
26									
27									
28									
29									
30									



Boring Number:		MW25			Page 1 of 1				
Location:		Robinson Terminal North			Date and Time:	1/22/18	12:00		
Site Address:		500 N. Union Street			Total Depth of Boring:		19'		
		Alexandria, VA			Depth to Groundwater:		8'		
Project Number:		16-CI.001			Geologist/Scientist:		M. Bruzzesi		
Drill Rig Type:		Direct-Push			Driller:		E. Lindberg		
Sampling Equipment:		Track-Mounted GeoProbe 6620DT			ICOR, Ltd. PO Box 406, Middleburg, VA 20118				
Borehole Diameter:		2-inch							
Depth	Sample	PID	USCS	Description	Notes				
1	MW-25(9-10)	0.0		0-1' Light brown intermixed GRAVEL, C.-M. SAND, little F. SAND, and very little SILT.	Dry. No odors.				
2				1'-6.5' Light brown very tight fill comprised of SILT and little F. SAND and CLAY.	Dry. No odors.				
3									
4									
5									
6									
7					6.5'-12.5' Light brown and black fill comprised of F. SAND with little M. SAND, some SILT, and little CLAY.	Wet at 8'. Faint petro odors from 9'-12.5'.			
8									
9									
10									
11									
12									
13				12.5'-15' Dark reddish brown fill comprised of C.-M. SAND, little F. SAND and SILT with with some brick fragments.	Wet. Faint petro odors.				
14									
15									
16				15'-17' Black fill comprised of SILT and little CLAY and organic matter.	Wet. Faint petro odors.				
17									
18				17'-19' Black and gold fill comprised of fine grained ore (brass slag or cuttings?) and SILT with silt content increasing with depth.	Wet. Faint petro odors.				
19									
20				Boring terminated at 19'.					
21				Permanent well installed to 19'. Well constructed of 1" diameter new, dedicated, and disposable PVC (with 15' of screen).					
22									
23									
24									
25									
26									
27									
28									
29									
30									



ATTACHMENT 3

**LABORATORY REPORTS OF
ANALYSIS**

Analytical Report for

Icor Ltd.

Certificate of Analysis No.: 18012316

Project Manager: Mike Bruzzesi

Project Name : RTN

Project Location: Alexandria, VA



January 30, 2018

Phase Separation Science, Inc.

6630 Baltimore National Pike

Baltimore, MD 21228

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PHASE SEPARATION SCIENCE, INC.



January 30, 2018

Mike Bruzzesi

Icor Ltd.

PO Box 406

Middleburg, VA 20118

Reference: PSS Work Order(s) No: **18012316**

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 **18012316**.

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 February 27, 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: Icor Ltd.
Project Name: RTN

Work Order Number(s): 18012316

The following samples were received under chain of custody by Phase Separation Science (PSS) on 01/23/2018 at 12:30 pm

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
18012316-001	MW-23 (11.5-12.5)	SOIL	01/22/18 09:50
18012316-002	MW-24 (8-9)	SOIL	01/22/18 11:15
18012316-003	MW-25 (9-10)	SOIL	01/22/18 12:10

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 contaminants, and part 141.3, for the secondary drinking water contaminants.
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.

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

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18012316

Icor Ltd., Middleburg, VA

January 30, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW-23 (11.5-12.5)		Date/Time Sampled: 01/22/2018 09:50				PSS Sample ID: 18012316-001		
Matrix: SOIL		Date/Time Received: 01/23/2018 12:30				% Solids: 67		
Total Petroleum Hydrocarbons - DRO		Analytical Method: SW-846 8015 C				Preparation Method: SW3550C		
DF/HF - No. 2/diesel fuel and heavier fuel/oil patterns observed in sample.								
	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	9,000	mg/kg	1,500	DF	20	01/24/18	01/25/18 19:00	1045
Total Petroleum Hydrocarbons-GRO		Analytical Method: SW-846 8015C				Preparation Method: 5035A		
	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	3,200	ug/kg	140		1	01/23/18	01/23/18 18:32	1035

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CERTIFICATE OF ANALYSIS

No: 18012316

Icor Ltd., Middleburg, VA

January 30, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW-23 (11.5-12.5)	Date/Time Sampled: 01/22/2018 09:50	PSS Sample ID: 18012316-001
Matrix: SOIL	Date/Time Received: 01/23/2018 12:30	% Solids: 67

TCL Volatile Organic Compounds

Analytical Method: SW-846 8260 B

Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/kg	3,000		100	01/26/18	01/27/18 19:28	1011
Benzene	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
Bromochloromethane	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
Bromodichloromethane	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
Bromoform	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
Bromomethane	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
2-Butanone (MEK)	ND	ug/kg	3,000		100	01/26/18	01/27/18 19:28	1011
Carbon Disulfide	ND	ug/kg	1,500		100	01/26/18	01/27/18 19:28	1011
Carbon tetrachloride	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
Chlorobenzene	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
Chloroethane	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
Chloroform	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
Chloromethane	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
Cyclohexane	ND	ug/kg	3,000		100	01/26/18	01/27/18 19:28	1011
1,2-Dibromo-3-chloropropane	ND	ug/kg	6,000		100	01/26/18	01/27/18 19:28	1011
Dibromochloromethane	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
1,2-Dibromoethane	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
1,2-Dichlorobenzene	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
1,3-Dichlorobenzene	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
1,4-Dichlorobenzene	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
Dichlorodifluoromethane	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
1,1-Dichloroethane	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
1,2-Dichloroethane	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
1,1-Dichloroethene	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
cis-1,2-Dichloroethene	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
1,2-Dichloropropane	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
cis-1,3-Dichloropropene	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
trans-1,2-Dichloroethene	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
trans-1,3-Dichloropropene	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
Ethylbenzene	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011

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CERTIFICATE OF ANALYSIS

No: 18012316

Icor Ltd., Middleburg, VA

January 30, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW-23 (11.5-12.5)	Date/Time Sampled: 01/22/2018 09:50	PSS Sample ID: 18012316-001
Matrix: SOIL	Date/Time Received: 01/23/2018 12:30	% Solids: 67

TCL Volatile Organic Compounds

Analytical Method: SW-846 8260 B

Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
2-Hexanone (MBK)	ND	ug/kg	3,000		100	01/26/18	01/27/18 19:28	1011
Isopropylbenzene	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
Methyl Acetate	ND	ug/kg	3,000		100	01/26/18	01/27/18 19:28	1011
Methylcyclohexane	ND	ug/kg	3,000		100	01/26/18	01/27/18 19:28	1011
Methylene chloride	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/kg	3,000		100	01/26/18	01/27/18 19:28	1011
Methyl-t-Butyl Ether	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
Naphthalene	9,700	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
Styrene	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
Tetrachloroethene	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
Toluene	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
1,2,3-Trichlorobenzene	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
1,2,4-Trichlorobenzene	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
1,1,1-Trichloroethane	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
1,1,2-Trichloroethane	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
Trichloroethene	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
Trichlorofluoromethane	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
Vinyl chloride	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011
m&p-Xylene	ND	ug/kg	1,500		100	01/26/18	01/27/18 19:28	1011
o-Xylene	ND	ug/kg	750		100	01/26/18	01/27/18 19:28	1011

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18012316

Icor Ltd., Middleburg, VA

January 30, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW-23 (11.5-12.5)	Date/Time Sampled: 01/22/2018 09:50	PSS Sample ID: 18012316-001
Matrix: SOIL	Date/Time Received: 01/23/2018 12:30	% Solids: 67

TCL Semivolatile Organic Compounds

Analytical Method: SW-846 8270 C

Preparation Method: SW3550C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	850,000	ug/kg	6,200		50	01/25/18	01/26/18 00:40	1059
Acenaphthylene	52,000	ug/kg	6,200		50	01/25/18	01/26/18 00:40	1059
Acetophenone	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
Anthracene	780,000	ug/kg	6,200		50	01/25/18	01/26/18 00:40	1059
Atrazine	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
Benzo(a)anthracene	680,000	ug/kg	6,200		50	01/25/18	01/26/18 00:40	1059
Benzo(a)pyrene	570,000	ug/kg	6,200		50	01/25/18	01/26/18 00:40	1059
Benzo(b)fluoranthene	390,000	ug/kg	6,200		50	01/25/18	01/26/18 00:40	1059
Benzo(g,h,i)perylene	190,000	ug/kg	6,200		50	01/25/18	01/26/18 00:40	1059
Benzo(k)fluoranthene	420,000	ug/kg	6,200		50	01/25/18	01/26/18 00:40	1059
Biphenyl (Diphenyl)	160,000	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
Butyl benzyl phthalate	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
bis(2-chloroethoxy) methane	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
bis(2-chloroethyl) ether	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
bis(2-chloroisopropyl) ether	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
bis(2-ethylhexyl) phthalate	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
4-Bromophenylphenyl ether	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
Di-n-butyl phthalate	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
Carbazole	180,000	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
Caprolactam	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
4-Chloro-3-methyl phenol	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
4-Chloroaniline	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
2-Chloronaphthalene	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
2-Chlorophenol	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
4-Chlorophenyl Phenyl ether	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
Chrysene	530,000	ug/kg	6,200		50	01/25/18	01/26/18 00:40	1059
Dibenz(a,h)Anthracene	130,000	ug/kg	6,200		50	01/25/18	01/26/18 00:40	1059
Dibenzofuran	600,000	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
3,3-Dichlorobenzidine	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
2,4-Dichlorophenol	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18012316

Icor Ltd., Middleburg, VA

January 30, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW-23 (11.5-12.5)	Date/Time Sampled: 01/22/2018 09:50	PSS Sample ID: 18012316-001
Matrix: SOIL	Date/Time Received: 01/23/2018 12:30	% Solids: 67

TCL Semivolatile Organic Compounds

Analytical Method: SW-846 8270 C

Preparation Method: SW3550C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Diethyl phthalate	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
Dimethyl phthalate	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
2,4-Dimethylphenol	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
4,6-Dinitro-2-methyl phenol	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
2,4-Dinitrophenol	ND	ug/kg	120,000		50	01/25/18	01/26/18 00:40	1059
2,4-Dinitrotoluene	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
2,6-Dinitrotoluene	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
Fluoranthene	1,600,000	ug/kg	31,000		250	01/25/18	01/26/18 20:04	1059
Fluorene	800,000	ug/kg	6,200		50	01/25/18	01/26/18 00:40	1059
Hexachlorobenzene	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
Hexachlorobutadiene	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
Hexachlorocyclopentadiene	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
Hexachloroethane	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
Indeno(1,2,3-c,d)Pyrene	280,000	ug/kg	6,200		50	01/25/18	01/26/18 00:40	1059
Isophorone	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
2-Methylnaphthalene	16,000	ug/kg	6,200		50	01/25/18	01/26/18 00:40	1059
2-Methyl phenol	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
3&4-Methylphenol	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
Naphthalene	62,000	ug/kg	6,200		50	01/25/18	01/26/18 00:40	1059
2-Nitroaniline	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
3-Nitroaniline	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
4-Nitroaniline	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
Nitrobenzene	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
2-Nitrophenol	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
4-Nitrophenol	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
N-Nitrosodi-n-propyl amine	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
N-Nitrosodiphenylamine	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
Di-n-octyl phthalate	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
Pentachlorophenol	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
Phenanthrene	2,100,000	ug/kg	31,000		250	01/25/18	01/26/18 20:04	1059

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CERTIFICATE OF ANALYSIS

No: 18012316

Icor Ltd., Middleburg, VA

January 30, 2018

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Project Location: Alexandria, VA

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Matrix: SOIL	Date/Time Received: 01/23/2018 12:30	% Solids: 67

TCL Semivolatile Organic Compounds

Analytical Method: SW-846 8270 C

Preparation Method: SW3550C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Phenol	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
Pyrene	1,300,000	ug/kg	31,000		250	01/25/18	01/26/18 20:04	1059
Pyridine	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
2,4,5-Trichlorophenol	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059
2,4,6-Trichlorophenol	ND	ug/kg	62,000		50	01/25/18	01/26/18 00:40	1059

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CERTIFICATE OF ANALYSIS

No: 18012316

Icor Ltd., Middleburg, VA

January 30, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW-24 (8-9)	Date/Time Sampled: 01/22/2018 11:15	PSS Sample ID: 18012316-002
Matrix: SOIL	Date/Time Received: 01/23/2018 12:30	% Solids: 81

Total Petroleum Hydrocarbons - DRO

Analytical Method: SW-846 8015 C

Preparation Method: SW3550C

HF - Heavier fuel/oil pattern observed in sample.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	58	mg/kg	12	HF	1	01/24/18	01/29/18 12:17	1045

Total Petroleum Hydrocarbons-GRO

Analytical Method: SW-846 8015C

Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	ND	ug/kg	110		1	01/23/18	01/23/18 19:03	1035

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No: 18012316

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January 30, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW-24 (8-9)	Date/Time Sampled: 01/22/2018 11:15	PSS Sample ID: 18012316-002
Matrix: SOIL	Date/Time Received: 01/23/2018 12:30	% Solids: 81

TCL Volatile Organic Compounds

Analytical Method: SW-846 8260 B

Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	34	ug/kg	19		1	01/29/18	01/29/18 19:09	1011
Benzene	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
Bromochloromethane	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
Bromodichloromethane	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
Bromoform	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
Bromomethane	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
2-Butanone (MEK)	ND	ug/kg	19		1	01/29/18	01/29/18 19:09	1011
Carbon Disulfide	ND	ug/kg	9.4		1	01/29/18	01/29/18 19:09	1011
Carbon tetrachloride	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
Chlorobenzene	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
Chloroethane	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
Chloroform	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
Chloromethane	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
Cyclohexane	ND	ug/kg	19		1	01/29/18	01/29/18 19:09	1011
1,2-Dibromo-3-chloropropane	ND	ug/kg	38		1	01/29/18	01/29/18 19:09	1011
Dibromochloromethane	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
1,2-Dibromoethane	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
1,2-Dichlorobenzene	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
1,3-Dichlorobenzene	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
1,4-Dichlorobenzene	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
Dichlorodifluoromethane	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
1,1-Dichloroethane	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
1,2-Dichloroethane	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
1,1-Dichloroethene	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
1,2-Dichloropropane	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
cis-1,2-Dichloroethene	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
cis-1,3-Dichloropropene	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
trans-1,2-Dichloroethene	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
trans-1,3-Dichloropropene	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
Ethylbenzene	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011

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CERTIFICATE OF ANALYSIS

No: 18012316

Icor Ltd., Middleburg, VA

January 30, 2018

Project Name: RTN

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Sample ID: MW-24 (8-9)	Date/Time Sampled: 01/22/2018 11:15	PSS Sample ID: 18012316-002
Matrix: SOIL	Date/Time Received: 01/23/2018 12:30	% Solids: 81

TCL Volatile Organic Compounds

Analytical Method: SW-846 8260 B

Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
2-Hexanone (MBK)	ND	ug/kg	19		1	01/29/18	01/29/18 19:09	1011
Isopropylbenzene	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
Methyl Acetate	ND	ug/kg	19		1	01/29/18	01/29/18 19:09	1011
Methylcyclohexane	ND	ug/kg	19		1	01/29/18	01/29/18 19:09	1011
Methylene chloride	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/kg	19		1	01/29/18	01/29/18 19:09	1011
Methyl-t-Butyl Ether	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
Naphthalene	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
Styrene	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
Tetrachloroethene	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
Toluene	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
1,2,3-Trichlorobenzene	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
1,2,4-Trichlorobenzene	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
1,1,1-Trichloroethane	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
1,1,2-Trichloroethane	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
Trichloroethene	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
Trichlorofluoromethane	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
Vinyl chloride	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011
m&p-Xylene	ND	ug/kg	9.4		1	01/29/18	01/29/18 19:09	1011
o-Xylene	ND	ug/kg	4.7		1	01/29/18	01/29/18 19:09	1011

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TCL Semivolatile Organic Compounds

Analytical Method: SW-846 8270 C

Preparation Method: SW3550C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	35	ug/kg	20		1	01/25/18	01/26/18 20:31	1059
Acenaphthylene	57	ug/kg	20		1	01/25/18	01/26/18 20:31	1059
Acetophenone	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
Anthracene	100	ug/kg	20		1	01/25/18	01/26/18 20:31	1059
Atrazine	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
Benzo(a)anthracene	430	ug/kg	20		1	01/25/18	01/26/18 20:31	1059
Benzo(a)pyrene	450	ug/kg	20		1	01/25/18	01/26/18 20:31	1059
Benzo(b)fluoranthene	400	ug/kg	20		1	01/25/18	01/26/18 20:31	1059
Benzo(g,h,i)perylene	220	ug/kg	20		1	01/25/18	01/26/18 20:31	1059
Benzo(k)fluoranthene	320	ug/kg	20		1	01/25/18	01/26/18 20:31	1059
Biphenyl (Diphenyl)	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
Butyl benzyl phthalate	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
bis(2-chloroethoxy) methane	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
bis(2-chloroethyl) ether	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
bis(2-chloroisopropyl) ether	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
bis(2-ethylhexyl) phthalate	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
4-Bromophenylphenyl ether	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
Di-n-butyl phthalate	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
Carbazole	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
Caprolactam	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
4-Chloro-3-methyl phenol	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
4-Chloroaniline	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
2-Chloronaphthalene	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
2-Chlorophenol	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
4-Chlorophenyl Phenyl ether	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
Chrysene	440	ug/kg	20		1	01/25/18	01/26/18 20:31	1059
Dibenz(a,h)Anthracene	80	ug/kg	20		1	01/25/18	01/26/18 20:31	1059
Dibenzofuran	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
3,3-Dichlorobenzidine	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
2,4-Dichlorophenol	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059

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January 30, 2018

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TCL Semivolatile Organic Compounds

Analytical Method: SW-846 8270 C

Preparation Method: SW3550C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Diethyl phthalate	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
Dimethyl phthalate	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
2,4-Dimethylphenol	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
4,6-Dinitro-2-methyl phenol	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
2,4-Dinitrophenol	ND	ug/kg	410		1	01/25/18	01/26/18 20:31	1059
2,4-Dinitrotoluene	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
2,6-Dinitrotoluene	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
Fluoranthene	720	ug/kg	20		1	01/25/18	01/26/18 20:31	1059
Fluorene	43	ug/kg	20		1	01/25/18	01/26/18 20:31	1059
Hexachlorobenzene	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
Hexachlorobutadiene	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
Hexachlorocyclopentadiene	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
Hexachloroethane	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
Indeno(1,2,3-c,d)Pyrene	280	ug/kg	20		1	01/25/18	01/26/18 20:31	1059
Isophorone	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
2-Methylnaphthalene	ND	ug/kg	20		1	01/25/18	01/26/18 20:31	1059
2-Methyl phenol	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
3&4-Methylphenol	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
Naphthalene	ND	ug/kg	20		1	01/25/18	01/26/18 20:31	1059
2-Nitroaniline	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
3-Nitroaniline	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
4-Nitroaniline	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
Nitrobenzene	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
2-Nitrophenol	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
4-Nitrophenol	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
N-Nitrosodi-n-propyl amine	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
N-Nitrosodiphenylamine	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
Di-n-octyl phthalate	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
Pentachlorophenol	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
Phenanthrene	400	ug/kg	20		1	01/25/18	01/26/18 20:31	1059

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18012316

Icor Ltd., Middleburg, VA

January 30, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW-24 (8-9)	Date/Time Sampled: 01/22/2018 11:15	PSS Sample ID: 18012316-002
Matrix: SOIL	Date/Time Received: 01/23/2018 12:30	% Solids: 81

TCL Semivolatile Organic Compounds

Analytical Method: SW-846 8270 C

Preparation Method: SW3550C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Phenol	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
Pyrene	660	ug/kg	20		1	01/25/18	01/26/18 20:31	1059
Pyridine	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
2,4,5-Trichlorophenol	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059
2,4,6-Trichlorophenol	ND	ug/kg	200		1	01/25/18	01/26/18 20:31	1059

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18012316

Icor Ltd., Middleburg, VA

January 30, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW-25 (9-10)	Date/Time Sampled: 01/22/2018 12:10	PSS Sample ID: 18012316-003
Matrix: SOIL	Date/Time Received: 01/23/2018 12:30	% Solids: 72

Total Petroleum Hydrocarbons - DRO

Analytical Method: SW-846 8015 C

Preparation Method: SW3550C

HF - Heavier fuel/oil pattern observed in sample.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	220	mg/kg	69	HF	1	01/24/18	01/25/18 17:46	1045

Total Petroleum Hydrocarbons-GRO

Analytical Method: SW-846 8015C

Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	ND	ug/kg	120		1	01/23/18	01/23/18 19:34	1035

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18012316

Icor Ltd., Middleburg, VA

January 30, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW-25 (9-10)	Date/Time Sampled: 01/22/2018 12:10	PSS Sample ID: 18012316-003
Matrix: SOIL	Date/Time Received: 01/23/2018 12:30	% Solids: 72

TCL Volatile Organic Compounds

Analytical Method: SW-846 8260 B

Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	ND	ug/kg	25		1	01/30/18	01/30/18 13:11	1011
Benzene	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
Bromochloromethane	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
Bromodichloromethane	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
Bromoform	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
Bromomethane	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
2-Butanone (MEK)	ND	ug/kg	25		1	01/30/18	01/30/18 13:11	1011
Carbon Disulfide	ND	ug/kg	12		1	01/30/18	01/30/18 13:11	1011
Carbon tetrachloride	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
Chlorobenzene	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
Chloroethane	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
Chloroform	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
Chloromethane	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
Cyclohexane	ND	ug/kg	25		1	01/30/18	01/30/18 13:11	1011
1,2-Dibromo-3-chloropropane	ND	ug/kg	50		1	01/30/18	01/30/18 13:11	1011
Dibromochloromethane	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
1,2-Dibromoethane	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
1,2-Dichlorobenzene	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
1,3-Dichlorobenzene	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
1,4-Dichlorobenzene	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
Dichlorodifluoromethane	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
1,1-Dichloroethane	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
1,2-Dichloroethane	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
1,1-Dichloroethene	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
1,2-Dichloropropane	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
cis-1,2-Dichloroethene	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
cis-1,3-Dichloropropene	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
trans-1,2-Dichloroethene	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
trans-1,3-Dichloropropene	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
Ethylbenzene	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18012316

Icor Ltd., Middleburg, VA

January 30, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW-25 (9-10)	Date/Time Sampled: 01/22/2018 12:10	PSS Sample ID: 18012316-003
Matrix: SOIL	Date/Time Received: 01/23/2018 12:30	% Solids: 72

TCL Volatile Organic Compounds

Analytical Method: SW-846 8260 B

Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
2-Hexanone (MBK)	ND	ug/kg	25		1	01/30/18	01/30/18 13:11	1011
Isopropylbenzene	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
Methyl Acetate	ND	ug/kg	25		1	01/30/18	01/30/18 13:11	1011
Methylcyclohexane	ND	ug/kg	25		1	01/30/18	01/30/18 13:11	1011
Methylene chloride	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/kg	25		1	01/30/18	01/30/18 13:11	1011
Methyl-t-Butyl Ether	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
Naphthalene	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
Styrene	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
Tetrachloroethene	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
Toluene	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
1,2,3-Trichlorobenzene	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
1,2,4-Trichlorobenzene	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
1,1,1-Trichloroethane	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
1,1,2-Trichloroethane	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
Trichloroethene	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
Trichlorofluoromethane	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
Vinyl chloride	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011
m&p-Xylene	ND	ug/kg	12		1	01/30/18	01/30/18 13:11	1011
o-Xylene	ND	ug/kg	6.2		1	01/30/18	01/30/18 13:11	1011

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18012316

Icor Ltd., Middleburg, VA

January 30, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW-25 (9-10)	Date/Time Sampled: 01/22/2018 12:10	PSS Sample ID: 18012316-003
Matrix: SOIL	Date/Time Received: 01/23/2018 12:30	% Solids: 72

TCL Semivolatile Organic Compounds

Analytical Method: SW-846 8270 C

Preparation Method: SW3550C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	ND	ug/kg	110		1	01/25/18	01/25/18 23:47	1059
Acenaphthylene	ND	ug/kg	110		1	01/25/18	01/25/18 23:47	1059
Acetophenone	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
Anthracene	ND	ug/kg	110		1	01/25/18	01/25/18 23:47	1059
Atrazine	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
Benzo(a)anthracene	ND	ug/kg	110		1	01/25/18	01/25/18 23:47	1059
Benzo(a)pyrene	ND	ug/kg	110		1	01/25/18	01/25/18 23:47	1059
Benzo(b)fluoranthene	ND	ug/kg	110		1	01/25/18	01/25/18 23:47	1059
Benzo(g,h,i)perylene	ND	ug/kg	110		1	01/25/18	01/25/18 23:47	1059
Benzo(k)fluoranthene	ND	ug/kg	110		1	01/25/18	01/25/18 23:47	1059
Biphenyl (Diphenyl)	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
Butyl benzyl phthalate	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
bis(2-chloroethoxy) methane	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
bis(2-chloroethyl) ether	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
bis(2-chloroisopropyl) ether	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
bis(2-ethylhexyl) phthalate	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
4-Bromophenylphenyl ether	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
Di-n-butyl phthalate	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
Carbazole	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
Caprolactam	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
4-Chloro-3-methyl phenol	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
4-Chloroaniline	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
2-Chloronaphthalene	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
2-Chlorophenol	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
4-Chlorophenyl Phenyl ether	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
Chrysene	ND	ug/kg	110		1	01/25/18	01/25/18 23:47	1059
Dibenz(a,h)Anthracene	ND	ug/kg	110		1	01/25/18	01/25/18 23:47	1059
Dibenzofuran	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
3,3-Dichlorobenzidine	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
2,4-Dichlorophenol	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18012316

Icor Ltd., Middleburg, VA

January 30, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW-25 (9-10)	Date/Time Sampled: 01/22/2018 12:10	PSS Sample ID: 18012316-003
Matrix: SOIL	Date/Time Received: 01/23/2018 12:30	% Solids: 72

TCL Semivolatile Organic Compounds

Analytical Method: SW-846 8270 C

Preparation Method: SW3550C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Diethyl phthalate	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
Dimethyl phthalate	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
2,4-Dimethylphenol	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
4,6-Dinitro-2-methyl phenol	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
2,4-Dinitrophenol	ND	ug/kg	2,300		1	01/25/18	01/25/18 23:47	1059
2,4-Dinitrotoluene	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
2,6-Dinitrotoluene	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
Fluoranthene	190	ug/kg	110		1	01/25/18	01/25/18 23:47	1059
Fluorene	ND	ug/kg	110		1	01/25/18	01/25/18 23:47	1059
Hexachlorobenzene	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
Hexachlorobutadiene	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
Hexachlorocyclopentadiene	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
Hexachloroethane	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
Indeno(1,2,3-c,d)Pyrene	ND	ug/kg	110		1	01/25/18	01/25/18 23:47	1059
Isophorone	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
2-Methylnaphthalene	ND	ug/kg	110		1	01/25/18	01/25/18 23:47	1059
2-Methyl phenol	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
3&4-Methylphenol	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
Naphthalene	ND	ug/kg	110		1	01/25/18	01/25/18 23:47	1059
2-Nitroaniline	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
3-Nitroaniline	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
4-Nitroaniline	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
Nitrobenzene	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
2-Nitrophenol	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
4-Nitrophenol	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
N-Nitrosodi-n-propyl amine	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
N-Nitrosodiphenylamine	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
Di-n-octyl phthalate	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
Pentachlorophenol	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
Phenanthrene	130	ug/kg	110		1	01/25/18	01/25/18 23:47	1059

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18012316

Icor Ltd., Middleburg, VA

January 30, 2018

Project Name: RTN

Project Location: Alexandria, VA

Sample ID: MW-25 (9-10)	Date/Time Sampled: 01/22/2018 12:10	PSS Sample ID: 18012316-003
Matrix: SOIL	Date/Time Received: 01/23/2018 12:30	% Solids: 72

TCL Semivolatile Organic Compounds

Analytical Method: SW-846 8270 C

Preparation Method: SW3550C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Phenol	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
Pyrene	190	ug/kg	110		1	01/25/18	01/25/18 23:47	1059
Pyridine	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
2,4,5-Trichlorophenol	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059
2,4,6-Trichlorophenol	ND	ug/kg	1,100		1	01/25/18	01/25/18 23:47	1059



Case Narrative Summary

Client Name: Icor Ltd.

Project Name: RTN

Work Order Number(s): 18012316

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.

Sample Receipt:

All sample receipt conditions were acceptable.

Analytical:

TCL Semivolatile Organic Compounds

Batch: 149951

Samples 18012316-001 and 18012316-003 could not be concentrated to a final volume of one milliliter due to the nature of the sample matrix. The final volume for this sample is five milliliters.

Sample 18012316-001 required a 50X and 250X dilution due to extracts being viscous and dark in color.

Surrogate recoveries affected by sample dilution for 18012316-001.

Benzo-b-fluoranthene and benzo-k-fluoranthene do not meet resolution criteria.

Batch: 149956

Benzo-b-fluoranthene and benzo-k-fluoranthene do not meet resolution criteria.

Surrogate recoveries affected by sample dilution for 18012316-001.

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): 18012316

Report Prepared For: Icor Ltd., Middleburg, VA

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
SM2540G	MW-23 (11.5-12.5)	Initial	18012316-001	1067	S	149825	149825	01/22/2018	01/24/2018 13:08	01/24/2018 13:08
	MW-24 (8-9)	Initial	18012316-002	1067	S	149825	149825	01/22/2018	01/24/2018 13:08	01/24/2018 13:08
	MW-25 (9-10)	Initial	18012316-003	1067	S	149825	149825	01/22/2018	01/24/2018 13:08	01/24/2018 13:08
SW-846 8015 C	MW-23 (11.5-12.5)	Initial	18012316-001	1045	S	69657	149872	01/22/2018	01/24/2018 08:10	01/25/2018 19:00
	CS7-012218 S	MS	18012307-007 S	1045	S	69657	149872	01/22/2018	01/24/2018 08:10	01/25/2018 10:24
	CS7-012218 SD	MSD	18012307-007 SD	1045	S	69657	149872	01/22/2018	01/24/2018 08:10	01/25/2018 10:48
	MW-25 (9-10)	Initial	18012316-003	1045	S	69657	149873	01/22/2018	01/24/2018 08:10	01/25/2018 17:46
	69657-1-BKS	BKS	69657-1-BKS	1045	S	69657	149873	-----	01/24/2018 08:10	01/25/2018 10:24
	69657-1-BLK	BLK	69657-1-BLK	1045	S	69657	149873	-----	01/24/2018 08:10	01/25/2018 09:59
	69657-1-BSD	BSD	69657-1-BSD	1045	S	69657	149873	-----	01/24/2018 08:10	01/25/2018 10:48
	MW-24 (8-9)	Initial	18012316-002	1045	S	69657	149949	01/22/2018	01/24/2018 08:10	01/29/2018 12:17
SW-846 8015C	MW-23 (11.5-12.5)	Initial	18012316-001	1035	S	69652	149784	01/22/2018	01/23/2018 09:44	01/23/2018 18:32
	MW-24 (8-9)	Initial	18012316-002	1035	S	69652	149784	01/22/2018	01/23/2018 09:44	01/23/2018 19:03
	MW-25 (9-10)	Initial	18012316-003	1035	S	69652	149784	01/22/2018	01/23/2018 09:44	01/23/2018 19:34
	69652-2-BKS	BKS	69652-2-BKS	1035	S	69652	149784	-----	01/23/2018 09:44	01/23/2018 14:57
	69652-2-BLK	BLK	69652-2-BLK	1035	S	69652	149784	-----	01/23/2018 09:44	01/23/2018 12:25
	011918-OP-W4120 S	MS	18012213-001 S	1035	S	69652	149784	01/19/2018	01/23/2018 09:44	01/23/2018 20:05
	011918-OP-W4120 SD	MSD	18012213-001 SD	1035	S	69652	149784	01/19/2018	01/23/2018 09:44	01/23/2018 20:35
SW-846 8260 B	MW-23 (11.5-12.5)	Initial	18012316-001	1011	S	69717	149910	01/22/2018	01/26/2018 08:47	01/27/2018 19:28
	69717-1-BKS	BKS	69717-1-BKS	1011	S	69717	149910	-----	01/26/2018 08:47	01/27/2018 10:48
	69717-1-BLK	BLK	69717-1-BLK	1011	S	69717	149910	-----	01/26/2018 08:47	01/27/2018 11:28
	CS1-012218 S	MS	18012307-001 S	1011	S	69717	149910	01/22/2018	01/26/2018 08:47	01/27/2018 12:48
	CS1-012218 SD	MSD	18012307-001 SD	1011	S	69717	149910	01/22/2018	01/26/2018 08:47	01/27/2018 13:27
	MW-24 (8-9)	Initial	18012316-002	1011	S	69733	149953	01/22/2018	01/29/2018 09:17	01/29/2018 19:09
	69733-1-BKS	BKS	69733-1-BKS	1011	S	69733	149953	-----	01/29/2018 09:17	01/29/2018 15:48
	69733-1-BLK	BLK	69733-1-BLK	1011	S	69733	149953	-----	01/29/2018 09:17	01/29/2018 14:27
	HML-3, 38.0-39.5 S	MS	18012502-003 S	1011	S	69733	149953	01/18/2018	01/29/2018 09:17	01/29/2018 16:28
	HML-3, 38.0-39.5 SD	MSD	18012502-003 SD	1011	S	69733	149953	01/18/2018	01/29/2018 09:17	01/29/2018 17:08



Analytical Data Package Information Summary

Work Order(s): 18012316

Report Prepared For: Icor Ltd., Middleburg, VA

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	MW-25 (9-10)	Initial	18012316-003	1011	S	69741	149983	01/22/2018	01/30/2018 08:43	01/30/2018 13:11
	69741-1-BKS	BKS	69741-1-BKS	1011	S	69741	149983	-----	01/30/2018 08:43	01/30/2018 10:29
	69741-1-BLK	BLK	69741-1-BLK	1011	S	69741	149983	-----	01/30/2018 08:43	01/30/2018 11:09
SW-846 8270 C	MW-23 (11.5-12.5)	Initial	18012316-001	1059	S	69681	149951	01/22/2018	01/25/2018 08:52	01/26/2018 00:40
	MW-25 (9-10)	Initial	18012316-003	1059	S	69681	149951	01/22/2018	01/25/2018 08:52	01/25/2018 23:47
	69681-1-BKS	BKS	69681-1-BKS	1059	S	69681	149951	-----	01/25/2018 08:52	01/25/2018 15:01
	69681-1-BLK	BLK	69681-1-BLK	1059	S	69681	149951	-----	01/25/2018 08:52	01/25/2018 14:34
	69681-1-BSD	BSD	69681-1-BSD	1059	S	69681	149951	-----	01/25/2018 08:52	01/25/2018 15:27
	Sand - M S	MS	18012214-004 S	1059	S	69681	149951	01/18/2018	01/25/2018 08:52	01/25/2018 15:54
	Sand - M SD	MSD	18012214-004 SD	1059	S	69681	149951	01/18/2018	01/25/2018 08:52	01/25/2018 16:20
	MW-24 (8-9)	Initial	18012316-002	1059	S	69681	149956	01/22/2018	01/25/2018 08:52	01/26/2018 20:31
	MW-23 (11.5-12.5)	Reanalysis	18012316-001	1059	S	69681	149956	01/22/2018	01/25/2018 08:52	01/26/2018 20:04

PHASE SEPARATION SCIENCE, INC.

QC Summary 18012316

Icor Ltd.

RTN

Analytical Method: SW-846 8015 C

Seq Number: 149872

PSS Sample ID: 18012316-001

Matrix: Soil

Prep Method: SW3550C

Date Prep: 01/24/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	112		34-133	%	01/25/18 19:00

Analytical Method: SW-846 8270 C

Seq Number: 149951

PSS Sample ID: 18012316-001

Matrix: Soil

Prep Method: SW3550C

Date Prep: 01/25/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	0	*	32-107	%	01/26/18 00:40
2-Fluorophenol	0	*	34-113	%	01/26/18 00:40
Nitrobenzene-d5	0	*	35-123	%	01/26/18 00:40
Phenol-d6	0	*	34-120	%	01/26/18 00:40
Terphenyl-D14	0	*	46-154	%	01/26/18 00:40
2,4,6-Tribromophenol	0	*	31-113	%	01/26/18 00:40

Analytical Method: SW-846 8015C

Seq Number: 149784

PSS Sample ID: 18012316-001

Matrix: Soil

Prep Method: SW5035

Date Prep: 01/23/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	87		50-122	%	01/23/18 18:32

Analytical Method: SW-846 8260 B

Seq Number: 149910

PSS Sample ID: 18012316-001

Matrix: Soil

Prep Method: SW5035

Date Prep: 01/26/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	98		82-126	%	01/27/18 19:28
Dibromofluoromethane	102		92-113	%	01/27/18 19:28
Toluene-D8	106	*	94-105	%	01/27/18 19:28

Analytical Method: SW-846 8015 C

Seq Number: 149949

PSS Sample ID: 18012316-002

Matrix: Soil

Prep Method: SW3550C

Date Prep: 01/24/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	101		34-133	%	01/29/18 12:17

PHASE SEPARATION SCIENCE, INC.

QC Summary 18012316

Icor Ltd.

RTN

Analytical Method: SW-846 8270 C

Seq Number: 149956

PSS Sample ID: 18012316-002

Matrix: Soil

Prep Method: SW3550C

Date Prep: 01/25/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	81		32-107	%	01/26/18 20:31
2-Fluorophenol	78		34-113	%	01/26/18 20:31
Nitrobenzene-d5	80		35-123	%	01/26/18 20:31
Phenol-d6	82		34-120	%	01/26/18 20:31
Terphenyl-D14	80		46-154	%	01/26/18 20:31
2,4,6-Tribromophenol	91		31-113	%	01/26/18 20:31

Analytical Method: SW-846 8015C

Seq Number: 149784

PSS Sample ID: 18012316-002

Matrix: Soil

Prep Method: SW5035

Date Prep: 01/23/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	91		50-122	%	01/23/18 19:03

Analytical Method: SW-846 8260 B

Seq Number: 149953

PSS Sample ID: 18012316-002

Matrix: Soil

Prep Method: SW5035

Date Prep: 01/29/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	112		82-126	%	01/29/18 19:09
Dibromofluoromethane	106		92-113	%	01/29/18 19:09
Toluene-D8	100		94-105	%	01/29/18 19:09

Analytical Method: SW-846 8015 C

Seq Number: 149873

PSS Sample ID: 18012316-003

Matrix: Soil

Prep Method: SW3550C

Date Prep: 01/24/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	92		34-133	%	01/25/18 17:46

PHASE SEPARATION SCIENCE, INC.

QC Summary 18012316

Icor Ltd.

RTN

Analytical Method: SW-846 8270 C

Seq Number: 149951

PSS Sample ID: 18012316-003

Matrix: Soil

Prep Method: SW3550C

Date Prep: 01/25/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	49		32-107	%	01/25/18 23:47
2-Fluorophenol	48		34-113	%	01/25/18 23:47
Nitrobenzene-d5	50		35-123	%	01/25/18 23:47
Phenol-d6	46		34-120	%	01/25/18 23:47
Terphenyl-D14	47		46-154	%	01/25/18 23:47
2,4,6-Tribromophenol	50		31-113	%	01/25/18 23:47

Analytical Method: SW-846 8015C

Seq Number: 149784

PSS Sample ID: 18012316-003

Matrix: Soil

Prep Method: SW5035

Date Prep: 01/23/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	96		50-122	%	01/23/18 19:34

Analytical Method: SW-846 8260 B

Seq Number: 149983

PSS Sample ID: 18012316-003

Matrix: Soil

Prep Method: SW5035

Date Prep: 01/30/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	106		82-126	%	01/30/18 13:11
Dibromofluoromethane	104		92-113	%	01/30/18 13:11
Toluene-D8	100		94-105	%	01/30/18 13:11

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 18012316

Icor Ltd.
RTN

Analytical Method: SW-846 8015 C

Seq Number: 149873

MB Sample Id: 69657-1-BLK

Matrix: Solid

LCS Sample Id: 69657-1-BKS

Prep Method: SW3550C

Date Prep: 01/24/18

LCSD Sample Id: 69657-1-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)	<10.01	33.37	35.90	108	27.00	81	54-123	28	25	mg/kg	01/25/18 10:24	F
Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	LCSD Result	LCSD Flag	Limits			Units	Analysis Date	
o-Terphenyl	88		96		71		34-133			%	01/25/18 10:24	

PHASE SEPARATION SCIENCE, INC.

QC Summary 18012316

Icor Ltd.

RTN

Analytical Method: SW-846 8270 C

Seq Number: 149951

MB Sample Id: 69681-1-BLK

Matrix: Solid

LCS Sample Id: 69681-1-BKS

Prep Method: SW3550C

Date Prep: 01/25/18

LCSD Sample Id: 69681-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Acenaphthene	<16.60	1328	985.1	74	1044	79	60-116	6	25	ug/kg	01/25/18 15:01	
Acenaphthylene	<16.60	1328	1018	77	1067	80	61-112	5	25	ug/kg	01/25/18 15:01	
Acetophenone	<166	1328	1087	82	1117	84	57-114	3	25	ug/kg	01/25/18 15:01	
Anthracene	<16.60	1328	1069	80	1098	83	66-115	3	25	ug/kg	01/25/18 15:01	
Atrazine	<166	1328	1666	125	1606	121	7-109	4	25	ug/kg	01/25/18 15:01	H
Benzo(a)anthracene	<16.60	1328	1072	81	1094	82	71-113	2	25	ug/kg	01/25/18 15:01	
Benzo(a)pyrene	<16.60	1328	1188	89	1242	94	69-118	4	25	ug/kg	01/25/18 15:01	
Benzo(b)fluoranthene	<16.60	1328	1098	83	1129	85	65-126	3	25	ug/kg	01/25/18 15:01	
Benzo(g,h,i)perylene	<16.60	1328	1138	86	1209	91	69-112	6	25	ug/kg	01/25/18 15:01	
Benzo(k)fluoranthene	<16.60	1328	1008	76	1087	82	57-129	8	25	ug/kg	01/25/18 15:01	
Biphenyl (Diphenyl)	<166	1328	1066	80	1121	84	62-117	5	25	ug/kg	01/25/18 15:01	
Butyl benzyl phthalate	<166	1328	1312	99	1338	101	81-111	2	25	ug/kg	01/25/18 15:01	
bis(2-chloroethoxy) methane	<166	1328	1129	85	1177	89	56-119	4	25	ug/kg	01/25/18 15:01	
bis(2-chloroethyl) ether	<166	1328	1122	84	1123	85	55-107	0	25	ug/kg	01/25/18 15:01	
bis(2-chloroisopropyl) ether	<166	1328	1113	84	1125	85	44-103	1	25	ug/kg	01/25/18 15:01	
bis(2-ethylhexyl) phthalate	<166	1328	1306	98	1359	102	84-109	4	25	ug/kg	01/25/18 15:01	
4-Bromophenylphenyl ether	<166	1328	1192	90	1186	89	63-125	1	25	ug/kg	01/25/18 15:01	
Di-n-butyl phthalate	<166	1328	1219	92	1164	88	76-110	5	25	ug/kg	01/25/18 15:01	
Carbazole	<166	1328	1178	89	1176	89	58-133	0	25	ug/kg	01/25/18 15:01	
Caprolactam	<166	1328	1317	99	1392	105	51-122	6	25	ug/kg	01/25/18 15:01	
4-Chloro-3-methyl phenol	<166	1328	1241	93	1308	98	74-119	5	25	ug/kg	01/25/18 15:01	
4-Chloroaniline	<166	1328	1015	76	997	75	45-107	2	25	ug/kg	01/25/18 15:01	
2-Chloronaphthalene	<166	1328	1113	84	1133	85	56-113	2	25	ug/kg	01/25/18 15:01	
2-Chlorophenol	<166	1328	1179	89	1188	89	59-113	1	25	ug/kg	01/25/18 15:01	
4-Chlorophenyl Phenyl ether	<166	1328	1122	84	1134	85	62-111	1	25	ug/kg	01/25/18 15:01	
Chrysene	<16.60	1328	1028	77	1060	80	72-114	3	25	ug/kg	01/25/18 15:01	
Dibenz(a,h)Anthracene	<16.60	1328	1182	89	1243	94	72-110	5	25	ug/kg	01/25/18 15:01	
Dibenzofuran	<166	1328	1092	82	1115	84	62-118	2	25	ug/kg	01/25/18 15:01	
3,3-Dichlorobenzidine	<166	1328	1446	109	1512	114	66-141	4	25	ug/kg	01/25/18 15:01	
2,4-Dichlorophenol	<166	1328	1177	89	1202	91	68-118	2	25	ug/kg	01/25/18 15:01	
Diethyl phthalate	<166	1328	1151	87	1163	88	61-113	1	25	ug/kg	01/25/18 15:01	
Dimethyl phthalate	<166	1328	1157	87	1182	89	69-109	2	25	ug/kg	01/25/18 15:01	
2,4-Dimethylphenol	<166	1328	1239	93	1304	98	57-122	5	25	ug/kg	01/25/18 15:01	
4,6-Dinitro-2-methyl phenol	<166	1328	1225	92	1223	92	50-134	0	25	ug/kg	01/25/18 15:01	
2,4-Dinitrophenol	<332	1328	1039	78	1023	77	24-144	2	25	ug/kg	01/25/18 15:01	
2,4-Dinitrotoluene	<166	1328	1183	89	1176	89	61-124	1	25	ug/kg	01/25/18 15:01	
2,6-Dinitrotoluene	<166	1328	1151	87	1170	88	59-124	2	25	ug/kg	01/25/18 15:01	
Fluoranthene	<16.60	1328	1058	80	1048	79	69-119	1	25	ug/kg	01/25/18 15:01	
Fluorene	<16.60	1328	1074	81	1117	84	65-115	4	25	ug/kg	01/25/18 15:01	
Hexachlorobenzene	<166	1328	1164	88	1149	87	63-118	1	25	ug/kg	01/25/18 15:01	
Hexachlorobutadiene	<166	1328	1097	83	1114	84	55-120	2	25	ug/kg	01/25/18 15:01	
Hexachlorocyclopentadiene	<166	1328	1196	90	1207	91	29-138	1	25	ug/kg	01/25/18 15:01	
Hexachloroethane	<166	1328	1095	82	1071	81	54-110	2	25	ug/kg	01/25/18 15:01	
Indeno(1,2,3-c,d)Pyrene	<16.60	1328	1072	81	1165	88	60-127	8	25	ug/kg	01/25/18 15:01	
Isophorone	<166	1328	1099	83	1147	86	57-116	4	25	ug/kg	01/25/18 15:01	
2-Methylnaphthalene	<16.60	1328	1057	80	1107	83	70-109	5	25	ug/kg	01/25/18 15:01	
2-Methyl phenol	<166	1328	1145	86	1166	88	59-118	2	25	ug/kg	01/25/18 15:01	
3&4-Methylphenol	<166	1328	1190	90	1255	95	59-113	5	25	ug/kg	01/25/18 15:01	
Naphthalene	<16.60	1328	954.8	72	983.4	74	59-108	3	25	ug/kg	01/25/18 15:01	
2-Nitroaniline	<166	1328	1185	89	1190	90	51-116	0	25	ug/kg	01/25/18 15:01	
3-Nitroaniline	<166	1328	1117	84	1188	89	57-111	6	25	ug/kg	01/25/18 15:01	

PHASE SEPARATION SCIENCE, INC.

QC Summary 18012316

Icor Ltd.

RTN

Analytical Method: SW-846 8270 C

Seq Number: 149951

MB Sample Id: 69681-1-BLK

Matrix: Solid

LCS Sample Id: 69681-1-BKS

Prep Method: SW3550C

Date Prep: 01/25/18

LCSD Sample Id: 69681-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
4-Nitroaniline	<166	1328	1233	93	1240	93	55-125	1	25	ug/kg	01/25/18 15:01	
Nitrobenzene	<166	1328	1080	81	1088	82	53-110	1	25	ug/kg	01/25/18 15:01	
2-Nitrophenol	<166	1328	1201	90	1257	95	58-124	5	25	ug/kg	01/25/18 15:01	
4-Nitrophenol	<166	1328	1477	111	1202	91	51-116	21	25	ug/kg	01/25/18 15:01	
N-Nitrosodi-n-propyl amine	<166	1328	1150	87	1203	91	60-98	5	25	ug/kg	01/25/18 15:01	
N-Nitrosodiphenylamine	<166	1328	1169	88	1139	86	65-111	3	25	ug/kg	01/25/18 15:01	
Di-n-octyl phthalate	<166	1328	1362	103	1464	110	69-120	7	25	ug/kg	01/25/18 15:01	
Pentachlorophenol	<166	1328	1261	95	1234	93	56-124	2	25	ug/kg	01/25/18 15:01	
Phenanthrene	<16.60	1328	997.7	75	1007	76	67-117	1	25	ug/kg	01/25/18 15:01	
Phenol	<166	1328	1125	85	1167	88	58-114	4	25	ug/kg	01/25/18 15:01	
Pyrene	<16.60	1328	1094	82	1078	81	77-111	1	25	ug/kg	01/25/18 15:01	
Pyridine	<166	1328	979.1	74	968.1	73	37-110	1	25	ug/kg	01/25/18 15:01	
2,4,5-Trichlorophenol	<166	1328	1312	99	1351	102	64-114	3	25	ug/kg	01/25/18 15:01	
2,4,6-Trichlorophenol	<166	1328	1270	96	1254	94	60-125	1	25	ug/kg	01/25/18 15:01	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	LCSD Result	LCSD Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	79		82		83		32-107	%	01/25/18 15:01
2-Fluorophenol	76		83		84		34-113	%	01/25/18 15:01
Nitrobenzene-d5	76		81		82		35-123	%	01/25/18 15:01
Phenol-d6	76		85		85		34-120	%	01/25/18 15:01
Terphenyl-D14	79		82		83		46-154	%	01/25/18 15:01
2,4,6-Tribromophenol	80		98		95		31-113	%	01/25/18 15:01

Analytical Method: SW-846 8015C

Seq Number: 149784

MB Sample Id: 69652-2-BLK

Matrix: Solid

LCS Sample Id: 69652-2-BKS

Prep Method: SW5030

Date Prep: 01/23/18

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
TPH-GRO (Gasoline Range Organic:	<100	5000	5800	116	75-123	ug/kg	01/23/18 14:57	
Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	Limits	Units	Analysis Date	
a,a,a-Trifluorotoluene	93		110		50-122	%	01/23/18 14:57	

PHASE SEPARATION SCIENCE, INC.

QC Summary 18012316

Icor Ltd.

RTN

Analytical Method: SW-846 8260 B

Seq Number: 149910

MB Sample Id: 69717-1-BLK

Matrix: Solid

LCS Sample Id: 69717-1-BKS

Prep Method: SW5030

Date Prep: 01/26/18

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Acetone	<20	59	50	85	46-127	ug/kg	01/27/18 10:48	
Benzene	<4.9	59	63	107	70-127	ug/kg	01/27/18 10:48	
Bromochloromethane	<4.9	59	62	105	68-122	ug/kg	01/27/18 10:48	
Bromodichloromethane	<4.9	59	62	105	68-122	ug/kg	01/27/18 10:48	
Bromoform	<4.9	59	63	107	57-127	ug/kg	01/27/18 10:48	
Bromomethane	<4.9	59	56	95	68-123	ug/kg	01/27/18 10:48	
2-Butanone (MEK)	<20	59	44	75	41-136	ug/kg	01/27/18 10:48	
Carbon Disulfide	<9.9	59	59	100	66-135	ug/kg	01/27/18 10:48	
Carbon tetrachloride	<4.9	59	59	100	64-147	ug/kg	01/27/18 10:48	
Chlorobenzene	<4.9	59	62	105	70-121	ug/kg	01/27/18 10:48	
Chloroethane	<4.9	59	57	97	66-142	ug/kg	01/27/18 10:48	
Chloroform	<4.9	59	60	102	68-123	ug/kg	01/27/18 10:48	
Chloromethane	<4.9	59	56	95	65-136	ug/kg	01/27/18 10:48	
Cyclohexane	<20	59	58	98	62-138	ug/kg	01/27/18 10:48	
1,2-Dibromo-3-chloropropane	<39	59	53	90	55-122	ug/kg	01/27/18 10:48	
Dibromochloromethane	<4.9	59	61	103	61-122	ug/kg	01/27/18 10:48	
1,2-Dibromoethane	<4.9	59	61	103	63-119	ug/kg	01/27/18 10:48	
1,2-Dichlorobenzene	<4.9	59	61	103	65-121	ug/kg	01/27/18 10:48	
1,3-Dichlorobenzene	<4.9	59	60	102	69-121	ug/kg	01/27/18 10:48	
1,4-Dichlorobenzene	<4.9	59	58	98	69-118	ug/kg	01/27/18 10:48	
Dichlorodifluoromethane	<4.9	59	59	100	53-162	ug/kg	01/27/18 10:48	
1,1-Dichloroethane	<4.9	59	60	102	70-127	ug/kg	01/27/18 10:48	
1,2-Dichloroethane	<4.9	59	59	100	68-118	ug/kg	01/27/18 10:48	
1,1-Dichloroethene	<4.9	59	58	98	69-133	ug/kg	01/27/18 10:48	
1,2-Dichloropropane	<4.9	59	63	107	70-122	ug/kg	01/27/18 10:48	
cis-1,2-Dichloroethene	<4.9	59	64	108	68-126	ug/kg	01/27/18 10:48	
cis-1,3-Dichloropropene	<4.9	59	56	95	68-121	ug/kg	01/27/18 10:48	
trans-1,2-Dichloroethene	<4.9	59	61	103	70-132	ug/kg	01/27/18 10:48	
trans-1,3-Dichloropropene	<4.9	59	55	93	67-115	ug/kg	01/27/18 10:48	
Ethylbenzene	<4.9	59	64	108	70-125	ug/kg	01/27/18 10:48	
2-Hexanone (MBK)	<20	59	45	76	40-121	ug/kg	01/27/18 10:48	
Isopropylbenzene	<4.9	59	53	90	68-130	ug/kg	01/27/18 10:48	
Methyl Acetate	<20	59	54	92	60-125	ug/kg	01/27/18 10:48	
Methylcyclohexane	<20	59	58	98	62-150	ug/kg	01/27/18 10:48	
Methylene chloride	<4.9	59	60	102	67-121	ug/kg	01/27/18 10:48	
4-Methyl-2-Pentanone (MIBK)	<20	59	45	76	48-117	ug/kg	01/27/18 10:48	
Methyl-t-Butyl Ether	<4.9	59	57	97	66-119	ug/kg	01/27/18 10:48	
Naphthalene	<4.9	59	47	80	54-115	ug/kg	01/27/18 10:48	
Styrene	<4.9	59	59	100	71-120	ug/kg	01/27/18 10:48	
1,1,2,2-Tetrachloroethane	<4.9	59	56	95	59-122	ug/kg	01/27/18 10:48	
Tetrachloroethene	<4.9	59	61	103	65-145	ug/kg	01/27/18 10:48	
Toluene	<4.9	59	64	108	69-129	ug/kg	01/27/18 10:48	
1,2,3-Trichlorobenzene	<4.9	59	52	88	60-114	ug/kg	01/27/18 10:48	
1,2,4-Trichlorobenzene	<4.9	59	49	83	64-115	ug/kg	01/27/18 10:48	
1,1,1-Trichloroethane	<4.9	59	60	102	65-139	ug/kg	01/27/18 10:48	
1,1,2-Trichloroethane	<4.9	59	64	108	64-125	ug/kg	01/27/18 10:48	
Trichloroethene	<4.9	59	63	107	69-133	ug/kg	01/27/18 10:48	
Trichlorofluoromethane	<4.9	59	57	97	59-153	ug/kg	01/27/18 10:48	
1,1,2-Trichlorotrifluoroethane	<4.9	59	57	97	62-139	ug/kg	01/27/18 10:48	
Vinyl chloride	<4.9	59	57	97	69-142	ug/kg	01/27/18 10:48	
m&p-Xylene	<9.9	120	130	108	71-124	ug/kg	01/27/18 10:48	

PHASE SEPARATION SCIENCE, INC.

QC Summary 18012316

Icor Ltd.
RTN

Analytical Method: SW-846 8260 B

Seq Number: 149910

MB Sample Id: 69717-1-BLK

Matrix: Solid

LCS Sample Id: 69717-1-BKS

Prep Method: SW5030

Date Prep: 01/26/18

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
o-Xylene	<4.9	59	58	98	72-123	ug/kg	01/27/18 10:48	
Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	Limits	Units	Analysis Date	
4-Bromofluorobenzene	118		92		82-126	%	01/27/18 10:48	
Dibromofluoromethane	104		100		92-113	%	01/27/18 10:48	
Toluene-D8	96		104		94-105	%	01/27/18 10:48	

PHASE SEPARATION SCIENCE, INC.

QC Summary 18012316

Icor Ltd.

RTN

Analytical Method: SW-846 8260 B

Seq Number: 149953

MB Sample Id: 69733-1-BLK

Matrix: Solid

LCS Sample Id: 69733-1-BKS

Prep Method: SW5030

Date Prep: 01/29/18

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Acetone	<20	60	65	108	46-127	ug/kg	01/29/18 15:48	
Benzene	<5.0	60	70	117	70-127	ug/kg	01/29/18 15:48	
Bromochloromethane	<5.0	60	69	115	68-122	ug/kg	01/29/18 15:48	
Bromodichloromethane	<5.0	60	68	113	68-122	ug/kg	01/29/18 15:48	
Bromoform	<5.0	60	73	122	57-127	ug/kg	01/29/18 15:48	
Bromomethane	<5.0	60	64	107	68-123	ug/kg	01/29/18 15:48	
2-Butanone (MEK)	<20	60	57	95	41-136	ug/kg	01/29/18 15:48	
Carbon Disulfide	<10	60	67	112	66-135	ug/kg	01/29/18 15:48	
Carbon tetrachloride	<5.0	60	66	110	64-147	ug/kg	01/29/18 15:48	
Chlorobenzene	<5.0	60	71	118	70-121	ug/kg	01/29/18 15:48	
Chloroethane	<5.0	60	66	110	66-142	ug/kg	01/29/18 15:48	
Chloroform	<5.0	60	67	112	68-123	ug/kg	01/29/18 15:48	
Chloromethane	<5.0	60	65	108	65-136	ug/kg	01/29/18 15:48	
Cyclohexane	<20	60	62	103	62-138	ug/kg	01/29/18 15:48	
1,2-Dibromo-3-chloropropane	<40	60	69	115	55-122	ug/kg	01/29/18 15:48	
Dibromochloromethane	<5.0	60	69	115	61-122	ug/kg	01/29/18 15:48	
1,2-Dibromoethane	<5.0	60	71	118	63-119	ug/kg	01/29/18 15:48	
1,2-Dichlorobenzene	<5.0	60	80	133	65-121	ug/kg	01/29/18 15:48	H
1,3-Dichlorobenzene	<5.0	60	79	132	69-121	ug/kg	01/29/18 15:48	H
1,4-Dichlorobenzene	<5.0	60	76	127	69-118	ug/kg	01/29/18 15:48	H
Dichlorodifluoromethane	<5.0	60	67	112	53-162	ug/kg	01/29/18 15:48	
1,1-Dichloroethane	<5.0	60	68	113	70-127	ug/kg	01/29/18 15:48	
1,2-Dichloroethane	<5.0	60	68	113	68-118	ug/kg	01/29/18 15:48	
1,1-Dichloroethene	<5.0	60	67	112	69-133	ug/kg	01/29/18 15:48	
1,2-Dichloropropane	<5.0	60	69	115	70-122	ug/kg	01/29/18 15:48	
cis-1,2-Dichloroethene	<5.0	60	70	117	68-126	ug/kg	01/29/18 15:48	
cis-1,3-Dichloropropene	<5.0	60	62	103	68-121	ug/kg	01/29/18 15:48	
trans-1,2-Dichloroethene	<5.0	60	68	113	70-132	ug/kg	01/29/18 15:48	
trans-1,3-Dichloropropene	<5.0	60	62	103	67-115	ug/kg	01/29/18 15:48	
Ethylbenzene	<5.0	60	75	125	70-125	ug/kg	01/29/18 15:48	
2-Hexanone (MBK)	<20	60	56	93	40-121	ug/kg	01/29/18 15:48	
Isopropylbenzene	<5.0	60	71	118	68-130	ug/kg	01/29/18 15:48	
Methyl Acetate	<20	60	62	103	60-125	ug/kg	01/29/18 15:48	
Methylcyclohexane	<20	60	65	108	62-150	ug/kg	01/29/18 15:48	
Methylene chloride	<5.0	60	67	112	67-121	ug/kg	01/29/18 15:48	
4-Methyl-2-Pentanone (MIBK)	<20	60	60	100	48-117	ug/kg	01/29/18 15:48	
Methyl-t-Butyl Ether	<5.0	60	61	102	66-119	ug/kg	01/29/18 15:48	
Naphthalene	<5.0	60	61	102	54-115	ug/kg	01/29/18 15:48	
Styrene	<5.0	60	68	113	71-120	ug/kg	01/29/18 15:48	
1,1,2,2-Tetrachloroethane	<5.0	60	74	123	59-122	ug/kg	01/29/18 15:48	H
Tetrachloroethene	<5.0	60	70	117	65-145	ug/kg	01/29/18 15:48	
Toluene	<5.0	60	71	118	69-129	ug/kg	01/29/18 15:48	
1,2,3-Trichlorobenzene	<5.0	60	68	113	60-114	ug/kg	01/29/18 15:48	
1,2,4-Trichlorobenzene	<5.0	60	64	107	64-115	ug/kg	01/29/18 15:48	
1,1,1-Trichloroethane	<5.0	60	67	112	65-139	ug/kg	01/29/18 15:48	
1,1,2-Trichloroethane	<5.0	60	71	118	64-125	ug/kg	01/29/18 15:48	
Trichloroethene	<5.0	60	68	113	69-133	ug/kg	01/29/18 15:48	
Trichlorofluoromethane	<5.0	60	67	112	59-153	ug/kg	01/29/18 15:48	
1,1,2-Trichlorotrifluoroethane	<5.0	60	68	113	62-139	ug/kg	01/29/18 15:48	
Vinyl chloride	<5.0	60	63	105	69-142	ug/kg	01/29/18 15:48	
m&p-Xylene	<10	120	150	125	71-124	ug/kg	01/29/18 15:48	H

PHASE SEPARATION SCIENCE, INC.

QC Summary 18012316

Icor Ltd.
RTN

Analytical Method: SW-846 8260 B

Seq Number: 149953

MB Sample Id: 69733-1-BLK

Matrix: Solid

LCS Sample Id: 69733-1-BKS

Prep Method: SW5030

Date Prep: 01/29/18

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
o-Xylene	<5.0	60	68	113	72-123	ug/kg	01/29/18 15:48	
Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	Limits	Units	Analysis Date	
4-Bromofluorobenzene	120		98		82-126	%	01/29/18 15:48	
Dibromofluoromethane	100		102		92-113	%	01/29/18 15:48	
Toluene-D8	98		102		94-105	%	01/29/18 15:48	

PHASE SEPARATION SCIENCE, INC.

QC Summary 18012316

Icor Ltd.

RTN

Analytical Method: SW-846 8260 B

Seq Number: 149983

MB Sample Id: 69741-1-BLK

Matrix: Solid

LCS Sample Id: 69741-1-BKS

Prep Method: SW5030

Date Prep: 01/30/18

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Acetone	<19	58	60	103	46-127	ug/kg	01/30/18 10:29	
Benzene	<4.8	58	62	107	70-127	ug/kg	01/30/18 10:29	
Bromochloromethane	<4.8	58	61	105	68-122	ug/kg	01/30/18 10:29	
Bromodichloromethane	<4.8	58	59	102	68-122	ug/kg	01/30/18 10:29	
Bromoform	<4.8	58	54	93	57-127	ug/kg	01/30/18 10:29	
Bromomethane	<4.8	58	55	95	68-123	ug/kg	01/30/18 10:29	
2-Butanone (MEK)	<19	58	54	93	41-136	ug/kg	01/30/18 10:29	
Carbon Disulfide	<9.7	58	58	100	66-135	ug/kg	01/30/18 10:29	
Carbon tetrachloride	<4.8	58	58	100	64-147	ug/kg	01/30/18 10:29	
Chlorobenzene	<4.8	58	55	95	70-121	ug/kg	01/30/18 10:29	
Chloroethane	<4.8	58	55	95	66-142	ug/kg	01/30/18 10:29	
Chloroform	<4.8	58	60	103	68-123	ug/kg	01/30/18 10:29	
Chloromethane	<4.8	58	50	86	65-136	ug/kg	01/30/18 10:29	
Cyclohexane	<19	58	53	91	62-138	ug/kg	01/30/18 10:29	
1,2-Dibromo-3-chloropropane	<39	58	47	81	55-122	ug/kg	01/30/18 10:29	
Dibromochloromethane	<4.8	58	54	93	61-122	ug/kg	01/30/18 10:29	
1,2-Dibromoethane	<4.8	58	55	95	63-119	ug/kg	01/30/18 10:29	
1,2-Dichlorobenzene	<4.8	58	57	98	65-121	ug/kg	01/30/18 10:29	
1,3-Dichlorobenzene	<4.8	58	55	95	69-121	ug/kg	01/30/18 10:29	
1,4-Dichlorobenzene	<4.8	58	54	93	69-118	ug/kg	01/30/18 10:29	
Dichlorodifluoromethane	<4.8	58	61	105	53-162	ug/kg	01/30/18 10:29	
1,1-Dichloroethane	<4.8	58	60	103	70-127	ug/kg	01/30/18 10:29	
1,2-Dichloroethane	<4.8	58	60	103	68-118	ug/kg	01/30/18 10:29	
1,1-Dichloroethene	<4.8	58	58	100	69-133	ug/kg	01/30/18 10:29	
1,2-Dichloropropane	<4.8	58	59	102	70-122	ug/kg	01/30/18 10:29	
cis-1,2-Dichloroethene	<4.8	58	63	109	68-126	ug/kg	01/30/18 10:29	
cis-1,3-Dichloropropene	<4.8	58	54	93	68-121	ug/kg	01/30/18 10:29	
trans-1,2-Dichloroethene	<4.8	58	60	103	70-132	ug/kg	01/30/18 10:29	
trans-1,3-Dichloropropene	<4.8	58	54	93	67-115	ug/kg	01/30/18 10:29	
Ethylbenzene	<4.8	58	57	98	70-125	ug/kg	01/30/18 10:29	
2-Hexanone (MBK)	<19	58	47	81	40-121	ug/kg	01/30/18 10:29	
Isopropylbenzene	<4.8	58	50	86	68-130	ug/kg	01/30/18 10:29	
Methyl Acetate	<19	58	53	91	60-125	ug/kg	01/30/18 10:29	
Methylcyclohexane	<19	58	56	97	62-150	ug/kg	01/30/18 10:29	
Methylene chloride	<4.8	58	60	103	67-121	ug/kg	01/30/18 10:29	
4-Methyl-2-Pentanone (MIBK)	<19	58	53	91	48-117	ug/kg	01/30/18 10:29	
Methyl-t-Butyl Ether	<4.8	58	59	102	66-119	ug/kg	01/30/18 10:29	
Naphthalene	<4.8	58	43	74	54-115	ug/kg	01/30/18 10:29	
Styrene	<4.8	58	51	88	71-120	ug/kg	01/30/18 10:29	
1,1,2,2-Tetrachloroethane	<4.8	58	52	90	59-122	ug/kg	01/30/18 10:29	
Tetrachloroethene	<4.8	58	61	105	65-145	ug/kg	01/30/18 10:29	
Toluene	<4.8	58	60	103	69-129	ug/kg	01/30/18 10:29	
1,2,3-Trichlorobenzene	<4.8	58	49	84	60-114	ug/kg	01/30/18 10:29	
1,2,4-Trichlorobenzene	<4.8	58	48	83	64-115	ug/kg	01/30/18 10:29	
1,1,1-Trichloroethane	<4.8	58	59	102	65-139	ug/kg	01/30/18 10:29	
1,1,2-Trichloroethane	<4.8	58	59	102	64-125	ug/kg	01/30/18 10:29	
Trichloroethene	<4.8	58	57	98	69-133	ug/kg	01/30/18 10:29	
Trichlorofluoromethane	<4.8	58	57	98	59-153	ug/kg	01/30/18 10:29	
1,1,2-Trichlorotrifluoroethane	<4.8	58	57	98	62-139	ug/kg	01/30/18 10:29	
Vinyl chloride	<4.8	58	54	93	69-142	ug/kg	01/30/18 10:29	
m&p-Xylene	<9.7	120	120	100	71-124	ug/kg	01/30/18 10:29	

PHASE SEPARATION SCIENCE, INC.

QC Summary 18012316

Icor Ltd.

RTN

Analytical Method: SW-846 8260 B

Seq Number: 149983

MB Sample Id: 69741-1-BLK

Matrix: Solid

LCS Sample Id: 69741-1-BKS

Prep Method: SW5030

Date Prep: 01/30/18

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
o-Xylene	<4.8	58	51	88	72-123	ug/kg	01/30/18 10:29	
Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	Limits	Units	Analysis Date	
4-Bromofluorobenzene	124		94		82-126	%	01/30/18 10:29	
Dibromofluoromethane	104		100		92-113	%	01/30/18 10:29	
Toluene-D8	98		104		94-105	%	01/30/18 10:29	

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

Sample Receipt Checklist

Work Order # 18012316
Client Name Icor Ltd.
Project Name RTN
Disposal Date 02/27/2018

Received By Barb Weber
Date Received 01/23/2018 12:30:00 PM
Delivered By Trans Time Express
Tracking No Not Applicable
Logged In By Thomas Wingate

Shipping Container(s)

No. of Coolers 1

Custody Seal(s) Intact?

N/A

Seal(s) Signed / Dated?

N/A

Ice Present

Temp (deg C) 6

Temp Blank Present No

Documentation

COC agrees with sample labels?

Yes

Chain of Custody

Yes

Sampler Name Mike Bruzzesi

MD DW Cert. No. N/A

Sample Container

Appropriate for Specified Analysis?

Yes

Intact?

Yes

Labeled and Labels Legible?

Yes

Custody Seal(s) Intact? Not Applicable

Seal(s) Signed / Dated Not Applicable

Total No. of Samples Received 3

Total No. of Containers Received 18

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) N/A

Do VOA vials have zero headspace?

N/A

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:

Thomas Wingate

Date: 01/23/2018

PM Review and Approval:

Lynn Jackson

Date: 01/23/2018

Analytical Report for

Icor Ltd.

Certificate of Analysis No.: 18013017

Project Manager: Mike Bruzzesi

Project Name : RTN - Robinson Terminal North

Project Location: Alexandria, VA



February 6, 2018

Phase Separation Science, Inc.

6630 Baltimore National Pike

Baltimore, MD 21228

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PHASE SEPARATION SCIENCE, INC.



February 6, 2018

Mike Bruzzesi
Icor Ltd.
PO Box 406
Middleburg, VA 20118

Reference: PSS Work Order(s) No: **18013017**
Project Name: RTN - Robinson Terminal North
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 **18013017**.

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 March 6, 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: Icor Ltd.

Project Name: RTN - Robinson Terminal North

Work Order Number(s): 18013017

The following samples were received under chain of custody by Phase Separation Science (PSS) on 01/30/2018 at 12:50 pm

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
18013017-001	TEC-MW2	GROUND WATER	01/29/18 09:15
18013017-002	TEC-MW4	GROUND WATER	01/29/18 08:00
18013017-003	ECS-MW4	GROUND WATER	01/29/18 09:35
18013017-004	MiHpt-5	GROUND WATER	01/29/18 09:55
18013017-005	MiHpt-7	GROUND WATER	01/29/18 10:45
18013017-006	MiHpt-8	GROUND WATER	01/29/18 07:50
18013017-007	MiHpt-14	GROUND WATER	01/29/18 12:15
18013017-008	MiHpt-15	GROUND WATER	01/29/18 12:50
18013017-009	MiHpt-20	GROUND WATER	01/29/18 11:30
18013017-010	MiHpt-21	GROUND WATER	01/29/18 11:05
18013017-011	MiHpt-22	GROUND WATER	01/29/18 10:55
18013017-012	MW23	GROUND WATER	01/29/18 11:50
18013017-013	MW24	GROUND WATER	01/29/18 09:00
18013017-014	MW25	GROUND WATER	01/29/18 08:45

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 contaminants, and part 141.3, for the secondary drinking water contaminants.
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: Icor Ltd.

Project Name: RTN - Robinson Terminal North

Work Order Number(s): 18013017

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

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: TEC-MW2 **Date/Time Sampled: 01/29/2018 09:15** **PSS Sample ID: 18013017-001**
Matrix: GROUND WATER **Date/Time Received: 01/30/2018 12:50**

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)	0.28	mg/L	0.11		1	01/31/18	02/03/18 00:39	1045

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	01/30/18	01/30/18 21:17	1035

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February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: TEC-MW2	Date/Time Sampled: 01/29/2018 09:15	PSS Sample ID: 18013017-001
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 12:05	1011
Benzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
Bromochloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
Bromodichloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
Bromoform	ND	ug/L	5.0		1	01/31/18	01/31/18 12:05	1011
Bromomethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
2-Butanone (MEK)	ND	ug/L	10		1	01/31/18	01/31/18 12:05	1011
Carbon Disulfide	ND	ug/L	10		1	01/31/18	01/31/18 12:05	1011
Carbon tetrachloride	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
Chlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
Chloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
Chloroform	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
Chloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
Cyclohexane	ND	ug/L	10		1	01/31/18	01/31/18 12:05	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	01/31/18	01/31/18 12:05	1011
Dibromochloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
Ethylbenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: TEC-MW2	Date/Time Sampled: 01/29/2018 09:15	PSS Sample ID: 18013017-001
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 12:05	1011
Isopropylbenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
Methyl Acetate	ND	ug/L	10		1	01/31/18	01/31/18 12:05	1011
Methylcyclohexane	ND	ug/L	10		1	01/31/18	01/31/18 12:05	1011
Methylene chloride	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	01/31/18	01/31/18 12:05	1011
Methyl-t-Butyl Ether	2.3	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
Naphthalene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
Styrene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
Tetrachloroethene	ND	ug/L	5.0		1	01/31/18	01/31/18 12:05	1011
Toluene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
Trichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	01/31/18	01/31/18 12:05	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
Vinyl chloride	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011
m&p-Xylene	ND	ug/L	2.0		1	01/31/18	01/31/18 12:05	1011
o-Xylene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:05	1011

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February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: TEC-MW2	Date/Time Sampled: 01/29/2018 09:15	PSS Sample ID: 18013017-001
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	02/01/18 12:21	1055
Acenaphthylene	ND	ug/L	0.50		1	01/31/18	02/01/18 12:21	1055
Acetophenone	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
Anthracene	ND	ug/L	0.50		1	01/31/18	02/01/18 12:21	1055
Atrazine	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
Benzo(a)anthracene	ND	ug/L	0.50		1	01/31/18	02/01/18 12:21	1055
Benzo(a)pyrene	ND	ug/L	0.50		1	01/31/18	02/01/18 12:21	1055
Benzo(b)fluoranthene	ND	ug/L	0.50		1	01/31/18	02/01/18 12:21	1055
Benzo(g,h,i)perylene	ND	ug/L	0.50		1	01/31/18	02/01/18 12:21	1055
Benzo(k)fluoranthene	ND	ug/L	0.50		1	01/31/18	02/01/18 12:21	1055
Biphenyl (Diphenyl)	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
Butyl benzyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
bis(2-chloroethyl) ether	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
4-Bromophenylphenyl ether	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
Di-n-butyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
Carbazole	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
Caprolactam	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
4-Chloroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
2-Chloronaphthalene	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
2-Chlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
Chrysene	ND	ug/L	0.50		1	01/31/18	02/01/18 12:21	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.50		1	01/31/18	02/01/18 12:21	1055
Dibenzofuran	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
3,3-Dichlorobenzidine	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
2,4-Dichlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055

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CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: TEC-MW2	Date/Time Sampled: 01/29/2018 09:15	PSS Sample ID: 18013017-001
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	02/01/18 12:21	1055
Dimethyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
2,4-Dimethylphenol	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
2,4-Dinitrophenol	ND	ug/L	10		1	01/31/18	02/01/18 12:21	1055
2,4-Dinitrotoluene	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
2,6-Dinitrotoluene	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
Fluoranthene	ND	ug/L	0.50		1	01/31/18	02/01/18 12:21	1055
Fluorene	ND	ug/L	0.50		1	01/31/18	02/01/18 12:21	1055
Hexachlorobenzene	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
Hexachlorobutadiene	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
Hexachlorocyclopentadiene	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
Hexachloroethane	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.50		1	01/31/18	02/01/18 12:21	1055
Isophorone	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
2-Methylnaphthalene	ND	ug/L	0.50		1	01/31/18	02/01/18 12:21	1055
2-Methyl phenol	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
3&4-Methylphenol	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
Naphthalene	ND	ug/L	0.50		1	01/31/18	02/01/18 12:21	1055
2-Nitroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
3-Nitroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
4-Nitroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
Nitrobenzene	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
2-Nitrophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
4-Nitrophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
N-Nitrosodiphenylamine	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
Di-n-octyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
Pentachlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
Phenanthrene	ND	ug/L	0.50		1	01/31/18	02/01/18 12:21	1055

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Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: TEC-MW2 **Date/Time Sampled: 01/29/2018 09:15** **PSS Sample ID: 18013017-001**
Matrix: GROUND WATER **Date/Time Received: 01/30/2018 12:50**

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	01/31/18	02/01/18 12:21	1055
Pyrene	ND	ug/L	0.50		1	01/31/18	02/01/18 12:21	1055
Pyridine	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
2,4,5-Trichlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055
2,4,6-Trichlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 12:21	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: TEC-MW4 **Date/Time Sampled: 01/29/2018 08:00** **PSS Sample ID: 18013017-002**

Matrix: GROUND WATER **Date/Time Received: 01/30/2018 12:50**

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)	0.30	mg/L	0.10		1	01/31/18	02/03/18 00:39	1045

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	01/30/18	01/30/18 21:44	1035

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CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: TEC-MW4	Date/Time Sampled: 01/29/2018 08:00	PSS Sample ID: 18013017-002
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 12:28	1011
Benzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
Bromochloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
Bromodichloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
Bromoform	ND	ug/L	5.0		1	01/31/18	01/31/18 12:28	1011
Bromomethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
2-Butanone (MEK)	ND	ug/L	10		1	01/31/18	01/31/18 12:28	1011
Carbon Disulfide	ND	ug/L	10		1	01/31/18	01/31/18 12:28	1011
Carbon tetrachloride	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
Chlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
Chloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
Chloroform	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
Chloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
Cyclohexane	ND	ug/L	10		1	01/31/18	01/31/18 12:28	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	01/31/18	01/31/18 12:28	1011
Dibromochloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
Ethylbenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011

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CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: TEC-MW4	Date/Time Sampled: 01/29/2018 08:00	PSS Sample ID: 18013017-002
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 12:28	1011
Isopropylbenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
Methyl Acetate	ND	ug/L	10		1	01/31/18	01/31/18 12:28	1011
Methylcyclohexane	ND	ug/L	10		1	01/31/18	01/31/18 12:28	1011
Methylene chloride	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	01/31/18	01/31/18 12:28	1011
Methyl-t-Butyl Ether	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
Naphthalene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
Styrene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
Tetrachloroethene	ND	ug/L	5.0		1	01/31/18	01/31/18 12:28	1011
Toluene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
Trichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	01/31/18	01/31/18 12:28	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
Vinyl chloride	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011
m&p-Xylene	ND	ug/L	2.0		1	01/31/18	01/31/18 12:28	1011
o-Xylene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:28	1011

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February 6, 2018

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Project Location: Alexandria, VA

Sample ID: TEC-MW4	Date/Time Sampled: 01/29/2018 08:00	PSS Sample ID: 18013017-002
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 22:27	1055
Acenaphthylene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:27	1055
Acetophenone	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
Anthracene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:27	1055
Atrazine	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
Benzo(a)anthracene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:27	1055
Benzo(a)pyrene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:27	1055
Benzo(b)fluoranthene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:27	1055
Benzo(g,h,i)perylene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:27	1055
Benzo(k)fluoranthene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:27	1055
Biphenyl (Diphenyl)	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
Butyl benzyl phthalate	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
bis(2-chloroethyl) ether	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
4-Bromophenylphenyl ether	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
Di-n-butyl phthalate	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
Carbazole	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
Caprolactam	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
4-Chloroaniline	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
2-Chloronaphthalene	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
2-Chlorophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
Chrysene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:27	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:27	1055
Dibenzofuran	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
3,3-Dichlorobenzidine	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
2,4-Dichlorophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: TEC-MW4	Date/Time Sampled: 01/29/2018 08:00	PSS Sample ID: 18013017-002
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 22:27	1055
Dimethyl phthalate	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
2,4-Dimethylphenol	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
2,4-Dinitrophenol	ND	ug/L	10		1	01/31/18	01/31/18 22:27	1055
2,4-Dinitrotoluene	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
2,6-Dinitrotoluene	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
Fluoranthene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:27	1055
Fluorene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:27	1055
Hexachlorobenzene	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
Hexachlorobutadiene	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
Hexachlorocyclopentadiene	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
Hexachloroethane	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:27	1055
Isophorone	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
2-Methylnaphthalene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:27	1055
2-Methyl phenol	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
3&4-Methylphenol	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
Naphthalene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:27	1055
2-Nitroaniline	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
3-Nitroaniline	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
4-Nitroaniline	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
Nitrobenzene	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
2-Nitrophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
4-Nitrophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
N-Nitrosodiphenylamine	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
Di-n-octyl phthalate	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
Pentachlorophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
Phenanthrene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:27	1055

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CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: TEC-MW4

Date/Time Sampled: 01/29/2018 08:00

PSS Sample ID: 18013017-002

Matrix: GROUND WATER

Date/Time Received: 01/30/2018 12:50

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	01/31/18	01/31/18 22:27	1055
Pyrene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:27	1055
Pyridine	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
2,4,5-Trichlorophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055
2,4,6-Trichlorophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 22:27	1055

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CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: ECS-MW4 **Date/Time Sampled: 01/29/2018 09:35** **PSS Sample ID: 18013017-003**

Matrix: GROUND WATER **Date/Time Received: 01/30/2018 12:50**

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)	0.11	mg/L	0.10		1	01/31/18	02/03/18 01:04	1045

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	01/30/18	01/30/18 22:11	1035

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Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: ECS-MW4	Date/Time Sampled: 01/29/2018 09:35	PSS Sample ID: 18013017-003
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 12:52	1011
Benzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
Bromochloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
Bromodichloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
Bromoform	ND	ug/L	5.0		1	01/31/18	01/31/18 12:52	1011
Bromomethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
2-Butanone (MEK)	ND	ug/L	10		1	01/31/18	01/31/18 12:52	1011
Carbon Disulfide	ND	ug/L	10		1	01/31/18	01/31/18 12:52	1011
Carbon tetrachloride	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
Chlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
Chloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
Chloroform	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
Chloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
Cyclohexane	ND	ug/L	10		1	01/31/18	01/31/18 12:52	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	01/31/18	01/31/18 12:52	1011
Dibromochloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
Ethylbenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011

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CERTIFICATE OF ANALYSIS

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February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: ECS-MW4	Date/Time Sampled: 01/29/2018 09:35	PSS Sample ID: 18013017-003
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 12:52	1011
Isopropylbenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
Methyl Acetate	ND	ug/L	10		1	01/31/18	01/31/18 12:52	1011
Methylcyclohexane	ND	ug/L	10		1	01/31/18	01/31/18 12:52	1011
Methylene chloride	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	01/31/18	01/31/18 12:52	1011
Methyl-t-Butyl Ether	4.9	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
Naphthalene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
Styrene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
Tetrachloroethene	ND	ug/L	5.0		1	01/31/18	01/31/18 12:52	1011
Toluene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
Trichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	01/31/18	01/31/18 12:52	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
Vinyl chloride	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011
m&p-Xylene	ND	ug/L	2.0		1	01/31/18	01/31/18 12:52	1011
o-Xylene	ND	ug/L	1.0		1	01/31/18	01/31/18 12:52	1011

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: ECS-MW4	Date/Time Sampled: 01/29/2018 09:35	PSS Sample ID: 18013017-003
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

TCL Semivolatile Organic Compounds

Analytical Method: SW-846 8270 C

Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	2.1	ug/L	0.50		1	01/31/18	01/31/18 22:53	1055
Acenaphthylene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:53	1055
Acetophenone	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
Anthracene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:53	1055
Atrazine	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
Benzo(a)anthracene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:53	1055
Benzo(a)pyrene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:53	1055
Benzo(b)fluoranthene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:53	1055
Benzo(g,h,i)perylene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:53	1055
Benzo(k)fluoranthene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:53	1055
Biphenyl (Diphenyl)	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
Butyl benzyl phthalate	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
bis(2-chloroethyl) ether	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
4-Bromophenylphenyl ether	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
Di-n-butyl phthalate	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
Carbazole	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
Caprolactam	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
4-Chloroaniline	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
2-Chloronaphthalene	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
2-Chlorophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
Chrysene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:53	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:53	1055
Dibenzofuran	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
3,3-Dichlorobenzidine	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
2,4-Dichlorophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: ECS-MW4	Date/Time Sampled: 01/29/2018 09:35	PSS Sample ID: 18013017-003
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 22:53	1055
Dimethyl phthalate	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
2,4-Dimethylphenol	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
2,4-Dinitrophenol	ND	ug/L	10		1	01/31/18	01/31/18 22:53	1055
2,4-Dinitrotoluene	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
2,6-Dinitrotoluene	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
Fluoranthene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:53	1055
Fluorene	0.66	ug/L	0.50		1	01/31/18	01/31/18 22:53	1055
Hexachlorobenzene	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
Hexachlorobutadiene	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
Hexachlorocyclopentadiene	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
Hexachloroethane	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:53	1055
Isophorone	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
2-Methylnaphthalene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:53	1055
2-Methyl phenol	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
3&4-Methylphenol	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
Naphthalene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:53	1055
2-Nitroaniline	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
3-Nitroaniline	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
4-Nitroaniline	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
Nitrobenzene	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
2-Nitrophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
4-Nitrophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
N-Nitrosodiphenylamine	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
Di-n-octyl phthalate	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
Pentachlorophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
Phenanthrene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:53	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: ECS-MW4 **Date/Time Sampled: 01/29/2018 09:35** **PSS Sample ID: 18013017-003**
Matrix: GROUND WATER **Date/Time Received: 01/30/2018 12:50**

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	01/31/18	01/31/18 22:53	1055
Pyrene	ND	ug/L	0.50		1	01/31/18	01/31/18 22:53	1055
Pyridine	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
2,4,5-Trichlorophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055
2,4,6-Trichlorophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 22:53	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-5	Date/Time Sampled: 01/29/2018 09:55	PSS Sample ID: 18013017-004
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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)	0.41	mg/L	0.10		1	01/31/18	02/03/18 01:04	1045
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)	600	ug/L	100		1	01/30/18	01/30/18 22:39	1035

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-5	Date/Time Sampled: 01/29/2018 09:55	PSS Sample ID: 18013017-004
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 14:54	1011
Benzene	130	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
Bromochloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
Bromodichloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
Bromoform	ND	ug/L	5.0		1	01/31/18	01/31/18 14:54	1011
Bromomethane	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
2-Butanone (MEK)	ND	ug/L	10		1	01/31/18	01/31/18 14:54	1011
Carbon Disulfide	ND	ug/L	10		1	01/31/18	01/31/18 14:54	1011
Carbon tetrachloride	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
Chlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
Chloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
Chloroform	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
Chloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
Cyclohexane	ND	ug/L	10		1	01/31/18	01/31/18 14:54	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	01/31/18	01/31/18 14:54	1011
Dibromochloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
Ethylbenzene	13	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-5	Date/Time Sampled: 01/29/2018 09:55	PSS Sample ID: 18013017-004
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 14:54	1011
Isopropylbenzene	5.5	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
Methyl Acetate	ND	ug/L	10		1	01/31/18	01/31/18 14:54	1011
Methylcyclohexane	ND	ug/L	10		1	01/31/18	01/31/18 14:54	1011
Methylene chloride	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	01/31/18	01/31/18 14:54	1011
Methyl-t-Butyl Ether	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
Naphthalene	220	ug/L	5.0		5	01/31/18	02/01/18 15:01	1011
Styrene	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
Tetrachloroethene	ND	ug/L	5.0		1	01/31/18	01/31/18 14:54	1011
Toluene	1.5	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
Trichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	01/31/18	01/31/18 14:54	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
Vinyl chloride	ND	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011
m&p-Xylene	19	ug/L	2.0		1	01/31/18	01/31/18 14:54	1011
o-Xylene	39	ug/L	1.0		1	01/31/18	01/31/18 14:54	1011

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-5	Date/Time Sampled: 01/29/2018 09:55	PSS Sample ID: 18013017-004
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 23:19	1055
Acenaphthylene	ND	ug/L	0.50		1	01/31/18	01/31/18 23:19	1055
Acetophenone	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
Anthracene	ND	ug/L	0.50		1	01/31/18	01/31/18 23:19	1055
Atrazine	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
Benzo(a)anthracene	ND	ug/L	0.50		1	01/31/18	01/31/18 23:19	1055
Benzo(a)pyrene	ND	ug/L	0.50		1	01/31/18	01/31/18 23:19	1055
Benzo(b)fluoranthene	ND	ug/L	0.50		1	01/31/18	01/31/18 23:19	1055
Benzo(g,h,i)perylene	ND	ug/L	0.50		1	01/31/18	01/31/18 23:19	1055
Benzo(k)fluoranthene	ND	ug/L	0.50		1	01/31/18	01/31/18 23:19	1055
Biphenyl (Diphenyl)	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
Butyl benzyl phthalate	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
bis(2-chloroethyl) ether	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
4-Bromophenylphenyl ether	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
Di-n-butyl phthalate	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
Carbazole	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
Caprolactam	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
4-Chloroaniline	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
2-Chloronaphthalene	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
2-Chlorophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
Chrysene	ND	ug/L	0.50		1	01/31/18	01/31/18 23:19	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.50		1	01/31/18	01/31/18 23:19	1055
Dibenzofuran	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
3,3-Dichlorobenzidine	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
2,4-Dichlorophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-5	Date/Time Sampled: 01/29/2018 09:55	PSS Sample ID: 18013017-004
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 23:19	1055
Dimethyl phthalate	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
2,4-Dimethylphenol	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
2,4-Dinitrophenol	ND	ug/L	10		1	01/31/18	01/31/18 23:19	1055
2,4-Dinitrotoluene	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
2,6-Dinitrotoluene	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
Fluoranthene	ND	ug/L	0.50		1	01/31/18	01/31/18 23:19	1055
Fluorene	ND	ug/L	0.50		1	01/31/18	01/31/18 23:19	1055
Hexachlorobenzene	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
Hexachlorobutadiene	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
Hexachlorocyclopentadiene	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
Hexachloroethane	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.50		1	01/31/18	01/31/18 23:19	1055
Isophorone	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
2-Methylnaphthalene	1.4	ug/L	0.50		1	01/31/18	01/31/18 23:19	1055
2-Methyl phenol	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
3&4-Methylphenol	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
Naphthalene	16	ug/L	0.50		1	01/31/18	01/31/18 23:19	1055
2-Nitroaniline	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
3-Nitroaniline	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
4-Nitroaniline	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
Nitrobenzene	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
2-Nitrophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
4-Nitrophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
N-Nitrosodiphenylamine	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
Di-n-octyl phthalate	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
Pentachlorophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
Phenanthrene	ND	ug/L	0.50		1	01/31/18	01/31/18 23:19	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-5

Date/Time Sampled: 01/29/2018 09:55

PSS Sample ID: 18013017-004

Matrix: GROUND WATER

Date/Time Received: 01/30/2018 12:50

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	01/31/18	01/31/18 23:19	1055
Pyrene	ND	ug/L	0.50		1	01/31/18	01/31/18 23:19	1055
Pyridine	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
2,4,5-Trichlorophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055
2,4,6-Trichlorophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 23:19	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-7 **Date/Time Sampled: 01/29/2018 10:45** **PSS Sample ID: 18013017-005**

Matrix: GROUND WATER **Date/Time Received: 01/30/2018 12:50**

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)	2.6	mg/L	0.10		1	01/31/18	02/03/18 01:28	1045

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)	1,400	ug/L	100		1	01/30/18	01/30/18 23:06	1035

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-7	Date/Time Sampled: 01/29/2018 10:45	PSS Sample ID: 18013017-005
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 15:16	1011
Benzene	59	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
Bromochloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
Bromodichloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
Bromoform	ND	ug/L	5.0		1	01/31/18	01/31/18 15:16	1011
Bromomethane	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
2-Butanone (MEK)	ND	ug/L	10		1	01/31/18	01/31/18 15:16	1011
Carbon Disulfide	ND	ug/L	10		1	01/31/18	01/31/18 15:16	1011
Carbon tetrachloride	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
Chlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
Chloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
Chloroform	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
Chloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
Cyclohexane	ND	ug/L	10		1	01/31/18	01/31/18 15:16	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	01/31/18	01/31/18 15:16	1011
Dibromochloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
Ethylbenzene	94	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-7	Date/Time Sampled: 01/29/2018 10:45	PSS Sample ID: 18013017-005
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 15:16	1011
Isopropylbenzene	15	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
Methyl Acetate	ND	ug/L	10		1	01/31/18	01/31/18 15:16	1011
Methylcyclohexane	ND	ug/L	10		1	01/31/18	01/31/18 15:16	1011
Methylene chloride	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	01/31/18	01/31/18 15:16	1011
Methyl-t-Butyl Ether	1.4	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
Naphthalene	970	ug/L	20		20	01/31/18	02/01/18 15:26	1011
Styrene	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
Tetrachloroethene	ND	ug/L	5.0		1	01/31/18	01/31/18 15:16	1011
Toluene	2.9	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
Trichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	01/31/18	01/31/18 15:16	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
Vinyl chloride	ND	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011
m&p-Xylene	39	ug/L	2.0		1	01/31/18	01/31/18 15:16	1011
o-Xylene	56	ug/L	1.0		1	01/31/18	01/31/18 15:16	1011

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-7	Date/Time Sampled: 01/29/2018 10:45	PSS Sample ID: 18013017-005
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

TCL Semivolatile Organic Compounds

Analytical Method: SW-846 8270 C

Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	14	ug/L	0.50		1	01/31/18	01/31/18 23:46	1055
Acenaphthylene	ND	ug/L	0.50		1	01/31/18	01/31/18 23:46	1055
Acetophenone	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
Anthracene	0.61	ug/L	0.50		1	01/31/18	01/31/18 23:46	1055
Atrazine	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
Benzo(a)anthracene	ND	ug/L	0.50		1	01/31/18	01/31/18 23:46	1055
Benzo(a)pyrene	ND	ug/L	0.50		1	01/31/18	01/31/18 23:46	1055
Benzo(b)fluoranthene	ND	ug/L	0.50		1	01/31/18	01/31/18 23:46	1055
Benzo(g,h,i)perylene	ND	ug/L	0.50		1	01/31/18	01/31/18 23:46	1055
Benzo(k)fluoranthene	ND	ug/L	0.50		1	01/31/18	01/31/18 23:46	1055
Biphenyl (Diphenyl)	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
Butyl benzyl phthalate	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
bis(2-chloroethyl) ether	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
4-Bromophenylphenyl ether	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
Di-n-butyl phthalate	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
Carbazole	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
Caprolactam	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
4-Chloroaniline	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
2-Chloronaphthalene	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
2-Chlorophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
Chrysene	ND	ug/L	0.50		1	01/31/18	01/31/18 23:46	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.50		1	01/31/18	01/31/18 23:46	1055
Dibenzofuran	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
3,3-Dichlorobenzidine	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
2,4-Dichlorophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-7	Date/Time Sampled: 01/29/2018 10:45	PSS Sample ID: 18013017-005
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 23:46	1055
Dimethyl phthalate	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
2,4-Dimethylphenol	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
2,4-Dinitrophenol	ND	ug/L	10		1	01/31/18	01/31/18 23:46	1055
2,4-Dinitrotoluene	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
2,6-Dinitrotoluene	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
Fluoranthene	ND	ug/L	0.50		1	01/31/18	01/31/18 23:46	1055
Fluorene	3.5	ug/L	0.50		1	01/31/18	01/31/18 23:46	1055
Hexachlorobenzene	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
Hexachlorobutadiene	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
Hexachlorocyclopentadiene	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
Hexachloroethane	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.50		1	01/31/18	01/31/18 23:46	1055
Isophorone	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
2-Methylnaphthalene	4.7	ug/L	0.50		1	01/31/18	01/31/18 23:46	1055
2-Methyl phenol	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
3&4-Methylphenol	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
Naphthalene	73	ug/L	0.50		1	01/31/18	01/31/18 23:46	1055
2-Nitroaniline	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
3-Nitroaniline	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
4-Nitroaniline	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
Nitrobenzene	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
2-Nitrophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
4-Nitrophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
N-Nitrosodiphenylamine	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
Di-n-octyl phthalate	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
Pentachlorophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
Phenanthrene	3.2	ug/L	0.50		1	01/31/18	01/31/18 23:46	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-7 **Date/Time Sampled: 01/29/2018 10:45** **PSS Sample ID: 18013017-005**
Matrix: GROUND WATER **Date/Time Received: 01/30/2018 12:50**

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	01/31/18	01/31/18 23:46	1055
Pyrene	ND	ug/L	0.50		1	01/31/18	01/31/18 23:46	1055
Pyridine	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
2,4,5-Trichlorophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055
2,4,6-Trichlorophenol	ND	ug/L	5.0		1	01/31/18	01/31/18 23:46	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-8 **Date/Time Sampled: 01/29/2018 07:50** **PSS Sample ID: 18013017-006**

Matrix: GROUND WATER **Date/Time Received: 01/30/2018 12:50**

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	01/31/18	02/03/18 01:28	1045

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	01/30/18	01/30/18 23:34	1035

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-8	Date/Time Sampled: 01/29/2018 07:50	PSS Sample ID: 18013017-006
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	02/01/18	02/01/18 14:12	1011
Benzene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
Bromochloromethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
Bromodichloromethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
Bromoform	ND	ug/L	5.0		1	02/01/18	02/01/18 14:12	1011
Bromomethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
2-Butanone (MEK)	ND	ug/L	10		1	02/01/18	02/01/18 14:12	1011
Carbon Disulfide	ND	ug/L	10		1	02/01/18	02/01/18 14:12	1011
Carbon tetrachloride	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
Chlorobenzene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
Chloroethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
Chloroform	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
Chloromethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
Cyclohexane	ND	ug/L	10		1	02/01/18	02/01/18 14:12	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	02/01/18	02/01/18 14:12	1011
Dibromochloromethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
Ethylbenzene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-8	Date/Time Sampled: 01/29/2018 07:50	PSS Sample ID: 18013017-006
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	02/01/18	02/01/18 14:12	1011
Isopropylbenzene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
Methyl Acetate	ND	ug/L	10		1	02/01/18	02/01/18 14:12	1011
Methylcyclohexane	ND	ug/L	10		1	02/01/18	02/01/18 14:12	1011
Methylene chloride	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	02/01/18	02/01/18 14:12	1011
Methyl-t-Butyl Ether	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
Naphthalene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
Styrene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
Tetrachloroethene	ND	ug/L	5.0		1	02/01/18	02/01/18 14:12	1011
Toluene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
Trichloroethene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	02/01/18	02/01/18 14:12	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
Vinyl chloride	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011
m&p-Xylene	ND	ug/L	2.0		1	02/01/18	02/01/18 14:12	1011
o-Xylene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:12	1011

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-8	Date/Time Sampled: 01/29/2018 07:50	PSS Sample ID: 18013017-006
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

TCL Semivolatile Organic Compounds

Analytical Method: SW-846 8270 C

Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	0.66	ug/L	0.50		1	01/31/18	02/01/18 00:12	1055
Acenaphthylene	ND	ug/L	0.50		1	01/31/18	02/01/18 00:12	1055
Acetophenone	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
Anthracene	ND	ug/L	0.50		1	01/31/18	02/01/18 00:12	1055
Atrazine	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
Benzo(a)anthracene	ND	ug/L	0.50		1	01/31/18	02/01/18 00:12	1055
Benzo(a)pyrene	ND	ug/L	0.50		1	01/31/18	02/01/18 00:12	1055
Benzo(b)fluoranthene	ND	ug/L	0.50		1	01/31/18	02/01/18 00:12	1055
Benzo(g,h,i)perylene	ND	ug/L	0.50		1	01/31/18	02/01/18 00:12	1055
Benzo(k)fluoranthene	ND	ug/L	0.50		1	01/31/18	02/01/18 00:12	1055
Biphenyl (Diphenyl)	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
Butyl benzyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
bis(2-chloroethyl) ether	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
4-Bromophenylphenyl ether	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
Di-n-butyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
Carbazole	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
Caprolactam	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
4-Chloroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
2-Chloronaphthalene	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
2-Chlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
Chrysene	ND	ug/L	0.50		1	01/31/18	02/01/18 00:12	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.50		1	01/31/18	02/01/18 00:12	1055
Dibenzofuran	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
3,3-Dichlorobenzidine	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
2,4-Dichlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-8	Date/Time Sampled: 01/29/2018 07:50	PSS Sample ID: 18013017-006
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	02/01/18 00:12	1055
Dimethyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
2,4-Dimethylphenol	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
2,4-Dinitrophenol	ND	ug/L	10		1	01/31/18	02/01/18 00:12	1055
2,4-Dinitrotoluene	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
2,6-Dinitrotoluene	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
Fluoranthene	ND	ug/L	0.50		1	01/31/18	02/01/18 00:12	1055
Fluorene	ND	ug/L	0.50		1	01/31/18	02/01/18 00:12	1055
Hexachlorobenzene	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
Hexachlorobutadiene	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
Hexachlorocyclopentadiene	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
Hexachloroethane	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.50		1	01/31/18	02/01/18 00:12	1055
Isophorone	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
2-Methylnaphthalene	ND	ug/L	0.50		1	01/31/18	02/01/18 00:12	1055
2-Methyl phenol	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
3&4-Methylphenol	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
Naphthalene	ND	ug/L	0.50		1	01/31/18	02/01/18 00:12	1055
2-Nitroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
3-Nitroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
4-Nitroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
Nitrobenzene	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
2-Nitrophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
4-Nitrophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
N-Nitrosodiphenylamine	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
Di-n-octyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
Pentachlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
Phenanthrene	ND	ug/L	0.50		1	01/31/18	02/01/18 00:12	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-8 **Date/Time Sampled: 01/29/2018 07:50** **PSS Sample ID: 18013017-006**
Matrix: GROUND WATER **Date/Time Received: 01/30/2018 12:50**

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	01/31/18	02/01/18 00:12	1055
Pyrene	ND	ug/L	0.50		1	01/31/18	02/01/18 00:12	1055
Pyridine	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
2,4,5-Trichlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055
2,4,6-Trichlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 00:12	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-14	Date/Time Sampled: 01/29/2018 12:15	PSS Sample ID: 18013017-007
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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)	1.5	mg/L	0.10		1	01/31/18	02/03/18 01:53	1045
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)	280	ug/L	100		1	01/30/18	01/31/18 00:01	1035

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-14	Date/Time Sampled: 01/29/2018 12:15	PSS Sample ID: 18013017-007
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 16:30	1011
Benzene	66	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
Bromochloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
Bromodichloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
Bromoform	ND	ug/L	5.0		1	01/31/18	01/31/18 16:30	1011
Bromomethane	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
2-Butanone (MEK)	ND	ug/L	10		1	01/31/18	01/31/18 16:30	1011
Carbon Disulfide	ND	ug/L	10		1	01/31/18	01/31/18 16:30	1011
Carbon tetrachloride	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
Chlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
Chloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
Chloroform	2.2	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
Chloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
Cyclohexane	ND	ug/L	10		1	01/31/18	01/31/18 16:30	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	01/31/18	01/31/18 16:30	1011
Dibromochloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
Ethylbenzene	6.0	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-14	Date/Time Sampled: 01/29/2018 12:15	PSS Sample ID: 18013017-007
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 16:30	1011
Isopropylbenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
Methyl Acetate	ND	ug/L	10		1	01/31/18	01/31/18 16:30	1011
Methylcyclohexane	ND	ug/L	10		1	01/31/18	01/31/18 16:30	1011
Methylene chloride	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	01/31/18	01/31/18 16:30	1011
Methyl-t-Butyl Ether	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
Naphthalene	48	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
Styrene	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
Tetrachloroethene	ND	ug/L	5.0		1	01/31/18	01/31/18 16:30	1011
Toluene	4.7	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
Trichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	01/31/18	01/31/18 16:30	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
Vinyl chloride	ND	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011
m&p-Xylene	3.8	ug/L	2.0		1	01/31/18	01/31/18 16:30	1011
o-Xylene	5.7	ug/L	1.0		1	01/31/18	01/31/18 16:30	1011

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-14	Date/Time Sampled: 01/29/2018 12:15	PSS Sample ID: 18013017-007
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

TCL Semivolatile Organic Compounds

Analytical Method: SW-846 8270 C

Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	2.5	ug/L	0.53		1	01/31/18	02/01/18 00:39	1055
Acenaphthylene	ND	ug/L	0.53		1	01/31/18	02/01/18 00:39	1055
Acetophenone	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
Anthracene	0.83	ug/L	0.53		1	01/31/18	02/01/18 00:39	1055
Atrazine	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
Benzo(a)anthracene	ND	ug/L	0.53		1	01/31/18	02/01/18 00:39	1055
Benzo(a)pyrene	ND	ug/L	0.53		1	01/31/18	02/01/18 00:39	1055
Benzo(b)fluoranthene	ND	ug/L	0.53		1	01/31/18	02/01/18 00:39	1055
Benzo(g,h,i)perylene	ND	ug/L	0.53		1	01/31/18	02/01/18 00:39	1055
Benzo(k)fluoranthene	ND	ug/L	0.53		1	01/31/18	02/01/18 00:39	1055
Biphenyl (Diphenyl)	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
Butyl benzyl phthalate	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
bis(2-chloroethyl) ether	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
4-Bromophenylphenyl ether	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
Di-n-butyl phthalate	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
Carbazole	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
Caprolactam	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
4-Chloroaniline	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
2-Chloronaphthalene	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
2-Chlorophenol	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
Chrysene	ND	ug/L	0.53		1	01/31/18	02/01/18 00:39	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.53		1	01/31/18	02/01/18 00:39	1055
Dibenzofuran	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
3,3-Dichlorobenzidine	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
2,4-Dichlorophenol	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-14	Date/Time Sampled: 01/29/2018 12:15	PSS Sample ID: 18013017-007
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	5.3		1	01/31/18	02/01/18 00:39	1055
Dimethyl phthalate	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
2,4-Dimethylphenol	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
2,4-Dinitrophenol	ND	ug/L	11		1	01/31/18	02/01/18 00:39	1055
2,4-Dinitrotoluene	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
2,6-Dinitrotoluene	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
Fluoranthene	0.60	ug/L	0.53		1	01/31/18	02/01/18 00:39	1055
Fluorene	2.9	ug/L	0.53		1	01/31/18	02/01/18 00:39	1055
Hexachlorobenzene	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
Hexachlorobutadiene	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
Hexachlorocyclopentadiene	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
Hexachloroethane	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.53		1	01/31/18	02/01/18 00:39	1055
Isophorone	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
2-Methylnaphthalene	ND	ug/L	0.53		1	01/31/18	02/01/18 00:39	1055
2-Methyl phenol	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
3&4-Methylphenol	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
Naphthalene	2.9	ug/L	0.53		1	01/31/18	02/01/18 00:39	1055
2-Nitroaniline	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
3-Nitroaniline	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
4-Nitroaniline	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
Nitrobenzene	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
2-Nitrophenol	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
4-Nitrophenol	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
N-Nitrosodiphenylamine	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
Di-n-octyl phthalate	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
Pentachlorophenol	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
Phenanthrene	2.3	ug/L	0.53		1	01/31/18	02/01/18 00:39	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-14 **Date/Time Sampled: 01/29/2018 12:15** **PSS Sample ID: 18013017-007**
Matrix: GROUND WATER **Date/Time Received: 01/30/2018 12:50**

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	5.3		1	01/31/18	02/01/18 00:39	1055
Pyrene	ND	ug/L	0.53		1	01/31/18	02/01/18 00:39	1055
Pyridine	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
2,4,5-Trichlorophenol	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055
2,4,6-Trichlorophenol	ND	ug/L	5.3		1	01/31/18	02/01/18 00:39	1055

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CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-15	Date/Time Sampled: 01/29/2018 12:50	PSS Sample ID: 18013017-008
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	02/03/18 01:53	1045
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	01/30/18	01/31/18 00:29	1035

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CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-15	Date/Time Sampled: 01/29/2018 12:50	PSS Sample ID: 18013017-008
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	02/01/18	02/01/18 14:37	1011
Benzene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
Bromochloromethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
Bromodichloromethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
Bromoform	ND	ug/L	5.0		1	02/01/18	02/01/18 14:37	1011
Bromomethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
2-Butanone (MEK)	ND	ug/L	10		1	02/01/18	02/01/18 14:37	1011
Carbon Disulfide	ND	ug/L	10		1	02/01/18	02/01/18 14:37	1011
Carbon tetrachloride	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
Chlorobenzene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
Chloroethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
Chloroform	12	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
Chloromethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
Cyclohexane	ND	ug/L	10		1	02/01/18	02/01/18 14:37	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	02/01/18	02/01/18 14:37	1011
Dibromochloromethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
Ethylbenzene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011

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CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-15	Date/Time Sampled: 01/29/2018 12:50	PSS Sample ID: 18013017-008
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	02/01/18	02/01/18 14:37	1011
Isopropylbenzene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
Methyl Acetate	ND	ug/L	10		1	02/01/18	02/01/18 14:37	1011
Methylcyclohexane	ND	ug/L	10		1	02/01/18	02/01/18 14:37	1011
Methylene chloride	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	02/01/18	02/01/18 14:37	1011
Methyl-t-Butyl Ether	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
Naphthalene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
Styrene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
Tetrachloroethene	ND	ug/L	5.0		1	02/01/18	02/01/18 14:37	1011
Toluene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
Trichloroethene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	02/01/18	02/01/18 14:37	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
Vinyl chloride	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011
m&p-Xylene	ND	ug/L	2.0		1	02/01/18	02/01/18 14:37	1011
o-Xylene	ND	ug/L	1.0		1	02/01/18	02/01/18 14:37	1011

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-15	Date/Time Sampled: 01/29/2018 12:50	PSS Sample ID: 18013017-008
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	02/01/18 01:05	1055
Acenaphthylene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:05	1055
Acetophenone	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
Anthracene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:05	1055
Atrazine	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
Benzo(a)anthracene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:05	1055
Benzo(a)pyrene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:05	1055
Benzo(b)fluoranthene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:05	1055
Benzo(g,h,i)perylene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:05	1055
Benzo(k)fluoranthene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:05	1055
Biphenyl (Diphenyl)	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
Butyl benzyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
bis(2-chloroethyl) ether	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
4-Bromophenylphenyl ether	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
Di-n-butyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
Carbazole	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
Caprolactam	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
4-Chloroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
2-Chloronaphthalene	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
2-Chlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
Chrysene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:05	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:05	1055
Dibenzofuran	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
3,3-Dichlorobenzidine	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
2,4-Dichlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-15	Date/Time Sampled: 01/29/2018 12:50	PSS Sample ID: 18013017-008
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	02/01/18 01:05	1055
Dimethyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
2,4-Dimethylphenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
2,4-Dinitrophenol	ND	ug/L	10		1	01/31/18	02/01/18 01:05	1055
2,4-Dinitrotoluene	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
2,6-Dinitrotoluene	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
Fluoranthene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:05	1055
Fluorene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:05	1055
Hexachlorobenzene	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
Hexachlorobutadiene	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
Hexachlorocyclopentadiene	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
Hexachloroethane	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:05	1055
Isophorone	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
2-Methylnaphthalene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:05	1055
2-Methyl phenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
3&4-Methylphenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
Naphthalene	1.8	ug/L	0.50		1	01/31/18	02/01/18 01:05	1055
2-Nitroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
3-Nitroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
4-Nitroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
Nitrobenzene	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
2-Nitrophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
4-Nitrophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
N-Nitrosodiphenylamine	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
Di-n-octyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
Pentachlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
Phenanthrene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:05	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-15 **Date/Time Sampled: 01/29/2018 12:50** **PSS Sample ID: 18013017-008**
Matrix: GROUND WATER **Date/Time Received: 01/30/2018 12:50**

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	01/31/18	02/01/18 01:05	1055
Pyrene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:05	1055
Pyridine	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
2,4,5-Trichlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055
2,4,6-Trichlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:05	1055

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CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-20 **Date/Time Sampled: 01/29/2018 11:30** **PSS Sample ID: 18013017-009**

Matrix: GROUND WATER **Date/Time Received: 01/30/2018 12:50**

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)	0.77	mg/L	0.10		1	01/31/18	02/03/18 02:18	1045

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	01/30/18	01/31/18 00:56	1035

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CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-20	Date/Time Sampled: 01/29/2018 11:30	PSS Sample ID: 18013017-009
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 17:17	1011
Benzene	14	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
Bromochloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
Bromodichloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
Bromoform	ND	ug/L	5.0		1	01/31/18	01/31/18 17:17	1011
Bromomethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
2-Butanone (MEK)	ND	ug/L	10		1	01/31/18	01/31/18 17:17	1011
Carbon Disulfide	ND	ug/L	10		1	01/31/18	01/31/18 17:17	1011
Carbon tetrachloride	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
Chlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
Chloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
Chloroform	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
Chloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
Cyclohexane	ND	ug/L	10		1	01/31/18	01/31/18 17:17	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	01/31/18	01/31/18 17:17	1011
Dibromochloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
Ethylbenzene	1.5	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-20	Date/Time Sampled: 01/29/2018 11:30	PSS Sample ID: 18013017-009
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 17:17	1011
Isopropylbenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
Methyl Acetate	ND	ug/L	10		1	01/31/18	01/31/18 17:17	1011
Methylcyclohexane	ND	ug/L	10		1	01/31/18	01/31/18 17:17	1011
Methylene chloride	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	01/31/18	01/31/18 17:17	1011
Methyl-t-Butyl Ether	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
Naphthalene	64	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
Styrene	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
Tetrachloroethene	ND	ug/L	5.0		1	01/31/18	01/31/18 17:17	1011
Toluene	2.2	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
Trichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	01/31/18	01/31/18 17:17	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
Vinyl chloride	ND	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011
m&p-Xylene	ND	ug/L	2.0		1	01/31/18	01/31/18 17:17	1011
o-Xylene	1.6	ug/L	1.0		1	01/31/18	01/31/18 17:17	1011

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No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

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Project Location: Alexandria, VA

Sample ID: MiHpt-20	Date/Time Sampled: 01/29/2018 11:30	PSS Sample ID: 18013017-009
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

TCL Semivolatile Organic Compounds

Analytical Method: SW-846 8270 C

Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	2.0	ug/L	0.50		1	01/31/18	02/01/18 01:32	1055
Acenaphthylene	1.2	ug/L	0.50		1	01/31/18	02/01/18 01:32	1055
Acetophenone	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
Anthracene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:32	1055
Atrazine	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
Benzo(a)anthracene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:32	1055
Benzo(a)pyrene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:32	1055
Benzo(b)fluoranthene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:32	1055
Benzo(g,h,i)perylene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:32	1055
Benzo(k)fluoranthene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:32	1055
Biphenyl (Diphenyl)	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
Butyl benzyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
bis(2-chloroethyl) ether	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
4-Bromophenylphenyl ether	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
Di-n-butyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
Carbazole	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
Caprolactam	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
4-Chloroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
2-Chloronaphthalene	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
2-Chlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
Chrysene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:32	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:32	1055
Dibenzofuran	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
3,3-Dichlorobenzidine	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
2,4-Dichlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055

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CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-20	Date/Time Sampled: 01/29/2018 11:30	PSS Sample ID: 18013017-009
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	02/01/18 01:32	1055
Dimethyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
2,4-Dimethylphenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
2,4-Dinitrophenol	ND	ug/L	10		1	01/31/18	02/01/18 01:32	1055
2,4-Dinitrotoluene	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
2,6-Dinitrotoluene	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
Fluoranthene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:32	1055
Fluorene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:32	1055
Hexachlorobenzene	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
Hexachlorobutadiene	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
Hexachlorocyclopentadiene	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
Hexachloroethane	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:32	1055
Isophorone	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
2-Methylnaphthalene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:32	1055
2-Methyl phenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
3&4-Methylphenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
Naphthalene	5.7	ug/L	0.50		1	01/31/18	02/01/18 01:32	1055
2-Nitroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
3-Nitroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
4-Nitroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
Nitrobenzene	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
2-Nitrophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
4-Nitrophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
N-Nitrosodiphenylamine	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
Di-n-octyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
Pentachlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
Phenanthrene	1.7	ug/L	0.50		1	01/31/18	02/01/18 01:32	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-20 **Date/Time Sampled: 01/29/2018 11:30** **PSS Sample ID: 18013017-009**
Matrix: GROUND WATER **Date/Time Received: 01/30/2018 12:50**

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	01/31/18	02/01/18 01:32	1055
Pyrene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:32	1055
Pyridine	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
2,4,5-Trichlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055
2,4,6-Trichlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:32	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-21 **Date/Time Sampled: 01/29/2018 11:05** **PSS Sample ID: 18013017-010**

Matrix: GROUND WATER **Date/Time Received: 01/30/2018 12:50**

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)	2.3	mg/L	0.10	LF	1	01/31/18	02/03/18 02:18	1045

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)	4,500	ug/L	100		1	01/30/18	01/31/18 02:45	1035

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CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-21	Date/Time Sampled: 01/29/2018 11:05	PSS Sample ID: 18013017-010
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

TCL Volatile Organic Compounds

Analytical Method: SW-846 8260 B

Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	19	ug/L	10		1	01/31/18	01/31/18 17:42	1011
Benzene	75	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
Bromochloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
Bromodichloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
Bromoform	ND	ug/L	5.0		1	01/31/18	01/31/18 17:42	1011
Bromomethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
2-Butanone (MEK)	ND	ug/L	10		1	01/31/18	01/31/18 17:42	1011
Carbon Disulfide	ND	ug/L	10		1	01/31/18	01/31/18 17:42	1011
Carbon tetrachloride	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
Chlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
Chloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
Chloroform	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
Chloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
Cyclohexane	460	ug/L	100		10	01/31/18	02/01/18 16:16	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	01/31/18	01/31/18 17:42	1011
Dibromochloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
cis-1,2-Dichloroethene	2.1	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
Ethylbenzene	73	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-21	Date/Time Sampled: 01/29/2018 11:05	PSS Sample ID: 18013017-010
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 17:42	1011
Isopropylbenzene	8.4	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
Methyl Acetate	ND	ug/L	10		1	01/31/18	01/31/18 17:42	1011
Methylcyclohexane	340	ug/L	100		10	01/31/18	02/01/18 16:16	1011
Methylene chloride	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	01/31/18	01/31/18 17:42	1011
Methyl-t-Butyl Ether	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
Naphthalene	3.2	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
Styrene	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
Tetrachloroethene	26	ug/L	5.0		1	01/31/18	01/31/18 17:42	1011
Toluene	31	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
Trichloroethene	10	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	01/31/18	01/31/18 17:42	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
Vinyl chloride	ND	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011
m&p-Xylene	110	ug/L	2.0		1	01/31/18	01/31/18 17:42	1011
o-Xylene	4.6	ug/L	1.0		1	01/31/18	01/31/18 17:42	1011

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-21	Date/Time Sampled: 01/29/2018 11:05	PSS Sample ID: 18013017-010
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	02/01/18 01:58	1055
Acenaphthylene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:58	1055
Acetophenone	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
Anthracene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:58	1055
Atrazine	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
Benzo(a)anthracene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:58	1055
Benzo(a)pyrene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:58	1055
Benzo(b)fluoranthene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:58	1055
Benzo(g,h,i)perylene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:58	1055
Benzo(k)fluoranthene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:58	1055
Biphenyl (Diphenyl)	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
Butyl benzyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
bis(2-chloroethyl) ether	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
4-Bromophenylphenyl ether	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
Di-n-butyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
Carbazole	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
Caprolactam	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
4-Chloroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
2-Chloronaphthalene	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
2-Chlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
Chrysene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:58	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:58	1055
Dibenzofuran	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
3,3-Dichlorobenzidine	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
2,4-Dichlorophenol	120	ug/L	25		5	01/31/18	02/01/18 11:55	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-21	Date/Time Sampled: 01/29/2018 11:05	PSS Sample ID: 18013017-010
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	02/01/18 01:58	1055
Dimethyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
2,4-Dimethylphenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
2,4-Dinitrophenol	ND	ug/L	10		1	01/31/18	02/01/18 01:58	1055
2,4-Dinitrotoluene	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
2,6-Dinitrotoluene	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
Fluoranthene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:58	1055
Fluorene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:58	1055
Hexachlorobenzene	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
Hexachlorobutadiene	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
Hexachlorocyclopentadiene	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
Hexachloroethane	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:58	1055
Isophorone	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
2-Methylnaphthalene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:58	1055
2-Methyl phenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
3&4-Methylphenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
Naphthalene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:58	1055
2-Nitroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
3-Nitroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
4-Nitroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
Nitrobenzene	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
2-Nitrophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
4-Nitrophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
N-Nitrosodiphenylamine	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
Di-n-octyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
Pentachlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
Phenanthrene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:58	1055

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CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-21 **Date/Time Sampled: 01/29/2018 11:05** **PSS Sample ID: 18013017-010**
Matrix: GROUND WATER **Date/Time Received: 01/30/2018 12:50**

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	01/31/18	02/01/18 01:58	1055
Pyrene	ND	ug/L	0.50		1	01/31/18	02/01/18 01:58	1055
Pyridine	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
2,4,5-Trichlorophenol	11	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055
2,4,6-Trichlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 01:58	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-22 **Date/Time Sampled: 01/29/2018 10:55** **PSS Sample ID: 18013017-011**

Matrix: GROUND WATER **Date/Time Received: 01/30/2018 12:50**

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)	33	mg/L	1.0		10	01/31/18	02/06/18 11:40	1045

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)	270	ug/L	100		1	01/30/18	01/31/18 03:13	1035

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-22	Date/Time Sampled: 01/29/2018 10:55	PSS Sample ID: 18013017-011
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 18:32	1011
Benzene	34	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
Bromochloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
Bromodichloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
Bromoform	ND	ug/L	5.0		1	01/31/18	01/31/18 18:32	1011
Bromomethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
2-Butanone (MEK)	ND	ug/L	10		1	01/31/18	01/31/18 18:32	1011
Carbon Disulfide	ND	ug/L	10		1	01/31/18	01/31/18 18:32	1011
Carbon tetrachloride	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
Chlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
Chloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
Chloroform	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
Chloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
Cyclohexane	ND	ug/L	10		1	01/31/18	01/31/18 18:32	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	01/31/18	01/31/18 18:32	1011
Dibromochloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
Ethylbenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-22	Date/Time Sampled: 01/29/2018 10:55	PSS Sample ID: 18013017-011
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 18:32	1011
Isopropylbenzene	1.2	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
Methyl Acetate	ND	ug/L	10		1	01/31/18	01/31/18 18:32	1011
Methylcyclohexane	ND	ug/L	10		1	01/31/18	01/31/18 18:32	1011
Methylene chloride	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	01/31/18	01/31/18 18:32	1011
Methyl-t-Butyl Ether	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
Naphthalene	1.3	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
Styrene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
Tetrachloroethene	ND	ug/L	5.0		1	01/31/18	01/31/18 18:32	1011
Toluene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
Trichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	01/31/18	01/31/18 18:32	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
Vinyl chloride	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011
m&p-Xylene	ND	ug/L	2.0		1	01/31/18	01/31/18 18:32	1011
o-Xylene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:32	1011

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CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-22	Date/Time Sampled: 01/29/2018 10:55	PSS Sample ID: 18013017-011
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	0.56		1	01/31/18	02/01/18 02:24	1055
Acenaphthylene	ND	ug/L	0.56		1	01/31/18	02/01/18 02:24	1055
Acetophenone	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
Anthracene	ND	ug/L	0.56		1	01/31/18	02/01/18 02:24	1055
Atrazine	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
Benzo(a)anthracene	ND	ug/L	0.56		1	01/31/18	02/01/18 02:24	1055
Benzo(a)pyrene	ND	ug/L	0.56		1	01/31/18	02/01/18 02:24	1055
Benzo(b)fluoranthene	ND	ug/L	0.56		1	01/31/18	02/01/18 02:24	1055
Benzo(g,h,i)perylene	ND	ug/L	0.56		1	01/31/18	02/01/18 02:24	1055
Benzo(k)fluoranthene	ND	ug/L	0.56		1	01/31/18	02/01/18 02:24	1055
Biphenyl (Diphenyl)	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
Butyl benzyl phthalate	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
bis(2-chloroethyl) ether	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
4-Bromophenylphenyl ether	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
Di-n-butyl phthalate	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
Carbazole	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
Caprolactam	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
4-Chloroaniline	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
2-Chloronaphthalene	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
2-Chlorophenol	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
Chrysene	ND	ug/L	0.56		1	01/31/18	02/01/18 02:24	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.56		1	01/31/18	02/01/18 02:24	1055
Dibenzofuran	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
3,3-Dichlorobenzidine	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
2,4-Dichlorophenol	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055

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CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-22	Date/Time Sampled: 01/29/2018 10:55	PSS Sample ID: 18013017-011
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	5.6		1	01/31/18	02/01/18 02:24	1055
Dimethyl phthalate	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
2,4-Dimethylphenol	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
2,4-Dinitrophenol	ND	ug/L	11		1	01/31/18	02/01/18 02:24	1055
2,4-Dinitrotoluene	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
2,6-Dinitrotoluene	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
Fluoranthene	ND	ug/L	0.56		1	01/31/18	02/01/18 02:24	1055
Fluorene	ND	ug/L	0.56		1	01/31/18	02/01/18 02:24	1055
Hexachlorobenzene	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
Hexachlorobutadiene	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
Hexachlorocyclopentadiene	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
Hexachloroethane	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.56		1	01/31/18	02/01/18 02:24	1055
Isophorone	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
2-Methylnaphthalene	ND	ug/L	0.56		1	01/31/18	02/01/18 02:24	1055
2-Methyl phenol	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
3&4-Methylphenol	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
Naphthalene	ND	ug/L	0.56		1	01/31/18	02/01/18 02:24	1055
2-Nitroaniline	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
3-Nitroaniline	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
4-Nitroaniline	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
Nitrobenzene	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
2-Nitrophenol	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
4-Nitrophenol	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
N-Nitrosodiphenylamine	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
Di-n-octyl phthalate	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
Pentachlorophenol	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
Phenanthrene	ND	ug/L	0.56		1	01/31/18	02/01/18 02:24	1055

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CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MiHpt-22

Date/Time Sampled: 01/29/2018 10:55

PSS Sample ID: 18013017-011

Matrix: GROUND WATER

Date/Time Received: 01/30/2018 12:50

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	5.6		1	01/31/18	02/01/18 02:24	1055
Pyrene	ND	ug/L	0.56		1	01/31/18	02/01/18 02:24	1055
Pyridine	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
2,4,5-Trichlorophenol	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055
2,4,6-Trichlorophenol	ND	ug/L	5.6		1	01/31/18	02/01/18 02:24	1055

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CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MW23 **Date/Time Sampled: 01/29/2018 11:50** **PSS Sample ID: 18013017-012**

Matrix: GROUND WATER **Date/Time Received: 01/30/2018 12:50**

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)	0.28	mg/L	0.10		1	01/31/18	02/03/18 02:43	1045

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	01/30/18	01/31/18 01:24	1035

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Project Location: Alexandria, VA

Sample ID: MW23	Date/Time Sampled: 01/29/2018 11:50	PSS Sample ID: 18013017-012
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 18:57	1011
Benzene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
Bromochloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
Bromodichloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
Bromoform	ND	ug/L	5.0		1	01/31/18	01/31/18 18:57	1011
Bromomethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
2-Butanone (MEK)	ND	ug/L	10		1	01/31/18	01/31/18 18:57	1011
Carbon Disulfide	ND	ug/L	10		1	01/31/18	01/31/18 18:57	1011
Carbon tetrachloride	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
Chlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
Chloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
Chloroform	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
Chloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
Cyclohexane	ND	ug/L	10		1	01/31/18	01/31/18 18:57	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	01/31/18	01/31/18 18:57	1011
Dibromochloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
Ethylbenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011

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CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MW23	Date/Time Sampled: 01/29/2018 11:50	PSS Sample ID: 18013017-012
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 18:57	1011
Isopropylbenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
Methyl Acetate	ND	ug/L	10		1	01/31/18	01/31/18 18:57	1011
Methylcyclohexane	ND	ug/L	10		1	01/31/18	01/31/18 18:57	1011
Methylene chloride	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	01/31/18	01/31/18 18:57	1011
Methyl-t-Butyl Ether	4.3	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
Naphthalene	1.4	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
Styrene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
Tetrachloroethene	ND	ug/L	5.0		1	01/31/18	01/31/18 18:57	1011
Toluene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
Trichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	01/31/18	01/31/18 18:57	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
Vinyl chloride	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011
m&p-Xylene	ND	ug/L	2.0		1	01/31/18	01/31/18 18:57	1011
o-Xylene	ND	ug/L	1.0		1	01/31/18	01/31/18 18:57	1011

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MW23	Date/Time Sampled: 01/29/2018 11:50	PSS Sample ID: 18013017-012
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

TCL Semivolatile Organic Compounds

Analytical Method: SW-846 8270 C

Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	0.90	ug/L	0.50		1	01/31/18	02/01/18 02:51	1055
Acenaphthylene	ND	ug/L	0.50		1	01/31/18	02/01/18 02:51	1055
Acetophenone	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
Anthracene	ND	ug/L	0.50		1	01/31/18	02/01/18 02:51	1055
Atrazine	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
Benzo(a)anthracene	ND	ug/L	0.50		1	01/31/18	02/01/18 02:51	1055
Benzo(a)pyrene	ND	ug/L	0.50		1	01/31/18	02/01/18 02:51	1055
Benzo(b)fluoranthene	ND	ug/L	0.50		1	01/31/18	02/01/18 02:51	1055
Benzo(g,h,i)perylene	ND	ug/L	0.50		1	01/31/18	02/01/18 02:51	1055
Benzo(k)fluoranthene	ND	ug/L	0.50		1	01/31/18	02/01/18 02:51	1055
Biphenyl (Diphenyl)	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
Butyl benzyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
bis(2-chloroethyl) ether	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
4-Bromophenylphenyl ether	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
Di-n-butyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
Carbazole	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
Caprolactam	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
4-Chloroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
2-Chloronaphthalene	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
2-Chlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
Chrysene	ND	ug/L	0.50		1	01/31/18	02/01/18 02:51	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.50		1	01/31/18	02/01/18 02:51	1055
Dibenzofuran	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
3,3-Dichlorobenzidine	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
2,4-Dichlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MW23	Date/Time Sampled: 01/29/2018 11:50	PSS Sample ID: 18013017-012
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	02/01/18 02:51	1055
Dimethyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
2,4-Dimethylphenol	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
2,4-Dinitrophenol	ND	ug/L	10		1	01/31/18	02/01/18 02:51	1055
2,4-Dinitrotoluene	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
2,6-Dinitrotoluene	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
Fluoranthene	ND	ug/L	0.50		1	01/31/18	02/01/18 02:51	1055
Fluorene	0.52	ug/L	0.50		1	01/31/18	02/01/18 02:51	1055
Hexachlorobenzene	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
Hexachlorobutadiene	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
Hexachlorocyclopentadiene	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
Hexachloroethane	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.50		1	01/31/18	02/01/18 02:51	1055
Isophorone	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
2-Methylnaphthalene	ND	ug/L	0.50		1	01/31/18	02/01/18 02:51	1055
2-Methyl phenol	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
3&4-Methylphenol	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
Naphthalene	ND	ug/L	0.50		1	01/31/18	02/01/18 02:51	1055
2-Nitroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
3-Nitroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
4-Nitroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
Nitrobenzene	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
2-Nitrophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
4-Nitrophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
N-Nitrosodiphenylamine	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
Di-n-octyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
Pentachlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
Phenanthrene	0.60	ug/L	0.50		1	01/31/18	02/01/18 02:51	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MW23 **Date/Time Sampled: 01/29/2018 11:50** **PSS Sample ID: 18013017-012**
Matrix: GROUND WATER **Date/Time Received: 01/30/2018 12:50**

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	01/31/18	02/01/18 02:51	1055
Pyrene	ND	ug/L	0.50		1	01/31/18	02/01/18 02:51	1055
Pyridine	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
2,4,5-Trichlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055
2,4,6-Trichlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 02:51	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MW24 **Date/Time Sampled: 01/29/2018 09:00** **PSS Sample ID: 18013017-013**

Matrix: GROUND WATER **Date/Time Received: 01/30/2018 12:50**

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)	1.1	mg/L	0.10		1	01/31/18	02/03/18 03:08	1045

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	01/30/18	01/31/18 01:51	1035

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MW24	Date/Time Sampled: 01/29/2018 09:00	PSS Sample ID: 18013017-013
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 19:23	1011
Benzene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
Bromochloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
Bromodichloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
Bromoform	ND	ug/L	5.0		1	01/31/18	01/31/18 19:23	1011
Bromomethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
2-Butanone (MEK)	ND	ug/L	10		1	01/31/18	01/31/18 19:23	1011
Carbon Disulfide	ND	ug/L	10		1	01/31/18	01/31/18 19:23	1011
Carbon tetrachloride	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
Chlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
Chloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
Chloroform	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
Chloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
Cyclohexane	ND	ug/L	10		1	01/31/18	01/31/18 19:23	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	01/31/18	01/31/18 19:23	1011
Dibromochloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
Ethylbenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MW24	Date/Time Sampled: 01/29/2018 09:00	PSS Sample ID: 18013017-013
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 19:23	1011
Isopropylbenzene	1.7	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
Methyl Acetate	ND	ug/L	10		1	01/31/18	01/31/18 19:23	1011
Methylcyclohexane	ND	ug/L	10		1	01/31/18	01/31/18 19:23	1011
Methylene chloride	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	01/31/18	01/31/18 19:23	1011
Methyl-t-Butyl Ether	3.9	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
Naphthalene	2.6	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
Styrene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
Tetrachloroethene	ND	ug/L	5.0		1	01/31/18	01/31/18 19:23	1011
Toluene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
Trichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	01/31/18	01/31/18 19:23	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
Vinyl chloride	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011
m&p-Xylene	ND	ug/L	2.0		1	01/31/18	01/31/18 19:23	1011
o-Xylene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:23	1011

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CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MW24	Date/Time Sampled: 01/29/2018 09:00	PSS Sample ID: 18013017-013
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

TCL Semivolatile Organic Compounds

Analytical Method: SW-846 8270 C

Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	2.5	ug/L	0.50		1	01/31/18	02/01/18 03:17	1055
Acenaphthylene	ND	ug/L	0.50		1	01/31/18	02/01/18 03:17	1055
Acetophenone	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
Anthracene	0.55	ug/L	0.50		1	01/31/18	02/01/18 03:17	1055
Atrazine	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
Benzo(a)anthracene	ND	ug/L	0.50		1	01/31/18	02/01/18 03:17	1055
Benzo(a)pyrene	ND	ug/L	0.50		1	01/31/18	02/01/18 03:17	1055
Benzo(b)fluoranthene	ND	ug/L	0.50		1	01/31/18	02/01/18 03:17	1055
Benzo(g,h,i)perylene	ND	ug/L	0.50		1	01/31/18	02/01/18 03:17	1055
Benzo(k)fluoranthene	ND	ug/L	0.50		1	01/31/18	02/01/18 03:17	1055
Biphenyl (Diphenyl)	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
Butyl benzyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
bis(2-chloroethyl) ether	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
4-Bromophenylphenyl ether	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
Di-n-butyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
Carbazole	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
Caprolactam	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
4-Chloroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
2-Chloronaphthalene	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
2-Chlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
Chrysene	ND	ug/L	0.50		1	01/31/18	02/01/18 03:17	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.50		1	01/31/18	02/01/18 03:17	1055
Dibenzofuran	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
3,3-Dichlorobenzidine	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
2,4-Dichlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MW24	Date/Time Sampled: 01/29/2018 09:00	PSS Sample ID: 18013017-013
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	02/01/18 03:17	1055
Dimethyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
2,4-Dimethylphenol	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
2,4-Dinitrophenol	ND	ug/L	10		1	01/31/18	02/01/18 03:17	1055
2,4-Dinitrotoluene	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
2,6-Dinitrotoluene	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
Fluoranthene	1.1	ug/L	0.50		1	01/31/18	02/01/18 03:17	1055
Fluorene	1.3	ug/L	0.50		1	01/31/18	02/01/18 03:17	1055
Hexachlorobenzene	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
Hexachlorobutadiene	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
Hexachlorocyclopentadiene	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
Hexachloroethane	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.50		1	01/31/18	02/01/18 03:17	1055
Isophorone	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
2-Methylnaphthalene	ND	ug/L	0.50		1	01/31/18	02/01/18 03:17	1055
2-Methyl phenol	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
3&4-Methylphenol	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
Naphthalene	ND	ug/L	0.50		1	01/31/18	02/01/18 03:17	1055
2-Nitroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
3-Nitroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
4-Nitroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
Nitrobenzene	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
2-Nitrophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
4-Nitrophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
N-Nitrosodiphenylamine	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
Di-n-octyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
Pentachlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
Phenanthrene	2.2	ug/L	0.50		1	01/31/18	02/01/18 03:17	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MW24

Date/Time Sampled: 01/29/2018 09:00

PSS Sample ID: 18013017-013

Matrix: GROUND WATER

Date/Time Received: 01/30/2018 12:50

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	01/31/18	02/01/18 03:17	1055
Pyrene	0.88	ug/L	0.50		1	01/31/18	02/01/18 03:17	1055
Pyridine	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
2,4,5-Trichlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055
2,4,6-Trichlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 03:17	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MW25 **Date/Time Sampled: 01/29/2018 08:45** **PSS Sample ID: 18013017-014**

Matrix: GROUND WATER **Date/Time Received: 01/30/2018 12:50**

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)	0.45	mg/L	0.10		1	01/31/18	02/03/18 03:08	1045

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)	110	ug/L	100		1	01/30/18	01/31/18 02:18	1035

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MW25	Date/Time Sampled: 01/29/2018 08:45	PSS Sample ID: 18013017-014
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 19:46	1011
Benzene	14	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
Bromochloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
Bromodichloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
Bromoform	ND	ug/L	5.0		1	01/31/18	01/31/18 19:46	1011
Bromomethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
2-Butanone (MEK)	ND	ug/L	10		1	01/31/18	01/31/18 19:46	1011
Carbon Disulfide	ND	ug/L	10		1	01/31/18	01/31/18 19:46	1011
Carbon tetrachloride	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
Chlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
Chloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
Chloroform	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
Chloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
Cyclohexane	ND	ug/L	10		1	01/31/18	01/31/18 19:46	1011
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0		1	01/31/18	01/31/18 19:46	1011
Dibromochloromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
1,2-Dibromoethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
Dichlorodifluoromethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
Ethylbenzene	2.3	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MW25	Date/Time Sampled: 01/29/2018 08:45	PSS Sample ID: 18013017-014
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	01/31/18 19:46	1011
Isopropylbenzene	1.6	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
Methyl Acetate	ND	ug/L	10		1	01/31/18	01/31/18 19:46	1011
Methylcyclohexane	ND	ug/L	10		1	01/31/18	01/31/18 19:46	1011
Methylene chloride	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0		1	01/31/18	01/31/18 19:46	1011
Methyl-t-Butyl Ether	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
Naphthalene	83	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
Styrene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
Tetrachloroethene	ND	ug/L	5.0		1	01/31/18	01/31/18 19:46	1011
Toluene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
Trichloroethene	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	01/31/18	01/31/18 19:46	1011
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
Vinyl chloride	ND	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011
m&p-Xylene	ND	ug/L	2.0		1	01/31/18	01/31/18 19:46	1011
o-Xylene	2.4	ug/L	1.0		1	01/31/18	01/31/18 19:46	1011

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MW25	Date/Time Sampled: 01/29/2018 08:45	PSS Sample ID: 18013017-014
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

TCL Semivolatile Organic Compounds

Analytical Method: SW-846 8270 C

Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	0.81	ug/L	0.50		1	01/31/18	02/01/18 03:44	1055
Acenaphthylene	ND	ug/L	0.50		1	01/31/18	02/01/18 03:44	1055
Acetophenone	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
Anthracene	ND	ug/L	0.50		1	01/31/18	02/01/18 03:44	1055
Atrazine	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
Benzo(a)anthracene	ND	ug/L	0.50		1	01/31/18	02/01/18 03:44	1055
Benzo(a)pyrene	ND	ug/L	0.50		1	01/31/18	02/01/18 03:44	1055
Benzo(b)fluoranthene	ND	ug/L	0.50		1	01/31/18	02/01/18 03:44	1055
Benzo(g,h,i)perylene	ND	ug/L	0.50		1	01/31/18	02/01/18 03:44	1055
Benzo(k)fluoranthene	ND	ug/L	0.50		1	01/31/18	02/01/18 03:44	1055
Biphenyl (Diphenyl)	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
Butyl benzyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
bis(2-chloroethoxy) methane	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
bis(2-chloroethyl) ether	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
bis(2-chloroisopropyl) ether	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
bis(2-ethylhexyl) phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
4-Bromophenylphenyl ether	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
Di-n-butyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
Carbazole	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
Caprolactam	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
4-Chloro-3-methyl phenol	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
4-Chloroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
2-Chloronaphthalene	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
2-Chlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
4-Chlorophenyl Phenyl ether	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
Chrysene	ND	ug/L	0.50		1	01/31/18	02/01/18 03:44	1055
Dibenz(a,h)Anthracene	ND	ug/L	0.50		1	01/31/18	02/01/18 03:44	1055
Dibenzofuran	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
3,3-Dichlorobenzidine	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
2,4-Dichlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MW25	Date/Time Sampled: 01/29/2018 08:45	PSS Sample ID: 18013017-014
Matrix: GROUND WATER	Date/Time Received: 01/30/2018 12:50	

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	01/31/18	02/01/18 03:44	1055
Dimethyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
2,4-Dimethylphenol	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
4,6-Dinitro-2-methyl phenol	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
2,4-Dinitrophenol	ND	ug/L	10		1	01/31/18	02/01/18 03:44	1055
2,4-Dinitrotoluene	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
2,6-Dinitrotoluene	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
Fluoranthene	ND	ug/L	0.50		1	01/31/18	02/01/18 03:44	1055
Fluorene	ND	ug/L	0.50		1	01/31/18	02/01/18 03:44	1055
Hexachlorobenzene	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
Hexachlorobutadiene	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
Hexachlorocyclopentadiene	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
Hexachloroethane	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/L	0.50		1	01/31/18	02/01/18 03:44	1055
Isophorone	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
2-Methylnaphthalene	ND	ug/L	0.50		1	01/31/18	02/01/18 03:44	1055
2-Methyl phenol	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
3&4-Methylphenol	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
Naphthalene	3.5	ug/L	0.50		1	01/31/18	02/01/18 03:44	1055
2-Nitroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
3-Nitroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
4-Nitroaniline	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
Nitrobenzene	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
2-Nitrophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
4-Nitrophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
N-Nitrosodi-n-propyl amine	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
N-Nitrosodiphenylamine	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
Di-n-octyl phthalate	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
Pentachlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
Phenanthrene	ND	ug/L	0.50		1	01/31/18	02/01/18 03:44	1055

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS

No: 18013017

Icor Ltd., Middleburg, VA

February 6, 2018

Project Name: RTN - Robinson Terminal North

Project Location: Alexandria, VA

Sample ID: MW25 **Date/Time Sampled: 01/29/2018 08:45** **PSS Sample ID: 18013017-014**
Matrix: GROUND WATER **Date/Time Received: 01/30/2018 12:50**

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	01/31/18	02/01/18 03:44	1055
Pyrene	ND	ug/L	0.50		1	01/31/18	02/01/18 03:44	1055
Pyridine	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
2,4,5-Trichlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055
2,4,6-Trichlorophenol	ND	ug/L	5.0		1	01/31/18	02/01/18 03:44	1055



Case Narrative Summary

Client Name: Icor Ltd.

Project Name: RTN - Robinson Terminal North

Work Order Number(s): 18013017

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.

Sample Receipt:

All sample receipt conditions were acceptable.

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): 18013017

Report Prepared For: Icor Ltd., Middleburg, VA

Project Name: RTN - Robinson Terminal North

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	69744-1-BKS	BKS	69744-1-BKS	1045	W	69744	150028	-----	01/31/2018 08:10	01/31/2018 12:57
	69744-1-BLK	BLK	69744-1-BLK	1045	W	69744	150028	-----	01/31/2018 08:10	01/31/2018 12:32
	69744-1-BSD	BSD	69744-1-BSD	1045	W	69744	150028	-----	01/31/2018 08:10	01/31/2018 12:57
	TEC-MW4	Initial	18013017-002	1045	W	69744	150157	01/29/2018	01/31/2018 08:10	02/03/2018 00:39
	MiHpt-5	Initial	18013017-004	1045	W	69744	150157	01/29/2018	01/31/2018 08:10	02/03/2018 01:04
	MiHpt-8	Initial	18013017-006	1045	W	69744	150157	01/29/2018	01/31/2018 08:10	02/03/2018 01:28
	MiHpt-15	Initial	18013017-008	1045	W	69744	150157	01/29/2018	01/31/2018 08:10	02/03/2018 01:53
	MiHpt-21	Initial	18013017-010	1045	W	69744	150157	01/29/2018	01/31/2018 08:10	02/03/2018 02:18
	MW23	Initial	18013017-012	1045	W	69744	150157	01/29/2018	01/31/2018 08:10	02/03/2018 02:43
	MW25	Initial	18013017-014	1045	W	69744	150157	01/29/2018	01/31/2018 08:10	02/03/2018 03:08
	TEC-MW2	Initial	18013017-001	1045	W	69744	150159	01/29/2018	01/31/2018 08:10	02/03/2018 00:39
	ECS-MW4	Initial	18013017-003	1045	W	69744	150159	01/29/2018	01/31/2018 08:10	02/03/2018 01:04
	MiHpt-7	Initial	18013017-005	1045	W	69744	150159	01/29/2018	01/31/2018 08:10	02/03/2018 01:28
	MiHpt-14	Initial	18013017-007	1045	W	69744	150159	01/29/2018	01/31/2018 08:10	02/03/2018 01:53
	MiHpt-20	Initial	18013017-009	1045	W	69744	150159	01/29/2018	01/31/2018 08:10	02/03/2018 02:18
	MW24	Initial	18013017-013	1045	W	69744	150159	01/29/2018	01/31/2018 08:10	02/03/2018 03:08
	MiHpt-22	Initial	18013017-011	1045	W	69744	150186	01/29/2018	01/31/2018 08:10	02/06/2018 11:40
SW-846 8015C	TEC-MW2	Initial	18013017-001	1035	W	69753	149998	01/29/2018	01/30/2018 16:16	01/30/2018 21:17
	TEC-MW4	Initial	18013017-002	1035	W	69753	149998	01/29/2018	01/30/2018 16:16	01/30/2018 21:44
	ECS-MW4	Initial	18013017-003	1035	W	69753	149998	01/29/2018	01/30/2018 16:16	01/30/2018 22:11
	MiHpt-5	Initial	18013017-004	1035	W	69753	149998	01/29/2018	01/30/2018 16:16	01/30/2018 22:39
	MiHpt-7	Initial	18013017-005	1035	W	69753	149998	01/29/2018	01/30/2018 16:16	01/30/2018 23:06
	MiHpt-8	Initial	18013017-006	1035	W	69753	149998	01/29/2018	01/30/2018 16:16	01/30/2018 23:34
	MiHpt-14	Initial	18013017-007	1035	W	69753	149998	01/29/2018	01/30/2018 16:16	01/31/2018 00:01
	MiHpt-15	Initial	18013017-008	1035	W	69753	149998	01/29/2018	01/30/2018 16:16	01/31/2018 00:29
	MiHpt-20	Initial	18013017-009	1035	W	69753	149998	01/29/2018	01/30/2018 16:16	01/31/2018 00:56
	MiHpt-21	Initial	18013017-010	1035	W	69753	149998	01/29/2018	01/30/2018 16:16	01/31/2018 02:45
	MiHpt-22	Initial	18013017-011	1035	W	69753	149998	01/29/2018	01/30/2018 16:16	01/31/2018 03:13
	MW23	Initial	18013017-012	1035	W	69753	149998	01/29/2018	01/30/2018 16:16	01/31/2018 01:24



Analytical Data Package Information Summary

Work Order(s): 18013017

Report Prepared For: Icor Ltd., Middleburg, VA

Project Name: RTN - Robinson Terminal North

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	18013017-013	1035	W	69753	149998	01/29/2018	01/30/2018 16:16	01/31/2018 01:51
	MW25	Initial	18013017-014	1035	W	69753	149998	01/29/2018	01/30/2018 16:16	01/31/2018 02:18
	69753-2-BKS	BKS	69753-2-BKS	1035	W	69753	149998	-----	01/30/2018 16:16	01/30/2018 18:34
	69753-2-BLK	BLK	69753-2-BLK	1035	W	69753	149998	-----	01/30/2018 16:16	01/30/2018 18:06
	MW25 S	MS	18013017-014 S	1035	W	69753	149998	01/29/2018	01/30/2018 16:16	01/31/2018 03:40
	MW25 SD	MSD	18013017-014 SD	1035	W	69753	149998	01/29/2018	01/30/2018 16:16	01/31/2018 04:08
SW-846 8260 B	TEC-MW2	Initial	18013017-001	1011	W	69775	150042	01/29/2018	01/31/2018 09:36	01/31/2018 12:05
	TEC-MW4	Initial	18013017-002	1011	W	69775	150042	01/29/2018	01/31/2018 09:36	01/31/2018 12:28
	ECS-MW4	Initial	18013017-003	1011	W	69775	150042	01/29/2018	01/31/2018 09:36	01/31/2018 12:52
	MiHpt-5	Initial	18013017-004	1011	W	69775	150042	01/29/2018	01/31/2018 09:36	01/31/2018 14:54
	MiHpt-7	Initial	18013017-005	1011	W	69775	150042	01/29/2018	01/31/2018 09:36	01/31/2018 15:16
	MiHpt-14	Initial	18013017-007	1011	W	69775	150042	01/29/2018	01/31/2018 09:36	01/31/2018 16:30
	MiHpt-20	Initial	18013017-009	1011	W	69775	150042	01/29/2018	01/31/2018 09:36	01/31/2018 17:17
	MiHpt-21	Initial	18013017-010	1011	W	69775	150042	01/29/2018	01/31/2018 09:36	01/31/2018 17:42
	MiHpt-22	Initial	18013017-011	1011	W	69775	150042	01/29/2018	01/31/2018 09:36	01/31/2018 18:32
	MW23	Initial	18013017-012	1011	W	69775	150042	01/29/2018	01/31/2018 09:36	01/31/2018 18:57
	MW24	Initial	18013017-013	1011	W	69775	150042	01/29/2018	01/31/2018 09:36	01/31/2018 19:23
	MW25	Initial	18013017-014	1011	W	69775	150042	01/29/2018	01/31/2018 09:36	01/31/2018 19:46
	69775-1-BKS	BKS	69775-1-BKS	1011	W	69775	150042	-----	01/31/2018 09:36	01/31/2018 10:44
	69775-1-BLK	BLK	69775-1-BLK	1011	W	69775	150042	-----	01/31/2018 09:36	01/31/2018 11:37
	TEC-MW2 S	MS	18013017-001 S	1011	W	69775	150042	01/29/2018	01/31/2018 09:36	01/31/2018 13:15
	TEC-MW2 SD	MSD	18013017-001 SD	1011	W	69775	150042	01/29/2018	01/31/2018 09:36	01/31/2018 13:38
	MiHpt-8	Initial	18013017-006	1011	W	69802	150076	01/29/2018	02/01/2018 09:38	02/01/2018 14:12
	MiHpt-15	Initial	18013017-008	1011	W	69802	150076	01/29/2018	02/01/2018 09:38	02/01/2018 14:37
	69802-1-BKS	BKS	69802-1-BKS	1011	W	69802	150076	-----	02/01/2018 09:38	02/01/2018 10:43
	69802-1-BLK	BLK	69802-1-BLK	1011	W	69802	150076	-----	02/01/2018 09:38	02/01/2018 11:39
	MW45 S	MS	18013023-010 S	1011	W	69802	150076	01/30/2018	02/01/2018 09:38	02/01/2018 12:53
	MW45 SD	MSD	18013023-010 SD	1011	W	69802	150076	01/30/2018	02/01/2018 09:38	02/01/2018 13:18
	MiHpt-5	Reanalysis	18013017-004	1011	W	69775	150076	01/29/2018	01/31/2018 09:36	02/01/2018 15:01



Analytical Data Package Information Summary

Work Order(s): 18013017

Report Prepared For: Icor Ltd., Middleburg, VA

Project Name: RTN - Robinson Terminal North

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	MiHpt-7	Reanalysis	18013017-005	1011	W	69775	150076	01/29/2018	01/31/2018 09:36	02/01/2018 15:26
	MiHpt-21	Reanalysis	18013017-010	1011	W	69775	150076	01/29/2018	01/31/2018 09:36	02/01/2018 16:16
SW-846 8270 C	TEC-MW4	Initial	18013017-002	1055	W	69748	150082	01/29/2018	01/31/2018 09:00	01/31/2018 22:27
	ECS-MW4	Initial	18013017-003	1055	W	69748	150082	01/29/2018	01/31/2018 09:00	01/31/2018 22:53
	MiHpt-5	Initial	18013017-004	1055	W	69748	150082	01/29/2018	01/31/2018 09:00	01/31/2018 23:19
	MiHpt-7	Initial	18013017-005	1055	W	69748	150082	01/29/2018	01/31/2018 09:00	01/31/2018 23:46
	MiHpt-8	Initial	18013017-006	1055	W	69748	150082	01/29/2018	01/31/2018 09:00	02/01/2018 00:12
	MiHpt-14	Initial	18013017-007	1055	W	69748	150082	01/29/2018	01/31/2018 09:00	02/01/2018 00:39
	MiHpt-15	Initial	18013017-008	1055	W	69748	150082	01/29/2018	01/31/2018 09:00	02/01/2018 01:05
	MiHpt-20	Initial	18013017-009	1055	W	69748	150082	01/29/2018	01/31/2018 09:00	02/01/2018 01:32
	MiHpt-21	Initial	18013017-010	1055	W	69748	150082	01/29/2018	01/31/2018 09:00	02/01/2018 01:58
	MiHpt-22	Initial	18013017-011	1055	W	69748	150082	01/29/2018	01/31/2018 09:00	02/01/2018 02:24
	MW23	Initial	18013017-012	1055	W	69748	150082	01/29/2018	01/31/2018 09:00	02/01/2018 02:51
	MW24	Initial	18013017-013	1055	W	69748	150082	01/29/2018	01/31/2018 09:00	02/01/2018 03:17
	MW25	Initial	18013017-014	1055	W	69748	150082	01/29/2018	01/31/2018 09:00	02/01/2018 03:44
	69748-1-BKS	BKS	69748-1-BKS	1055	W	69748	150082	-----	01/31/2018 09:00	01/31/2018 19:22
	69748-1-BLK	BLK	69748-1-BLK	1055	W	69748	150082	-----	01/31/2018 09:00	01/31/2018 18:55
	69748-1-BSD	BSD	69748-1-BSD	1055	W	69748	150082	-----	01/31/2018 09:00	01/31/2018 19:48
	TEC-MW2	Initial	18013017-001	1055	W	69748	150085	01/29/2018	01/31/2018 09:00	02/01/2018 12:21
	MiHpt-21	Reanalysis	18013017-010	1055	W	69748	150085	01/29/2018	01/31/2018 09:00	02/01/2018 11:55

PHASE SEPARATION SCIENCE, INC.

QC Summary 18013017

Icor Ltd.

RTN - Robinson Terminal North

Analytical Method: SW-846 8270 C

Seq Number: 150085

PSS Sample ID: 18013017-001

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	70		35-107	%	02/01/18 12:21
2-Fluorophenol	70		32-106	%	02/01/18 12:21
Nitrobenzene-d5	75		34-123	%	02/01/18 12:21
Phenol-d6	73		36-111	%	02/01/18 12:21
Terphenyl-D14	90		43-143	%	02/01/18 12:21
2,4,6-Tribromophenol	84		26-122	%	02/01/18 12:21

Analytical Method: SW-846 8015 C

Seq Number: 150159

PSS Sample ID: 18013017-001

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	89		46-111	%	02/03/18 00:39

Analytical Method: SW-846 8015C

Seq Number: 149998

PSS Sample ID: 18013017-001

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 01/30/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	70		55-114	%	01/30/18 21:17

Analytical Method: SW-846 8260 B

Seq Number: 150042

PSS Sample ID: 18013017-001

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	99		86-111	%	01/31/18 12:05
Dibromofluoromethane	100		91-119	%	01/31/18 12:05
Toluene-D8	101		90-117	%	01/31/18 12:05

PHASE SEPARATION SCIENCE, INC.

QC Summary 18013017

Icor Ltd.

RTN - Robinson Terminal North

Analytical Method: SW-846 8270 C

Seq Number: 150082

PSS Sample ID: 18013017-002

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	70		35-107	%	01/31/18 22:27
2-Fluorophenol	70		32-106	%	01/31/18 22:27
Nitrobenzene-d5	74		34-123	%	01/31/18 22:27
Phenol-d6	73		36-111	%	01/31/18 22:27
Terphenyl-D14	87		43-143	%	01/31/18 22:27
2,4,6-Tribromophenol	83		26-122	%	01/31/18 22:27

Analytical Method: SW-846 8015 C

Seq Number: 150157

PSS Sample ID: 18013017-002

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	81		46-111	%	02/03/18 00:39

Analytical Method: SW-846 8015C

Seq Number: 149998

PSS Sample ID: 18013017-002

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 01/30/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	71		55-114	%	01/30/18 21:44

Analytical Method: SW-846 8260 B

Seq Number: 150042

PSS Sample ID: 18013017-002

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	99		86-111	%	01/31/18 12:28
Dibromofluoromethane	111		91-119	%	01/31/18 12:28
Toluene-D8	102		90-117	%	01/31/18 12:28

PHASE SEPARATION SCIENCE, INC.

QC Summary 18013017

Icor Ltd.

RTN - Robinson Terminal North

Analytical Method: SW-846 8270 C

Seq Number: 150082

PSS Sample ID: 18013017-003

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	78		35-107	%	01/31/18 22:53
2-Fluorophenol	77		32-106	%	01/31/18 22:53
Nitrobenzene-d5	80		34-123	%	01/31/18 22:53
Phenol-d6	80		36-111	%	01/31/18 22:53
Terphenyl-D14	80		43-143	%	01/31/18 22:53
2,4,6-Tribromophenol	80		26-122	%	01/31/18 22:53

Analytical Method: SW-846 8015 C

Seq Number: 150159

PSS Sample ID: 18013017-003

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	91		46-111	%	02/03/18 01:04

Analytical Method: SW-846 8015C

Seq Number: 149998

PSS Sample ID: 18013017-003

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 01/30/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	70		55-114	%	01/30/18 22:11

Analytical Method: SW-846 8260 B

Seq Number: 150042

PSS Sample ID: 18013017-003

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	98		86-111	%	01/31/18 12:52
Dibromofluoromethane	107		91-119	%	01/31/18 12:52
Toluene-D8	103		90-117	%	01/31/18 12:52

PHASE SEPARATION SCIENCE, INC.

QC Summary 18013017

Icor Ltd.

RTN - Robinson Terminal North

Analytical Method: SW-846 8270 C

Seq Number: 150082

PSS Sample ID: 18013017-004

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	71		35-107	%	01/31/18 23:19
2-Fluorophenol	74		32-106	%	01/31/18 23:19
Nitrobenzene-d5	78		34-123	%	01/31/18 23:19
Phenol-d6	76		36-111	%	01/31/18 23:19
Terphenyl-D14	84		43-143	%	01/31/18 23:19
2,4,6-Tribromophenol	80		26-122	%	01/31/18 23:19

Analytical Method: SW-846 8015 C

Seq Number: 150157

PSS Sample ID: 18013017-004

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	89		46-111	%	02/03/18 01:04

Analytical Method: SW-846 8015C

Seq Number: 149998

PSS Sample ID: 18013017-004

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 01/30/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	71		55-114	%	01/30/18 22:39

Analytical Method: SW-846 8260 B

Seq Number: 150042

PSS Sample ID: 18013017-004

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	93		86-111	%	01/31/18 14:54
Dibromofluoromethane	104		91-119	%	01/31/18 14:54
Toluene-D8	101		90-117	%	01/31/18 14:54

PHASE SEPARATION SCIENCE, INC.

QC Summary 18013017

Icor Ltd.

RTN - Robinson Terminal North

Analytical Method: SW-846 8270 C

Seq Number: 150082

PSS Sample ID: 18013017-005

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	76		35-107	%	01/31/18 23:46
2-Fluorophenol	79		32-106	%	01/31/18 23:46
Nitrobenzene-d5	82		34-123	%	01/31/18 23:46
Phenol-d6	81		36-111	%	01/31/18 23:46
Terphenyl-D14	85		43-143	%	01/31/18 23:46
2,4,6-Tribromophenol	84		26-122	%	01/31/18 23:46

Analytical Method: SW-846 8015 C

Seq Number: 150159

PSS Sample ID: 18013017-005

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	92		46-111	%	02/03/18 01:28

Analytical Method: SW-846 8015C

Seq Number: 149998

PSS Sample ID: 18013017-005

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 01/30/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	69		55-114	%	01/30/18 23:06

Analytical Method: SW-846 8260 B

Seq Number: 150042

PSS Sample ID: 18013017-005

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	96		86-111	%	01/31/18 15:16
Dibromofluoromethane	104		91-119	%	01/31/18 15:16
Toluene-D8	95		90-117	%	01/31/18 15:16

PHASE SEPARATION SCIENCE, INC.

QC Summary 18013017

Icor Ltd.

RTN - Robinson Terminal North

Analytical Method: SW-846 8270 C

Seq Number: 150082

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

PSS Sample ID: 18013017-006

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	72		35-107	%	02/01/18 00:12
2-Fluorophenol	70		32-106	%	02/01/18 00:12
Nitrobenzene-d5	77		34-123	%	02/01/18 00:12
Phenol-d6	74		36-111	%	02/01/18 00:12
Terphenyl-D14	87		43-143	%	02/01/18 00:12
2,4,6-Tribromophenol	83		26-122	%	02/01/18 00:12

Analytical Method: SW-846 8015 C

Seq Number: 150157

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

PSS Sample ID: 18013017-006

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	85		46-111	%	02/03/18 01:28

Analytical Method: SW-846 8015C

Seq Number: 149998

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 01/30/2018

PSS Sample ID: 18013017-006

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	71		55-114	%	01/30/18 23:34

Analytical Method: SW-846 8260 B

Seq Number: 150076

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 02/01/2018

PSS Sample ID: 18013017-006

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	100		86-111	%	02/01/18 14:12
Dibromofluoromethane	105		91-119	%	02/01/18 14:12
Toluene-D8	102		90-117	%	02/01/18 14:12

PHASE SEPARATION SCIENCE, INC.

QC Summary 18013017

Icor Ltd.

RTN - Robinson Terminal North

Analytical Method: SW-846 8270 C

Seq Number: 150082

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

PSS Sample ID: 18013017-007

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	75		35-107	%	02/01/18 00:39
2-Fluorophenol	77		32-106	%	02/01/18 00:39
Nitrobenzene-d5	81		34-123	%	02/01/18 00:39
Phenol-d6	78		36-111	%	02/01/18 00:39
Terphenyl-D14	80		43-143	%	02/01/18 00:39
2,4,6-Tribromophenol	80		26-122	%	02/01/18 00:39

Analytical Method: SW-846 8015 C

Seq Number: 150159

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

PSS Sample ID: 18013017-007

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	89		46-111	%	02/03/18 01:53

Analytical Method: SW-846 8015C

Seq Number: 149998

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 01/30/2018

PSS Sample ID: 18013017-007

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	70		55-114	%	01/31/18 00:01

Analytical Method: SW-846 8260 B

Seq Number: 150042

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 01/31/2018

PSS Sample ID: 18013017-007

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	96		86-111	%	01/31/18 16:30
Dibromofluoromethane	105		91-119	%	01/31/18 16:30
Toluene-D8	94		90-117	%	01/31/18 16:30

PHASE SEPARATION SCIENCE, INC.

QC Summary 18013017

Icor Ltd.

RTN - Robinson Terminal North

Analytical Method: SW-846 8270 C

Seq Number: 150082

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

PSS Sample ID: 18013017-008

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	64		35-107	%	02/01/18 01:05
2-Fluorophenol	65		32-106	%	02/01/18 01:05
Nitrobenzene-d5	68		34-123	%	02/01/18 01:05
Phenol-d6	67		36-111	%	02/01/18 01:05
Terphenyl-D14	83		43-143	%	02/01/18 01:05
2,4,6-Tribromophenol	74		26-122	%	02/01/18 01:05

Analytical Method: SW-846 8015 C

Seq Number: 150157

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

PSS Sample ID: 18013017-008

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	89		46-111	%	02/03/18 01:53

Analytical Method: SW-846 8015C

Seq Number: 149998

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 01/30/2018

PSS Sample ID: 18013017-008

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	70		55-114	%	01/31/18 00:29

Analytical Method: SW-846 8260 B

Seq Number: 150076

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 02/01/2018

PSS Sample ID: 18013017-008

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	96		86-111	%	02/01/18 14:37
Dibromofluoromethane	105		91-119	%	02/01/18 14:37
Toluene-D8	100		90-117	%	02/01/18 14:37

PHASE SEPARATION SCIENCE, INC.

QC Summary 18013017

Icor Ltd.

RTN - Robinson Terminal North

Analytical Method: SW-846 8270 C

Seq Number: 150082

PSS Sample ID: 18013017-009

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	83		35-107	%	02/01/18 01:32
2-Fluorophenol	83		32-106	%	02/01/18 01:32
Nitrobenzene-d5	89		34-123	%	02/01/18 01:32
Phenol-d6	87		36-111	%	02/01/18 01:32
Terphenyl-D14	88		43-143	%	02/01/18 01:32
2,4,6-Tribromophenol	89		26-122	%	02/01/18 01:32

Analytical Method: SW-846 8015 C

Seq Number: 150159

PSS Sample ID: 18013017-009

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	90		46-111	%	02/03/18 02:18

Analytical Method: SW-846 8015C

Seq Number: 149998

PSS Sample ID: 18013017-009

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 01/30/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	70		55-114	%	01/31/18 00:56

Analytical Method: SW-846 8260 B

Seq Number: 150042

PSS Sample ID: 18013017-009

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	97		86-111	%	01/31/18 17:17
Dibromofluoromethane	102		91-119	%	01/31/18 17:17
Toluene-D8	91		90-117	%	01/31/18 17:17

PHASE SEPARATION SCIENCE, INC.

QC Summary 18013017

Icor Ltd.

RTN - Robinson Terminal North

Analytical Method: SW-846 8270 C

Seq Number: 150082

PSS Sample ID: 18013017-010

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	80		35-107	%	02/01/18 01:58
2-Fluorophenol	79		32-106	%	02/01/18 01:58
Nitrobenzene-d5	85		34-123	%	02/01/18 01:58
Phenol-d6	84		36-111	%	02/01/18 01:58
Terphenyl-D14	81		43-143	%	02/01/18 01:58
2,4,6-Tribromophenol	94		26-122	%	02/01/18 01:58

Analytical Method: SW-846 8015 C

Seq Number: 150157

PSS Sample ID: 18013017-010

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	88		46-111	%	02/03/18 02:18

Analytical Method: SW-846 8015C

Seq Number: 149998

PSS Sample ID: 18013017-010

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 01/30/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	72		55-114	%	01/31/18 02:45

Analytical Method: SW-846 8260 B

Seq Number: 150042

PSS Sample ID: 18013017-010

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	97		86-111	%	01/31/18 17:42
Dibromofluoromethane	105		91-119	%	01/31/18 17:42
Toluene-D8	105		90-117	%	01/31/18 17:42

PHASE SEPARATION SCIENCE, INC.

QC Summary 18013017

Icor Ltd.

RTN - Robinson Terminal North

Analytical Method: SW-846 8270 C

Seq Number: 150082

PSS Sample ID: 18013017-011

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	81		35-107	%	02/01/18 02:24
2-Fluorophenol	82		32-106	%	02/01/18 02:24
Nitrobenzene-d5	90		34-123	%	02/01/18 02:24
Phenol-d6	83		36-111	%	02/01/18 02:24
Terphenyl-D14	88		43-143	%	02/01/18 02:24
2,4,6-Tribromophenol	96		26-122	%	02/01/18 02:24

Analytical Method: SW-846 8015 C

Seq Number: 150186

PSS Sample ID: 18013017-011

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	79		46-111	%	02/06/18 11:40

Analytical Method: SW-846 8015C

Seq Number: 149998

PSS Sample ID: 18013017-011

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 01/30/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	70		55-114	%	01/31/18 03:13

Analytical Method: SW-846 8260 B

Seq Number: 150042

PSS Sample ID: 18013017-011

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	98		86-111	%	01/31/18 18:32
Dibromofluoromethane	103		91-119	%	01/31/18 18:32
Toluene-D8	93		90-117	%	01/31/18 18:32

PHASE SEPARATION SCIENCE, INC.

QC Summary 18013017

Icor Ltd.

RTN - Robinson Terminal North

Analytical Method: SW-846 8270 C

Seq Number: 150082

PSS Sample ID: 18013017-012

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	58		35-107	%	02/01/18 02:51
2-Fluorophenol	60		32-106	%	02/01/18 02:51
Nitrobenzene-d5	62		34-123	%	02/01/18 02:51
Phenol-d6	63		36-111	%	02/01/18 02:51
Terphenyl-D14	86		43-143	%	02/01/18 02:51
2,4,6-Tribromophenol	67		26-122	%	02/01/18 02:51

Analytical Method: SW-846 8015 C

Seq Number: 150157

PSS Sample ID: 18013017-012

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	89		46-111	%	02/03/18 02:43

Analytical Method: SW-846 8015C

Seq Number: 149998

PSS Sample ID: 18013017-012

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 01/30/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	70		55-114	%	01/31/18 01:24

Analytical Method: SW-846 8260 B

Seq Number: 150042

PSS Sample ID: 18013017-012

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	97		86-111	%	01/31/18 18:57
Dibromofluoromethane	104		91-119	%	01/31/18 18:57
Toluene-D8	100		90-117	%	01/31/18 18:57

PHASE SEPARATION SCIENCE, INC.

QC Summary 18013017

Icor Ltd.

RTN - Robinson Terminal North

Analytical Method: SW-846 8270 C

Seq Number: 150082

PSS Sample ID: 18013017-013

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	57		35-107	%	02/01/18 03:17
2-Fluorophenol	49		32-106	%	02/01/18 03:17
Nitrobenzene-d5	61		34-123	%	02/01/18 03:17
Phenol-d6	61		36-111	%	02/01/18 03:17
Terphenyl-D14	79		43-143	%	02/01/18 03:17
2,4,6-Tribromophenol	67		26-122	%	02/01/18 03:17

Analytical Method: SW-846 8015 C

Seq Number: 150159

PSS Sample ID: 18013017-013

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	94		46-111	%	02/03/18 03:08

Analytical Method: SW-846 8015C

Seq Number: 149998

PSS Sample ID: 18013017-013

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 01/30/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	69		55-114	%	01/31/18 01:51

Analytical Method: SW-846 8260 B

Seq Number: 150042

PSS Sample ID: 18013017-013

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	97		86-111	%	01/31/18 19:23
Dibromofluoromethane	103		91-119	%	01/31/18 19:23
Toluene-D8	94		90-117	%	01/31/18 19:23

PHASE SEPARATION SCIENCE, INC.

QC Summary 18013017

Icor Ltd.

RTN - Robinson Terminal North

Analytical Method: SW-846 8270 C

Seq Number: 150082

PSS Sample ID: 18013017-014

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	75		35-107	%	02/01/18 03:44
2-Fluorophenol	66		32-106	%	02/01/18 03:44
Nitrobenzene-d5	81		34-123	%	02/01/18 03:44
Phenol-d6	71		36-111	%	02/01/18 03:44
Terphenyl-D14	82		43-143	%	02/01/18 03:44
2,4,6-Tribromophenol	83		26-122	%	02/01/18 03:44

Analytical Method: SW-846 8015 C

Seq Number: 150157

PSS Sample ID: 18013017-014

Matrix: Ground Water

Prep Method: SW3510C

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	84		46-111	%	02/03/18 03:08

Analytical Method: SW-846 8015C

Seq Number: 149998

PSS Sample ID: 18013017-014

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 01/30/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	71		55-114	%	01/31/18 02:18

Analytical Method: SW-846 8260 B

Seq Number: 150042

PSS Sample ID: 18013017-014

Matrix: Ground Water

Prep Method: SW5030B

Date Prep: 01/31/2018

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	93		86-111	%	01/31/18 19:46
Dibromofluoromethane	105		91-119	%	01/31/18 19:46
Toluene-D8	102		90-117	%	01/31/18 19:46

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 18013017

Icor Ltd.

RTN - Robinson Terminal North

Analytical Method: SW-846 8015 C

Seq Number: 150028

MB Sample Id: 69744-1-BLK

Matrix: Water

LCS Sample Id: 69744-1-BKS

Prep Method: SW3510C

Date Prep: 01/31/18

LCSD Sample Id: 69744-1-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	0.9091	91	0.8803	88	41-123	3	20	mg/L	01/31/18 12:57	
Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	LCSD Result	LCSD Flag	Limits			Units	Analysis Date	
o-Terphenyl	81		88		89		46-111			%	01/31/18 12:57	

PHASE SEPARATION SCIENCE, INC.

QC Summary 18013017

Icor Ltd.

RTN - Robinson Terminal North

Analytical Method: SW-846 8270 C

Seq Number: 150082

MB Sample Id: 69748-1-BLK

Matrix: Water

LCS Sample Id: 69748-1-BKS

Prep Method: SW3510C

Date Prep: 01/31/18

LCSD Sample Id: 69748-1-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	33.03	83	35.73	89	67-110	8	20	ug/L	01/31/18 19:22	
Acenaphthylene	<0.5000	40.00	35.02	88	37.95	95	69-106	8	20	ug/L	01/31/18 19:22	
Acetophenone	<5.000	40.00	35.52	89	38.72	97	67-107	9	20	ug/L	01/31/18 19:22	
Anthracene	<0.5000	40.00	32.00	80	33.61	84	79-108	5	20	ug/L	01/31/18 19:22	
Atrazine	<5.000	40.00	49.61	124	50.83	127	17-98	2	20	ug/L	01/31/18 19:22	H
Benzo(a)anthracene	<0.5000	40.00	35.81	90	38.01	95	76-109	6	20	ug/L	01/31/18 19:22	
Benzo(a)pyrene	<0.5000	40.00	39.31	98	41.25	103	76-114	5	20	ug/L	01/31/18 19:22	
Benzo(b)fluoranthene	<0.5000	40.00	37.03	93	40.23	101	67-121	8	20	ug/L	01/31/18 19:22	
Benzo(g,h,i)perylene	<0.5000	40.00	37.50	94	40.36	101	75-107	7	20	ug/L	01/31/18 19:22	
Benzo(k)fluoranthene	<0.5000	40.00	31.86	80	32.32	81	62-132	1	20	ug/L	01/31/18 19:22	
Biphenyl (Diphenyl)	<5.000	40.00	36.99	92	40.02	100	71-108	8	20	ug/L	01/31/18 19:22	
Butyl benzyl phthalate	<5.000	40.00	44.20	111	45.97	115	74-117	4	20	ug/L	01/31/18 19:22	
bis(2-chloroethoxy) methane	<5.000	40.00	38.87	97	42.05	105	69-111	8	20	ug/L	01/31/18 19:22	
bis(2-chloroethyl) ether	<5.000	40.00	38.21	96	40.23	101	62-103	5	20	ug/L	01/31/18 19:22	
bis(2-chloroisopropyl) ether	<5.000	40.00	38.55	96	40.44	101	50-103	5	20	ug/L	01/31/18 19:22	
bis(2-ethylhexyl) phthalate	<5.000	40.00	44.55	111	47.09	118	78-114	6	20	ug/L	01/31/18 19:22	H
4-Bromophenylphenyl ether	<5.000	40.00	36.59	91	38.51	96	82-108	5	20	ug/L	01/31/18 19:22	
Di-n-butyl phthalate	<5.000	40.00	36.99	92	40.79	102	71-115	10	20	ug/L	01/31/18 19:22	
Carbazole	<5.000	40.00	36.83	92	38.11	95	52-134	3	20	ug/L	01/31/18 19:22	
Caprolactam	<5.000	40.00	46.93	117	50.69	127	50-125	8	20	ug/L	01/31/18 19:22	H
4-Chloro-3-methyl phenol	<5.000	40.00	42.92	107	45.45	114	72-121	6	20	ug/L	01/31/18 19:22	
4-Chloroaniline	<5.000	40.00	34.67	87	38.33	96	54-103	10	20	ug/L	01/31/18 19:22	
2-Chloronaphthalene	<5.000	40.00	37.39	93	39.26	98	66-105	5	20	ug/L	01/31/18 19:22	
2-Chlorophenol	<5.000	40.00	39.67	99	41.98	105	63-109	6	20	ug/L	01/31/18 19:22	
4-Chlorophenyl Phenyl ether	<5.000	40.00	36.87	92	39.43	99	73-100	7	20	ug/L	01/31/18 19:22	
Chrysene	<0.5000	40.00	34.11	85	35.63	89	78-111	4	20	ug/L	01/31/18 19:22	
Dibenz(a,h)Anthracene	<0.5000	40.00	39.64	99	41.77	104	76-106	5	20	ug/L	01/31/18 19:22	
Dibenzofuran	<5.000	40.00	36.07	90	38.29	96	70-111	6	20	ug/L	01/31/18 19:22	
3,3-Dichlorobenzidine	<5.000	40.00	48.26	121	51.54	129	79-132	7	20	ug/L	01/31/18 19:22	
2,4-Dichlorophenol	<5.000	40.00	40.12	100	43.32	108	65-118	8	20	ug/L	01/31/18 19:22	
Diethyl phthalate	<5.000	40.00	37.81	95	38.46	96	60-114	2	20	ug/L	01/31/18 19:22	
Dimethyl phthalate	<5.000	40.00	39.56	99	41.95	105	66-107	6	20	ug/L	01/31/18 19:22	
2,4-Dimethylphenol	<5.000	40.00	42.77	107	46.03	115	60-119	7	20	ug/L	01/31/18 19:22	
4,6-Dinitro-2-methyl phenol	<5.000	40.00	39.45	99	42.50	106	60-130	7	20	ug/L	01/31/18 19:22	
2,4-Dinitrophenol	<10.00	40.00	40.37	101	43.22	108	36-136	7	20	ug/L	01/31/18 19:22	
2,4-Dinitrotoluene	<5.000	40.00	37.44	94	40.72	102	70-119	8	20	ug/L	01/31/18 19:22	
2,6-Dinitrotoluene	<5.000	40.00	38.40	96	39.66	99	68-117	3	20	ug/L	01/31/18 19:22	
Fluoranthene	<0.5000	40.00	33.15	83	35.40	89	79-112	7	20	ug/L	01/31/18 19:22	
Fluorene	<0.5000	40.00	36.33	91	38.38	96	71-109	5	20	ug/L	01/31/18 19:22	
Hexachlorobenzene	<5.000	40.00	34.98	87	37.11	93	76-110	6	20	ug/L	01/31/18 19:22	
Hexachlorobutadiene	<5.000	40.00	36.12	90	37.99	95	64-113	5	20	ug/L	01/31/18 19:22	
Hexachlorocyclopentadiene	<5.000	40.00	38.23	96	40.11	100	49-124	5	20	ug/L	01/31/18 19:22	
Hexachloroethane	<5.000	40.00	36.82	92	38.96	97	62-105	6	20	ug/L	01/31/18 19:22	
Indeno(1,2,3-c,d)Pyrene	<0.5000	40.00	37.63	94	40.01	100	69-120	6	20	ug/L	01/31/18 19:22	
Isophorone	<5.000	40.00	37.89	95	41.25	103	68-108	8	20	ug/L	01/31/18 19:22	
2-Methylnaphthalene	<0.5000	40.00	35.64	89	35.74	89	64-117	0	20	ug/L	01/31/18 19:22	
2-Methyl phenol	<5.000	40.00	38.79	97	40.82	102	67-111	5	20	ug/L	01/31/18 19:22	
3&4-Methylphenol	<5.000	40.00	41.55	104	44.86	112	67-107	8	20	ug/L	01/31/18 19:22	H
Naphthalene	<0.5000	40.00	33.11	83	35.06	88	65-103	6	20	ug/L	01/31/18 19:22	
2-Nitroaniline	<5.000	40.00	40.13	100	42.36	106	59-114	5	20	ug/L	01/31/18 19:22	
3-Nitroaniline	<5.000	40.00	36.84	92	39.49	99	60-109	7	20	ug/L	01/31/18 19:22	

PHASE SEPARATION SCIENCE, INC.

QC Summary 18013017

Icor Ltd.

RTN - Robinson Terminal North

Analytical Method: SW-846 8270 C

Seq Number: 150082

MB Sample Id: 69748-1-BLK

Matrix: Water

LCS Sample Id: 69748-1-BKS

Prep Method: SW3510C

Date Prep: 01/31/18

LCSD Sample Id: 69748-1-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	39.07	98	39.84	100	51-125	2	20	ug/L	01/31/18 19:22	
Nitrobenzene	<5.000	40.00	37.44	94	39.62	99	60-107	6	20	ug/L	01/31/18 19:22	
2-Nitrophenol	<5.000	40.00	42.94	107	47.01	118	65-119	9	20	ug/L	01/31/18 19:22	
4-Nitrophenol	<5.000	40.00	50.63	127	52.26	131	46-121	3	20	ug/L	01/31/18 19:22	H
N-Nitrosodi-n-propyl amine	<5.000	40.00	40.59	101	42.79	107	60-98	5	20	ug/L	01/31/18 19:22	H
N-Nitrosodiphenylamine	<5.000	40.00	35.60	89	38.66	97	68-106	8	20	ug/L	01/31/18 19:22	
Di-n-octyl phthalate	<5.000	40.00	45.47	114	48.03	120	69-120	5	20	ug/L	01/31/18 19:22	
Pentachlorophenol	<5.000	40.00	40.58	101	43.15	108	63-119	6	20	ug/L	01/31/18 19:22	
Phenanthrene	<0.5000	40.00	31.18	78	34.62	87	73-109	10	20	ug/L	01/31/18 19:22	
Phenol	<5.000	40.00	38.09	95	41.75	104	65-110	9	20	ug/L	01/31/18 19:22	
Pyrene	<0.5000	40.00	36.66	92	39.17	98	78-111	7	20	ug/L	01/31/18 19:22	
Pyridine	<5.000	40.00	32.68	82	34.01	85	47-105	4	20	ug/L	01/31/18 19:22	
2,4,5-Trichlorophenol	<5.000	40.00	42.75	107	45.08	113	69-114	5	20	ug/L	01/31/18 19:22	
2,4,6-Trichlorophenol	<5.000	40.00	42.65	107	45.65	114	68-118	7	20	ug/L	01/31/18 19:22	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	LCSD Result	LCSD Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	93		91		86		35-107	%	01/31/18 19:22
2-Fluorophenol	103		95		91		32-106	%	01/31/18 19:22
Nitrobenzene-d5	104		94		90		34-123	%	01/31/18 19:22
Phenol-d6	103		97		94		36-111	%	01/31/18 19:22
Terphenyl-D14	91		94		90		43-143	%	01/31/18 19:22
2,4,6-Tribromophenol	103		107		104		26-122	%	01/31/18 19:22

Analytical Method: SW-846 8015C

Seq Number: 149998

MB Sample Id: 69753-2-BLK

Matrix: Water

LCS Sample Id: 69753-2-BKS

Prep Method: SW5030B

Date Prep: 01/30/18

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
TPH-GRO (Gasoline Range Organic)	<100	5000	4400	88	74-132	ug/L	01/30/18 18:34	
Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	Limits	Units	Analysis Date	
a,a,a-Trifluorotoluene	71		80		55-114	%	01/30/18 18:34	

Analytical Method: SW-846 8015C

Seq Number: 149998

Parent Sample Id: 18013017-014

Matrix: Ground Water

MS Sample Id: 18013017-014 S

Prep Method: SW5030B

Date Prep: 01/30/18

MSD Sample Id: 18013017-014 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 Organic)	110	5000	4100	80	4100	80	49-137	0	25	ug/L	01/31/18 03:40	
Surrogate			MS Result	MS Flag	MSD Result	MSD Flag	Limits			Units	Analysis Date	
a,a,a-Trifluorotoluene			72		74		55-114			%	01/31/18 03:40	

PHASE SEPARATION SCIENCE, INC.

QC Summary 18013017

Icor Ltd.

RTN - Robinson Terminal North

Analytical Method: SW-846 8260 B

Seq Number: 150042

MB Sample Id: 69775-1-BLK

Matrix: Water

LCS Sample Id: 69775-1-BKS

Prep Method: SW5030B

Date Prep: 01/31/18

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Acetone	<10.00	50.00	42.51	85	29-149	ug/L	01/31/18 10:44	
Benzene	<1.000	50.00	53.43	107	85-123	ug/L	01/31/18 10:44	
Bromochloromethane	<1.000	50.00	54.89	110	82-136	ug/L	01/31/18 10:44	
Bromodichloromethane	<1.000	50.00	55.39	111	88-133	ug/L	01/31/18 10:44	
Bromoform	<5.000	50.00	53.51	107	80-126	ug/L	01/31/18 10:44	
Bromomethane	<1.000	50.00	52.75	106	64-139	ug/L	01/31/18 10:44	
2-Butanone (MEK)	<10.00	50.00	42.21	84	39-135	ug/L	01/31/18 10:44	
Carbon Disulfide	<10.00	50.00	54.56	109	85-124	ug/L	01/31/18 10:44	
Carbon tetrachloride	<1.000	50.00	55.47	111	81-138	ug/L	01/31/18 10:44	
Chlorobenzene	<1.000	50.00	53.79	108	85-120	ug/L	01/31/18 10:44	
Chloroethane	<1.000	50.00	49.48	99	75-129	ug/L	01/31/18 10:44	
Chloroform	<1.000	50.00	52.91	106	85-128	ug/L	01/31/18 10:44	
Chloromethane	<1.000	50.00	48.53	97	60-139	ug/L	01/31/18 10:44	
Cyclohexane	<10.00	50.00	53.41	107	55-131	ug/L	01/31/18 10:44	
1,2-Dibromo-3-chloropropane	<5.000	50.00	56.26	113	69-127	ug/L	01/31/18 10:44	
Dibromochloromethane	<1.000	50.00	56.87	114	82-127	ug/L	01/31/18 10:44	
1,2-Dibromoethane	<1.000	50.00	54.15	108	82-121	ug/L	01/31/18 10:44	
1,2-Dichlorobenzene	<1.000	50.00	57.02	114	82-123	ug/L	01/31/18 10:44	
1,3-Dichlorobenzene	<1.000	50.00	57.41	115	81-123	ug/L	01/31/18 10:44	
1,4-Dichlorobenzene	<1.000	50.00	57.28	115	81-121	ug/L	01/31/18 10:44	
Dichlorodifluoromethane	<1.000	50.00	53.51	107	69-147	ug/L	01/31/18 10:44	
1,1-Dichloroethane	<1.000	50.00	55.31	111	83-123	ug/L	01/31/18 10:44	
1,2-Dichloroethane	<1.000	50.00	54.82	110	86-138	ug/L	01/31/18 10:44	
1,1-Dichloroethene	<1.000	50.00	60.16	120	85-127	ug/L	01/31/18 10:44	
cis-1,2-Dichloroethene	<1.000	50.00	57.03	114	87-127	ug/L	01/31/18 10:44	
1,2-Dichloropropane	<1.000	50.00	52.11	104	79-125	ug/L	01/31/18 10:44	
cis-1,3-Dichloropropene	<1.000	50.00	56.09	112	79-131	ug/L	01/31/18 10:44	
trans-1,3-Dichloropropene	<1.000	50.00	57.15	114	82-133	ug/L	01/31/18 10:44	
trans-1,2-Dichloroethene	<1.000	50.00	58.45	117	85-125	ug/L	01/31/18 10:44	
Ethylbenzene	<1.000	50.00	56.59	113	83-123	ug/L	01/31/18 10:44	
2-Hexanone (MBK)	<5.000	50.00	43.19	86	37-137	ug/L	01/31/18 10:44	
Isopropylbenzene	<1.000	50.00	58.17	116	70-131	ug/L	01/31/18 10:44	
Methyl Acetate	<10.00	50.00	55.00	110	69-127	ug/L	01/31/18 10:44	
Methylcyclohexane	<10.00	50.00	56.38	113	75-129	ug/L	01/31/18 10:44	
Methylene chloride	<1.000	50.00	57.00	114	86-124	ug/L	01/31/18 10:44	
4-Methyl-2-Pentanone (MIBK)	<5.000	50.00	43.47	87	39-143	ug/L	01/31/18 10:44	
Methyl-t-Butyl Ether	<1.000	50.00	54.62	109	75-134	ug/L	01/31/18 10:44	
Naphthalene	<1.000	50.00	55.25	111	61-118	ug/L	01/31/18 10:44	
Styrene	<1.000	50.00	59.27	119	80-120	ug/L	01/31/18 10:44	
1,1,2,2-Tetrachloroethane	<1.000	50.00	51.23	102	64-125	ug/L	01/31/18 10:44	
Tetrachloroethene	<5.000	50.00	57.94	116	83-138	ug/L	01/31/18 10:44	
Toluene	<1.000	50.00	55.33	111	88-126	ug/L	01/31/18 10:44	
1,2,3-Trichlorobenzene	<1.000	50.00	63.01	126	75-124	ug/L	01/31/18 10:44	H
1,2,4-Trichlorobenzene	<1.000	50.00	63.90	128	77-131	ug/L	01/31/18 10:44	
1,1,1-Trichloroethane	<1.000	50.00	56.02	112	68-146	ug/L	01/31/18 10:44	
1,1,2-Trichloroethane	<1.000	50.00	52.34	105	85-124	ug/L	01/31/18 10:44	
Trichloroethene	<1.000	50.00	54.12	108	87-127	ug/L	01/31/18 10:44	
Trichlorofluoromethane	<5.000	50.00	57.62	115	77-147	ug/L	01/31/18 10:44	
1,1,2-Trichlorotrifluoroethane	<1.000	50.00	60.14	120	68-135	ug/L	01/31/18 10:44	
Vinyl chloride	<1.000	50.00	55.18	110	74-138	ug/L	01/31/18 10:44	
m&p-Xylene	<2.000	100	111.6	112	84-124	ug/L	01/31/18 10:44	

PHASE SEPARATION SCIENCE, INC.

QC Summary 18013017

Icor Ltd.

RTN - Robinson Terminal North

Analytical Method: SW-846 8260 B

Seq Number: 150042

MB Sample Id: 69775-1-BLK

Matrix: Water

LCS Sample Id: 69775-1-BKS

Prep Method: SW5030B

Date Prep: 01/31/18

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
o-Xylene	<1.000	50.00	56.52	113	79-126	ug/L	01/31/18 10:44	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	96		98		86-111	%	01/31/18 10:44
Dibromofluoromethane	106		101		91-119	%	01/31/18 10:44
Toluene-D8	102		101		90-117	%	01/31/18 10:44

PHASE SEPARATION SCIENCE, INC.

QC Summary 18013017

Icor Ltd.

RTN - Robinson Terminal North

Analytical Method: SW-846 8260 B

Seq Number: 150076

MB Sample Id: 69802-1-BLK

Matrix: Water

LCS Sample Id: 69802-1-BKS

Prep Method: SW5030B

Date Prep: 02/01/18

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Acetone	<10.00	50.00	51.02	102	29-149	ug/L	02/01/18 10:43	
Benzene	<1.000	50.00	56.50	113	85-123	ug/L	02/01/18 10:43	
Bromochloromethane	<1.000	50.00	59.73	119	82-136	ug/L	02/01/18 10:43	
Bromodichloromethane	<1.000	50.00	58.30	117	88-133	ug/L	02/01/18 10:43	
Bromoform	<5.000	50.00	57.19	114	80-126	ug/L	02/01/18 10:43	
Bromomethane	<1.000	50.00	36.25	73	64-139	ug/L	02/01/18 10:43	
2-Butanone (MEK)	<10.00	50.00	51.07	102	39-135	ug/L	02/01/18 10:43	
Carbon Disulfide	<10.00	50.00	56.93	114	85-124	ug/L	02/01/18 10:43	
Carbon tetrachloride	<1.000	50.00	55.99	112	81-138	ug/L	02/01/18 10:43	
Chlorobenzene	<1.000	50.00	55.86	112	85-120	ug/L	02/01/18 10:43	
Chloroethane	<1.000	50.00	51.73	103	75-129	ug/L	02/01/18 10:43	
Chloroform	<1.000	50.00	58.81	118	85-128	ug/L	02/01/18 10:43	
Chloromethane	<1.000	50.00	45.02	90	60-139	ug/L	02/01/18 10:43	
Cyclohexane	<10.00	50.00	56.13	112	55-131	ug/L	02/01/18 10:43	
1,2-Dibromo-3-chloropropane	<5.000	50.00	63.36	127	69-127	ug/L	02/01/18 10:43	
Dibromochloromethane	<1.000	50.00	58.82	118	82-127	ug/L	02/01/18 10:43	
1,2-Dibromoethane	<1.000	50.00	58.05	116	82-121	ug/L	02/01/18 10:43	
1,2-Dichlorobenzene	<1.000	50.00	59.07	118	82-123	ug/L	02/01/18 10:43	
1,3-Dichlorobenzene	<1.000	50.00	58.35	117	81-123	ug/L	02/01/18 10:43	
1,4-Dichlorobenzene	<1.000	50.00	56.70	113	81-121	ug/L	02/01/18 10:43	
Dichlorodifluoromethane	<1.000	50.00	55.26	111	69-147	ug/L	02/01/18 10:43	
1,1-Dichloroethane	<1.000	50.00	58.92	118	83-123	ug/L	02/01/18 10:43	
1,2-Dichloroethane	<1.000	50.00	56.93	114	86-138	ug/L	02/01/18 10:43	
1,1-Dichloroethene	<1.000	50.00	59.56	119	85-127	ug/L	02/01/18 10:43	
cis-1,2-Dichloroethene	<1.000	50.00	60.81	122	87-127	ug/L	02/01/18 10:43	
1,2-Dichloropropane	<1.000	50.00	54.40	109	79-125	ug/L	02/01/18 10:43	
cis-1,3-Dichloropropene	<1.000	50.00	56.97	114	79-131	ug/L	02/01/18 10:43	
trans-1,3-Dichloropropene	<1.000	50.00	61.26	123	82-133	ug/L	02/01/18 10:43	
trans-1,2-Dichloroethene	<1.000	50.00	62.09	124	85-125	ug/L	02/01/18 10:43	
Ethylbenzene	<1.000	50.00	57.45	115	83-123	ug/L	02/01/18 10:43	
2-Hexanone (MBK)	<5.000	50.00	52.43	105	37-137	ug/L	02/01/18 10:43	
Isopropylbenzene	<1.000	50.00	59.04	118	70-131	ug/L	02/01/18 10:43	
Methyl Acetate	<10.00	50.00	61.70	123	69-127	ug/L	02/01/18 10:43	
Methylcyclohexane	<10.00	50.00	59.76	120	75-129	ug/L	02/01/18 10:43	
Methylene chloride	<1.000	50.00	58.79	118	86-124	ug/L	02/01/18 10:43	
4-Methyl-2-Pentanone (MIBK)	<5.000	50.00	50.78	102	39-143	ug/L	02/01/18 10:43	
Methyl-t-Butyl Ether	<1.000	50.00	60.93	122	75-134	ug/L	02/01/18 10:43	
Naphthalene	<1.000	50.00	60.43	121	61-118	ug/L	02/01/18 10:43	H
Styrene	<1.000	50.00	60.79	122	80-120	ug/L	02/01/18 10:43	H
1,1,2,2-Tetrachloroethane	<1.000	50.00	54.14	108	64-125	ug/L	02/01/18 10:43	
Tetrachloroethene	<5.000	50.00	61.00	122	83-138	ug/L	02/01/18 10:43	
Toluene	<1.000	50.00	57.83	116	88-126	ug/L	02/01/18 10:43	
1,2,3-Trichlorobenzene	<1.000	50.00	65.04	130	75-124	ug/L	02/01/18 10:43	H
1,2,4-Trichlorobenzene	<1.000	50.00	65.38	131	77-131	ug/L	02/01/18 10:43	
1,1,1-Trichloroethane	<1.000	50.00	60.23	120	68-146	ug/L	02/01/18 10:43	
1,1,2-Trichloroethane	<1.000	50.00	56.35	113	85-124	ug/L	02/01/18 10:43	
Trichloroethene	<1.000	50.00	56.24	112	87-127	ug/L	02/01/18 10:43	
Trichlorofluoromethane	<5.000	50.00	60.52	121	77-147	ug/L	02/01/18 10:43	
1,1,2-Trichlorotrifluoroethane	<1.000	50.00	61.29	123	68-135	ug/L	02/01/18 10:43	
Vinyl chloride	<1.000	50.00	56.21	112	74-138	ug/L	02/01/18 10:43	
m&p-Xylene	<2.000	100	117.7	118	84-124	ug/L	02/01/18 10:43	

PHASE SEPARATION SCIENCE, INC.

QC Summary 18013017

Icor Ltd.

RTN - Robinson Terminal North

Analytical Method: SW-846 8260 B

Seq Number: 150076

MB Sample Id: 69802-1-BLK

Matrix: Water

LCS Sample Id: 69802-1-BKS

Prep Method: SW5030B

Date Prep: 02/01/18

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
o-Xylene	<1.000	50.00	57.62	115	79-126	ug/L	02/01/18 10:43	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	97		95		86-111	%	02/01/18 10:43
Dibromofluoromethane	101		108		91-119	%	02/01/18 10:43
Toluene-D8	102		99		90-117	%	02/01/18 10:43

PHASE SEPARATION SCIENCE, INC.

QC Summary 18013017

Icor Ltd.

RTN - Robinson Terminal North

Analytical Method: SW-846 8260 B

Seq Number: 150042

Parent Sample Id: 18013017-001

Matrix: Ground Water

MS Sample Id: 18013017-001 S

Prep Method: SW5030B

Date Prep: 01/31/18

MSD Sample Id: 18013017-001 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	44.30	89	47.83	96	46-138	8	25	ug/L	01/31/18 13:15	
Benzene	<1.000	50.00	49.40	99	51.44	103	77-126	4	25	ug/L	01/31/18 13:15	
Bromochloromethane	<1.000	50.00	51.22	102	50.64	101	74-133	1	25	ug/L	01/31/18 13:15	
Bromodichloromethane	<1.000	50.00	50.69	101	52.59	105	79-130	4	25	ug/L	01/31/18 13:15	
Bromoform	<5.000	50.00	47.95	96	51.80	104	69-120	8	25	ug/L	01/31/18 13:15	
Bromomethane	<1.000	50.00	45.35	91	45.89	92	64-130	1	25	ug/L	01/31/18 13:15	
2-Butanone (MEK)	<10.00	50.00	40.49	81	47.45	95	34-126	16	25	ug/L	01/31/18 13:15	
Carbon Disulfide	<10.00	50.00	55.91	112	55.32	111	76-126	1	25	ug/L	01/31/18 13:15	
Carbon tetrachloride	<1.000	50.00	51.67	103	52.10	104	77-137	1	25	ug/L	01/31/18 13:15	
Chlorobenzene	<1.000	50.00	49.96	100	52.93	106	74-120	6	25	ug/L	01/31/18 13:15	
Chloroethane	<1.000	50.00	47.01	94	48.92	98	68-133	4	25	ug/L	01/31/18 13:15	
Chloroform	<1.000	50.00	50.73	101	51.00	102	77-127	1	25	ug/L	01/31/18 13:15	
Chloromethane	<1.000	50.00	44.15	88	46.32	93	50-143	5	25	ug/L	01/31/18 13:15	
Cyclohexane	<10.00	50.00	51.20	102	51.56	103	53-139	1	25	ug/L	01/31/18 13:15	
1,2-Dibromo-3-chloropropane	<5.000	50.00	54.74	109	61.31	123	56-123	11	25	ug/L	01/31/18 13:15	
Dibromochloromethane	<1.000	50.00	50.74	101	53.44	107	70-125	5	25	ug/L	01/31/18 13:15	
1,2-Dibromoethane	<1.000	50.00	49.97	100	52.80	106	69-121	6	25	ug/L	01/31/18 13:15	
1,2-Dichlorobenzene	<1.000	50.00	52.77	106	54.66	109	69-118	4	25	ug/L	01/31/18 13:15	
1,3-Dichlorobenzene	<1.000	50.00	51.25	103	53.26	107	68-119	4	25	ug/L	01/31/18 13:15	
1,4-Dichlorobenzene	<1.000	50.00	50.31	101	52.81	106	67-117	5	25	ug/L	01/31/18 13:15	
Dichlorodifluoromethane	<1.000	50.00	51.73	103	51.58	103	68-139	0	25	ug/L	01/31/18 13:15	
1,1-Dichloroethane	<1.000	50.00	53.15	106	52.62	105	78-126	1	25	ug/L	01/31/18 13:15	
1,2-Dichloroethane	<1.000	50.00	50.44	101	51.55	103	78-134	2	25	ug/L	01/31/18 13:15	
1,1-Dichloroethene	<1.000	50.00	55.02	110	55.68	111	78-125	1	25	ug/L	01/31/18 13:15	
cis-1,2-Dichloroethene	<1.000	50.00	55.63	111	52.82	106	78-128	5	25	ug/L	01/31/18 13:15	
1,2-Dichloropropane	<1.000	50.00	48.81	98	49.88	100	73-126	2	25	ug/L	01/31/18 13:15	
cis-1,3-Dichloropropene	<1.000	50.00	50.10	100	52.03	104	67-126	4	25	ug/L	01/31/18 13:15	
trans-1,3-Dichloropropene	<1.000	50.00	51.48	103	52.73	105	68-129	2	25	ug/L	01/31/18 13:15	
trans-1,2-Dichloroethene	<1.000	50.00	55.56	111	54.92	110	76-128	1	25	ug/L	01/31/18 13:15	
Ethylbenzene	<1.000	50.00	51.87	104	52.59	105	74-123	1	25	ug/L	01/31/18 13:15	
2-Hexanone (MBK)	<5.000	50.00	44.92	90	50.81	102	38-125	12	25	ug/L	01/31/18 13:15	
Isopropylbenzene	<1.000	50.00	53.46	107	53.68	107	58-129	0	25	ug/L	01/31/18 13:15	
Methyl Acetate	<10.00	50.00	56.34	113	61.01	122	63-115	8	25	ug/L	01/31/18 13:15	X
Methylcyclohexane	<10.00	50.00	53.79	108	53.77	108	69-130	0	25	ug/L	01/31/18 13:15	
Methylene chloride	<1.000	50.00	54.27	109	53.98	108	76-124	1	25	ug/L	01/31/18 13:15	
4-Methyl-2-Pentanone (MIBK)	<5.000	50.00	42.89	86	48.65	97	35-123	13	25	ug/L	01/31/18 13:15	
Methyl-t-Butyl Ether	2.250	50.00	50.81	97	51.34	98	64-129	1	25	ug/L	01/31/18 13:15	
Naphthalene	<1.000	50.00	51.64	103	56.34	113	45-109	9	25	ug/L	01/31/18 13:15	X
Styrene	<1.000	50.00	54.58	109	56.10	112	61-124	3	25	ug/L	01/31/18 13:15	
1,1,2,2-Tetrachloroethane	<1.000	50.00	47.67	95	51.31	103	47-130	7	25	ug/L	01/31/18 13:15	
Tetrachloroethene	<5.000	50.00	53.65	107	54.19	108	68-139	1	25	ug/L	01/31/18 13:15	
Toluene	<1.000	50.00	51.82	104	53.55	107	79-128	3	25	ug/L	01/31/18 13:15	
1,2,3-Trichlorobenzene	<1.000	50.00	54.44	109	58.80	118	48-122	8	25	ug/L	01/31/18 13:15	
1,2,4-Trichlorobenzene	<1.000	50.00	57.91	116	58.17	116	54-124	0	25	ug/L	01/31/18 13:15	
1,1,1-Trichloroethane	<1.000	50.00	52.55	105	53.26	107	73-140	1	25	ug/L	01/31/18 13:15	
1,1,2-Trichloroethane	<1.000	50.00	49.10	98	51.67	103	78-124	5	25	ug/L	01/31/18 13:15	
Trichloroethene	<1.000	50.00	50.97	102	51.78	104	77-131	2	25	ug/L	01/31/18 13:15	
Trichlorofluoromethane	<5.000	50.00	54.69	109	55.48	111	73-144	1	25	ug/L	01/31/18 13:15	
1,1,2-Trichlorotrifluoroethane	<1.000	50.00	56.21	112	55.61	111	65-140	1	25	ug/L	01/31/18 13:15	
Vinyl chloride	<1.000	50.00	50.88	102	53.55	107	60-146	5	25	ug/L	01/31/18 13:15	
m&p-Xylene	<2.000	100	106	106	110	110	75-125	4	25	ug/L	01/31/18 13:15	

PHASE SEPARATION SCIENCE, INC.

QC Summary 18013017

Icor Ltd.

RTN - Robinson Terminal North

Analytical Method: SW-846 8260 B

Seq Number: 150042

Parent Sample Id: 18013017-001

Matrix: Ground Water

MS Sample Id: 18013017-001 S

Prep Method: SW5030B

Date Prep: 01/31/18

MSD Sample Id: 18013017-001 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	51.76	104	52.64	105	69-126	2	25	ug/L	01/31/18 13:15	

Surrogate

	MS Result	MS Flag	MSD Result	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	99		99		86-111	%	01/31/18 13:15
Dibromofluoromethane	103		101		91-119	%	01/31/18 13:15
Toluene-D8	98		100		90-117	%	01/31/18 13:15

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



The client (Client Name), by signing, or having client's agent sign, this "Sample Chain of Custody/Agreement Form", agrees to pay for the above requested services per the latest version of the Service Brochure or PSS-provided quotation including any and all attorney's or other reasonable fees if collection becomes necessary. * = REQUIRED



www.phaseonline.com
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6630 Baltimore National Pike • Route 40 West • Baltimore, Maryland 21228 • (410) 747-8770 • (800) 932-9047 • Fax (410) 788-8723

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Phase Separation Science, Inc

Sample Receipt Checklist

Work Order # 18013017

Client Name Icor Ltd.

Project Name RTN - Robinson Terminal North

Disposal Date 03/06/2018

Received By Barb Weber

Date Received 01/30/2018 12:50:00 PM

Delivered By Trans Time Express

Tracking No Not Applicable

Logged In By Thomas Wingate

Shipping Container(s)

No. of Coolers 1

Custody Seal(s) Intact?

N/A

Seal(s) Signed / Dated?

N/A

Ice

Present

Temp (deg C)

5

Temp Blank Present

No

Documentation

COC agrees with sample labels?

Yes

Chain of Custody

Yes

Sampler Name

Not Provided

N/A

Sample Container

Appropriate for Specified Analysis?

Yes

Intact?

Yes

Labeled and Labels Legible?

Yes

Custody Seal(s) Intact? Not Applicable

Seal(s) Signed / Dated Not Applicable

Total No. of Samples Received 14

Total No. of Containers Received 111

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:

Thomas Wingate

Date: 01/30/2018

PM Review and Approval:

Lynn Jackson

Date: 02/01/2018