GOLDER

REPORT

Semi-Annual Monitoring Report January - June 2018

Delaware Sand & Gravel Superfund Site
New Castle County, Delaware

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ACRONYMS AND ABBREVIATIONS

ACL	Army Creek Landfill
AWC	Artesian Water Company
BCEE	bis (2-chloroethyl) ether
bgs	below ground surface
BRA	Bioremediation Area
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
cis-1,2,-DCE	cis-1,2-dichloroethene
COCs	Chemicals of Concerns
COPCs	Chemicals of Potential Concern
CSM	Conceptual Site Model
1,2-DCA	1,2-Dichloroethane
DDA	Drum Disposal Area
DNREC	State of Delaware Department of Natural Resources and Environmental Control
DO	Dissolved Oxygen
DS&G	Delaware Sand & Gravel
DQA	Data Quality Assessment
FS	Feasibility Study
FS Rev 1	Feasibility Study - Revision 1
FSWP Rev 2	Feasibility Study Work Plan - Revision 2
gpm	gallons per minute
GWTT	Groundwater Treatment and Technology
HDPE	High-Density Polyethylene
HI	Hazard Index
lbs	pounds
LCS	Laboratory Control Sample
LFExS	Low-Flow Extraction System
LIMS	Laboratory Information Management System
MCLs	Maximum Contaminant Levels
mg/L	milligrams per liter
MS/MSD	Matrix Spike/Matrix Spike Duplicate
mV	millivolts
NAPs	Natural Attenuation Parameters
NCC	New Castle County
NTUs	Nephelometric Turbidity Units
OM&M	Operation, Maintenance and Monitoring
ORP	Oxidation/Reduction Potential
OU	Operable Unit
PCB	Polychlorinated biphenyls
POTW	Publicly Owned Treatment Works
PRG	Preliminary Remediation Goal
QA/QC	Quality Assurance/Quality Control
RAO	Remedial Action Objective
RI	Remedial Investigation
ROD	Record of Decision
RSL	Regional Screening Levels
SAP	Sampling and Analysis Plan
ss-PRG	Site-specific Preliminary Remediation Goals
SSC Rev 2	Supplemental Site Characterization Report – Revision 2
SVOCs	Semi-Volatile Organic Compounds
TAL	Target Analyte List
1,2-DCA	1,2-Dichloroethane
1,2,4-TMB	1,2,4-Trimethylbenzene

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1,3,5-TMB	1,3,5-Trimethylbenzene
TTO	Total Toxic Organics
TVOC	Total Volatile Organic Compound
µg/L	micrograms per liter
UPA	Upper Potomac Aquifer
UPCU	Upper Potomac Confining Unit
UPCUTZ	UPCU Transition Zone
USEPA	United States Environmental Protection Agency
VBVS	Vertical Bioventing System
VOCs	Volatile Organic Compounds

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1.0 INTRODUCTION

On behalf of the Delaware Sand & Gravel (DS&G) Remedial Trust (the Trust), Golder Associates Inc. (Golder) is providing this Semi-Annual Monitoring Report for the Delaware Sand & Gravel Superfund Site (the Site) located in New Castle, Delaware (see Figures 1 and 2). This report covers the monitoring activities conducted at the Site from January to June 2018 including the following:

- Groundwater monitoring in accordance with the October 2011 Feasibility Study Work Plan Revision 2 (FSWP Rev 2) Sampling and Analysis Plan (SAP) (Golder, 2011b)
- Sampling of additional monitoring wells in support of the ongoing pre-design activities
- Low-flow extraction system (LFExS) operation, maintenance and monitoring (OM&M)
- Pumping well PW-1(U) OM&M

In addition to Site-wide groundwater quality data, this report also presents the following for the period covered by this report:

- an evaluation of groundwater characteristics associated with the Drum Disposal Area (DDA), including hydraulic containment/hydraulic gradient evaluations in support of the LFExS performance evaluation
- estimates of mass removed by the LFExS
- an estimate of mass removed by pumping at well PW-1(U)
- an estimate of mass loading to the New Castle County (NCC) sewer system (publicly-owned treatment works [POTW]) during the period covered by this report.

1.1 Groundwater Monitoring

The April 2018 monitoring event was conducted in accordance with the FSWP Rev 2 SAP (Golder, 2011b), with addition of select monitoring wells as approved by the United States Environmental Protection Agency (USEPA) and State of Delaware Department of Natural Resources and Environmental Control (DNREC) to monitor groundwater conditions at and downgradient of the Site. The monitoring wells and/or piezometers sampled during the period covered by this report are listed on Table 1 and shown on Figures 3 and 4. A synoptic round of water levels was collected before the start of the monitoring event. Table 2 provides the gauged water levels and calculated groundwater elevations for the April 2018 monitoring event.

In addition to the April 2018 routine monitoring event, bimonthly monitoring events were voluntarily performed in February, April, and June 2018 for four wells (MW-26N, UPA-03D, AWC-E1, and AWC-E2) located upgradient of well AWC-G3R. The sampling frequency for these wells was increased to evaluate the migration of manganese and the leachate plume from the area of combined mass between the DS&G and Army Creek Landfill (ACL) Sites toward Artesian Water Company's (AWC's) Llangollen Wellfield.

1.2 LFExS and Well PW-1(U) Operation, Maintenance and Monitoring

The LFExS extracts groundwater from the DDA at a target extraction rate of 8 to 10 gallons per minute (gpm) and discharges the extracted water directly to the NCC sewer system. The LFExS provides hydraulic containment and removal of volatile organic compounds (VOCs) and bis(2-chloroethyl) ether (BCEE) contaminant mass from

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the groundwater within the DDA through operation of eight extraction wells (see Appendix B of Golder, 2016b). Additional discussion is included in Section 2.2.

In June 2004, NCC and the DS&G Trust worked together to install pumping well PW-1[1] in the vicinity of monitoring well DGC-7S to complete the groundwater divide between the DDA and AWC's Llangollen wellfield and to provide capture of Upper Potomac Aquifer (UPA) groundwater in the vicinity of the DDA. On October 15, 2012, the Trust assumed hands-on responsibility for the operation and maintenance of pumping well PW-1(U) from NCC. The well PW-1(U) system discharges directly to the NCC sanitary sewer system (POTW). The NCC sewer discharge permit was modified to include the discharge from both the LFExS and pumping well PW-1(U) with the total combined flow now permitted at 51 gpm.

Since the Trust assumed hands-on responsibility for operation and maintenance, well PW-1(U) has extracted groundwater at a rate between approximately 30 and 40 gpm (instantaneous extraction rate). A summary of the LFExS and well PW-1(U) system operation and monitoring results since installation of the systems is presented in the Supplemental Site Characterization Report – Revision 2 (SSC Rev 2) dated January 29, 2016 (Golder, 2016a). As presented in the SSC Rev 2 Report, the groundwater data indicate that operation of pumping well PW-1(U) captures some contaminant mass within the UPA upper sand groundwater to the north and northwest of well PW-1(U). Operation of well PW-1(U) is also providing some capture of the impacts observed in the Upper Potomac Confining Unit Transition Zone (UPCUTZ) between the DDA and well PW-1(U).

During the April 2018 monitoring event, the extraction wells for both systems were sampled and analyzed in accordance with the Feasibility Study Work Plan Revision 2 Sampling and Analysis Plan (FSWP Rev 2 SAP; Golder, 2011b), and samples were also collected and analyzed for parameters required by the NCC sewer discharge permit. A summary of the LFExS monitoring activities conducted during the period covered by this report are presented in Sections 3.4.1, 3.4.2, and 4.1. Well PW-1(U) monitoring activities conducted during the period covered by this report are presented in Sections 3.4.3 and 4.2.

2.0 SITE SETTING AND PREVIOUS ACTIVITIES

The detailed Conceptual Site Model (CSM) originally presented in the FSWP Rev 2 (Golder, 2011b) was most recently updated in the Final FS Report - Revision 1 (Final FS Rev 1; Golder, 2016b). The sections below briefly present the Site history and description, remedial activities to date, and an overview of the chemicals of concern (COCs).

2.1 Brief Site History and Description

The DS&G Site is approximately 27 acres in area, and is located in an area of residential and light-industrial use with many residential developments within one mile. The Site is bound to the north and northeast by the Norfolk Southern Railroad tracks and to the west by Army Creek, which eventually discharges into the Delaware River.

Prior to 1968, the DS&G Site operated as a sand and gravel quarry, following which filling operations began. Between 1968 and 1976, the DS&G Landfill collected approximately 550,000 cubic yards of waste including about

[1] Wells PW-1(L) (screened in the lower sand of the UPA) and PW-1(U) (screened in the upper sand of the UPA) began operation in October 2004. Well PW-1(L) was operated until January 25, 2005, when the USEPA "approved termination of pumping from the lower zone [well PW-1(L)] because multiple rounds of chemical-quality data and hydraulic data demonstrated that the lower zone is generally free of contaminants and is hydraulically separated from the upper zone [well PW-1(U)]" (Ruth, 2007). On May 23, 2011, the portion of well PW-1 containing well PW-1(L) was grouted up to just below the base of well PW-1(U) (Ruth, 2013).

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13,000 drums[2] containing liquids and sludges from chemical production, manufacturing, and petroleum-refining processes (USEPA, 2005). The following presents a summary of the disposal area activities from the 1993 Record of Decision (ROD) Amendment for the DS&G Site:

- The Drum Disposal Area (DDA): "This area was originally a pit where drums containing liquids and sludges, including perfume, plastics, paint, and petroleum, from various industrial processes were disposed. The majority of drum contents were organics and inorganic solids." (USEPA, 1993)
- The Ridge Area: "...was used primarily for surface storage of drums and large storage tanks containing inorganic and organic sludges and solids. The drums and tanks have been removed, or emptied, and steam cleaned; however, contaminated surface soils remain." (USEPA, 1993)
- The Inert Disposal Area: "Field investigations suggest that nearly one half million cubic yards of construction rubble and scattered chemical wastes were deposited in this disposal area. The refuse was covered with a thin layer of soil. Abandoned cars, trucks, storage tanks, and other solid wastes currently occupy the surface of the Inert Disposal Area." (USEPA, 1993)
- The Grantham South Area: "An estimated 73,400 cubic yards of construction rubble and scattered chemical wastes were deposited in a layer nearly 35 feet thick. Pre-construction field investigations identified elevated levels of organic and inorganic contaminants within the refuse layer" (USEPA, 1993). Between 1988 and 1991, the US Army Corps of Engineers installed a cap on the Grantham South Area.

The ACL Superfund Site is located immediately west of the DS&G Site across Army Creek/Army Pond. The ACL Site is a 60-acre abandoned sand and gravel quarry that was operated by NCC as an unlined landfill between 1960 and 1968, and received 1.9 million cubic yards of municipal and industrial wastes (USEPA, 1998).

2.2 Previous and Ongoing Remedial Activities

In 1984, the USEPA and DNREC conducted an immediate removal action, removing more than 1,600 drums from the surface of the DDA and Ridge Areas (USEPA, 1984). Between 1989 and 1991, a multi-layer landfill cap, gas venting system, and perimeter fence were installed in the Grantham South Area. Between 1996 and 1997, the Trust constructed an 11-acre, multi-layer, landfill cap over the Inert Area.

In 1994, the Trust constructed a slurry-wall system to enclose an area of about three acres, including the DDA and the surrounding soils affected by historical releases from the DDA. The slurry-wall system consists of a three-foot thick, soil-bentonite slurry wall keyed into the underlying Upper Potomac Confining Unit (UPCU; clay unit), where present, and ranges in depth from 17 to 57 feet below ground surface (bgs) (USEPA, 1997). Between 1995 and 1997, the Trust completed remedial activities for the DDA (including drum and soil removal, and construction of a bio-venting system within the slurry-wall system) and Ridge Area (implemented under OU4 and OU5, which superseded OU2). (USEPA, 1997)

The area within the slurry-wall system is divided by a partition wall, which isolates the portion of the DDA with contaminated soils (containment area) from the area where the clay is thin, discontinuous, or not present (partition

[2] The 1993 Amended ROD indicates "approximately 550,000 cubic yards of industrial wastes and construction debris, including at least 7,000 drums, were disposed of within four distinct disposal areas on the DS&G property" (USEPA, 1993).

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area). Around the partition area, the slurry wall is classified as a "hanging wall" because the UPCU is absent beneath this section of wall.

An overview of the OU4 (Ridge Area/DDA excavation of drums and highly contaminated wastes) and OU5 (Ridge Area/DDA bio-cell construction and operation) activities is provided in the USEPA's 1999 Five-Year Review (FYR; USEPA, 1999), where the USEPA states the following:

> "Excavation of buried drums within the DDA began in August 1995 and was completed in August 1996. An estimated 13,000 drums were removed and transported off-site for treatment and/or disposal. In addition, approximately 2,300 cubic yards of PCB [polychlorinated biphenyl] contaminated soil was transported off-site for incineration between February and May 1996. Construction of the DDA slurry wall was completed during summer 1996[3]. Construction of the bioremediation (bioventing) system designed to treat 80,000 cubic yards of contaminated soils within the DDA slurry wall began in September 1996 and was completed in July 1997. The bioremediation process for contaminated soils began in July 1997 and will operate for a projected period of approximately eight years under the O&M Phase."

Between 1997 and 2009, the Trust operated an active remediation (bio-venting) system within a portion of the DDA referred to as the Bioremediation Area (BRA). Between 1996 and 1997 the Trust installed the BRA which included two components: a bio-cell and a VBVS, which treated the interval below the bio-cell. The bio-cell included the original 0.8-acre area where drums were disposed within the DDA, and the soils that were excavated and consolidated from the DDA and the Ridge Area. The Trust mixed the excavated soils with wood chips, sand, and di-ammonium phosphate to enhance the biodegradation of the soil contaminants prior to placement within the bio-cell (additional discussion is provided in Appendix C of the Final FS Rev1). As described in more detail in Appendix B of the Final FS Rev1, the Trust constructed and operated the bio-cell above the surface of the Columbia Aquifer water table (as influenced by operation of an extraction well to lower and maintain the water table beneath the bio-cell).

In 2005, with concurrence of the USEPA, the Trust suspended operation of the VBVS portion of the system, due to high water levels[4] in the VBVS extraction wells. The bio-cell is located at a higher elevation than the VBVS; therefore, operation of the bio-cell was not affected by the high water levels. The bio-cell continued to operate until 2009 when the Trust suspended active operation of the bio-cell because the technical limits of the system (asymptotic performance) had been achieved. Portions of the bio-cell's aboveground piping and appurtenances were subsequently removed to enable construction of the LFExS.

As indicated in Section 3.1.2 of the SSC Rev 2, a groundwater recovery system was operated by NCC between 1973 and October 2004 to extract contaminated groundwater from the UPA and in an attempt to create a groundwater divide between the Sites (ACL and DS&G) and AWC's Llangollen wellfield.

In October 2004, NCC began pumping from well PW-1 (as discussed in Section 1.2) and initiated a pilot study to shut down the NCC recovery well system. The NCC groundwater recovery system has been shut down since that time.

In May 2009, the Trust began operation of the LFExS, which initially extracted water from six extraction wells within the DDA (wells C-2D, C-19D, C-18D, BG-1, C-4D, and B-4D). The LFExS started temporary operation on

[3] The 1999 FYR indicates slurry-wall construction was completed in 1996; however, the construction was essentially completed in 1994. The Preliminary Close Out Report (USEPA, 1997) states that the USEPA accepted the certification of completion for the slurry wall on February 23, 1995.

[4] Shutdown of the NCC system in 2004 resulted in a rise in the Columbia Aquifer and UPA potentiometric surfaces.

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May 4, 2009 and operated at a monthly average flow rate of approximately 2 to 5 gallons per minute (gpm) until the system was shut down for construction of the permanent system in December 2009. Operation of the permanent system started on February 23, 2010. In September 2010, the Trust completed construction of an additional extraction well within the DDA (C-30) and in December 2012, existing well C-20D began operation as part of the LFExS. As indicated in Section 1.2, the system discharges directly to the NCC sewer system under a permit with NCC.

The LFExS currently has eight operational extraction wells (wells C-2D, C-19D, C-18D, BG-1, C-4D, B-4DR, C-30 and C-20D as shown on Figure 4) that provide hydraulic containment within the DDA by inducing inward (horizontal) gradients in the Columbia Aquifer across the slurry walls, and upward (vertical) gradients between the UPA upper sand and the Columbia Aquifer (i.e., maintaining a lower potentiometric head within the DDA). Operation of the LFExS also removes VOC and semi-VOC (SVOC, primarily BCEE and 1,4-dioxane[5]) dissolved-phase contaminant mass from within the DDA containment area.

Completed actions have achieved important remedial objectives at the Site. The USEPA has indicated that the remedial activities at the Grantham South, Inert Area, and Ridge Area are currently protective of human health and the environment; however, the USEPA has indicated that "in order for the remedy to be protective in the long term, additional response actions are needed at the DDA" (USEPA, 2015a). Ongoing activities, including maintenance of caps over the DDA and Grantham South and Inert Areas and operation of well PW-1(U) and the LFExS, address sources and potential exposure pathways on the DS&G property.

2.3 Chemicals of Concern

A list of COCs were provided in the Technical Memorandum – *Revised Addendum to Development of Site-Specific Preliminary Remediation Goals – Revision 2*, dated October 16, 2017 (Revised Addendum to Development of ss-PRGs – Rev 2; Golder, 2017). As discussed in the document and presented below, the COCs in groundwater at the Site include VOCs (benzene, and four alkylbenzenes [ethylbenzene; xylenes; 1,2,4-trimethylbenzene; and 1,3,5-trimethylbenzene]), SVOCs (BCEE; 1,4-dioxane[6]; naphthalene; and N,N-dimethylaniline), and metals (arsenic, cobalt, iron and manganese).

Based on review of the available analytical data, it is apparent that the ACL Site represents an on-going source of contaminant mass (primarily iron and manganese, which are also COCs at the DS&G Site) to the UPA. As stated by the USEPA in their comments dated December 19, 2014, "the Army Creek Landfill may be characterized as an indirect source of dissolved iron and manganese and a source of 1,2-dichloroethane [1,2-DCA] in the UPA. Elevated total arsenic and cobalt are also found in groundwater downgradient of the Army Creek Landfill and appear to be site-related." (USEPA, 2014)

Chemical of Concern	**ss-PRG** (micrograms per liter [µg/L])	**Notes**
1,2,4-Trimethylbenzene	5.7	COC-specific Non-Carcinogenic PRG
1,3,5-Trimethylbenzene	6.1	COC-specific Non-Carcinogenic PRG
1,4-Dioxane	4.6	Carcinogenic PRG with a Target Risk of 1.0E-05
Arsenic	0.52	Carcinogenic PRG with a Target Risk of 1.0E-05
Benzene	4.6	Carcinogenic PRG with a Target Risk of 1.0E-05
Bis(2-chloroethyl) Ether	0.14	Carcinogenic PRG with a Target Risk of 1.0E-05

[5] 1,4-dioxane is considered an SVOC due to its fate and transport properties and is handled as such within the context of the CSM. However, since it is analyzed via a VOC analytical method, the 1,4-dioxane results are presented in Sections 3.4 and 4, and Appendix B grouped with the other VOC analytes.

[6] 1,4-dioxane is detected using a VOC analytical method and is presented as a VOC in Appendix B.

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Chemical of Concern	ss-PRG (micrograms per liter [µg/L])	Notes
Cobalt	6.0	COC-specific Non-Carcinogenic PRG
Ethylbenzene	15	Carcinogenic PRG with a Target Risk of 1.0E-05
Iron	13,939	COC-specific Non-Carcinogenic PRG
Manganese	260	COC-specific Non-Carcinogenic PRG
N,N-dimethylaniline	25	Carcinogenic PRG with a Target Risk of 1.0E-05
Naphthalene	0.63	COC-specific Non-Carcinogenic PRG
Xylenes, Total	21	COC-specific Non-Carcinogenic PRG

3.0 GROUNDWATER SAMPLING AND ANALYSES

Consistent with the FSWP Rev 2 SAP (Golder, 2011b), Golder measured water levels, sampled wells and submitted the samples for analysis to monitor performance of the LFExS and the PW-1(U) system. Also consistent with the FSWP Rev 2 SAP, Golder performed routine groundwater monitoring in the UPA at and downgradient of the Site (see well list in Table 1). The monitoring locations are shown on Figures 3 and 4.

The semi-annual groundwater monitoring events are typically conducted in April and October each year and the results are summarized in semi-annual monitoring reports. This January to June 2018 semi-annual report provides the groundwater monitoring results from the April 2018 routine semi-annual monitoring event, as summarized on Table 1.

As outlined in the FSWP Rev 2 SAP, this semi-annual report includes the following information:

- Purpose and scope of monitoring
- Brief description of field procedures
- Summary of collected field data, including a table of field sampling parameters
- Groundwater elevation contour maps
- Laboratory analytical data tables (new data only)
- Trend plots of constituent concentrations over time
- Mass removal estimates based on a comparison of previous to current remaining mass estimates, and calculation of mass extracted by the LFExS
- Mass remaining estimates based on contouring the semi-annual groundwater data and calculating the residual mass in the saturated zone[7]
- Recommendations for additional monitoring or system enhancements

3.1 Groundwater Elevations

The piezometers and wells gauged and the groundwater elevations calculated for the April 2018 monitoring event are listed on Table 2. Depth to water was measured using a decontaminated electronic water level indicator from the top of casing reference points, and water elevations were subsequently calculated using surveyed elevation

[7] Mass remaining estimates were updated as part of the SSC Rev 2 (Golder, 2016a).

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information. The April 2018 groundwater elevations were used to prepare the groundwater elevation contours presented on Figures 5 through 9.

The groundwater elevations and flow directions indicate the following:

- Within the DDA, the elevations and flow directions reflect consistent, ongoing LFExS operation (see Figure 5). As expected, groundwater flow within the DDA converges toward the operating LFExS wells.
- In the UPCUTZ between the DDA and pumping well PW-1(U) (see Figure 6), groundwater flow is from north-northwest to south-southeast toward well PW-1(U).
- In the upper sand of the UPA between the DDA and pumping well PW-1(U) (see Figure 7), groundwater flow is from north-northwest to south-southeast toward pumping well PW-1(U).
- In the upper and lower sand of the UPA downgradient of well PW-1(U) (see Figures 8 and 9, respectively), groundwater flow is generally from north to south consistent with operation of the downgradient AWC wellfield. However, AWC wellfield operations impact gradients as you approach well AWC-ASR at the southern extent of the monitoring area.

3.2 Sampling and Analysis

3.2.1 Well Purging

All wells that required use of a submersible pump were purged using the low-flow purging and sampling procedure[8]. The monitoring wells were purged using a decontaminated 2-inch diameter submersible pump (Grundfos® Rediflo2) and Teflon®-lined or high density polyethylene (HDPE) tubing[9] that was dedicated to each well. Wells were purged at a rate of approximately 200 to 500 milliliters per minute. Frequent monitoring of the water level and adjustments to the flow (when necessary) minimized the drawdown during purging. A minimum of three feet of water was maintained over the pump intake to avoid entrainment of air in the pump. Pumping rate adjustments, if any, and depth(s) to water measurements were recorded on sample collection forms. Water removed during purging was collected in five-gallon buckets and disposed in the on-Site wastewater holding tank at the existing treatment building.

During purging, field parameters were monitored in-line with a Horiba U-52® water quality instrument. A flow-through cell device was used to minimize sample exposure to the atmosphere. Measurements were collected approximately every five minutes until the parameters stabilized based on three consecutive readings within the following ranges:

- Temperature:+/- 10%
- pH:+/- 0.1 Standard Units
- Conductivity: +/- 3%
- Oxidation/Reduction Potential (ORP): +/- 10 millivolts (mV)

[8] The procedure is based upon the USEPA Region II document entitled "Groundwater Sampling Procedure, Low Stress (Low Flow) Purging and Sampling" dated March 20, 1998.
[9] Teflon®-lined tubing and bailers are used for purging and sampling at the Site except during monitoring events which include sampling and analysis for PFAS.

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- Dissolved Oxygen (DO): +/- 10% (or +/- 0.1 milligrams per liter (mg/L) if less than 1.0 mg/L)
- Turbidity:+/- 10% (or three consecutive readings below 10 nephelometric turbidity units (NTUs))

Table 3 summarizes the stabilized field parameter measurements (temperature, pH, specific conductance, turbidity, DO, and ORP) for the monitoring wells.

Minor deviations from the planned sampling and analysis procedures are described below. These deviations do not affect the quality of data collected and are consistent with conventional practices:

- Monitoring wells DGC-7C, PZ-6N and PZ-6S were purged and sampled using certified-clean disposable bailer[10] because these locations go dry during purging.
- Monitoring well location MW-18 was purged and sampled using a peristaltic pump because well MW-18 is a 1-inch diameter well.
- UPA-01 was sampled using the conventional groundwater sampling method due to slow recharge during purging. A total of 3 well volumes were collected prior to sampling.
- Extraction wells BG-1, B-4DR, C-2D, C-4D, C-18D, C-19D, C-20D, C-30, and PW-1(U) pump almost continuously. Prior to field parameter measurement and sample collection, the port at each well was purged of approximately 19 liters of water with the exception of B-4DR which was purged of approximately 4 liter due to its limited flow rate. Well C-18D was not able to be sampled due to a pump malfunction.
- Extraction wells AWC-7 and AWC-G3R were not sampled by Golder as AWC has denied access to these wells, but instead has commenced sampling and analysis for a limited list of VOCs, SVOCs, and manganese themselves, and has been providing the data to the Trust.

3.2.2 Sample Collection

TestAmerica of Edison, New Jersey supplied certified-clean sample bottles, blank bottle labels, custody seals, analyte-free water, coolers, and chain-of-custody documents for the monitoring event. The bottles were labeled prior to sample collection using a permanent-marking pen. Once purging was completed, the discharge tubing was disconnected from the flow-through cell and samples were collected directly from the end of the discharge tubing. Bottles were filled by allowing the pump discharge to flow gently down the inside of the bottle with minimal agitation. Extraction wells BG-1, C-2D, C-19D, C-20D, C-30, and PW-1(U) were sampled by filling bottles directly from the sampling ports. Monitoring locations DGC-7C, PZ-6N, and PZ-6S were sampled using certified-clean disposable bailers. Well MW-18 was sampled using a peristaltic pump.

Each bottle was capped after it was filled. Samples for VOCs were collected first, taking steps to eliminate headspace in the vials. All samples were preserved according to method-specific requirements and were carefully packed into standard sample coolers with ice at approximately four degrees Celsius. All samples were shipped under chain-of-custody procedures via an overnight courier to TestAmerica for analysis.

In addition to the primary samples, the following quality assurance/quality control (QA/QC) samples were collected during the April 2018 monitoring event:

[10] Teflon®-lined tubing and bailers are used for purging and sampling at the Site except during monitoring events which include sampling and analysis for PFAS.

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- Fourteen trip blanks were sent along with the VOC samples collected
- Four field equipment rinsate blanks from decontaminated submersible pumps
- Field duplicate parameter sets from four wells (MW-26N, BW-1, DDA-09-TZ, MHW-1S)
- Triple volumes from four wells (MW-40, BW-2, DDA-02, DGC-8C) for the analysis of matrix spike/matrix spike duplicates (MS/MSD)

Tables 1 and 2 in Appendix A list the types and number of samples collected for analysis and the parameters analyzed for the April 2018 monitoring event. The laboratory result forms for the validated sample data are included in Appendix A.

3.2.3 Analyses

Table 3 lists the wells sampled during the April 2018 monitoring event, and provides a summary of field parameters measured. Samples collected from these wells were analyzed for the parameters indicated on Table 1, which include VOCs with low-level 1,4-dioxane as needed, SVOCs with low-level BCEE as needed, dissolved iron, dissolved manganese, total Target Analyte List (TAL)[11] metals, and ammonia. Well PW-1(U) and the LFExS effluent (NCC sewer discharge monitoring points) were also analyzed for discharge permit parameters (total metals including arsenic, cadmium, chromium, copper, lead, molybdenum, nickel, selenium, zinc, and mercury, and general chemistry parameters including ammonia, total cyanide, biochemical oxygen demand, and total suspended solids).

The wells sampled during the bimonthly monitoring events were analyzed for dissolved iron and dissolved manganese. Starting with the June 2018 bimonthly monitoring event, dissolved and total cobalt were also analyzed and will be analyzed in future bimonthly monitoring events.

3.3 Data Quality Assessment

TestAmerica logged the samples into their laboratory information management systems (LIMS) upon receipt, and scheduled the samples for preparation and analysis. Golder performed validation on all the data following guidelines provided by USEPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Superfund Organic Methods Data Review (January 2017) and NFG for Inorganic Superfund Data Review (January 2017), as applicable to the above listed analytical methods as listed in Appendix A. Additional information regarding sample analysis and validation, including the Data Quality Assessment (DQA), can be found in Appendix A.

Based on the data validations and DQA, the analytical data (including estimated data) for samples collected at the Site were determined to be acceptable for their intended use. Acceptable levels of accuracy and precision, based on laboratory control samples (LCS), MS/MSD, field duplicate and surrogate recoveries, were achieved for the data. In addition, the data completeness (i.e., the ratios of the amount of valid data obtained to the amount expected, including estimated data) was 99.99 percent for the April 2018 monitoring event. The data qualifier summaries are presented in Appendix A Table 2.

[11] TAL metals include aluminum, arsenic, barium, beryllium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, nickel, potassium, sodium, vanadium, and zinc.

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3.4 Analytical Results

The detected compounds and their respective concentrations for the groundwater samples collected during the April 2018 monitoring event are summarized and compared to groundwater standards and screening levels including maximum contaminant levels (MCLs), ss-PRGs and the June 2017[12] regional screening levels (RSLs) for tapwater in Appendix B-1. The bimonthly results are summarized and compared to the same standards in Appendix B-3.

A summary of the analytical results relative to ss-PRGs and MCLs is provided below, and a discussion of the trends is provided in Sections 4.1.4 and 4.2.3. Appendix B provides details of the analytical results and comparison of detections to ss-PRGs, MCLs, and RSLs.

3.4.1 DDA Extraction Wells

Golder collected groundwater samples from seven DDA extraction wells during the April 2018 monitoring event. As noted previously in Section 3.2.1, C-18D could not be collected due to pump malfunction. Although the 2017 ss-PRGs and/or MCLs are not applicable for the groundwater within the DDA, the 2017 ss-PRGs and/or MCLs are used as a basis for comparison and to provide context in the absence of applicable standards/goals. The following compounds were detected in DDA extraction wells above the 2017 ss-PRGs and/or MCLs (see Appendix B for details):

- VOCs – 1,2,4-Trimethylbenzene (1,2,4-TMB); 1,3,5-Trimethylbenzene (1,3,5-TMB); Chlorobenzene; 1,4-Dioxane[13]; Benzene; Ethylbenzene; and Xylenes, Total
- SVOCs –BCEE and Naphthalene
- Dissolved Metals – Iron and Manganese
- Total Metals – Arsenic; Cobalt; Iron; Manganese; and Thallium

Isoconcentration maps for BCEE and 1,4-dioxane (considered the primary COCs at the Site) in the DDA groundwater are included in Appendix C as Figures C-1 and C-2, respectively.

3.4.2 DDA Monitoring Wells

Golder collected groundwater samples from a total of 15 DDA monitoring wells, including piezometers PZ-4-INT-R, PZ-6N, PZ-6S, and PZ-11-EXT during the April 2018 monitoring event. The following compounds were detected in DDA monitoring wells above the 2017 ss-PRGs and/or MCLs (see Appendix B for details):

- VOCs – 1,2,4-TMB; 1,3,5-TMB; 1,2-DCA; 1,4-Dioxane; Benzene; Chlorobenzene; Cis-1,2-DCE; Ethylbenzene; Toluene; Vinyl Chloride; and Xylenes, Total
- SVOCs – BCEE, Bis(2-ethylhexyl) phthalate; and Naphthalene
- Dissolved Metals – Iron and Manganese

[12] . In October 2017, revised ss-PRGs were developed for the Site (2017 ss-PRGs). For the next monitoring period (January to June 2018) and subsequent monitoring reports, the June 2017 RSLs will be used for comparison.
[13] As noted in Section 2.2, 1,4-dioxane is considered an SVOC due to its fate and transport properties and is handled as such within the context of the CSM. However, since it is analyzed via a VOC analytical method, the 1,4-dioxane results are presented in Sections 3.4 and 4, and Appendix B grouped with the other VOC analytes.

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- Total Metals – Arsenic; Chromium; Cobalt; Iron; and Manganese

Isoconcentration maps for BCEE and 1,4-dioxane in the DDA groundwater are included in Appendix C as Figures C-1 and C-2, respectively.

3.4.3 PW-1(U) Monitoring Wells

Golder collected groundwater samples from a total of 26 monitoring wells (3 wells screened in the UPCUTZ and 9 wells screened in the UPA) associated with monitoring the performance of pumping well PW-1(U) during the April 2018 monitoring event. The following sections summarize the PW-1(U) monitoring wells screened in these units.

3.4.3.1 PW-1(U) UPCUTZ Wells

The following compounds were detected in PW-1(U) UPCUTZ monitoring wells above the 2017 ss-PRGs and/or MCLs (see Appendix B for details):

- VOCs - 1,2,4-TMB; 1,3,5-TMB, 1,4-Dioxane; Benzene; Ethylbenzene; and Xylenes Total
- SVOCs - BCEE and Naphthalene
- Dissolved Metals – Iron and Manganese
- Total Metals – Arsenic; Cobalt; Iron; and Manganese

3.4.3.2 PW-1(U) Upper Sand Wells

The following compounds were detected in PW-1(U) UPA monitoring wells above the 2017 ss-PRGs and/or MCLs (see Appendix B for details):

- VOCs – 1,2,4-TMB; 1,3,5-TMB; 1,4-Dioxane; Benzene; and Xylenes, Total
- SVOCs – BCEE and Naphthalene
- Dissolved Metals – Iron and Manganese
- Total Metals – Arsenic; Cobalt; Iron; and Manganese

Isoconcentration maps for BCEE and 1,4-dioxane in the UPA groundwater are included in Appendix C as Figures C-3 and C-4, respectively.

3.4.4 Downgradient UPA Wells – DS&G Site

Golder collected groundwater samples from 15 DS&G UPA monitoring wells located downgradient of pumping well PW-1(U) and from one AWC well (AWC-K1) during the April 2018 monitoring event. The following compounds were detected in downgradient UPA monitoring wells above the 2017 ss-PRGs and/or MCLs (see Appendix B for details):

- VOCs – 1,4-Dioxane; and Benzene
- SVOCs – BCEE
- Dissolved Metals – Iron and Manganese
- Total Metals – Arsenic; Cobalt; Iron; and Manganese

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Golder collected groundwater samples bimonthly from four DS&G UPA monitoring wells (MW-26N, UPA-03D, AWC-E1 and AWC-E2) located immediately upgradient of well AWC-G3R in February, April, and June 2018 for analysis of dissolved iron and manganese. Both compounds were detected in these UPA monitoring wells above the 2017 ss-PRGs and/or MCLs (see Appendix B-3 for details).

3.4.5 NCC UPA Monitoring Wells and P-6 Vicinity

Golder collected groundwater samples from 14 UPA wells associated with the ACL monitoring program and located downgradient of pumping well PW-1(U) during the April 2018 monitoring event. The following compounds were detected in these monitoring wells above the 2017 ss-PRGs and/or MCLs (see Appendix B for details):

- VOCs - 1,2,4-TMB; 1,2-DCA; 1,4-Dioxane; Benzene; Ethylbenzene; Methylene Chloride; Tetrachloroethene; Trichloroethene; Vinyl Chloride; and Xylenes, Total
- SVOCs – BCEE and Naphthalene
- Dissolved Metals – Iron and Manganese
- Total Metals – Arsenic; Cobalt; Iron; and Manganese

4.0 LFEXS AND PW-1(U) EXTRACTION SYSTEMS

The following section presents a summary of operation and maintenance activities, contaminant concentration trends, mass removal rates and other lines of evidence to support performance evaluations and recommended operational modifications for the LFExS and well PW-1(U) extraction system.

4.1 LFExS

The LFExS currently has eight operational extraction wells (wells C-2D, C-19D, C-18D, BG-1, C-4D, B-4DR, C-30 and C-20D) that provide hydraulic containment within the DDA by inducing inward and upward gradients between the UPA and the Columbia Aquifer and remove VOC and BCEE contaminant mass from the DDA groundwater. Between the months of January 2018 and June 2018, the system operated at a monthly average extraction rate between 8.93 and 10.83 gpm. Monthly and semi-annual average extraction rates for the LFExS from startup (2009) through December 2017 are presented on Appendix D, and are graphically represented on Figure 10. As shown on Figure 10, the Trust's focus on routine preventative maintenance activities and startup of Redux addition (see discussion in Section 5.2.4 of the SSC Rev 2) have improved the LFExS performance and increased the monthly average extraction rate. The monthly average extraction rates are reviewed on a semi-annual basis to assess system operation, evaluate options for maintaining an average monthly extraction rate between 8 and 10 gpm, and optimize system operation.

4.1.1 Operation and Maintenance

Operation and maintenance activities for the LFExS were conducted between January 2018 and June 2018. The following presents these items, as stated in the Trust's Quarterly OM&M Reports:

- First quarter 2018 activities:
  - January 11, 2018 - GWTT replaced ball valve on C4D manifold; cleaned C18D flowmeter; and removed and replaced C20 pump and motor.
  - February 2018 - Groundwater Treatment and Technology (GWTT) was on site to complete the first quarter maintenance. First quarter maintenance consisted of:

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- Removed, cleaned, and reinstalled eight selected well pumps. When the well pumps were removed, the drop tubing was inspected and cleaned as necessary. All of the pumps were clean and in good condition with the exception of C30 which had black silt and C18D which had thick brown sludge covering the screen intake.
- Dismantle and clean piping from holding tank to the floor penetration including the gate valve, check pump for buildup, and check the influent and effluent flow meters. Air relief valve was disassembled and cleaned.
- Clean C18D flowmeter; replace check valve on C18D manifold.
- Assisted with calibration of the LEL sensors.

- February 15, 2018 - Started new drum of Redux on LFExS discharge.
- March 13, 2018 - Received new shipment of 4 drums of Redux 620.

- Second Quarter 2018 activities:
- May 21-22, 2018 - GWTT was on site to complete the second quarter maintenance. Second quarter maintenance consisted of:
  - Remove, clean, and reinstall 3-4 selected well pumps. When the well pumps were removed, the drop tubing was inspected and cleaned as necessary.
  - Dismantle and clean piping from holding tank to the floor penetration including the gate valve, check pump for buildup, and check the influent and effluent flow meters. Air relief valve was disassembled and cleaned.
  - Jetting and vac of discharge piping and piping from the field to the building.
  - Clean check valve in vault on discharge line.
  - Conditions of the individual pumps were as follows: B4DR, C-2D and C-4D were clean.
  - C-18D is still out of the well waiting for redevelopment.
  - Rosey's also jetted the individual well lines from the clean out to the shed. The vacuum truck pulled suction from the shed and the hose was fed from the well clean out. All well lines were in fairly good condition. All had good suction on the line after jetting.
- May 29-30, 2018 - A.C. Shultes was retained to redevelop wells C30 and C18D because pumps and motors seized due to silting in of the wells. At this time DDA-13TZ monitoring well was repaired and a new casing installed. Two bollards were installed on either side of the well to prevent future damage.
- April 5, and May 23, 2018 - Started new drum of Redux on LFExS discharge.
- June 4, 2018 - GWTT replaced 10,000 gallon tank discharge pump with new one. Old pump kept for spare. Saw 5 gpm increase in discharge rate from tank.
- June 25, 2018 - Restarted Redux addition to C-18D and C-30 wells.

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4.1.2 Discharge Monitoring

The effluent from the LFExS discharges directly to the NCC sewer system. In accordance with the NCC discharge permit, effluent samples are collected semi-annually and analyzed for VOCs, SVOCs, metals and total toxic organics (TTO). During the period covered by this report, one set of effluent samples was collected for VOCs, SVOCs, metals, TTO, and natural attenuation parameters (NAPs). The analytical results are submitted annually by the Trust to the NCC Department of Special Services – Engineering & Environmental Services Division in conformance with the discharge permit. An evaluation of mass loading to the NCC sewer system for the DS&G Site is presented in Section 4.5.

4.1.3 Performance Evaluations

As documented in Golder's April 24, 2009 letter to the USEPA, the general strategy for achieving effective, consistent operation of the LFExS requires balancing the extraction rates from the extraction wells to comply with the current wastewater discharge permit, including flow and contaminant limits, as well as providing an additional degree of hydraulic control near the DDA slurry wall using well C-2D. The following sections present an evaluation of the LFExS system for the period between January 2018 and June 2018.

4.1.3.1 Groundwater Contours

Figure 5 presents the contours for the groundwater elevation measurements observed within the DDA during the April 2018 monitoring event. This figure includes a blue-hatched area to indicate the approximate extent of LFExS-induced upward (vertical) gradients, based on a comparison of groundwater elevations above the UPCU within the DDA containment area versus below the UPCU (i.e., within the UPA upper sand beneath the DDA). As demonstrated by Figure 5, the extent of LFExS-induced upward (vertical) gradients includes a significant portion of the containment area of the DDA, particularly the portions of the containment area with elevated BCEE detections (Figure C-1).

4.1.3.2 Groundwater Gradient Evaluation

Appendix E presents trend plots of hydraulic head differences for groundwater elevations observed at wells and piezometers in the vicinity of the DDA. Golder calculated head differences instead of gradients because the slurry wall and confining clay (UPCU) represent hydraulic barriers, and gradients will vary depending on the location of the observation point relative to the hydraulic barrier. For example, the horizontal head difference across the slurry wall at the PZ-5 and PZ-11 piezometer pairs is similar, but the distance between the interior and the exterior wells is approximately two times farther for piezometer pair PZ-11 compared to piezometer pair PZ-5, so a calculated gradient would be two times lower for piezometer pair PZ-11.

4.1.3.2.1 Vertical Gradients

Vertical head differences are illustrated on the trend plots included in Figures E-1 through E-10 in Appendix E. For previous semi-annual monitoring reports, Golder calculated vertical head differences for DDA extraction wells BG-1, C-18D and C-20D and DDA monitoring wells B-2D, C 1D, C-3D, and C-6. To support the performance evaluation presented in the Final FS Rev 1 (Golder, 2016b), Golder also calculated vertical head differences for three additional DDA monitoring wells: B-3D, MHW-1M, and C-16.

In the previous semi-annual monitoring report submittals, the vertical head differences were calculated relative to UPA monitoring well MHW-1D, since well MHW-1D was the only UPA well screened beneath the DDA prior to September 2012. These calculated head differences were biased low because well MHW-1D is located downgradient (in the UPA) of many of the Columbia monitoring wells used for the vertical head difference

calculations. For example, well MHW-1D is located in the UPA upper sand approximately 97 feet downgradient of the location of Columbia well B-2D; therefore, the UPA groundwater elevation at well MHW-1D is approximately 0.5 feet lower than the UPA upper sand groundwater elevation beneath well B-2D. Therefore, using the lower groundwater elevation at well MHW-1D results in a calculated vertical head difference at well B-2D that is lower than the actual vertical head difference at well B-2D. To give a more accurate representation of actual head differences, Golder re-calculated head differences using more proximal UPCUTZ and UPA upper sand wells installed and screened beneath the DDA between September and December 2012. Continuing the example above, well B-2D vertical head differences were re-calculated relative to UPCUTZ well DDA-08-TZ and UPA well DDA-08-US. Trend plots using these re-calculated vertical head differences are presented in Appendix E along with the original head differences calculated relative to well MHW-1D[14].

The positive vertical head differences observed since initiation of LFExS extraction in May 2009 indicate that the LFExS generally induces an upward (vertical) gradient across the most impacted portions of the DDA containment area. These areas are coincident with the DDA extraction well locations. Lesser vertical head differences (near zero) were observed during groundwater gauging events that occurred during or shortly after LFExS shutdown for maintenance, such as the March 5, 2012 shutdown for the well B-4DR connection (see Appendix E). The reduced vertical head differences on the figures included in Appendix E are generally associated with water level monitoring events conducted: (1) during brief well, pump or system performance declines between quarterly maintenance events due to iron fouling, and/or (2) before, during or soon after routine, quarterly maintenance of the LFExS; therefore, they are not fully representative of the long-term vertical head differences between the Columbia Aquifer within the DDA and the UPA upper sand associated with the LFExS operation.

An exception to these observations is the neutral or slightly negative vertical head differences that have been calculated for DDA monitoring wells C-6 (see Figure E-7) and C-16 (see Figure E-10). The fluctuating vertical head differences calculated for well C-6 since 2011 are related to performance/operational issues associated with extraction well B-4DR, and indicate that well C-6 is at the eastern periphery of the extraction well B-4DR and LFExS influence. Well C-6 is located in a portion of the containment area where thick UPCU is present and VOC and SVOC concentrations are low (e.g., BCEE was detected at 0.021 micrograms per liter [ug/l] in 2008, prior to LFExS startup). While head differences in the area of monitoring well C-6 are evaluated, well C-6 is outside of the target capture zone defined by BCEE and VOC impacts; therefore, the neutral or slightly negative vertical head differences at well C-6 do not represent a gap in containment. In addition, the DDA-15-US/DDA-15-TZ well pair is located in the UPA slightly downgradient of the Columbia well C-6 location, which would bias-low the calculated head differences at this location. The negative head difference observed at well C-16 in September 2015 is considered anomalous, because nearby extraction well C-30 was operating during the period of water level monitoring, which would a promote a positive gradient at well C-16.

4.1.3.2.2 Horizontal Gradients

Horizontal head differences are illustrated on the trend plots included in Appendix E Figures E-11 through E-15. Golder calculates horizontal head differences for DDA piezometer pairs PZ-2, PZ-5, PZ-6, PZ-11 and PZ-12[15]. For the purposes of this analysis, the groundwater elevation for the interior piezometer is subtracted from the exterior piezometer; therefore, a positive horizontal head difference represents an inward hydraulic gradient (i.e., the Columbia Aquifer groundwater elevation outside the slurry wall is higher than inside the slurry wall). The

[14] Head differences for wells C-20D and MHW-1M are presented relative to UPA well MHW-1D because it is the nearest UPA well.
[15] Golder calculated horizontal head differences for piezometer pair PZ-1 until April 2012 when it was determined that the exterior piezometer PZ-1-EXT is likely influenced by perched conditions.

positive horizontal head differences observed since initiation of LFExS extraction in May 2009 suggest that the LFExS induces an inward (horizontal) gradient within the Columbia Aquifer in the vicinity of the wells located along the northeastern, southeastern and southwestern slurry walls of the DDA containment area, and across the slurry wall between the northwestern DDA partition and containment areas. The reduced horizontal head differences on the figures included in Appendix E are generally associated with water level monitoring events conducted: (1) during brief well, pump or system performance declines between quarterly maintenance events due to iron fouling, and/or (2) before, during or soon after routine, quarterly maintenance of the LFExS; therefore, they are not fully representative of the long-term horizontal head differences across the slurry walls associated with the LFExS operation.

4.1.3.2.3 Conclusion

An evaluation of the vertical and horizontal head differences presented in Appendix E demonstrates that since October 2012, the LFExS has induced:

- Inward (horizontal) gradients (from the Columbia Aquifer outside the DDA slurry walls to the Columbia Aquifer inside the DDA slurry walls).
- Upward (vertical) gradients (from the UPA upper sand into the DDA [Columbia Aquifer]) across the impacted portions of the DDA containment area.

The LFExS provides hydraulic control for the DDA by achieving inward (horizontal) head differences for the entire containment area and upward (vertical) head differences for the most impacted portions of the DDA containment area, except during brief periods of system maintenance. The Trust has implemented many measures to maintain consistent operation and improve the reliability of the system, as described in Section 2.1.4 of the Final FS Rev 1 (Golder, 2016b). The enhanced or modified LFExS, in combination with an impermeable cap over the DDA and groundwater extraction from the UPCUTZ and UPA as proposed in the Final FS Rev 1 (Golder, 2016b), will improve the overall reliability of the LFExS.

4.1.4 Contaminant Concentration Trends

To evaluate changes in groundwater quality within the DDA associated with operation of the LFExS, Golder prepared trend plots of groundwater analytical data for BCEE, 1,4-dioxane, benzene, iron, manganese, cobalt, and 1,2-DCA. The trend plots prepared for DDA (LFExS) extraction wells and DDA (LFExS) monitoring wells are presented in Appendix F.

BCEE, 1,4-dioxane, benzene, iron, manganese, and cobalt were chosen for inclusion on the trend plots because they are considered as the primary risk drivers at the Site, and they are detected in the DDA groundwater as well as in groundwater within the proposed AoA. There may be additional contaminants that exceed applicable standards in various Site wells or located downgradient of the Site, but these contaminants were not included on the trend plots because they are not the primary COCs and/or they are not detected Site-wide. Trend observations for 1,4-dioxane are limited to the period from 2012 to present as 1,4-dioxane was added to the sampling program as an analytical parameter in 2012.

4.1.4.1 DDA Extraction Wells

Trend plots for BCEE, 1,4-dioxane, benzene, iron, manganese, and cobalt for the LFExS extraction wells are presented in Figures F-1A through F-1G of Appendix F. The LFExS extraction well trend plots for 1,4-dioxane, iron, and manganese show no discernible trends. The trend plots for cobalt indicates generally decreasing concentrations. The LFExS extraction well trend plots for BCEE and benzene indicate that concentrations

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generally decreased following initiation of LFExS extraction in 2009 and have been generally stable between LFExS startup and the April 2018 monitoring event, with the exception of the following:

- Well C-19D and C-20D which show an increase in BCEE since October 2016
- Well B-4D and C-30 which show an increase in BCEE in April 2018

4.1.4.2 *LFExS and DDA Monitoring Wells*

Trend plots for BCEE, 1,4-dioxane, benzene, iron, manganese, and cobalt for the LFExS monitoring wells are presented in Figures F-2A through F-2G of Appendix F and for the DDA monitoring wells in Figures F-3A through F-3G of Appendix F. The LFExS and DDA monitoring well trend plots for BCEE, benzene, iron, manganese, and cobalt indicate generally decreasing and/or stable concentrations in many wells when compared to concentrations prior to LFExS startup in May 2009 although some wells appear to have no discernible trends, with the exception of the following:

- BCEE trend plot for well MHW-1S and PZ-6N show overall increasing trends since October 2016, likely due to the initiation of extraction from well C-20D
- BCEE trend plot for B-2D shows an increase since April 2016
- BCEE trend plot for B-3D shows an increase in October 2017, but has returned to concentrations consistent with the historical trend in April 2018
- Benzene trend plot for well PZ-6S shows a generally increasing trend since July 2009, likely due to the initiation of extraction from well C-18D
- Iron trend plots for wells B-2D and PZ-11-EXT show generally increasing trends since October 2012
- Manganese trend plot for wells MHW-1S shows a generally increasing trends from October 2010 through October 2016, however results from the past three semi-annual events show a consistent decrease in concentrations
- Cobalt trend plot for Well MHW-1S shows a generally increasing trend since April 2013 after the initiation of extraction from C-20D began.
- Historical low concentrations for 1,4-dioxane, manganese, and cobalt were observed in April 2018 in well PZ-6N located in the eastern area of the DDA.

The concentrations in these wells will continue to be monitored in subsequent events and the trends will continue to be evaluated semi-annually.

4.2 PW-1(U) Extraction System

4.2.1 Operation and Maintenance

On October 15, 2012, the Trust assumed hands-on responsibility for the operation and maintenance of extraction well PW-1(U) from NCC. The well PW-1(U) system discharges directly to the NCC sanitary sewer system (POTW). The NCC sewer discharge permit was modified to include the discharge from both the LFExS and pumping well PW-1(U) with the total combined flow now permitted at 51 gpm.

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On October 3, 2013, the Trust began addition of Redux 620 to reduce iron fouling in the well. Since beginning Redux 620 addition to well PW-1(U), maintenance requirements for this well have decreased significantly due to the decreased iron fouling, and more consistent extraction rates (i.e., average monthly extraction rates generally between 32 and 37 gpm) have been maintained. Extraction rates for well PW-1(U) from December 2011 through June 2018 are presented in Appendix D, and graphically represented on Figure 11. As shown on Figures 11 and 14, the Trust's focus on routine preventative maintenance activities and startup of Redux addition have improved the well PW-1(U) performance and increased the monthly average extraction rate. However, due to the decline in the average extraction rate since summer 2017, the Trust performed a chemical swabbing of well PW-1(U) in March 2018. An increase of about 5 gpm in the flow rate was obtained. A sample of the water was given to Gary Richards for evaluation of the Redux dosage. No change is recommended at this time.

In addition to the chemical swabbing of PW-1(U), other maintenance activities that took place during the first quarter included:

- January 18, 2018 – A new drum of Redux 620 was started and rain water was pumped out of the vaults as needed.
- January 22, 2018 - NCC collected their quarterly sample and took pH measurements

Monthly pH measurements were taken monthly in accordance with the NCC sewer discharge permit at the same time as the LFExS.

The annual maintenance on well PW-1(U) will be performed in the third quarter of 2018.

4.2.2 Performance Evaluation

The operational effectiveness of pumping well PW-1(U) was evaluated as part of the Performance Evaluation (Golder, 2012) and further evaluated in the SSC Rev 2 submitted in January 2016. As presented in the SSC Rev 2 Report, groundwater data (water quality and potentiometric data) indicate that pumping well PW-1(U) captures some contaminant mass within the UPA upper sand and contaminant mass migrating from the UPCUTZ groundwater to the UPA upper sand groundwater to the north and northwest of well PW-1(U). Based on the potentiometric surface and results of the Spring 2013 aquifer testing, the areas to the east and northeast of well PW-1(U) (eastern edge of the groundwater emanating from beneath the DDA), and to the west in the area of well DDA-16-US, appear to be outside the capture zone for well PW-1(U). Results of the numerical groundwater flow modeling in the DDA area (see Appendix B of the DAA) generally support these observations. More specifically, the results of the groundwater flow model indicate the following:

- Particles released near the DDA since shutdown of the NCC system in 2004 have been generally captured by well PW-1(U) operation[16] (see Appendix D of the Final FS Rev 1 which includes Slides 18 to 21 from Attachment 1 of Appendix B of the DAA)
- The capture zone for well PW-1(U) at a simulated extraction rate of 40 gpm encompasses more than the entire width of the DDA (see Appendix D of the Final FS Rev 1 which includes Slide 28 from Attachment 1 of Appendix B of the DAA)

[16] The particle capture in the groundwater model was simulated with well PW-1(U) operating at 40 gpm to approximate current conditions. Based on the operational history of well PW-1(U), NCC generally operated the well at less than 30 gpm between 2005 and 2012. Figure 14 of the Semi-Annual Monitoring Report illustrates the well PW-1(U) extraction rates and changes over time.

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4.2.3 Contaminant Concentration Trends

To evaluate changes in groundwater quality associated with the DDA and operation of the LFExS and well PW-1(U), Golder prepared trend plots of groundwater analytical data for BCEE, 1,4-dioxane and benzene, iron, and manganese. The trend plots and discussion[17] of the contaminant concentration trends focus on the groundwater between the DDA and pumping well PW-1(U), and the UPA groundwater downgradient of well PW-1(U) to the AWC wells (AWC-7 and AWC-K1). The trend plots were prepared for: UPCUTZ monitoring wells located between the DDA and well PW-1(U) (see Figures E-4A through E-4E); pumping well PW-1(U) with associated PW-1(U) monitoring wells in the UPCUTZ and UPA (see Figures E-5A through E-5E); and downgradient UPA wells (see Figures E-6A through E-6E, E-7A through E-7E, E-8A through E-8E, E-9A through E-9E, and E-10A through E-10E).

The rationale for the choice of these constituents is presented in Section 4.1.4. There may be additional contaminants that exceed applicable standards in various wells associated with the Site or located downgradient of the Site, but these contaminants were not included on the trend plots because they are not the primary COCs associated with the Site and/or they are not detected Site-wide.

The following sections discuss the concentration trends observed in the PW-1(U) performance monitoring wells and the downgradient UPA monitoring wells.

4.2.3.1 PW-1(U) Performance Monitoring Wells

Trend plots for BCEE, 1,4-dioxane, benzene, iron, manganese, and cobalt for PW-1(U) performance monitoring wells are presented in Figures F-4A through F-4G of Appendix F for wells screened in the UPCUTZ and in Figures F-5A through F-5G of Appendix F for wells screened in the UPA. The concentrations shown in the PW-1(U) performance monitoring well trend plots for which long-term data exists (wells DGC-2S,,DGC-7S, DGC-5, and MHW-1D) generally indicate an initial decreasing trend after the startup of pumping well PW-1(U) in October 2004, followed by a relatively stable trend. Monitoring wells located between the DDA and pumping well PW-1(U) installed after well PW-1(U) startup (i.e., DDA-01 and DDA-03 installed in 2008 and the DAA-series wells installed in 2012) indicate relatively stable trends. Exceptions to this include:

- UPCUTZ wells DDA-07-TZ (manganese), DDA-12-TZ (BCEE) and DDA-16-TZ (iron) for which the data set begins in 2012 and concentration trends appear to be fluctuating or increasing
- UPCUTZ well DGC-5 (iron, manganese and cobalt) for which the data set begins in 2004 and concentration trends appear to be fluctuating
- UPCUTZ wells DDA-09-TZ and DDA-12-TZ concentration trends for cobalt appear to be fluctuating or increasing
- UPA wells DDA-08-US (manganese), DDA-10-US (BCEE, iron, manganese, and cobalt), DDA-12-US (BCEE and iron), and DDA-17 (iron) for which the data set begins in 2012 and recent concentration trends appear to be fluctuating or increasing
- UPA wells DDA-08-US, DDA-10-US, and DDA-15-US concentration trends for cobalt appear to be fluctuating or increasing

[17] Trend observations for 1,4-dioxane are limited to the period from 2012 to present as 1,4-dioxane was added to the sampling program as an analytical parameter in 2012.

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The concentrations in these wells will continue to be monitored and the trends will continue to be evaluated on a semi-annual basis.

4.2.3.2 Downgradient UPA Monitoring Wells

Trend plots for BCEE, 1,4-dioxane, benzene, iron, manganese, and cobalt for select UPA monitoring wells downgradient of well PW-1(U) are presented in Figures F-6A through F-6G, F-7A through F-7G, F-8A through F-8G, F-9A through F-9G, and F-10A through F-10G[18] of Appendix F. These trend plots indicate that concentrations in these wells were relatively stable or decreasing with the exception of the following:

- A maximum 1,4-dioxane concentration[19] was observed in October 2017 in well MW-28[20] located along the eastern lobe of the ACL[21]. The concentration decreased in April 2018 to a concentration more similar to those detected prior to the October 2017 monitoring event.
- Increasing trends in BCEE, 1,4-dioxane, benzene, iron, and manganese have been observed in wells UPA-01.
- MW-26N has exhibited increasing trends in BCEE, 1,4-dioxane, manganese, and cobalt. Since the restart of AWC-G3R in 2014, 1,4-dioxane concentrations have decreased. BCEE concentrations began to decrease in April 2016.
- Well UPA-101-US exhibited increasing trends in 1,4-dioxane and benzene since October 2016.
- Well P-6 exhibited increasing BCEE and benzene concentrations between October 2004 and October 2007 following shutdown of the NCC extraction system. Since April 2012, the COC concentrations in well P-6 have demonstrated a stable or decreasing trend.
- In April 2015, 1,4-dioxane, iron, and manganese increased in well MW-34 relative to concentrations observed since 2012. These trends for have remained relatively stable since the increase in April 2015. The manganese concentration in well BW-1 has been increasing since April 2015 as well.
- Decreasing trends in iron and increasing trends in manganese have been observed at well UPA-02D since shutdown of wells AWC-G3 and AWC-K1 in early 2012. Trends for these compounds in well UPA-02D have been generally increasing for iron and cobalt but stable for manganese since re-start of AWC-G3R in October 2014.
- Well P-4 has exhibited fluctuating trends for iron, manganese, and cobalt.

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[18] AWC production wells have not been sampled by Golder since March 2014 as AWC has denied access to these wells, but has commenced sampling and analysis for a limited list of VOCs and SVOCs themselves, and has been providing the data to DS&G. Data provided by AWC for BCEE and 1,4-dioxane have been incorporated into the trend plots included as Figures E-10A through E-10C.

[19] The data for this monitoring event were validated and no issues with this new maximum concentration were identified. The field information forms for this event were reviewed and compared to historical forms, and no deviations from protocols used during previous monitoring events were identified.

[20] Well MW-28 has a long screen interval and is screened across the upper and lower sand of the UPA. Golder purges and samples well MW-28 from the shallow portion of the screen interval consistent with the UPA upper sand.

[21] The groundwater elevation measured in well MW-28 during this monitoring event was the lowest groundwater elevation recorded for this well by Golder since sampling and analysis for 1,4-dioxane was initiated at the Site in 2012. This new maximum concentration (120 ug/l) is consistent with the concentration detected during this event and previous events in downgradient well BW-2 (the 1,4-dioxane concentration in well BW-2 was also 120 ug/l in October 2017). The previous 1,4-dioxane maximum concentration in well BW-2 was about 4 ug/l. While the monitoring network is relatively sparse in this area, the particle tracking analysis performed in 2015 by TetraTech indicates the migration pathway for 1,4-dioxane impacts to the well BW-2 area passes from beneath the eastern lobe of ACL to the east of the well MW-28 area and down to the area of well BW-2. The 1,4-dioxane concentration in this well will continue to be monitored.

- Well AWC-G3 exhibited increasing BCEE and 1,4-dioxane concentrations until the restart of AWC-G3R in late 2014. Since late 2014, concentrations of BCEE and 1,4-dioxane have decreased in well AWC-G3R.
- Well AWC-E2 upper and lower screen samples exhibit increasing BCEE trends since the start of sampling in 2012 and 2016, respectively.
- Upper and lower screen samples for wells AWC-E1 and AWC-E2 exhibit fluctuating cobalt trends since the start of sampling in 2012 and 2016, respectively.
- Well AWC-7 has exhibited increasing BCEE and 1,4-dioxane trends since shutdown of wells AWC-G3 and AWC-K1 in early 2012, although the April 2015 through April 2018 concentrations (based on data for wells AWC-7 and AWC-G3 provided by AWC) are below the values reported for February and March 2015.
- Concentration trends for benzene, iron or other parameters in AWC production wells since April 2014 have not been evaluated as AWC has denied access to these wells, but AWC has commenced sampling and analysis for a limited list of VOCs and SVOCs and more recently manganese themselves, and has been providing the data to the Trust.

The concentrations in these wells will continue to be monitored and the trends will continue to be evaluated on a semi-annual basis.

4.3 LFExS Mass Removal Estimate

The FSWP Rev 2 SAP indicated that future reports would include estimates of the contaminant mass removed by the LFExS based on calculation of mass extracted by the LFExS and comparison of previous to current remaining mass estimates. In the June 2, 2010 DDA LFExS Memo (Golder, 2010), Golder estimated the mass of VOCs and BCEE removed for the period from system startup in May 2009 to April 2010. This mass estimate was calculated based on the volume of water discharged by the LFExS multiplied by the detected concentrations in the LFExS effluent samples. This method has been used to evaluate each six-month period since that time. As shown on Table 4, Golder estimated that the LFExS removed approximately 2.24 pounds (lbs) of VOCs (does not include 1,4-dioxane) and 0.42 lbs of BCEE between November 1, 2017 and April 30, 2018. The effluent analytical results are provided in Appendix F. Since system startup, it is estimated that the LFExS has removed between approximately 2.6 and 13 lbs per year of VOCs (does not include 1,4-dioxane) and between approximately 0.2 and 1.8 lbs per year of BCEE.

Figure 12 shows the changes over time in the LFExS mass removal based on the effluent analytical results. This figure shows that mass removal rates for VOCs increased to 13 lbs per year at the end of 2011, and have since remained below 10 lbs per year. The figure also shows that mass removal rates for BCEE have generally increased since the middle of 2012 and have generally remained between 0.5 and 1 lb per year since that time.

To evaluate the relative contribution of the individual extraction wells to the overall system mass removal rate, Golder estimated the mass removal for individual extraction wells by multiplying the extraction rates for those wells by the concentrations detected in those wells for six-month periods since system start-up. Golder estimated this mass contribution for the period between November 1, 2017 and April 30, 2018 for inclusion in this report. Table 5 summarizes the mass removal estimates for the individual wells and Figure 13 shows the changes over time in the mass removal rates for the system. Golder estimates that the LFExS has removed between

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approximately 10.0 and 34.7[22] lbs/year of VOCs (including between 3.5 and 11 lbs/year of 1,4-dioxane since it was added to the target analyte list in 2012), and between approximately 0.2 and 3.3 lbs/year of BCEE since startup (Table 5). During this most recent six-month period, the individual well mass removal estimates suggest the following:

- Extraction wells B-4DR, C-20D, and BG-1 accounted for over 85% of the VOC mass removal
- Extraction well B-4DR, C-20D, and BG-1 accounted for nearly 85% of the BCEE mass removal
- Extraction well C-20D and BG-1 accounted for over 90% of the 1,4-dioxane mass removal

Table 5 provides a summary of mass removal estimates for November 2018 to April 2018 based on the LFExS effluent samples and the LFExS individual wells.[23] It should be noted that because a sample was not able to be collected from C-18D, the individual well mass removal estimate for this well was unable to be calculated. Historically, C-18D has contributed to a significant portion of the VOC and BCEE mass removal. On a semi-annual basis, Golder reviews the mass removal rates and recommends adjustment of extraction rates as part of the semi-annual monitoring report to improve mass removal of the LFExS system. Recommendations for adjustments of extraction rates are included in Section 4.6.1 of this report.

4.4 PW-1(U) Mass Removal Estimate

As part of the LFExS Memo and the May through December 2010 Semi-Annual Monitoring Report, Golder estimated the mass of VOCs[24] and BCEE removed by extraction well PW-1(U) on a quarterly basis for the period from system startup in November 2004 to December 2010 (see Appendix F of the LFExS Memo and Table 5 of the May-December 2010 Semi-Annual Monitoring Report (Golder, 2011a)). This mass estimate was calculated based on the extraction rate for pumping well PW-1(U) and the concentrations detected in the well PW-1(U) samples. This method has been used to evaluate each six-month period since that time. Using the April 2018 analytical data, Golder estimated the mass removal rate based on the same methodology. As shown on Tables 6 and 7, the current pumping well PW-1(U) mass removal rates are approximately 18 lbs per year for VOCs (including approximately 9.7 lbs per year of 1,4-dioxane) and 1.1 lbs per year for BCEE.

Figure 14 shows the changes over time in the well PW-1(U) mass removal rates in pounds removed per quarter and the average extraction rate of pumping well PW-1(U) since the last sample taken. As shown on the figure, the average extraction rate of pumping well PW-1(U) increased to almost 40 gpm between October 2013 and April 2014 and decrease from 33.5 to 30.4 gpm between April 2017 and April 2018, respectively.

4.5 POTW Mass Loading Rate

At the request of the USEPA (see recommendations of the Five Year Review report for the DS&G Site dated August 28, 2015), an evaluation of the actual mass loading to the NCC sewer system versus the permitted[25]

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[22] The 34.7 lbs/year total volatile organic compound (TVOC) mass removal based on the sum of individual extraction wells for the period between November 1, 2014 and April 30, 2015 is above recent values, largely due to an increase in the concentration of toluene in well C-18D.
[23] As noted above, these results should not be directly compared to one another because the effluent sample estimates are based on 6-month averages and the VOC total concentrations do not include 1,4 dioxane, while the individual well estimates are based on monthly snapshots and the VOC totals include 1,4 dioxane. However, the relative mass removal contributions for individual wells reflected as percentages of total system mass removal are instructive.
[24] Historically, concentrations used in the VOCs calculation only included benzene, toluene, ethylbenzene, and xylenes (BTEX) compounds. Since April 2012, data collected has been based on a revised target analyte list which includes 1,4-dioxane. Table 8 and Figure 12 present both historical BTEX and current TVOCs data.
[25] Wastewater Discharge Permit WDP 04-107, Permit Revision 5 dated July 1, 2014 between NCC and the Trust.

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maximum permissible loading[26] to the NCC sewer system for the LFExS and the well PW-1 system were performed. Appendix Tables G-1 and G-2 summarize the following associated with the evaluation:

- Maximum permissible mass loading limits in lbs per day
- Concentration-based limits in ug/l calculated by dividing the permitted mass loading limits by the permitted flow rates for the systems
- April 2016 through April 2018 system discharge sample analytical results[27]

Based on a comparison of the 2018 system discharge data sets to the calculated concentration based limits, the system discharges are below the maximum permissible loading with the exception of total cyanide which has a permit limit of 0.49 mg/L but was detected at a concentration of 4.2 mg/L with a J qualifier indicating this was an estimated result[28]. These data were provided to NCC by the Trust. The total cyanide concentration will continue to be monitored on a semi-annual basis.

4.6 Recommendations

4.6.1 LFExS

The individual well mass removal estimates suggest there is significant variability in mass removal rates among the wells. The mass removal of the LFExS can be maintained and/or increased by increasing the extraction rate at wells removing a greater percentage of the contaminant mass and decreasing the extraction rate at wells removing a lower percentage of the contaminant mass. Changes in extraction rates are recommended such that hydraulic containment (inward and upward gradients) is maintained within the DDA. Based on the conclusions of the Performance Evaluation (Golder, 2012) and Appendix B of the Final FS Rev 1 (Golder, 2016b), Golder recommends maintaining the 8 to 10 gpm extraction rate for the LFExS and continued optimization of the extraction regime to maximize mass extraction while maintaining 8 to 10 gpm.

Based on a review of the mass removal rate of individual wells between May 2017 and October 2017 and contaminant concentrations within the DDA in April 2018, Golder recommends the following extraction rates for the LFExS wells:

Well	Extraction Rate Minimum	Extraction Rate Maximum
BG-1	0.5	0.75
B-4DR	0.25	0.5
C-2D	0.75	1.0
C-4D	1.0	1.25
C-18D	0.75	1.0
C-19D	0.50	0.75
C-20D	3.25	3.5
C-30	1.0	1.25

[26] Note that the permit limit for molybdenum is listed by NCC as 0.00000 lbs/day.
[27] The detection limit for the molybdenum and mercury analysis is above the calculated concentration-based permit limit.
[28] Total cyanide has been non-detect at 0.01 mg/l in samples previously collected from well PW-1(U). Total cyanide was detected in the October 9, 2017 sample from well PW-1 at 1.9 mg/l which exceeds the permit limit of 0.49 mg/l. These data have been provided to NCC by the Trust. The total cyanide concentration in well PW-1(U) was evaluated again in April 2018 and found to have a concentration of 4.2 J mg/L, with the J qualifier indicating an estimated result.

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Well	Extraction Rate Minimum	Extraction Rate Maximum
Totals	**8 gpm**	**10 gpm**

These extraction rates are the same rates recommended in the previous semi-annual monitoring report.

4.6.2 PW-1(U) System

Well PW-1(U) has operated at over 30 gpm since addition of Redux 620 started in October 3, 2013. Operation of well PW-1(U) will continue to be monitored and evaluated semi-annually. There are no recommendations for changes in well PW-1(U) OM&M at this time. However, due to the decline in the average extraction rate since summer 2017, the Trust performed a chemical swabbing of well PW-1(U) in March 2018.

5.0 DATA EVALUATION AND INTERPRETATION

In their Fourth Five-Year Review Report for the Site, the USEPA provided the following recommendations/follow-up actions: "Progress toward the attainment of remedial action objectives, changes in Site conditions and opportunities for remedy optimization should be regularly evaluated using Site data and documented in regularly submitted reports. If necessary, data collection objectives should be reviewed." (USEPA, 2010)

5.1 Changes in Site Conditions

Golder evaluated changes in the groundwater conditions at the Site based on the April 2018 monitoring data. Sections 4.1.4 and 4.2.3 discuss COC concentration trends and Appendix F presents trend plots for the wells in the semi-annual monitoring program. RI/FS activities have provided additional information about groundwater conditions. Results of the monitoring indicate that the groundwater conditions are largely unchanged since the previous monitoring event, with the exception of new minimum concentrations for 1,4-dioxane, manganese, and cobalt in well PZ-6N located in the partition area of the DDA. . Additional information is provided in Section 4.1.4.2.

Changes in groundwater conditions will continue to be evaluated on a semi-annual basis and reported via the semi-annual monitoring reports.

5.2 Remedy Optimization

Modifications to the LFExS have been made with the intent of optimizing the system's performance both in maintaining hydraulic containment as well as in increasing the extraction rates of the extraction wells with the highest mass removal rates. Additional modifications in the form of rebalancing individual well extraction rates are recommended in Section 4.6.1. Hydraulic gradients and mass removal rates will continue to be evaluated on a semi-annual basis to further optimize the effectiveness of the LFExS.

Modifications to the well PW-1(U) system have been made with the intent of optimizing the system's performance both in maintaining hydraulic control as well as capturing groundwater impacts in migrating with in the UPA upper sand and from the UPCUTZ into the UPA upper sand near the DDA. Hydraulic gradients and mass removal rates will continue to be evaluated on a semi-annual basis.

5.3 Attainment of RAOs

In May 2016, the Trust submitted the Final FS Rev 1 for the Site including the proposed Remedial Action Objectives (RAOs) to the USEPA (Golder, 2016b). Based on the information presented in the Final FS Rev 1, the

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SSC Rev 2 and in this semi-annual report, progress is being made toward the attainment of these proposed RAOs.

The LFExS reduces the migration of COCs to groundwater from contaminated soil remaining in the DDA by lowering the water level in select areas (areas with higher relative contaminant concentrations) within the DDA. The LFExS also reduces the contaminant mass remaining in the DDA and prevents migration of impacted groundwater from the DDA to the Columbia Aquifer, UPCUTZ and the UPA groundwater. Monitoring results indicate the LFExS is providing hydraulic containment and removing VOCs and BCEE contaminant mass from the DDA. Additional discussion about the hydraulic containment and mass removal by the LFExS is provided in Appendix B of the Final FS Report Rev 1 (Golder, 2016b).

As presented in the SSC Rev 2 Report, the groundwater data indicate that pumping well PW-1(U) captures some contaminant mass within the UPA upper sand and contaminant mass migrating from the UPCUTZ groundwater to the UPA upper sand groundwater to the north and northwest of well PW-1(U).

As discussed in Sections 2, 4 and 6 of the DAA (Golder, 2015a), there are institutional and engineering controls in place which achieve two of the four proposed RAOs for the Site. These RAOs are:

- Prevent direct contact with contaminated soil at the DDA that would result in unacceptable levels of risk, i.e., prevent exposures that would present a cumulative excess lifetime cancer risk greater than one in one million (1×10^{-6}) or result in a HI [hazard index] greater than 1.0[29]
- Prevent direct contact with groundwater containing contaminants from the DS&G Site at levels that exceed the ss-PRGs

Progress toward attainment of the proposed RAOs was discussed in Section 5.4.1 of the Final FS Rev 1 (Golder, 2016b), and will continue to be assessed on a semi-annual basis.

5.4 Data Collection Objectives

To assist with evaluation of the Site-wide contaminant concentration trends, the Trust obtains analytical and field parameter data for the wells sampled as part of the ACL monitoring program from NCC. In addition, the Trust sampled the UPA-101-TZ/UPA-101-US well pair installed in 2013, and the UPCUTZ and UPA wells installed in 2012 (DDA-07-US through DDA-17).

5.5 Evaluation of Tentatively Identified Compounds

On December 21, 2016, the Trust submitted to the USEPA a technical memorandum prepared by Golder regarding Review of Tentatively Identified Compounds in Groundwater (Golder, 2016c). This memorandum provided a summary of tentatively identified compounds (TICs) for the 2015 and 2016 groundwater monitoring events and recommended four compounds to be added to the target analyte list (TAL) for the Site (indane, 1,2,3-trimethylbenzene, N-methyl aniline, and fluorodichloromethane).

The USEPA provided a response to the memo via email dated February 7, 2017. In the response, the USEPA indicated concurrence with Golder's recommended TAL additions and requested that the Trust perform a bi-annual review of groundwater TICs (the next review should to be completed in December 2018).

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[29] RAO revised from a cumulative excess lifetime cancer risk greater than one in ten thousand (1×10^{-4}) to one in one million (1×10^{-6}), based on the August 6, 2015 comments from the USEPA on the Draft FS.

5.6 Reporting

The Trust will continue to summarize the routine groundwater monitoring results and evaluate the performance of the LFExS and pumping well PW-1(U) in semi-annual monitoring reports. These reports will be prepared for monitoring periods as follows: January 1 through June 30, and July 1 through December 31. The reports will be submitted to the USEPA within 60 days of the completion of the monitoring period.

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Signature Page

Golder appreciates the opportunity to prepare this report for submission to the USEPA on behalf of the Trust. Should you have any questions regarding this report, please contact Ms. Theresa Miller at (978) 376-8434.

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Tables

Table 1
April 2018 Semi-Annual Monitoring Program
Delaware Sand & Gravel Superfund Site
New Castle County, Delaware

Sample ID	Routine Groundwater Monitoring VOCs+ll-1,4-dioxane, SVOCs+ll-BCEE, d-Fe/Mn, TAL Metals, Ammonia	FSWP Revision 2 (October 2011) Sample Location?
DDA Extraction Wells		
B-4DR	x	Yes
BG-1	x	Yes
C-18D	x	Yes
C-19D	x	Yes
C-20D	x	Yes
C-2D	x	Yes
C-30	x	Yes
C-4D	x	Yes
DDA Monitoring Wells		
B-2D	x	Yes
B-3D	x	Yes
C-1D	x	Yes
C-22S	x	Yes
C-3D	x	Yes
DGC-7C	x	Yes
DGC-8C	x	-
DGC-15		-
GA-101	x	Yes*
MHW-1M	x	Yes
MHW-1S	x	Yes
P-4D	x	Yes
PZ-11-EXT	x	Yes**
PZ-4-INT-R	x	Yes
PZ-6N	x	Yes
PZ-6S	x	Yes
PW-1(U) Monitoring Wells		
DDA-01	x	Yes
DDA-02	x	Yes
DDA-03	x	Yes
DDA-04		-
DDA-05	x	Yes
DDA-06	x	Yes
DDA-07-TZ	x	Not included in FSWP Revision 2. Installed as part of Supplemental Remedial Investigation Activities in Fall 2012, and have remained in monitoring program due to detections. See Notes.
DDA-07-US	x	
DDA-08-TZ	x	
DDA-08-US	x	
DDA-09-TZ	x	
DDA-10-US	x	
DDA-11-LS	x	
DDA-11-US	x	
DDA-12-TZ	x	
DDA-12-US	x	
DDA-13-TZ	x	
DDA-14-TZ	x	
DDA-15-TZ	x	
DDA-15-US	x	
DDA-16-TZ	x	
DDA-16-US	x	
DDA-17	x	
DGC-2S	x	Yes
DGC-5	x	Yes
DGC-7S	x	Yes
MHW-1D	x	Yes
PW-1(U)	x	Yes
Downgradient UPA Wells		
AWC-E1 at 132 ft bgs	x	Yes
AWC-E1 at 156 ft bgs	x	-
AWC-E2 at 140 ft bgs	x	Yes
AWC-E2 at 165 ft bgs	x	-
DGC-10D	x	Yes
DGC-10S	x	Yes
DGC-11D	x	Yes
DGC-11S	x	Yes
DGC-8D		-
DGC-8S		-
RT-1-UP	x	Yes
UPA-01	x	Yes
UPA-02D	x	Yes
UPA-02S	x	Yes
UPA-03D	x	Yes
UPA-101-TZ	x	Not part of FSWP Rev 2. Installed Fall 2013.
UPA-101-US	x	
AWC Wells		-
AWC-2	Active extraction wells sampled by AWC and data is provided to DS&G	-
AWC-6		-
AWC-7		Yes
AWC-G3R		Yes
AWC-K1		Yes
NCC UPA Monitoring Wells and P-6 Vicinity		
MW-18	x	Yes***
MW-22N		-
MW-26N	x	Yes***
MW-28	x	-
MW-29	x	-
MW-31	x	-
MW-34	x	Yes***
MW-38N		-
MW-40	x	-
MW-49N		-
P-6	x	Yes***
BW-1	x	-
BW-2	x	-
BW-3		-
P-4	x	-
P-5L	x	-
P-5U	x	-
RW-10	x	-
NCC Sewer Discharge Monitoring Points		
PW-1(U) Discharge	x	-
TTO	x	-

Notes:
1) A synoptic round of water level measurements was collected before the monitoring event.

2) The following quality assurance/quality control (QA/QC) samples were collected during the monitoring event at a rate of 1 per 20 primary samples: field duplicates, field equipment rinsate blanks, matrix spikes and matrix spike duplicates.

3) Trip blanks accompanied each shipment of VOC samples (1 per day).

4) ll = low level
5) d-Fe/Mn = dissolved iron and manganese
6) FSWP = Feasibility Study Work Plan
7) VOCs = volatile organic compounds
8) SVOCs = semi-volatile organic compounds
9) TAL = target analyte list
10) DDA = drum disposal area
11) UPA = Upper Potomac Aquifer
12) NCC = New Castle County
13) AWC = Artesian Water Company
14) ft bgs = feet below ground surface
15) Both PW-1(U) Discharge and TTO are monitored for VOCs, SVOCs, d-Fe/Mn, and NCC Discharge Permit Parameters.

- Indicates well was not included as a FSWP Revision 2 sample location

*According to the FSWP Revision 2 SAP, well GA-101 has been added as a routine semi-annual well due to PRG exceedances.

** PZ-11-EXT was included in the FSWP Revision 2 SAP for a one-time sampling event, but due to detections it remains in the monitoring program.

*** Initially sampled in April 2012 to collect additional FS parameters, but due to detections in well P-6(UPA), these area wells remained in the monitoring program.

Prepared by: MBS
Checked by: MLM
Reviewed by: TAM

Table 2
Groundwater Elevations - April 2018
Delaware Sand & Gravel Superfund Site
New Castle County, Delaware

Monitoring Point ID	Hydrogeologic Unit	Reference Elevation (feet MSL)	Date	Depth to Groundwater (feet BTOIC)	Groundwater Elevation (feet MSL)	Extracting Well Function
DDA Extraction Wells						
B-4DR	Columbia Aquifer - Columbia Sand	30.15	4/2/2018	35.03	-4.88	-
BG-1	Columbia Aquifer	24.97	4/2/2018	26.13	-1.16	Extracting
C-18D	Columbia Aquifer	25.41	4/2/2018	27.97	-2.56	-
C-19D	Columbia Aquifer	28.86	4/2/2018	31.44	-2.58	-
C-20D	Columbia Aquifer	32.57	4/2/2018	>20.42	< 12.15	Extracting
C-2D	Columbia Aquifer - Columbia Sand and Basal Gravel	22.44	4/2/2018	24.95	-2.51	-
C-30	Columbia Aquifer	25.71	4/2/2018	27.90	-2.19	-
C-4D	Columbia Aquifer - Columbia Sand and Basal Gravel	22.74	4/2/2018	24.98	-2.24	-
DDA Monitoring Wells						
B-1D	Columbia Aquifer	27.40	4/2/2018	29.06	-1.66	-
B-2D	Columbia Aquifer - Columbia Sand and Basal Gravel	28.60	4/2/2018	31.23	-2.63	-
B-3D	Columbia Aquifer	31.21	4/2/2018	33.53	-2.32	-
C-1D	Columbia Aquifer - Columbia Sand and Basal Gravel	22.30	4/2/2018	24.77	-2.47	-
C-3D	Columbia Aquifer	22.66	4/2/2018	24.84	-2.18	-
C-5D	Columbia Aquifer	23.20	4/2/2018	23.54	-0.34	-
C-6_DDA	Columbia Aquifer	25.32	4/2/2018	26.03	-0.71	-
C-7	Columbia Aquifer	23.07	4/2/2018	NM	-	-
C-8	Columbia Aquifer	23.50	4/2/2018	23.21	0.29	-
C-9	Columbia Aquifer	24.93	4/2/2018	24.83	0.10	-
C-10	Columbia Aquifer	26.43	4/2/2018	27.57	-1.14	-
C-12	Columbia Aquifer	26.04	4/2/2018	26.61	-0.57	-
C-14	Columbia Aquifer	25.50	4/2/2018	27.37	-1.87	-
C-15D	Columbia Aquifer	23.53	4/2/2018	25.28	-1.75	-
C-16	Columbia Aquifer	24.01	4/3/2018	25.34	-1.33	-
C-17	Columbia Aquifer	24.80	4/2/2018	26.38	-1.58	-
C-21D	Columbia Aquifer	32.42	4/2/2018	34.98	-2.56	-
C-22D	Columbia Aquifer	33.38	4/2/2018	35.70	-2.32	-
C-22S	Columbia Aquifer	34.55	4/2/2018	34.28	0.27	-
C-23	Columbia Aquifer	29.70	4/2/2018	30.88	-1.18	-
C-24	Columbia Aquifer	28.28	4/2/2018	28.64	-0.36	-
C-25	Columbia Aquifer	30.37	4/2/2018	31.78	-1.41	-
C-27	Columbia Aquifer	29.25	4/2/2018	30.87	-1.62	-
DGC-7C	Columbia Aquifer	29.65	4/3/2018	28.31	1.34	-
DGC-8C	Columbia Aquifer	24.57	4/2/2018	23.95	0.62	-
DGC-15**	Columbia Aquifer	42.48	4/2/2018	>30.70	<11.78	-
GA-101	Columbia Aquifer	23.65	4/2/2018	23.49	0.16	-
MHW-1M	Base of Columbia Aquifer	29.83	4/2/2018	32.53	-2.70	-
MHW-1S	Columbia Aquifer	29.83	4/2/2018	31.24	-1.41	-
P-4D	Columbia Aquifer - UPCU, Columbia Clay, Basal Gravel	25.22	4/2/2018	23.01	2.21	-
PZ-11-EXT	Columbia Aquifer	23.27	4/2/2018	23.49	-0.22	-
PZ-11-INT-R	Columbia Aquifer	24.28	4/2/2018	26.83	-2.55	-
PZ-12-EXT	Columbia Aquifer	26.07	4/2/2018	25.41	0.66	-
PZ-12-INT	Columbia Aquifer	24.77	4/2/2018	26.11	-1.34	-
PZ-2-EXT	Columbia Aquifer	25.49	4/2/2018	23.89	1.60	-
PZ-2-INT	Columbia Aquifer	29.53	4/2/2018	30.82	-1.29	-
PZ-3 INT	Columbia Aquifer	21.56	4/2/2018	21.63	-0.07	-
PZ-4-EXT	Columbia Aquifer	23.98	4/2/2018	23.17	0.81	-
PZ-4-INT-R	Columbia Aquifer	24.11	4/2/2018	23.08	1.03	-
PZ-5-EXT	Columbia Aquifer	24.18	4/2/2018	23.38	0.80	-
PZ-5-INT	Columbia Aquifer	24.40	4/2/2018	25.54	-1.14	-
PZ-6N	Columbia Aquifer	27.55	4/3/2018	24.22	3.33	-
PZ-6S	Columbia Aquifer	28.01	4/2/2018	29.45	-1.44	-
PW-1(U) Monitoring Wells						
DDA-01	UPA - Upper Sand	30.92	4/2/2018	31.63	-0.71	-
DDA-02	UPA - Upper Sand	29.57	4/2/2018	30.02	-0.45	-
DDA-03	UPA - Upper Sand	27.12	4/2/2018	28.43	-1.31	
DDA-04	UPA - Upper Sand	31.03	4/2/2018	33.52	-2.49	-
DDA-05	UPCU - Transition Zone	28.68	4/2/2018	29.65	-0.97	-
DDA-06	UPCU - Transition Zone	28.14	4/2/2018	29.63	-1.49	-
DDA-07-TZ	UPCU - Transition Zone	25.22	4/3/2018	24.73	0.49	-
DDA-07-US	UPA - Upper Sand	25.44	4/2/2018	25.43	0.01	-
DDA-08-TZ	UPCU - Transition Zone	26.20	4/2/2018	26.72	-0.52	-
DDA-08-US	UPA - Upper Sand	24.52	4/2/2018	24.83	-0.31	-
DDA-09-TZ	UPCU - Transition Zone	30.86	4/2/2018	33.33	-2.47	-
DDA-10-US	UPA - Upper Sand	24.30	4/2/2018	25.29	-0.99	-
DDA-11-LS	UPA - Lower Sand	31.38	4/2/2018	32.63	-1.25	-
DDA-11-US	UPA - Upper Sand	31.53	4/2/2018	32.65	-1.12	-
DDA-12-TZ	UPCU - Transition Zone	27.90	4/2/2018	29.55	-1.65	-
DDA-12-US	UPA - Upper Sand	28.27	4/2/2018	30.09	-1.82	-
DDA-13-TZ	UPCU - Transition Zone	29.90	4/2/2018	31.73	-1.83	-
DDA-14-TZ	UPCU - Transition Zone	30.32	4/2/2018	31.22	-0.90	-
DDA-15-TZ	UPCU - Transition Zone	33.98	4/2/2018	34.72	-0.74	-
DDA-15-US	UPA - Upper Sand	34.58	4/2/2018	35.44	-0.86	-
DDA-16-TZ	UPCU - Transition Zone	28.59	4/2/2018	29.29	-0.70	-
DDA-16-US	UPA - Upper Sand	29.05	4/2/2018	29.58	-0.53	-
DDA-17	UPA - Upper Sand	29.39	4/2/2018	30.65	-1.26	-
DGC-2D	UPA - Lower Sand	31.51	4/2/2018	31.98	-0.47	-
DGC-2S	UPA - Upper Sand	31.90	4/3/2018	32.43	-0.53	-
DGC-5	UPCU - Transition Zone	15.14	4/2/2018	16.01	-0.87	-
DGC-7S	UPA - Upper Sand	29.74	4/2/2018	31.28	-1.54	-
MHW-1D	UPA - Upper Sand	29.99	4/2/2018	30.74	-0.75	-
MW-45	UPA - Upper and Lower Sand	25.85	4/2/2018	28.07	-2.22	-
PW-1(U)	UPA - Upper Sand	31.38	4/2/2018	NM	-	Extracting
Downgradient UPA Wells						
DGC-8D	UPA - Lower Sand	24.41	4/2/2018	25.88	-1.47	-
DGC-8S	UPA - Upper Sand	24.61	4/3/2018	25.88	-1.27	-
DGC-10D	UPA - Lower Sand	41.77	4/2/2018	50.81	-9.04	-
DGC-10S	UPA - Upper Sand	41.92	4/2/2018	50.91	-8.99	-
DGC-11D	UPA - Upper Sand	38.93	4/2/2018	48.55	-9.62	-
DGC-11S	UPA - Upper Sand	38.54	4/2/2018	45.54	-7.00	-
RT-1-UP	UPA - Upper Sand	39.16	4/2/2018	44.87	-5.71	-
UPA-01	UPA - Upper Sand	35.76	4/2/2018	41.63	-5.87	-
UPA-02D	UPA - Lower Sand	44.15	4/2/2018	53.52	-9.37	-
UPA-02S	UPA - Upper Sand	44.37	4/2/2018	53.68	-9.31	-
UPA-03D	UPA - Lower Sand	30.14	4/2/2018	44.02	-13.88	-
NCC UPA Monitoring Wells and P-6 Vicinity						
BW-1	UPA - Lower Sand	30.32	4/2/2018	39.26	-8.94	-
BW-2	UPA - Lower Sand	33.68	4/2/2018	42.29	-8.61	-
BW-3	UPA - Lower Sand	7.80	4/2/2018	NM	-	-
MW-18	UPA - Upper Sand	6.97	4/2/2018	13.54	-6.57	-
MW-22N	UPA - Lower Sand	51.68	4/2/2018	63.84	-12.16	-
MW-26N	UPA - Upper and Lower Sand	36.76	4/2/2018	48.24	-11.48	-
MW-28	UPA - Upper and Lower Sand	20.37	4/2/2018	24.00	-3.63	-
MW-29	UPA - Upper and Lower Sand	17.38	4/2/2018	19.06	-1.68	-
MW-31	UPA - Upper and Lower Sand	13.77	4/2/2018	14.04	-0.27	-
MW-34	UPA - Upper and Lower Sand	7.20	4/2/2018	13.85	-6.65	-
MW-38N	UPA - Upper and Lower Sand	35.55	4/2/2018	42.88	-7.33	-
MW-40	UPA - Lower Sand	36.32	4/2/2018	42.48	-6.16	-
MW-49N	UPA - Upper and Lower Sand	51.41	4/2/2018	NM	-	-
P-4_UPA (18)	UPA - Upper Sand	47.89	4/2/2018	58.04	-10.15	-
P-5L	UPA - Lower Sand	14.90	4/2/2018	22.96	-8.06	-
P-5U	UPA - Upper Sand	15.30	4/2/2018	21.66	-6.36	-
P-6_UPA	UPA - Upper Sand	43.06	4/2/2018	46.19	-3.13	-
RW-2	UPA - Upper Sand	6.98	4/2/2018	14.06	-7.08	-
RW-5	UPA - Upper Sand	33.09	4/2/2018	39.25	-6.16	-
RW-10	UPA - Upper Sand	8.67	4/2/2018	13.58	-4.91	-
RW-6	UPA - Upper Sand	14.98	4/2/2018	15.56	-0.58	-
UPA-101-TZ	UPCU - Transition Zone	46.13	4/2/2018	49.89	-3.76	-
UPA-101-US	UPA - Upper Sand	46.23	4/2/2018	49.28	-3.05	-
AWC Wells						
AWC-E1	UPA - Upper and Lower Sand	40.50	4/2/2018	56.44	-15.94	-
AWC-E2	UPA - Upper and Lower Sand	34.00	4/2/2018	50.13	-16.13	-
AWC-J1	UPA - Upper and Lower Sand	11.58	4/2/2018	25.68	-14.10	-
AWC-K1	UPA - Lower Sand	29.56	4/2/2018	43.67	-14.11	-
AWC-MW-1	UPA - Lower Sand	10.34	4/2/2018	20.97	-10.63	-
AWC-MW-2	UPA - Upper Sand	10.50	4/2/2018	24.19	-13.69	-
AWC-MW-3	UPA - Lower Sand	9.65	4/2/2018	23.48	-13.83	-
AWC-MW-4	UPA - Lower Sand	12.49	4/2/2018	26.08	-13.59	-
AWC-MW-5	UPA - Upper Sand	12.49	4/2/2018	26.31	-13.82	-
AWC-MW-6	UPA - Lower Sand	18.58	4/2/2018	39.85	-21.27	-
AWC-2*	UPA - Lower Sand	64.58	NA			Extracting
AWC-6*	UPA - Upper and Lower Sand	55.91	NA			Extracting
AWC-7*	UPA - Upper and Lower Sand	47.98	NA			-
AWC-G3R*	UPA - Upper and Lower Sand	19.70	NA			Extracting
AWC-ASR*	UPA - Lower Sand	10.70	NA			Injecting

Notes

(1) MSL = Mean Sea Level
(2) BTOIC = Below Top of Inner Casing
(3) DDA = Drum Disposal Area
(4) LFExS = Low-flow Extraction System
(5) NA = Not Available
(6) NC = Not Calculated
(7) NM = Not Measured
(8) NCC = New Castle County
(9) UPA = Upper Potomac Aquifer
(10) UPCU = Upper Potomac Confining Unit
(11) Survey data provided by Delaware Sand and Gravel Trust.
(12) Survey data updated based on 12/5/2012, 12/11/2012, and 12/18/2013 surveys, where available.
(13) * = Water level data not provided by Artesian Water Company
(14) ** = Perched water table
(15) AWC = Artesian Water Company
(16) ASR = Aquifer Storage and Recovery
(17) As observed by Delaware Sand & Gravel Trust
(18) Golder replaced the expandable well cap on well P-4 in May 2015. During the March-April 2015 monitoring event, Golder observed that the expandable well cap could not expand to correctly seal the well from water infiltration. Well P-4 is located in a localized topographic low point and, potentially susceptible to surface water infiltration.

Prepared by: MBS
Checked by: MLM
Reviewed by: TAM

Table 3
Groundwater Field Parameter Summary - September 2017
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

Monitoring Point ID	Note Number	Date Sampled	Hydrogeologic Unit	Temperature [°C]	pH [std]	Specific Conductance [mS/cm]	Dissolved Oxygen [mg/L]	Redox Potential [mV]	Turbidity [ntu]	Volume Purged (1) [liters]	Depth to Water(2) [ft-btoic]
DDA Extraction Wells											
B-4DR	3	4/13/2018	Columbia Aquifer - Columbia Sand	15.99	6.99	0.491	3.84	-34	0	4	-
BG-1	3	4/13/2018	Columbia Aquifer	16.61	7.01	0.388	12.37	-51	0	19	-
C-19D	3	4/13/2018	Columbia Aquifer	14.20	7.26	0.299	5.79	-50	0	19	-
C-20D	3	4/13/2018	Columbia Aquifer	19.64	7.28	0.383	2.73	-50	0	19	-
C-2D	3	4/13/2018	Columbia Aquifer - Columbia Sand and Basal Gravel	15.46	7.34	0.269	1.42	-58	0	8	-
C-30	3	4/13/2018	Columbia Aquifer	15.40	6.74	0.515	7.38	-23	0	19	-
C-4D	3	4/13/2018	Columbia Aquifer - Columbia Sand and Basal Gravel	14.84	7.65	0.426	1.78	-78	0	19	-
DDA Monitoring Wells											
B-2D		4/17/2018	Columbia Aquifer - Columbia Sand and Basal Gravel	16.99	7.27	0.379	0	-78	9.7	20	31.60
B-3D		4/17/2018	Columbia Aquifer	15.45	7.16	0.596	0	-75	15.0	12	33.93
C-1D		4/18/2018	Columbia Aquifer - Columbia Sand and Basal Gravel	16.21	7.09	0.323	0	-92	49.5	72	24.57
C-22S		4/17/2018	Columbia Aquifer	16.02	6.96	0.532	0	-17	0.8	10	34.31
C-3D		4/17/2018	Columbia Aquifer	14.53	6.72	0.481	0	-48	70.5	50	25.20
DGC-7C	4	4/12/2018	Columbia Aquifer	19.44	6.85	0.575	2.92	-84	14.5	13.5	28.28
DGC-8C		4/18/2018	Columbia Aquifer	17.57	7.05	0.507	0	40	0	6	23.61
GA-101		4/17/2018	Columbia Aquifer	13.42	7.23	0.575	0	-95	13.3	26	23.48
MHW-1M		4/16/2018	Base of Columbia Aquifer	16.43	7.42	0.603	0	-111	0	20	32.59
MHW-1S		4/18/2018	Columbia Aquifer	18.51	6.13	0.479	0	42	47.7	10	31.11
P-4D		4/17/2018	Columbia Aquifer - UPCU, Columbia Clay, Basal Gravel	14.80	6.63	0.474	0	-45	0	10	23.03
PZ-11-EXT		4/17/2018	Columbia Aquifer	15.35	7.66	0.230	0	-132	0	20	22.34
PZ-4-INTR		4/17/2018	Columbia Aquifer	14.54	7.02	0.255	0	-30	0	10	20.41
PZ-6N	4	4/19/2018	Columbia Aquifer	15.31	7.60	0.325	3.49	214	10	32	23.58
PZ-6S	4	4/18/2018	Columbia Aquifer	16.13	7.34	0.585	0.64	-101	6.9	13	29.39
PW-1(U) Monitoring Wells											
DDA-01		4/10/2018	UPA - Upper Sand	15.07	6.81	0.279	0	10	33.7	34	31.53
DDA-02		4/12/2018	UPA - Upper Sand	14.63	6.06	0.237	0	53	3.9	34	30.61
DDA-03		4/9/2018	UPA - Upper Sand	13.41	6.44	0.418	0	94	11.7	18	28.59
DDA-05		4/9/2018	UPCU - Transition Zone	14.22	7.33	0.346	0	-59	4.3	22	29.61
DDA-06		4/10/2018	UPCU - Transition Zone	15.06	10.41	0.448	0	-167	29.0	14	29.10
DDA-07-TZ		4/11/2018	UPCU - Transition Zone	14.74	7.56	0.362	0	-80	14.5	13	24.53
DDA-07-US		4/11/2018	UPA - Upper Sand	14.40	6.11	0.230	0	98	17.7	32	25.50
DDA-08-TZ		4/16/2018	UPCU - Transition Zone	14.95	7.67	0.416	0	-149	19.2	24	25.82
DDA-08-US		4/16/2018	UPA - Upper Sand	16.36	6.41	0.247	0	26	25.8	22	24.39
DDA-09-TZ		4/12/2018	UPCU - Transition Zone	16.68	7.34	0.297	0	-107	25.4	16	32.52
DDA-10-US		4/11/2018	UPA - Upper Sand	17.02	7.54	0.413	0	-109	6.6	18	25.10
DDA-11-LS		4/10/2018	UPA - Lower Sand	14.31	5.99	0.256	1.74	180	9.8	24	32.63
DDA-11-US		4/10/2018	UPA - Upper Sand	14.09	6.45	0.248	0	-27	0	14	32.66
DDA-12-TZ		4/6/2018	UPCU - Transition Zone	14.84	8.00	0.364	0	-111	83.1	48	29.62
DDA-12-US		4/6/2018	UPA - Upper Sand	12.78	7.31	0.351	0	-92	0	16	29.72
DDA-14-TZ		4/18/2018	UPCU - Transition Zone	16.17	8.34	0.266	0	-193	0	22	30.70
DDA-15-TZ		4/16/2018	UPCU - Transition Zone	17.40	7.54	0.396	0	-140	11.1	38	34.23
DDA-15-US		4/16/2018	UPA - Upper Sand	16.89	6.89	0.306	0	-58	4.6	24	34.94
DDA-16-TZ		4/10/2018	UPCU - Transition Zone	16.02	6.90	0.328	0	-62	22.9	36	29.32
DDA-16-US		4/10/2018	UPA - Upper Sand	14.75	5.90	0.217	0	82	0	12	29.58
DDA-17		4/10/2018	UPA - Upper Sand	13.84	7.69	0.491	0	-94	31.2	18	30.66
DGC-2S		4/11/2018	UPA - Upper Sand	13.60	5.97	0.180	0	119	0	10	32.03
DGC-5		4/11/2018	UPA - Upper Sand	13.89	6.46	0.299	0	17	0	10	15.14
DGC-7S		4/12/2018	UPA - Upper Sand	15.64	6.50	0.260	0	-25	29.2	50	31.15
MHW-1D		4/16/2018	UPCU - Transition Zone	16.30	6.43	0.234	0	11	0	10	30.28
PW-1(U)	3	4/12/2018	UPA - Upper Sand	19.67	7.11	0.262	12.60	-61	4.5	19	-
Downgradient UPA Wells											
DGC-10D		4/5/2018	UPA - Lower Sand	12.94	6.11	0.178	1.85	254	20.0	12	50.84
DGC-10S		4/5/2018	UPA - Upper Sand	13.85	6.84	0.280	0.19	64	20.7	40	50.98
DGC-11D		4/3/2018	UPA - Upper Sand	12.78	5.98	0.162	0	283	9.8	22	49.14
DGC-11S		4/3/2018	UPA - Upper Sand	12.96	5.89	0.080	0	115	70.8	22	45.51
RT-1-UP		4/3/2018	UPA - Upper Sand	14.88	6.37	0.126	0	54	32.8	32	44.52
UPA-01		4/11/2018	UPA - Upper Sand	17.24	7.19	0.241	0	-75	61.2	112	41.07
UPA-02D		4/5/2018	UPA - Lower Sand	13.29	6.81	0.300	0	41	12.8	20	53.62
UPA-02S		4/3/2018	UPA - Upper Sand	13.85	5.30	0.245	3.03	287	31.8	18	53.54
UPA-03D		4/5/2018	UPA - Lower Sand	12.72	5.60	0.166	0	222	13.9	36	44.23
UPA-101-TZ		4/5/2018	UPCU - Transition Zone	15.11	4.66	0.393	0	229	0	16	50.05
UPA-101-US		4/5/2018	UPA - Upper Sand	13.42	7.62	0.410	0	-130	0	10	49.06
AWC-E1 (132)		4/4/2018	UPA - Upper Sand	13.32	6.3	0.303	0	103	4.1	14	55.89
AWC-E1 (156)		4/4/2018	UPA - Lower Sand	13.48	6.41	0.301	0	69	23.5	14	55.91
AWC-E2 (140)		4/4/2018	UPA - Upper Sand	13.42	6.69	0.224	0	82	3.7	10	49.63
AWC-E2 (165)		4/4/2018	UPA - Lower Sand	13.84	6.69	0.237	0	105	19.7	18	49.67
NCC UPA Monitoring Wells and P-6 Vicinity											
BW-1		4/9/2018	UPA - Lower Sand	14.19	7.40	0.489	0	-33	25.1	40	39.09
BW-2		4/9/2018	UPA - Lower Sand	14.53	6.80	0.320	0	11	21.4	32	42.21
MW-18		4/6/2018	UPA - Upper Sand	13.52	7.10	0.485	0	-69	0	10	13.91
MW-26N		4/4/2018	UPA - Upper and Lower Sand	14.21	6.97	0.314	0	164	1.3	10	47.70
MW-28		4/6/2018	UPA - Upper and Lower Sand	13.20	6.39	0.330	0	47	24.2	10	23.92
MW-29		4/3/2018	UPA - Upper and Lower Sand	14.33	7.15	0.440	0	-87	29.9	10	19.06
MW-31		4/4/2018	UPA - Upper and Lower Sand	14.50	6.05	0.212	1.64	166	258	50	13.64
MW-34		4/6/2018	UPA - Upper and Lower Sand	13.22	7.11	0.334	0	6	88.7	32	13.82
MW-40		4/4/2018	UPA - Upper Sand	13.64	5.99	0.243	2.73	276	6.0	10	42.03
P-4 (UPA)		4/6/2018	UPA - Upper Sand	14.45	6.97	5.01	0	-55	3.70	12	58.16
P-5L		4/6/2018	UPA - Lower Sand	13.99	6.38	0.188	0	81	18.7	10	22.40
P-5U		4/9/2018	UPA - Upper Sand	13.26	6.20	0.287	0	219	0	10	21.62
P-6 (UPA)		4/5/2018	UPA - Upper Sand	14.34	8.24	0.452	0	-118	28	14	46.21
RW-10		4/3/2018	UPA - Upper Sand	11.34	7.79	0.293	0	-69	51.7	24	13.48
NCC Sewer Discharge Monitoring Points											
PW-1(U) Discharge	3	4/12/2018	UPA - Upper Sand	19.67	7.11	0.262	12.6	-61	4.5	19	-
TTO	3	4/12/2018	Columbia Aquifer	16.51	6.86	0.428	6.29	-16	47	19	-

Notes

Prepared by: MBS
Checked by: VRR
Reviewed by: TAM

(1) All wells were purged using the low-flow purging and sampling procedure based upon the USEPA Region II document entitled "Groundwater Sampling Procedure, Low Stress (Low Flow) Purging and Sampling" dated March 20, 1998 except as noted below.
(2) Depth to water measurements were made prior to purging the wells. These values are not the same as the values measured during the synoptic round of water level measurements.
(3) Wells B-4DR, BG-1, C-2D, C-4D, C-18D, C-19D, C-20D, C-30 and PW-1(U) are extraction wells that typically run continuously. The port of each well, as well as TTO, was purged at least 19 liters prior to sample collection with the exception of
(4) Purged and sampled with a bailer using the conventional 3 well volume method due to insufficient recharge for low flow purging.
(5) AWC = Artesian Water Company
(6) DDA = Drum Disposal Area
(7) NCC = New Castle County
(8) '-' = Not Measured
(9) TTO = Total Toxic Organics
(10) UPA = Upper Potomac Aquifer
(11) UPCU = Upper Potomac Confining Unit
(12) °C = degrees Celsius
(13) std = standard units
(14) mS/cm = millisiemens per centimeter
(15) mg/L = milligrams per liter
(16) mV = millivolts
(17) ntu = nephelometric turbidity units
(18) ft-btoic = feet below top of inner casing

Table 4
DDA Combined LFExS Mass Removal Estimate
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

Flow Rate							Analytical Results			Detected Concentrations			Mass Removed		Average Mass Removal Rate					
Period of Mass Calculation	Days in period	Days of System Operation	Percent Operation	Total Volume for Period	Average Flow Rate(9)	Adjusted Average Flow Rate(10)	Sample Date	Total VOCs	BCEE	Total VOCs	BCEE	Concentration Note	Total VOCs	BCEE	Total VOCs			BCEE		
			%	Gallons	GPM	GPM		ug/l	ug/l	ug/l	ug/l		lb	lb	lb/day	lb/6-mo	lb/year	lb/day	lb/6-mo	lb/year
5/4/2009 - 10/31/2009	180	180	100%	629,891	**2.43**	**2.43**	5/26/2009	455.4	280			*Startup date 5/4/2009*								
							10/15/2009	166.1	53	311	167	Average of 5/26/2009 and 10/15/2009 values	1.63	0.88	9.07E-03	1.66	3.31	4.87E-03	0.89	1.78
11/1/2009 - 4/30/2010	180	180	100%	768,957	**2.97**	**2.97**	4/14/2010	225.1	0	196	27	Average of 10/15/2009 and 4/14/2010 values	1.26	0.17	6.98E-03	1.27	2.55	9.62E-04	0.18	0.35
5/1/2010 - 10/31/2010	183	183	100%	1,280,274	**4.86**	**4.86**	10/11/2010	635.3	20	430.0	10	Average of 4/14/2010 and 10/11/2010 values	4.59	0.11	2.51E-02	4.58	9.15	5.83E-04	0.11	0.21
11/1/2010 - 4/30/2011	180	176	98%	1,292,178	**4.99**	**5.10**	4/4/2011	287.3	20	461	20	Average of 10/11/2010 and 4/4/2011 values	4.97	0.22	2.76E-02	5.04	10.07	1.20E-03	0.22	0.44
5/1/2011 - 10/31/2011	183	183	100%	1,741,056	**6.61**	**6.61**	10/6/2011	450.0	15	369	18	Average of 4/4/2011 and 10/6/2011 values	5.36	0.26	2.93E-02	5.34	10.68	1.43E-03	0.26	0.52
11/1/2011 - 4/30/2012	181	177	98%	1,993,749	**7.65**	**7.82**	4/2/2012	324.3	13	387	14	Average of 10/6/2011 and 4/2/12 values	6.43	0.23	3.55E-02	6.49	12.97	1.29E-03	0.23	0.47
5/1/2012 - 10/31/2012	183	183	100%	1,796,158	**6.82**	**6.82**	10/8/2012	128.6	7.0	226	10	Average of 4/2/12 and 10/8/12 values	3.38	0.15	1.85E-02	3.38	6.75	8.18E-04	0.15	0.30
11/1/2012 - 4/30/2013	180	179	99%	2,397,889	**9.25**	**9.30**	3/18/2013	221.4	9.5	175	8.0	Average of 10/8/12 and 3/18/13 values	3.50	0.16	1.94E-02	3.55	7.09	8.88E-04	0.16	0.32
5/1/2013 - 10/31/2013	183	180	98%	2,592,490	**9.84**	**10.0**	9/30/2013	230.0	14	226	12	Average of 3/18/13 and 9/30/13 values	4.88	0.26	2.67E-02	4.87	9.74	1.42E-03	0.26	0.52
11/1/2013 - 4/30/2014	180	179	99%	2,340,780	**8.98**	**9.03**	3/24/2014	170.5	9.7	200	12	Average of 9/30/13 and 3/24/14 values	3.91	0.23	2.17E-02	3.97	7.94	1.29E-03	0.24	0.47
5/1/2014 - 10/31/2014	183	182	99%	2,639,447	**10.08**	**10.14**	9/30/2014	119.4	13	145	11	Average of 3/24/14 and 9/30/14 values	3.19	0.25	1.74E-02	3.19	6.37	1.37E-03	0.25	0.50
11/1/2014 - 4/30/2015	180	180	100%	2,379,788	**9.13**	**9.13**	3/30/2015	103.1	20	111	17	Average of 9/30/14 and 3/30/15-4/2/15 values (note 12)	2.21	0.33	1.23E-02	2.24	4.48	1.82E-03	0.34	0.66
5/1/2015 - 10/31/2015	183	182	99%	2,486,638	**9.38**	**9.44**	9/28/2015	99.1	27	101	24	Average of 3/30/15-4/2/15 (note 12) and 9/30/15 values	2.10	0.49	1.15E-02	2.09	4.19	2.66E-03	0.49	0.97
11/1/2015 - 4/30/2016	181	180	99%	1,916,462	**7.31**	**7.35**	4/7/2016	135.6	26	117	27	Average of 9/28/15 and 3/30/2016 values	1.88	0.42	1.04E-02	1.89	3.79	2.34E-03	0.43	0.85
5/1/2016 - 10/31/2016	183	182	99%	2,282,164	**8.61**	**8.66**	9/30/2016	181.6	19	159	23	Average of 4/7/2016 and 9/30/2016 values	3.02	0.43	1.65E-02	3.02	6.03	2.34E-03	0.43	0.85
11/1/2016 - 4/30/2017	180	180	100%	1,722,069	**6.61**	**6.61**	3/27/2017	295.8	14	239	17	Average of 9/30/2016 and 3/27/2017 values	3.43	0.24	1.91E-02	3.48	6.96	1.32E-03	0.25	0.48
5/1/2017 - 10/31/2017	183	182	99%	2,760,164	**10.42**	**10.48**	10/9/2017	116.0	23	206	19	Average of 3/27/2017 and 10/9/2017 values	4.74	0.43	2.59E-02	4.73	9.47	2.33E-03	0.43	0.85
11/1/2017 - 4/30/2018	180	178	99%	2,454,085	**9.42**	**9.52**	4/12/2018	99.6	17	108	20	Average of 10/9/2017 and 4/12/2018 values	2.21	0.41	1.23E-02	2.24	4.48	2.28E-03	0.42	0.83

NOTES
(1) The low flow extraction system (LFExS) began operation on May 4, 2009
(2) Analytical results used in the mass removal calculation are based on unvalidated effluent data for the total toxic organics sample and do not include tentatively identified compounds (TICs)
(3) Flow volume and average values based on totalizer volume spreadsheet provided by DS&G Remedial Trust
(4) ug/l = micrograms per liter
(5) lb = pound
(6) GPM = gallons per minute
(7) VOCs = volatile organic compounds
(8) BCEE = bis(2-chloroethyl)ether
(9) Average flow rate represents system discharge rate to sewer
(10) Adjusted average flow rate represents system flow for periods of system operation, excluding down-time
(11) Total VOCs based on 624 analysis that does not include 1,4-dioxane
(12) Primary sample collected on March 30, 2015 and re-sampled for SVOC analysis on April 2, 2015

Prepared by: MBS
Checked by: BPC
Reviewed by: TAM

Table 5
Individual LFExS Well Mass Removal Estimate
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

Well	Avg Flow prior to sample (GPM)	Days in Period	(hide) Days System Down	Days of System Operation	Percent Operation (%)	Adjusted Flow Rate (GPM)	Average Flow Period	Sample Date	Total Detected VOC Concentration (Revised analyte list) (ug/l)	Total Detected VOC Concentration (Historical analyte list) (ug/l)	1,4-Dioxane Concentration (ug/l)	BCEE Concentration (ug/l)	Adjusted TVOC Mass Removal (Revised analyte list) (lb/day)	Adjusted TVOC Mass Removal (Historical analyte list) (lb/day)	Adjusted 1,4-Dioxane Mass Removal (lb/day)	Adjusted BCEE Mass Removal (lb/day)	Adjusted TVOC Mass Removal (Revised analyte list) (lb/year)	Adjusted TVOC Mass Removal (Historical analyte list) (lb/year)	Adjusted 1,4-Dioxane Mass Removal (lb/year)	Adjusted BCEE Mass Removal (lb/year)	TVOC Mass Removal (% of Total)	BCEE Mass Removal (% of Total)	1,4-Dioxane Mass Removal (% of Total)
5/4/2009	**through**	**10/31/2009**																					
B4D	0.94	180	0	180	100%	0.94	05/06/09 - 06/15/09	7/10/2009	NA	224	NA	500	NA	2.53E-03		5.64E-03	NA	0.92	NA	2.06	9%	63%	NA
C2D	0.86	180	0	180	100%	0.86	05/06/09 - 06/15/09	7/10/2009	NA	199	NA	29	NA	2.05E-03		2.99E-04	NA	0.75	NA	0.11	7%	3%	NA
C4D	1.02	180	0	180	100%	1.02	05/06/09 - 06/15/09	7/10/2009	NA	49	NA	140	NA	5.96E-04		1.71E-03	NA	0.22	NA	0.63	2%	19%	NA
C18D	0.59	180	0	180	100%	0.59	05/06/09 - 06/15/09	7/10/2009	NA	1884	NA	63	NA	1.33E-02		4.46E-04	NA	4.87	NA	0.16	47%	5%	NA
C19D	0.86	180	0	180	100%	0.86	05/06/09 - 06/15/09	7/10/2009	NA	46	NA	30	NA	4.70E-04		3.10E-04	NA	0.17	NA	0.11	2%	3%	NA
BG-1	0.49	180	0	180	100%	0.49	05/06/09 - 06/15/09	7/10/2009	NA	1649	NA	90	NA	9.70E-03		5.29E-04	NA	3.54	NA	0.19	34%	6%	NA
TOTAL=	**4.76**											**TOTAL=**		**2.87E-02**		**8.94E-03**	NA	**10.47**	NA	**3.26**	**100%**	**100%**	
11/1/2009	**through**	**4/30/2010**																					
B4D	0.62	180	0	180	100%	0.62	03/31/10 - 04/12/10	4/14/2010	NA	280	NA	51	NA	2.08E-03		3.80E-04	NA	0.76	NA	0.14	5%	27%	NA
C2D	0.39	180	0	180	100%	0.39	03/31/10 - 04/12/10	4/14/2010	NA	35	NA	14	NA	1.65E-04		6.55E-05	NA	0.06	NA	0.02	0%	5%	NA
C4D	0.81	180	0	180	100%	0.81	03/31/10 - 04/12/10	4/14/2010	NA	207	NA	46	NA	2.01E-03		4.47E-04	NA	0.73	NA	0.16	5%	32%	NA
C18D	0.75	180	0	180	100%	0.75	03/31/10 - 04/12/10	4/14/2010	NA	4371	NA	46	NA	3.94E-02		4.14E-04	NA	14.37	NA	0.15	89%	30%	NA
C19D	1.02	180	0	180	100%	1.02	03/31/10 - 04/12/10	4/14/2010	NA	40	NA	7	NA	4.90E-04		8.57E-05	NA	0.18	NA	0.03	1%	6%	NA
BG-1	0	180	14	166	92%	0.00	03/31/10 - 04/12/10	4/14/2010	NA	561	NA	22	NA	0.00E+00		0.00E+00	NA	0.00	NA	0.00	0%	0%	NA
TOTAL=	**3.59**											**TOTAL=**		**4.41E-02**		**1.39E-03**	NA	**16.10**	NA	**0.50**	**100%**	**100%**	
5/1/2010	**through**	**10/31/2010**																					
B4D	0.05	183	69	114	62%	0.03	12/02/10 - 12/16/2010	12/16/2010	NA	402	NA	140	NA	1.50E-04		5.24E-05	NA	0.05	NA	0.02	0%	6%	NA
C2D	0.85	183	8	175	96%	0.81	12/02/10 - 12/16/2010	12/16/2010	NA	65	NA	6.3	NA	6.36E-04		6.15E-05	NA	0.23	NA	0.02	1%	7%	NA
C4D	1.00	183	25	158	86%	0.86	12/02/10 - 12/16/2010	12/16/2010	NA	106	NA	29	NA	1.10E-03		3.01E-04	NA	0.40	NA	0.11	2%	33%	NA
C18D	1.09	183	73	110	60%	0.66	12/02/10 - 12/16/2010	12/16/2010	NA	5198	NA	46	NA	4.09E-02		3.62E-04	NA	14.92	NA	0.13	77%	40%	NA
C19D	0.06	183	27	156	85%	0.05	12/02/10 - 12/16/2010	12/16/2010	NA	20	NA	9.3	NA	1.22E-05		5.71E-06	NA	0.00	NA	0.00	0%	1%	NA
C30	0.06	183	18	165	90%	0.05	12/02/10 - 12/16/2010	12/16/2010	NA	4124	NA	11	NA	2.68E-03		7.14E-06	NA	0.98	NA	0.00	5%	1%	NA
BG-1	0.40	183	0	183	100%	0.40	12/02/10 - 12/16/2010	12/16/2010	NA	1578	NA	23		7.58E-03		1.10E-04	NA	2.77	NA	0.04	14%	12%	NA
TOTAL=	**3.51**											**TOTAL=**		**5.30E-02**		**9.00E-04**		**19.30**		**0.30**	**100%**	**100%**	
11/1/2010	**through**	**4/30/2011**																					
B4D	0.61	180	16	164	91%	0.56	3/21/2011 - 4/7/2011	4/6/2011	NA	397	NA	74	NA	2.65E-03		4.94E-04	NA	0.97	NA	0.18	8%	45%	NA
C2D	0.54	180	4	176	98%	0.53	3/21/2011 - 4/7/2011	4/6/2011	NA	111	NA	2.7	NA	7.02E-04		1.71E-05	NA	0.26	NA	0.01	2%	2%	NA
C4D	0.57	180	9	171	95%	0.54	3/21/2011 - 4/7/2011	4/6/2011	NA	602	NA	26	NA	3.91E-03		1.69E-04	NA	1.43	NA	0.06	11%	15%	NA
C18D	0.63	180	19	161	89%	0.56	3/21/2011 - 4/7/2011	4/6/2011	NA	1996	NA	21	NA	1.35E-02		1.42E-04	NA	4.93	NA	0.05	39%	13%	NA
C19D	0.57	180	38	142	79%	0.45	3/21/2011 - 4/7/2011	4/6/2011	NA	8.77	NA	9.2	NA	4.73E-05		4.97E-05	NA	0.02	NA	0.02	0%	5%	NA
C30	0.70	180	13	167	93%	0.65	3/21/2011 - 4/7/2011	4/6/2011	NA	827	NA	9.1	NA	6.45E-03		7.10E-05	NA	2.35	NA	0.03	19%	6%	NA
BG-1	1.30	180	14	166	92%	1.20	3/21/2011 - 4/7/2011	4/6/2011	NA	492	NA	11		7.09E-03		1.58E-04	NA	2.59	NA	0.06	21%	14%	NA
TOTAL=	**4.92**											**TOTAL=**		**3.44E-02**		**1.10E-03**		**11.58**		**0.23**	**100%**	**100%**	
5/1/2011	**through**	**10/31/2011**																					
B4D	1.11	183	59	124	68%	0.75	9/22/2011 - 10/6/2011	10/5/2011	NA	676	NA	32	NA	6.10E-03		2.89E-04	NA	2.23	NA	0.11	17%	29%	NA
C2D	1.01	183	0	183	100%	1.01	9/22/2011 - 10/6/2011	10/5/2011	NA	59	NA	2.9	NA	7.21E-04		3.52E-05	NA	0.26	NA	0.01	2%	3%	NA
C4D	0.95	183	25	158	86%	0.82	9/22/2011 - 10/6/2011	10/5/2011	NA	480	NA	21	NA	4.72E-03		2.07E-04	NA	1.72	NA	0.08	13%	20%	NA
C18D	1.08	183	38	145	79%	0.86	9/22/2011 - 10/6/2011	10/5/2011	NA	1507	NA	14	NA	1.55E-02		1.44E-04	NA	5.65	NA	0.05	44%	14%	NA
C19D	1.14	183	0	183	100%	1.14	9/22/2011 - 10/6/2011	10/5/2011	NA	21	NA	8.1	NA	2.92E-04		1.11E-04	NA	0.11	NA	0.04	1%	11%	NA
C30	1.27	183	0	183	100%	1.27	9/22/2011 - 10/6/2011	10/5/2011	NA	438	NA	7.9	NA	6.69E-03		1.20E-04	NA	2.44	NA	0.04	19%	12%	NA
BG-1	1.06	183	8	175	96%	1.01	7/1/2011 - 9/6/2011	10/3/2011	NA	91	NA	8.5		1.11E-03		1.03E-04	NA	0.40	NA	0.04	3%	10%	NA
TOTAL=	**7.62**											**TOTAL=**		**3.51E-02**		**1.01E-03**		**10.58**		**0.26**	**100%**	**100%**	
11/1/2011	**through**	**4/30/2012**																					
B4DR	0.17	181	34	147	81%	0.14	3/15/12 - 4/12/12	4/2/2012	1935	NA	810	14	3.30E-03	NA	1.38E-03	2.38E-05	1.20	NA	0.50	0.01	6%	2%	10%
C2D	1.21	181	4	177	98%	1.19	3/12/12 - 4/12/12	4/2/2012	84	NA	0	3.4	1.20E-03	NA	0.00E+00	4.84E-05	0.44	NA	0.00	0.02	2%	4%	0%
C4D	1.00	181	4	177	98%	0.97	3/12/12 - 4/12/12	4/2/2012	1222	NA	130	25	1.43E-02	NA	1.52E-03	2.92E-04	5.22	NA	0.55	0.11	27%	27%	11%
C18D	1.29	181	4	177	98%	1.27	3/12/12 - 4/12/12	4/2/2012	1122	NA	120	24	1.70E-02	NA	1.82E-03	3.65E-04	6.22	NA	0.67	0.13	32%	34%	14%
C19D	0.93	181	22	159	88%	0.82	3/12/12 - 4/12/12	4/2/2012	284	NA	270	8.6	2.80E-03	NA	2.66E-03	8.46E-05	1.02	NA	0.97	0.03	5%	8%	20%
C30	0.98	181	4	177	98%	0.96	3/12/12 - 4/12/12	4/2/2012	779	NA	360	9.8	8.99E-03	NA	4.15E-03	1.13E-04	3.28	NA	1.52	0.04	17%	10%	31%
BG-1	1.49	181	34	147	81%	1.21	3/12/12 - 4/12/12	4/3/2012	347	NA	120	11	5.04E-03	NA	1.74E-03	1.60E-04	1.84	NA	0.64	0.06	10%	15%	13%
TOTAL=	**7.08**											**TOTAL=**	**5.27E-02**		**1.33E-02**	**1.09E-03**	**19.22**		**4.85**	**0.39**	**100%**	**100%**	**100%**
5/1/2012	**through**	**10/31/2012**																					
B4DR	0.10	183	61	122	67%	0.07	8/30/2012 - 10/1/2012	10/2/2012	1766	NA	770	22	1.48E-03	NA	6.45E-04	1.84E-05	0.54	NA	0.24	0.01	4%	2%	6%
C2D	1.15	183	53	130	71%	0.82	9/10/2012 - 10/1/2012	10/2/2012	39	NA	0	3.0	3.83E-04	NA	0.00E+00	2.94E-05	0.14	NA	0.00	0.01	1%	2%	0%
C4D	0.84	183	7	176	96%	0.81	8/30/2012 - 10/1/2012	10/2/2012	680	NA	240	47	6.59E-03	NA	2.33E-03	4.55E-04	2.41	NA	0.85	0.17	18%	37%	21%
C18D	0.62	183	0	183	100%	0.62	9/24/2012 - 10/1/2012	10/2/2012	1371	NA	89	26	1.02E-02	NA	6.65E-04	1.94E-04	3.74	NA	0.24	0.07	27%	16%	6%
C19D	0.66	183	8	175	96%	0.63	9/10/2012 - 10/1/2012	10/2/2012	259	NA	230	14	1.96E-03	NA	1.74E-03	1.06E-04	0.72	NA	0.64	0.04	5%	9%	16%
C20D	NA	NA	NA	NA	NA	NA	NA	10/2/2012	309	NA	280	7.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
C30	1.05	183	7	176	96%	1.01	9/10/2012 - 10/1/2012	10/2/2012	743	NA	240	9.2	9.01E-03	NA	2.91E-03	1.12E-04	3.29	NA	1.06	0.04	24%	9%	26%
BG-1	2.13	183	0	183	100%	2.13	9/27/2012 - 10/1/2012	10/2/2012	306	NA	110	12	7.83E-03	NA	2.82E-03	3.07E-04	2.86	NA	1.03	0.11	21%	25%	25%
TOTAL=	**6.56**											**TOTAL=**	**3.75E-02**		**1.11E-02**	**1.22E-03**	**13.70**		**4.06**	**0.44**	**100%**	**100%**	**100%**

Table 5
Individual LFExS Well Mass Removal Estimate
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

Well	Avg Flow prior to sample (GPM)	Days in Period	(hide) Days System Down	Days of System Operation	Percent Operation (%)	Adjusted Flow Rate (GPM)	Average Flow Period	Sample Date	Total Detected VOC Concentration (Revised analyte list) (ug/l)	Total Detected VOC Concentration (Historical analyte list) (ug/l)	1,4-Dioxane Concentration (ug/l)	BCEE Concentration (ug/l)	Adjusted TVOC Mass Removal (Revised analyte list) (lb/day)	Adjusted TVOC Mass Removal (Historical analyte list) (lb/day)	Adjusted 1,4-Dioxane Mass Removal (lb/day)	Adjusted BCEE Mass Removal (lb/day)	Adjusted TVOC Mass Removal (Revised analyte list) (lb/year)	Adjusted TVOC Mass Removal (Historical analyte list) (lb/year)	Adjusted 1,4-Dioxane Mass Removal (lb/year)	Adjusted BCEE Mass Removal (lb/year)	TVOC Mass Removal (% of Total)	BCEE Mass Removal (% of Total)	1,4-Dioxane Mass Removal (% of Total)
11/1/2012	**through**	**4/30/2013**																					
B4DR	0.27	180	109	71	39%	0.11	3/4/2013 - 3/18/2013	3/19/2013	1554.30	NA	300	22	1.99E-03	NA	3.84E-04	2.81E-05	0.73	NA	0.14	0.01	3%	2%	2%
C2D	1.36	180	0	180	100%	1.36	3/4/2013 - 3/18/2013	3/19/2013	136.14	NA	56	2.7	2.22E-03	NA	9.14E-04	4.41E-05	0.81	NA	0.33	0.02	3%	3%	4%
C4D	1.15	180	0	180	100%	1.15	3/4/2013 - 3/18/2013	3/19/2013	1020.46	NA	100	15	1.41E-02	NA	1.38E-03	2.07E-04	5.14	NA	0.50	0.08	22%	16%	7%
C18D	1.00	180	0	180	100%	1.00	3/4/2013 - 3/18/2013	3/19/2013	1422.60	NA	110	20	1.71E-02	NA	1.32E-03	2.40E-04	6.23	NA	0.48	0.09	27%	19%	6%
C19D	1.35	180	0	180	100%	1.35	3/4/2013 - 3/18/2013	3/19/2013	181.53	NA	160	8.0	2.94E-03	NA	2.59E-03	1.30E-04	1.07	NA	0.95	0.05	5%	10%	13%
C20D	2.55	180	13	167	93%	2.37	3/4/2013 - 3/18/2013	3/20/2013	169.88	NA	160	5.1	4.83E-03	NA	4.54E-03	1.45E-04	1.76	NA	1.66	0.05	8%	11%	22%
C30	1.75	180	0	180	100%	1.75	3/4/2013 - 3/18/2013	3/19/2013	729.42	NA	310	8.6	1.53E-02	NA	6.51E-03	1.81E-04	5.59	NA	2.38	0.07	24%	14%	32%
BG-1	0.76	180	22	158	88%	0.67	3/4/2013 - 3/18/2013	3/19/2013	694.29	NA	380	38	5.56E-03	NA	3.04E-03	3.04E-04	2.03	NA	1.11	0.11	9%	24%	15%
TOTAL=	**10.19**											**TOTAL=**	**6.40E-02**		**2.07E-02**	**1.28E-03**	**23.36**		**7.55**	**0.48**	**100%**	**100%**	**100%**
5/1/2013	**through**	**10/31/2013**																					
B4DR	0.32	183	44	139	76%	0.25	9/16/2013 - 10/3/2013	10/4/2013	1873.09	NA	580	51	5.52E-03	NA	1.71E-03	1.50E-04	2.01	NA	0.62	0.05	10%	12%	8%
C2D	1.08	183	0	183	100%	1.08	9/16/2013 - 10/3/2013	10/4/2013	119.39	NA	53	3.2	1.55E-03	NA	6.87E-04	4.15E-05	0.57	NA	0.25	0.02	3%	3%	3%
C4D	0.95	183	4	179	98%	0.93	9/16/2013 - 10/3/2013	10/4/2013	1062.31	NA	88	20	1.19E-02	NA	9.84E-04	2.24E-04	4.33	NA	0.36	0.08	21%	18%	5%
C18D	1.07	183	42	141	77%	0.83	9/16/2013 - 10/3/2013	10/4/2013	1830.45	NA	210	28	1.82E-02	NA	2.09E-03	2.78E-04	6.64	NA	0.76	0.10	32%	22%	10%
C19D	1.24	183	10	173	95%	1.17	9/16/2013 - 10/3/2013	10/4/2013	539.76	NA	520	9.8	7.58E-03	NA	7.31E-03	1.38E-04	2.77	NA	2.67	0.05	13%	11%	35%
C20D	2.49	183	27	156	85%	2.12	9/19/2013 - 10/7/2013	10/7/2013	262.47	NA	250	7.5	6.69E-03	NA	6.37E-03	1.91E-04	2.44	NA	2.32	0.07	12%	15%	30%
C30	0.09	183	6	177	97%	0.09	9/3/2013 - 10/3/2013	10/4/2013	1136.02	NA	220	15	1.17E-03	NA	2.26E-04	1.54E-05	0.43	NA	0.08	0.01	2%	1%	1%
BG-1	1.05	183	12	171	93%	0.98	9/19/2013 - 10/7/2013	10/7/2013	344.97	NA	140	17	4.06E-03	NA	1.65E-03	2.00E-04	1.48	NA	0.60	0.07	7%	16%	8%
TOTAL=	**8.29**											**TOTAL=**	**5.66E-02**		**2.10E-02**	**1.24E-03**	**20.67**		**7.66**	**0.45**	**100%**	**100%**	**100%**
11/1/2013	**through**	**4/30/2014**																					
B4DR	0.00	180	155	25	14%	NA	10/3/2013 - 3/27/2014	NS	NA	NA	NA	NA	NA	NA		NA	NA	NA	0.00	NA	NA	NA	0%
C2D	0.62	180	9	171	95%	0.59	3/6/2014 - 3/24/2014	3/25/2014	88.46	NA	24	2.3	6.29E-04	NA	1.71E-04	1.64E-05	0.23	NA	0.06	0.01	1%	3%	1%
C4D	0.99	180	9	171	95%	0.94	3/10/2014 - 3/27/2014	3/28/2014	1074.65	NA	67	0.19	1.22E-02	NA	7.59E-04	2.15E-06	4.44	NA	0.28	0.00	18%	0%	4%
C18D	1.04	180	9	171	95%	0.99	3/10/2014 - 3/27/2014	3/28/2014	2536.12	NA	70	22	3.01E-02	NA	8.30E-04	2.61E-04	10.98	NA	0.30	0.10	44%	41%	5%
C19D	1.01	180	13	167	93%	0.93	3/10/2014 - 3/27/2014	3/28/2014	193.20	NA	180	9.3	2.17E-03	NA	2.02E-03	1.04E-04	0.79	NA	0.74	0.04	3%	16%	11%
C20D	3.02	180	28	152	84%	2.55	3/10/2014 - 3/27/2014	3/28/2014	330.50	NA	320	4.3	1.01E-02	NA	9.78E-03	1.31E-04	3.69	NA	3.57	0.05	15%	21%	54%
C30	0.97	180	23	157	87%	0.84	3/10/2014 - 3/27/2014	3/28/2014	1208.54	NA	390	7.3	1.23E-02	NA	3.95E-03	7.40E-05	4.47	NA	1.44	0.03	18%	12%	22%
BG-1	0.68	180	64	116	64%	0.44	3/10/2014 - 3/27/2014	3/28/2014	266.09	NA	91	9.3	1.39E-03	NA	4.75E-04	4.86E-05	0.51	NA	0.17	0.02	2%	8%	3%
TOTAL=	**8.32**											**TOTAL=**	**6.88E-02**		**1.80E-02**	**6.38E-04**	**25.11**		**6.56**	**0.25**	**100%**	**100%**	**100%**
5/1/2014	**through**	**10/31/2014**																					
B4DR	0.15	183	92	91	50%	0.08	9/15/2014-10/13/2014	10/13/2014	2916.21	NA	1100	85	2.66E-03	NA	1.00E-03	7.77E-05	0.97	NA	0.37	0.03	4%	6%	3%
C2D	1.57	183	0	183	100%	1.57	9/29/2014-10/13/2014	10/13/2014	116.43	NA	89	1.8	2.20E-03	NA	1.68E-03	3.40E-05	0.80	NA	0.61	0.01	3%	3%	6%
C4D	0.39	183	38	145	79%	0.31	8/4/2014-10/13/2014	10/14/2014	438.10	NA	170	42	1.62E-03	NA	6.29E-04	1.55E-04	0.59	NA	0.23	0.06	3%	13%	2%
C18D	0.75	183	10	173	95%	0.70	9/29/2014-10/13/2014	10/13/2014	975.24	NA	95	29	8.25E-03	NA	8.03E-04	2.45E-04	3.01	NA	0.29	0.09	13%	21%	3%
C19D	1.43	183	0	183	100%	1.43	9/29/2014-10/13/2014	10/13/2014	233.60	NA	220	6.4	4.02E-03	NA	3.79E-03	1.10E-04	1.47	NA	1.38	0.04	6%	9%	13%
C20D	3.31	183	2	181	99%	3.27	9/29/2014-10/13/2014	10/14/2014	662.24	NA	420	7.2	2.60E-02	NA	1.65E-02	2.83E-04	9.50	NA	6.02	0.10	41%	24%	55%
C30	1.44	183	0	183	100%	1.44	9/29/2014-10/13/2014	10/13/2014	869.36	NA	220	11	1.51E-02	NA	3.81E-03	1.91E-04	5.50	NA	1.39	0.07	24%	16%	13%
BG-1	0.98	183	18	165	90%	0.88	9/29/2014-10/13/2014	10/14/2014	329.29	NA	190	9.4	3.49E-03	NA	2.02E-03	9.97E-05	1.27	NA	0.74	0.04	6%	8%	7%
TOTAL=	**10.03**											**TOTAL=**	**6.33E-02**		**3.02E-02**	**1.20E-03**	**23.11**		**11.03**	**0.44**	**100%**	**100%**	**100%**
11/1/2014	**through**	**4/30/2015**																					
B4DR	0.23	180	31	146	81%	0.19	1/22/15-3/26/15	3/30/2015	1341.00	NA	110	210	3.00E-03	NA	2.46E-04	4.69E-04	1.09	NA	0.09	0.17	3%	28%	1%
C2D	1.16	180	0	180	100%	1.16	3/12/15-3/26/15	3/30/2015	67.77	NA	19	2	9.42E-04	NA	2.64E-04	2.78E-05	0.34	NA	0.10	0.01	1%	2%	1%
C4D	0.90	180	0	180	100%	0.90	3/12/15-3/26/15	3/30/2015	1293.67	NA	54	31	1.39E-02	NA	5.82E-04	3.34E-04	5.09	NA	0.21	0.12	15%	20%	2%
C18D	1.19	180	0	180	100%	1.19	3/12/15-3/26/15	3/30/2015	3052.27	NA	77	21	4.34E-02	NA	1.10E-03	2.99E-04	15.85	NA	0.40	0.11	46%	18%	4%
C19D	1.04	180	0	180	100%	1.04	3/12/15-3/26/15	3/30/2015	169.14	NA	160	7.8	2.12E-03	NA	2.01E-03	9.78E-05	0.77	NA	0.73	0.04	2%	6%	8%
C20D	3.38	180	0	180	100%	3.38	3/12/15-3/26/15	3/30/2015	423.20	NA	400	5.2	1.72E-02	NA	1.62E-02	2.11E-04	6.26	NA	5.92	0.08	18%	13%	63%
C30	1.13	180	0	180	100%	1.13	3/12/15-3/26/15	3/30/2015	892.53	NA	330	8.6	1.21E-02	NA	4.48E-03	1.17E-04	4.42	NA	1.63	0.04	13%	7%	17%
BG-1	0.61	180	10	170	94%	0.57	3/12/15-3/26/15	3/30/2015	329.82	NA	140	16	2.27E-03	NA	9.62E-04	1.10E-04	0.83	NA	0.35	0.04	2%	7%	4%
TOTAL=	**9.63**											**TOTAL=**	**9.49E-02**		**2.58E-02**	**1.66E-03**	**34.65**		**9.43**	**0.61**	**100%**	**100%**	**100%**
5/1/2015	**through**	**10/31/2015**																					
B4DR	0.14	183	0	183	100%	0.14	7/20/15-9/21/15	9/30/2015	2099.39	NA	82	95	3.52E-03	NA	1.37E-04	1.59E-04	1.28	NA	0.05	0.06	5%	18%	1%
C2D	0.86	183	0	183	100%	0.86	9/08/15-9/21/15	9/30/2015	28.28	NA	12	1.4	2.92E-04	NA	1.24E-04	1.44E-05	0.11	NA	0.05	0.01	0%	2%	1%
C4D	1.25	183	7	176	96%	1.20	9/08/15-9/21/15	9/30/2015	167.13	NA	130	6.4	2.40E-03	NA	1.87E-03	9.20E-05	0.88	NA	0.68	0.03	3%	10%	7%
C18D	0.72	183	0	183	100%	0.72	9/08/15-9/21/15	9/30/2015	3498.40	NA	71	18	3.02E-02	NA	6.14E-04	1.56E-04	11.04	NA	0.22	0.06	43%	17%	2%
C19D	0.93	183	0	183	100%	0.93	9/08/15-9/21/15	9/30/2015	131.23	NA	120	5.2	1.47E-03	NA	1.35E-03	5.83E-05	0.54	NA	0.49	0.02	2%	6%	5%
C20D	3.33	183	3	180	98%	3.28	9/08/15-9/21/15	9/30/2015	376.76	NA	360	5.9	1.48E-02	NA	1.42E-02	2.32E-04	5.41	NA	5.17	0.08	21%	26%	55%
C30	1.29	183	26	157	86%	1.11	9/08/15-9/21/15	9/30/2015	731.10	NA	320	10	9.72E-03	NA	4.26E-03	1.33E-04	3.55	NA	1.55	0.05	14%	15%	16%
BG-1	0.54	183	3	180	98%	0.53	9/08/15-9/21/15	9/30/2015	1132.90	NA	510	10	7.22E-03	NA	3.25E-03	6.38E-05	2.64	NA	1.19	0.02	10%	7%	13%
TOTAL=	**9.06**											**TOTAL=**	**6.97E-02**		**2.58E-02**	**9.08E-04**	**25.45**		**9.40**	**0.33**	**100%**	**100%**	**100%**
11/1/2015	**through**	**4/30/2016**																					
B4DR	0.05	181	0	106	59%	0.03	3/24/16-4/7/16	4/7/2016	429.48	NA	41	180	1.51E-04	NA	1.44E-05	6.33E-05	0.06	NA	0.01	0.02	0%	2%	0%
C2D	1.22	181	0	181	100%	1.22	3/24/16-4/7/16	4/7/2016	25.61	NA	13	2.3	3.75E-04	NA	1.90E-04	3.37E-05	0.14	NA	0.07	0.01	1%	1%	1%
C4D	1.04	181	7	169	93%	0.97	3/24/16-4/7/16	4/7/2016	1238.14	NA	60	150	1.44E-02	NA	6.99E-04	1.75E-03	5.27	NA	0.26	0.64	26%	67%	4%
C18D	0.63	181	0	181	100%	0.63	3/24/16-4/7/16	4/7/2016	2262.80	NA	69	19	1.71E-02	NA	5.22E-04	1.44E-04	6.25	NA	0.19	0.05	31%	6%	3%
C19D	1.08	181	0	176	97%	1.05	3/24/16-4/7/16	4/7/2016	242.39	NA	230	7.7	3.06E-03	NA	2.90E-03	9.71E-05	1.12	NA	1.06	0.04	6%	4%	17%
C20D	3.31	181	3	180	99%	3.29	3/24/16-4/7/16	4/7/2016	240.53	NA	220	4.4	9.51E-03	NA	8.69E-03	1.74E-04	3.47	NA	3.17	0.06	17%	7%	50%
C30	0.94	181	26	180	99%	0.93	3/24/16-4/7/16	4/7/2016	583.38	NA	200	6.7	6.55E-03	NA	2.24E-03	7.52E-05	2.39	NA	0.82	0.03	12%	3%	13%
BG-1	0.73	181	3	177	98%	0.72	3/28/16-4/11/16	4/12/2016	384.58	NA	260	31	3.31E-03	NA	2.24E-03	2.67E-04	1.21	NA	0.82	0.10	6%	10%	13%
TOTAL=	**9.00**											**TOTAL=**	**5.45E-02**		**1.75E-02**	**2.60E-03**	**19.91**		**6.40**	**0.95**	**100%**	**100%**	**100%**

Table 5
Individual LFExS Well Mass Removal Estimate
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

Well	Avg Flow prior to sample (GPM)	Days in Period	(hide) Days System Down	Days of System Operation	Percent Operation (%)	Adjusted Flow Rate (GPM)	Average Flow Period	Sample Date	Total Detected VOC Concentration (Revised analyte list) (ug/l)	Total Detected VOC Concentration (Historical analyte list) (ug/l)	1,4-Dioxane Concentration (ug/l)	BCEE Concentration (ug/l)	Adjusted TVOC Mass Removal (Revised analyte list) (lb/day)	Adjusted TVOC Mass Removal (Historical analyte list) (lb/day)	Adjusted 1,4-Dioxane Mass Removal (lb/day)	Adjusted BCEE Mass Removal (lb/day)	Adjusted TVOC Mass Removal (Revised analyte list) (lb/year)	Adjusted TVOC Mass Removal (Historical analyte list) (lb/year)	Adjusted 1,4-Dioxane Mass Removal (lb/year)	Adjusted BCEE Mass Removal (lb/year)	TVOC Mass Removal (% of Total)	BCEE Mass Removal (% of Total)	1,4-Dioxane Mass Removal (% of Total)
5/1/2016	**through**	**10/31/2016**																					
B4DR	0.19	183	101	82	45%	0.09	9/15/16-9/29/16	9/30/2016	940.27	NA	290	15	9.81E-04	NA	3.03E-04	1.56E-05	0.36	NA	0.11	0.01	3%	1%	3%
C2D	1.04	183	11	172	94%	0.98	9/15/16-9/29/16	9/30/2016	89.18	NA	43	3.1	1.05E-03	NA	5.05E-04	3.64E-05	0.38	NA	0.18	0.01	3%	3%	5%
C4D	0.88	183	0	183	100%	0.88	9/15/16-9/29/16	9/30/2016	1220.77	NA	58	76	1.28E-02	NA	6.10E-04	7.99E-04	4.69	NA	0.22	0.29	37%	72%	6%
C18D	0.52	183	0	183	100%	0.52	9/15/16-9/29/16	9/30/2016	986.03	NA	290	13	6.15E-03	NA	1.81E-03	8.11E-05	2.25	NA	0.66	0.03	18%	7%	18%
C19D	0.38	183	0	183	100%	0.38	9/29/16-10/13/16	10/13/2016	171.72	NA	160	7.9	7.85E-04	NA	7.32E-04	3.61E-05	0.29	NA	0.27	0.01	2%	3%	8%
C20D	0.90	183	14	169	92%	0.83	9/19/16-10/3/16	10/4/2016	324.39	NA	310	4.0	3.25E-03	NA	3.10E-03	4.00E-05	1.18	NA	1.13	0.01	9%	4%	32%
C30	0.79	183	0	183	100%	0.79	9/15/16-9/29/16	9/30/2016	920.70	NA	250	9.3	8.71E-03	NA	2.36E-03	8.79E-05	3.18	NA	0.86	0.03	25%	8%	24%
BG-1	0.53	183		183	100%	0.53	9/15/16-9/29/16	9/30/2016	90.93	NA	59	2.3	5.82E-04	NA	3.78E-04	1.47E-05	0.21	NA	0.14	0.01	2%	1%	4%
TOTAL=	**5.23**											**TOTAL=**	**3.43E-02**		**9.80E-03**	**1.11E-03**	**12.54**		**3.57**	**0.40**	**100%**	**100%**	**100%**
11/1/2016	**through**	**4/30/2017**																					
B4DR	0.11	180	4	176	98%	0.11	3/13/17-3/27/17	3/27/2017	4369.60	NA	140	13	5.55E-03	NA	1.78E-04	1.65E-05	2.02	NA	0.06	0.01	8%	2%	1%
C2D	0.04	180	26	154	86%	0.03	3/13/17-3/27/17	3/27/2017	76.42	NA	27	1.7	2.84E-05	NA	1.00E-05	6.32E-07	0.01	NA	0.00	0.00	0%	0%	0%
C4D	0.21	180	11	169	94%	0.20	3/13/17-3/27/17	3/27/2017	677.60	NA	82	95	1.59E-03	NA	1.93E-04	2.23E-04	0.58	NA	0.07	0.08	2%	27%	1%
C18D	0.02	180	68	112	62%	0.01	3/13/17-3/27/17	3/27/2017	3730.78	NA	150	10	5.81E-04	NA	2.33E-05	1.56E-06	0.21	NA	0.01	0.00	1%	0%	0%
C19D	0.08	180	7	173	96%	0.08	3/13/17-3/27/17	3/27/2017	199.09	NA	140	24	1.87E-04	NA	1.31E-04	2.25E-05	0.07	NA	0.05	0.01	0%	3%	1%
C20D	3.85	180	0	180	100%	3.85	3/13/17-3/27/17	3/29/2017	285.46	NA	230	6.6	1.32E-02	NA	1.06E-02	3.05E-04	4.81	NA	3.88	0.11	20%	36%	72%
C30	0.20	180	19	161	89%	0.18	3/13/17-3/27/17	3/27/2017	3193.07	NA	140	9.2	6.84E-03	NA	3.00E-04	1.97E-05	2.50	NA	0.11	0.01	10%	2%	2%
BG-1	4.54	180	0	180	100%	4.54	3/13/17-3/27/17	3/27/2017	716.32	NA	60	4.6	3.90E-02	NA	3.27E-03	2.51E-04	14.25	NA	1.19	0.09	58%	30%	22%
TOTAL=	**9.04**											**TOTAL=**	**6.70E-02**		**1.47E-02**	**8.39E-04**	**24.45**		**5.37**	**0.31**	**100%**	**100%**	**100%**
5/1/2017	**through**	**10/31/2017**																					
B4DR	0.06	183	22	161	88%	0.05	9/28/17-10/12/17	10/12/2017	2683.20	NA	30	16	1.73E-03	NA	1.93E-05	1.03E-05	0.63	NA	0.01	0.00	2%	1%	0%
C2D	0.15	183	18	165	90%	0.13	9/28/17-10/12/17	10/12/2017	247.66	NA	150	16.0	3.94E-04	NA	2.38E-04	2.54E-05	0.14	NA	0.09	0.01	0%	1%	1%
C4D	0.00	183	144	39	21%	0.00	9/28/17-10/12/17	10/12/2017	332.53	NA	79	94	0.00E+00	NA	0.00E+00	0.00E+00	0.00	NA	0.00	0.00	0%	0%	0%
C18D	0.41	183	5	178	97%	0.40	9/21/17-10/5/17	10/9/2017	4952.20	NA	120	16	2.36E-02	NA	5.72E-04	7.63E-05	8.62	NA	0.21	0.03	28%	4%	2%
C19D	0.76	183	0	183	100%	0.76	9/25/17-10/9/2017	10/9/2017	250.11	NA	210	17	2.29E-03	NA	1.92E-03	1.56E-04	0.84	NA	0.70	0.06	3%	8%	8%
C20D	3.67	183	0	183	100%	3.67	9/25/17-10/9/17	10/9/2017	432.56	NA	410	32.0	1.90E-02	NA	1.81E-02	1.41E-03	6.95	NA	6.59	0.51	22%	69%	75%
C30	0.54	183	8	175	96%	0.52	9/25/17-10/9/17	10/9/2017	4050.70	NA	200	12.0	2.53E-02	NA	1.25E-03	7.48E-05	9.22	NA	0.46	0.03	30%	4%	5%
BG-1	3.52	183	0	183	100%	3.52	9/21/17-10/5/17	10/9/2017	293.44	NA	45	7.1	1.24E-02	NA	1.90E-03	3.00E-04	4.53	NA	0.69	0.11	15%	15%	8%
TOTAL=	**9.11**											**TOTAL=**	**8.47E-02**		**2.40E-02**	**2.05E-03**	**30.93**		**8.75**	**0.75**	**100%**	**100%**	**100%**
11/1/2017	**through**	**4/30/2018**																					
B4DR	0.14	180	21	159	88%	0.12	3/30/18-4/13/18	4/13/2018	3513.50	NA	41	120	5.20E-03	NA	6.07E-05	1.78E-04	1.90	NA	0.02	0.06	19%	13%	0%
C2D	0.16	180	50	130	72%	0.12	3/30/18-4/13/18	4/13/2018	73.88	NA	25	2.1	1.05E-04	NA	3.54E-05	2.97E-06	0.04	NA	0.01	0.00	0%	0%	0%
C4D	0.18	180	57	123	68%	0.12	3/30/18-4/13/18	4/13/2018	451.50	NA	72	36	6.66E-04	NA	1.06E-04	5.31E-05	0.24	NA	0.04	0.02	2%	4%	1%
C18D	NA	180	101	79	44%	NA	3/30/18-4/13/18	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
C19D	0.28	180	10	170	94%	0.27	3/30/18-4/13/18	4/13/2018	332.06	NA	250	30	1.06E-03	NA	7.97E-04	9.57E-05	0.39	NA	0.29	0.03	4%	7%	6%
C20D	4.89	180	0	180	100%	4.89	3/30/18-4/13/18	4/13/2018	210.61	NA	180	14.0	1.24E-02	NA	1.06E-02	8.21E-04	4.51	NA	3.85	0.30	45%	59%	80%
C30	0.07	180	48	132	73%	0.05	3/30/18-4/13/18	4/13/2018	3186.84	NA	40	130.0	2.05E-03	NA	2.57E-05	8.35E-05	0.75	NA	0.01	0.03	7%	6%	0%
BG-1	4.10	180	0	180	100%	4.10	3/30/18-4/13/18	4/13/2018	121.14	NA	32	3.4	5.96E-03	NA	1.58E-03	1.67E-04	2.18	NA	0.57	0.06	22%	12%	12%
TOTAL=	**9.82**											**TOTAL=**	**2.74E-02**		**1.32E-02**	**1.40E-03**	**10.01**		**4.79**	**0.50**	**100%**	**100%**	**100%**

Table 5
Individual LFExS Well Mass Removal Estimate
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

Prepared by:	MBS
Checked by:	BPC
Reviewed by:	TAM

Notes:
1) GPM = gallons per minute
2) VOC = volatile organic compound
3) ug/l = micrograms per liter (ppb)
4) BCEE = bis(2-chloroethyl) ether
5) TVOC = total volatile organic compounds
6) lb/day = pounds per day
7) lb/year = pounds per year
8) 'Average flow prior to sample' is calculated over an approximate two-week period with variability due to when totalizer readings are available, with the exception of the following:
- '5/4/2009 through 10/31/2009' period which is calculated over the entire duration due to limited available totalizer data
- '5/1/2011 through 10/31/2011' period for BG-1 is based on flow rate early in the semi-annual monitoring period prior to pump failure in late September 2011.
- '5/1/2012 through 10/31/2012' period for B4DR and C4D are based on a flow rate calculated over a period of approximately one-month due to pump shutdowns in the two-week period skewing the flow rate
- '5/1/2013 through 10/31/2013' period for C30 is based on a flow rate calculated over a period of approximately one-month due to pump shutdowns in the two-week period skewing the flow rate.
- '10/3/2013 through 3/27/2014' period for B4DR is based upon a flow rate calculated over a period of approximately five months due to pump shutdown.
- '4/28/2014 through 9/29/2014' period for C4D is based upon a flow rate calculated over a period of approximately four months due to pump shutdowns in the two-week period skewing the flow rate.
9) Adjusted flow rate is calculated using flow rate prior to sample collection and percent of system operation.
10) TVOC and BCEE mass removal rates are calculated using adjusted flow rates.
11) B4D was replaced by B4DR on January 19, 2012.
12) Total VOC prior to the April 2012 data is based on a historical VOC analyte list. Since that time, the analyte list was revised to include additional compounds, including 1,4-dioxane.
13) In April 2017, the VOC analyte list was revised to include 1,2,3-Trimethylbenzene, Dichlorofluoromethane and Indane.
14) C20D was brought online as an extraction well on September 27, 2012; however, was not fully operational until December 4, 2012.

Table 6
Well PW-1(U) Mass Removal Estimate
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

		System Startup																		
	Sample Month		**Nov-04**	**Jan-05**	**May-05**	**Jul-05**	**Oct-05**	**Apr-06**	**Jul-06**	**Oct-06**	**Jan-07**	**May-07**	**Oct-07**	**Jan-08**	**Apr-08**	**Jul-08**	**Oct-08**	**Jan-09**	**Apr-09**	**Jul-09**
	Sample Date		**11/3/2004**	**1/31/2005**	**5/2/2005**	**7/20/2005**	**10/27/2005**	**4/27/2006**	**7/11/2006**	**10/13/2006**	**1/10/2007**	**5/7/2007**	**10/1/2007**	**1/1/2008**	**4/1/2008**	**7/1/2008**	**10/1/2008**	**1/1/2009**	**4/1/2009**	**7/13/2009**
	Sampler		**Golder**	**Golder**	**Golder**	**Golder**	**Golder**	**Golder**	**Golder**	**Golder**	**Golder**	**Golder**	**Ruth**	**Ruth**	**Ruth**	**Ruth**	**Ruth**	**Ruth**	**Ruth**	**Golder**
Date of PW-1(U) totalizer reading		**10/28/2004**	11/5/2004	2/2/2005	5/2/2005	7/21/2005	11/3/2005	4/27/2006	7/10/2006	10/12/2006	1/10/2007	4/26/2007	10/1/2007	1/8/2008	4/2/2008	7/15/2008	9/25/2008	1/5/2009	3/25/2009	7/12/2009
PW-1(U) Totalizer Reading (NCC)	gal	**0**	189257	1824351	3775923	7129794	11076040	16932640	20085882	23875940	26443467	30852010	38824424	43129074	47051554	50533666	53833997	57254018	60456235	64458411
PW-1(U) Totalizer Reading (DS&G)	gal		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gallons pumped since last sample	gal	**0**	189257	1635094	1951572	3353871	3946246	5856600	3153242	3790058	2567527	4408543	7972414	4304650	3922480	3482112	3300331	3420021	3202217	4002176
Days since last sample	days	**0**	8	89	89	80	105	175	74	94	90	106	158	99	85	104	72	102	79	109
Average Flow Rate Since Last Sample	gpm	**0**		12.8	15.2	29.1	26.1	23.2	29.6	28.0	19.8	28.9	35.0	30.2	32.1	23.3	31.8	23.3	28.2	25.5
Targeted Volatile Organic Compounds																				
Benzene	ug/l	NA	150	350	230	150	180	250	260	260	240	250	220	140	160	140	81	120	130	110
Toluene	ug/l	NA	18	25	170	170	270	510	560	570	460	490	420	400	490	220	210	260	300	290
Ethylbenzene	ug/l	NA	95	150	160	85	100	120	140	140	110	96	63	59	75	39	41	47	66	64
Xylenes, Total	ug/l	NA	230	530	460	320	360	360	340	360	310	280	230	180	230	140	130	140	190	170
1,4-Dioxane	ug/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Targeted VOCs (BTEX)	ug/l	NA	493	1055	1020	725	910	1240	1300	1330	1120	1116	933	779	955	539	462	567	686	634
Total Analyzed VOCs (Total VOCs)	ug/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimated Mass Removal (BTEX)	*lb/day*	NA	*0.00*	*0.16*	*0.19*	*0.25*	*0.29*	*0.35*	*0.46*	*0.45*	*0.27*	*0.39*	*0.39*	*0.28*	*0.37*	*0.15*	*0.18*	*0.16*	*0.23*	*0.19*
Estimated Mass Removal (BTEX)	*lb/quarter*	NA	*0*	*15*	*17*	*23*	*26*	*31*	*42*	*40*	*24*	*35*	*35*	*25*	*33*	*14*	*16*	*14*	*21*	*17*
Estimated Mass Removal (BTEX)	***lb/year***	NA	***0***	***58***	***67***	***91***	***103***	***125***	***166***	***161***	***96***	***139***	***141***	***102***	***132***	***54***	***64***	***57***	***83***	***70***
Estimated Mass Removal (1,4-Dioxane)	*lb/day*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimated Mass Removal (1,4-Dioxane)	*lb/quarter*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimated Mass Removal (1,4-Dioxane)	***lb/year***	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimated Mass Removal (Total VOC)	***lb/day***	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimated Mass Removal (Total VOC)	***lb/quarter***	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Estimated Mass Removal (Total VOC)	***lb/year***	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Targeted Semi-Volatile Organic Compounds																				
Bis(2-chloroethyl) Ether	ug/l	NA	74	96	24	28	43	44	48	45	37	44	40	31	37	43	31	34	27	31
Estimated Mass Removal	*lb/day*	NA	*0.000*	*0.015*	*0.004*	*0.010*	*0.013*	*0.012*	*0.017*	*0.015*	*0.009*	*0.015*	*0.017*	*0.011*	*0.014*	*0.012*	*0.012*	*0.010*	*0.009*	*0.009*
Estimated Mass Removal	*lb/quarter*	NA	*0.0*	*1.3*	*0.39*	*0.88*	*1.2*	*1.1*	*1.5*	*1.4*	*0.8*	*1.4*	*1.5*	*1.0*	*1.3*	*1.1*	*1.1*	*0.9*	*0.82*	*0.9*
Estimated Mass Removal	***lb/year***	NA	***0.0***	***5.3***	***1.6***	***3.5***	***4.8***	***4.4***	***6.1***	***5.4***	***3.2***	***5.5***	***6.1***	***4.0***	***5.1***	***4.3***	***4.3***	***3.4***	***3.3***	***3.4***

Table 6
Well PW-1(U) Mass Removal Estimate
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

	Sample Month	Oct-09	TAM	Jul-10	Oct-10	Apr-11	Oct-11	Feb-12	Apr-12	Oct-12	Mar-13	Oct-13	Apr-14	Oct-14	Mar-15	Oct-15	Apr-16	Sep-16	Apr-17	Oct-17	Apr-18
	Sample Date	**10/13/2009**	**4/14/2010**	**7/8/2010**	**10/13/2010**	**4/11/2011**	**10/6/2011**	**2/23/2012**	**4/4/2012**	**10/2/2012**	**3/19/2013**	**9/30/2013**	**4/2/2014**	**9/30/2014**	**3/30/2015**	**9/28/2015**	**4/7/2016**	**9/30/2016**	**4/11/2017**	**10/9/2017**	**4/12/2018**
	Sampler	**Golder**	**Golder**	**Golder**	**Golder**	**Golder**	**Golder**	**Golder**	**Golder**	**Golder**	**Golder**	**Golder**	**Golder**	**Golder**	**Golder**	**Golder**	**Golder**	**Golder**	**Golder**	**Golder**	**Golder**
Date of PW-1(U) totalizer reading		10/12/2009	4/12/2010	7/15/2010	10/13/2010	4/26/2011	10/6/2011	2/17/2012	4/16/2012	10/4/2012	4/17/2013	9/25/2013	4/2/2014	9/30/2014	3/30/2015	9/30/2015	4/7/2016	9/29/2016	4/11/2017	10/9/2017	4/12/2018
PW-1(U) Totalizer Reading (NCC)	gal	67732261	74703485	78349021	81392565	87701433	93961997	98241721	100496869	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PW-1(U) Totalizer Reading (DS&G)	gal	NA	NA	NA	NA	NA	NA	46351520	48266516	753247	7393803	13670142	9439024	19286181	28467313	38013099	47798444	56115498	65482679	74114433	82206929
Gallons pumped since last sample	gal	3273850	6971224	3645536	3043544	6308868	6260564	4279724	2255148	4837281	6640556	6276339	9439024	9847157	9181132	9545786	9785345	8317054	9367181	8631754	8092496
Days since last sample	days	92	182	94	90	195	163	134	59	183	195	161	167	181	181	184	190	175	194	181	185
Average Flow Rate Since Last Sample	gpm	24.7	26.6	26.9	23.5	22.5	26.7	22.2	26.5	18.4	23.7	27.1	39.3	37.8	35.2	36.0	35.8	33.0	33.5	33.1	30.4
Targeted Volatile Organic Compounds																					
Benzene	ug/l	120	96	88	93	58	90	61	74	50	38	38	35	37	30	28	21	22	14	14	11
Toluene	ug/l	250	170	180	150	27	67.5	75	98	65	24	15	2.4	1.5	ND	0.29	0.33	0.68	ND	ND	ND
Ethylbenzene	ug/l	59	60	62	70	19	35.6	39	56	49	23	33	24	19	19	11	20	8.4	4.3	2.3	2.8
Xylenes, Total	ug/l	170	150	160	170	50	102	86	120	110	48	63	47	34	42	31	47	25	15	11	15
1,4-Dioxane	ug/l	NA	NA	NA	NA	NA	NA	NA	95	68	56	68	45	79	67	79	60	61	65	100	73
Total Targeted VOCs (BTEX)	ug/l	599	476	490	483	154	295	261	348	274	133	149	108	92	91	70	88	56	33	27	29
Total Analyzed VOCs (Total VOCs)	ug/l	NA	NA	NA	NA	NA	NA	NA	521	411	227	265	192	204	201	181	203	155	130[13]	157	134
Estimated Mass Removal (BTEX)	*lb/day*	*0.18*	*0.15*	*0.16*	*0.14*	*0.04*	*0.09*	*0.07*	*0.11*	*0.06*	*0.04*	*0.05*	*0.05*	*0.04*	*0.04*	*0.03*	*0.04*	*0.02*	*0.01*	*0.01*	*0.01*
Estimated Mass Removal (BTEX)	*lb/quarter*	*16*	*14*	*14*	*12*	*4*	*8*	*6*	*10*	*5*	*3*	*4*	*5*	*4*	*3*	*3*	*3*	*2*	*1*	*1*	*1*
Estimated Mass Removal (BTEX)	***lb/year***	***64***	***55***	***57***	***49***	***15***	***34***	***25***	***40***	***22***	***14***	***18***	***19***	***15***	***14***	***11***	***14***	***8.1***	***4.8***	***3.9***	***3.9***
Estimated Mass Removal (1,4-Dioxane)	*lb/day*	NA	NA	NA	NA	NA	NA	NA	*0.03*	*0.01*	*0.02*	*0.02*	*0.02*	*0.04*	*0.03*	*0.03*	*0.03*	*0.02*	*0.03*	*0.04*	*0.03*
Estimated Mass Removal (1,4-Dioxane)	*lb/quarter*	NA	NA	NA	NA	NA	NA	NA	*3*	*1*	*1*	*2*	*2*	*3*	*3*	*3*	*2*	*2*	*2*	*4*	*2*
Estimated Mass Removal (1,4-Dioxane)	***lb/year***	NA	NA	NA	NA	NA	NA	NA	***11***	***5.5***	***5.8***	***8.1***	***7.7***	***13***	***10***	***12***	***9.4***	***8.8***	***9.5***	***14.5***	***9.7***
Estimated Mass Removal (Total VOC)	***lb/day***	NA	NA	NA	NA	NA	NA	NA	*0.17*	*0.09*	*0.06*	*0.09*	*0.09*	*0.09*	*0.09*	*0.08*	*0.09*	*0.06*	*0.05*	*0.06*	*0.05*
Estimated Mass Removal (Total VOC)	***lb/quarter***	NA	NA	NA	NA	NA	NA	NA	*15*	*8*	*6*	*8*	*8*	*8*	*8*	*7*	*8*	*6*	*5*	*6*	*4*
Estimated Mass Removal (Total VOC)	***lb/year***	NA	NA	NA	NA	NA	NA	NA	***61***	***33***	***24***	***31***	***33***	***34***	***31***	***29***	***32***	***22***	***19***	***23***	***18***
Targeted Semi-Volatile Organic Compounds																					
Bis(2-chloroethyl) Ether	ug/l	25	31	24	23	15	26	26	24	23	14	14	13	15	13	16	15	11	11	10	8.4
Estimated Mass Removal	*lb/day*	*0.007*	*0.010*	*0.008*	*0.006*	*0.004*	*0.008*	*0.007*	*0.008*	*0.005*	*0.004*	*0.005*	*0.006*	*0.007*	*0.005*	*0.007*	*0.006*	*0.004*	*0.004*	*0.004*	*0.003*
Estimated Mass Removal	*lb/quarter*	*0.67*	*0.9*	*0.70*	*0.58*	*0.36*	*0.75*	*0.62*	*0.69*	*0.46*	*0.36*	*0.41*	*0.55*	*0.61*	*0.49*	*0.62*	*0.58*	*0.39*	*0.40*	*0.36*	*0.28*
Estimated Mass Removal	***lb/year***	***2.7***	***3.6***	***2.8***	***2.3***	***1.5***	***3.0***	***2.5***	***2.8***	***1.8***	***1.5***	***1.7***	***2.2***	***2.5***	***2.0***	***2.5***	***2.4***	***1.6***	***1.6***	***1.5***	***1.1***

Table 6
Well PW-1(U) Mass Removal Estimate
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

Notes
1) lbs = pounds
2) gal = gallons
3) gpm = gallons per minute
4) VOC = volatile organic compounds
5) ug/l = micrograms per liter
6) NA= not applicable
7) NCC = New Castle County; operated extraction well PW-1(U) until October 15, 2012
8) DS&G = Delaware Sand and Gravel; operators of extraction well PW-1(U) since October 15, 2012
9) Targeted compounds excludes compounds that are not consistently detected
10) Historic PW-1(U) totalizer readings were provided to Golder on June 11, 2012 by Ruth; therefore, approximate flow rates were removed and historic mass removals were re-calculated. Prior calculations were based on a flow rate of 30 gpm
11) On September 9, 2012, a new totalizer was installed on PW-1(U). The last available totalizer reading prior to the change out was 52,350,550 gallons
12) On September 26, 2013, the power to the well PW-1(U) pump and totalizer were interrupted. The totalizer was reset and the equipment was restarted on October 17, 2013.
13) In April 2017, the VOC analyte list was revised to include 1,2,3-Trimethylbenzene, Dichlorofluoromethane and Indane.

Prepared by:	MBS
Checked by:	BPC
Reviewed by:	TAM

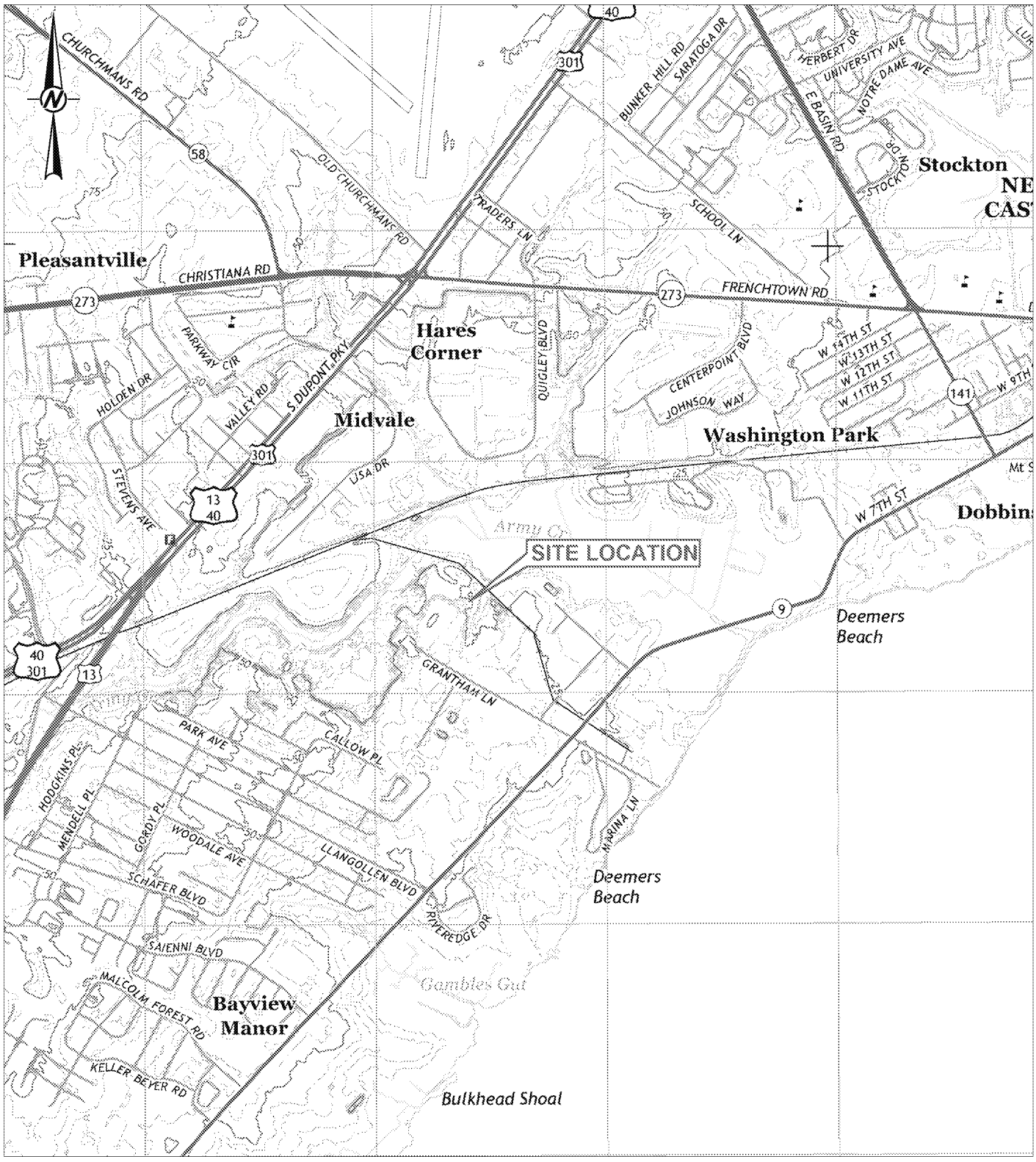
Table 7
Summary of Mass Removal Estimates
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

	PW-1(U) Mass Removal	DDA Combined LFExS Mass Removal	Individual LFExS Well Mass Removal
Period of Calculation	October 2017 - April 2018	November 2017 - April 2018	November 2017 - April 2018
TVOC Mass Removal Estimate	18 lb/year	4.48 lb/year*	10.01 lb/year
BCEE Mass Removal Estimate	1.1 lb/year	0.83 lb/year	0.50 lb/year
1,4-Dioxane Mass Removal Estimate	9.7 lb/year	N/A	4.79 lb/year
Average System Flow Rate	30.4 gpm	9.52 gpm	9.82 gpm
Notes	Mass removal calculated based on the sum of targeted VOCs and BCEE and an average flow rate.	Mass removal calculated based on the sum of targeted VOCs and BCEE from system effluent samples and the system extraction volume which is based on the difference between totalizer readings. System effluent samples are collected after the balancing tank; therefore, some VOC volatilization may occur. Calculated average flow rates are based on totalizer readings over a 6-month period including system down-time.	Mass removal calculated based on the sum of targeted VOCs and BCEE from individual well samples and average instantaneous flow rate for each well over a nearly one month period during almost continuous system operation. This calculation is intended as a comparison of mass removal by individual wells to the estimated total mass removed by the system based on the effluent sample results.

Notes:
1) LFExS = low-flow extraction system
2) lbs = pounds
3) gpm = gallons per minute
4) TVOC = total volatile organic compounds (based on target analyte list that includes 1,4-dioxane)
5) BCEE = bis(2-chloroethyl) ether
6) *does not include 1,4-dioxane in mass removal estimate

Prepared by: MBS 7/5/2018
Checked by: BPC 7/17/2018
Reviewed by: TAM 8/24/2018

Figures



REFERENCE(S)

1. BASE MAP TAKEN FROM USGS 7.5 MINUTE QUADRANGLE OF WILMINGTON SOUTH, DELAWARE, DATED 2014.

0 1000 2000
1" = 2000' FEET

CLIENT
DELAWARE SAND & GRAVEL SUPERFUND SITE
NEW CASTLE COUNTY, DELAWARE

PROJECT
SEMI-ANNUAL REPORT

CONSULTANT
GOLDER

YYYY-MM-DD	2018-08-30
DESIGNED	MBS
PREPARED	GLS
REVIEWED	BAR
APPROVED	TAM

TITLE
SITE LOCATION MAP

PROJECT NO	CONTROL	REV.	FIGURE
0136052.14	0001-001	0	1

Last Edited By: amorales Date: 2018-08-28 Time:9:18:33 AM | Printed By: GSantell Date: 2018-08-30 Time:2:29:39 PM
Path: \\mtlaurel\cadd\Projects\DelawareSand&Gravel\DS&G_NewCastleDelaware\99_PROJECTS\0136052.14_Monitoring\Reporting\0001-Semi-AnnualReport\02_PRODUCTION\DWG\ | File Name: 0136052.14-0001-002.dwg

REFERENCE(S)

1. AERIAL PHOTOGRAPH COURTESY OF © 2018 MICROSOFT CORPORATION, BING

0 400 800
1" = 800' FEET

CLIENT
DELAWARE SAND & GRAVEL SUPERFUND SITE
NEW CASTLE COUNTY, DELAWARE

PROJECT
SEMI-ANNUAL REPORT

CONSULTANT
GOLDER

YYYY-MM-DD	2018-08-30
DESIGNED	MBS
PREPARED	GLS
REVIEWED	BAR
APPROVED	TAM

TITLE
GENERAL SITE LAYOUT

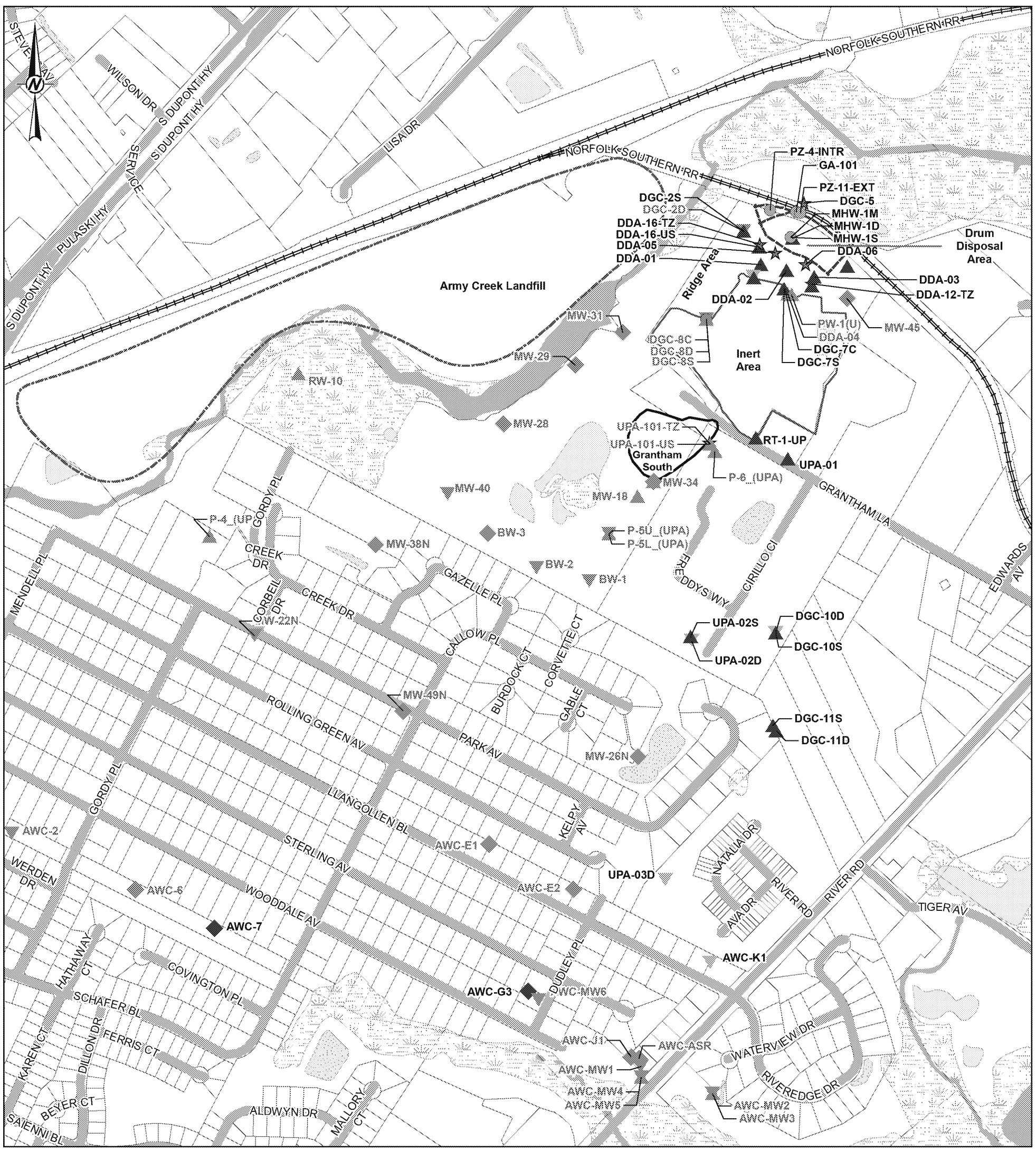
PROJECT NO.	CONTROL	REV.	FIGURE
0136052.14	0001-002	0	2

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A

1 in

0

ED_004821A_00011768-00052



LEGEND

- Well screened in UPCU Transition Zone included in DS&G's approved 2011 monitoring program
- Well screened in UPA Upper Sand included in DS&G's approved 2011 monitoring program
- Well screened in UPA Upper Sand not included in DS&G's approved 2011 monitoring program
- Well screened in UPA Lower Sand included in DS&G's approved 2011 monitoring program
- Well screened in UPA Lower Sand not included in DS&G's approved 2011 monitoring program
- Well screened across UPA Upper Sand and Lower Sand included in DS&G's approved 2011 monitoring program
- Well screened across UPA Upper Sand and Lower Sand not included in DS&G's approved 2011 monitoring program
- Well screened in Columbia Aquifer included in DS&G's approved 2011 monitoring program
- Well screened in Columbia Aquifer not included in DS&G's approved 2011 monitoring program

REFERENCE(S)

1. BASE DATA FROM NEW CASTLE COUNTY DELAWARE, DEPARTMENT OF LAND USE, "EPARCEL VIEW MAP" WEB SITE GIS DATA DOWNLOAD. DATA ACQUIRED 01/18/2012.

0 600 1,200

1 " = 600 feet Feet

CLIENT
DELAWARE SAND & GRAVEL SUPERFUND SITE
NEW CASTLE COUNTY, DELAWARE

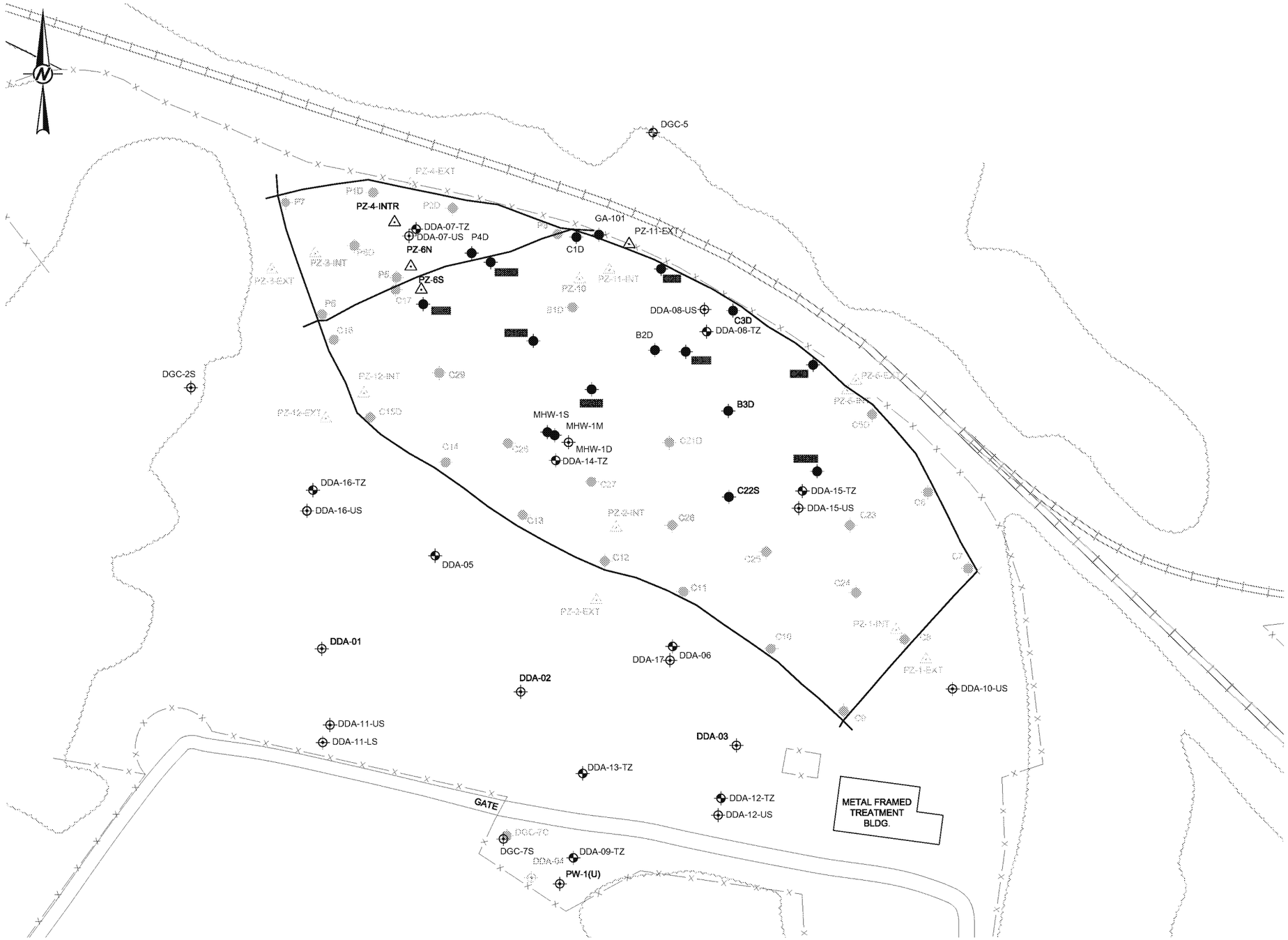
PROJECT
SEMI-ANNUAL REPORT

CONSULTANT
GOLDER

YYYY-MM-DD	2018-08-30
DESIGNED	MS
PREPARED	AM
REVIEWED	BAR
APPROVED	TAM

TITLE
DOWNGRADIENT UPA MONITORING LOCATIONS

PROJECT NO.	CONTROL	REV.	FIGURE
013-6052	0001-003	0	3



LEGEND

--X--------X--------X--------X	FENCELINE
	CENTERLINE OF SLURRY WALL AROUND DRUM DISPOSAL AREA
	RAILROAD
	DDA LOW-FLOW EXTRACTION SYSTEM (LFExS) WELL
DGC-2S	MONITORING WELL SCREENED IN UPPER POTOMAC AQUIFER
DDA-05	UPPER POTOMAC CONFINING UNIT TRANSITION ZONE MONITORING WELLS
PZ-10	DDA PIEZOMETERS
C1D	COLUMBIA MONITORING WELLS

NOTE(S)

1. LOCATIONS OF WELLS AND BORINGS ARE APPROXIMATE.

REFERENCE(S)

1. BASE MAP TAKEN FROM DIGITAL U.S.G.S. 7.5 MINUTE QUADRANGLES OF WILMINGTON SOUTH, DELAWARE/NEW JERSEY (DATED 1984), DELAWARE CITY, DELAWARE (DATED 1984), NEWARK EAST, DELAWARE (DATED 1984) AND SAINT GEORGES, DELAWARE (DATED 1984).

CLIENT
DELAWARE SAND & GRAVEL SUPERFUND SITE
NEW CASTLE COUNTY, DELAWARE

PROJECT
SEMI-ANNUAL REPORT

CONSULTANT
GOLDER

YYYY-MM-DD	2018-08-30
DESIGNED	MBS
PREPARED	GLS
REVIEWED	BAR
APPROVED	TAM

TITLE
LFExS WELLS AND DDA VICINITY MONITORING LOCATIONS

PROJECT NO.	CONTROL	REV.	FIGURE
0136052.14	0001-004	0	4

LEGEND

--X-------X-------X-------X--	FENCELINE
	CENTERLINE OF SLURRY WALL AROUND DRUM DISPOSAL AREA
	RAILROAD
	DDA LOW-FLOW EXTRACTION SYSTEM (LFExS) WELL
DGC-2S	MONITORING WELL SCREENED IN UPPER POTOMAC AQUIFER
DDA-05	UPPER POTOMAC CONFINING UNIT TRANSITION ZONE MONITORING WELLS
PZ-10	DDA PIEZOMETERS
C1D	COLUMBIA MONITORING WELLS
	INFERRED LFExS GROUNDWATER ELEVATION CONTOUR (ft-msl)
	APPROXIMATE EXTENT OF LFExS-INDUCED UPWARD VERTICAL GRADIENTS (SEE NOTE 2)
-1.95	LFExS GROUNDWATER ELEVATION (ft-msl) * INDICATES ELEVATIONS NOT INCLUDED IN CONTOURS
	NR = NOT RUNNING NM = NOT MEASURED

NOTE(S)

1. LOCATIONS OF WELLS AND BORING ARE BASED ON SURVEY BY TAYLOR WISEMAN & TAYLOR (REVISED 2012).
2. GROUNDWATER ELEVATION BASED ON APRIL 2018 MEASUREMENTS.
3. ft-msl = ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL

REFERENCE(S)

1. BASE MAP TAKEN FROM DIGITAL U.S.G.S. 7.5 MINUTE QUADRANGLES OF WILMINGTON SOUTH, DELAWARE/NEW JERSEY (DATED 1984), DELAWARE CITY, DELAWARE (DATED 1984), NEWARK EAST, DELAWARE (DATED 1984) AND SAINT GEORGES, DELAWARE (DATED 1984).

0 40 80
1" = 40' FEET

CLIENT
DELAWARE SAND & GRAVEL SUPERFUND SITE
NEW CASTLE COUNTY, DELAWARE

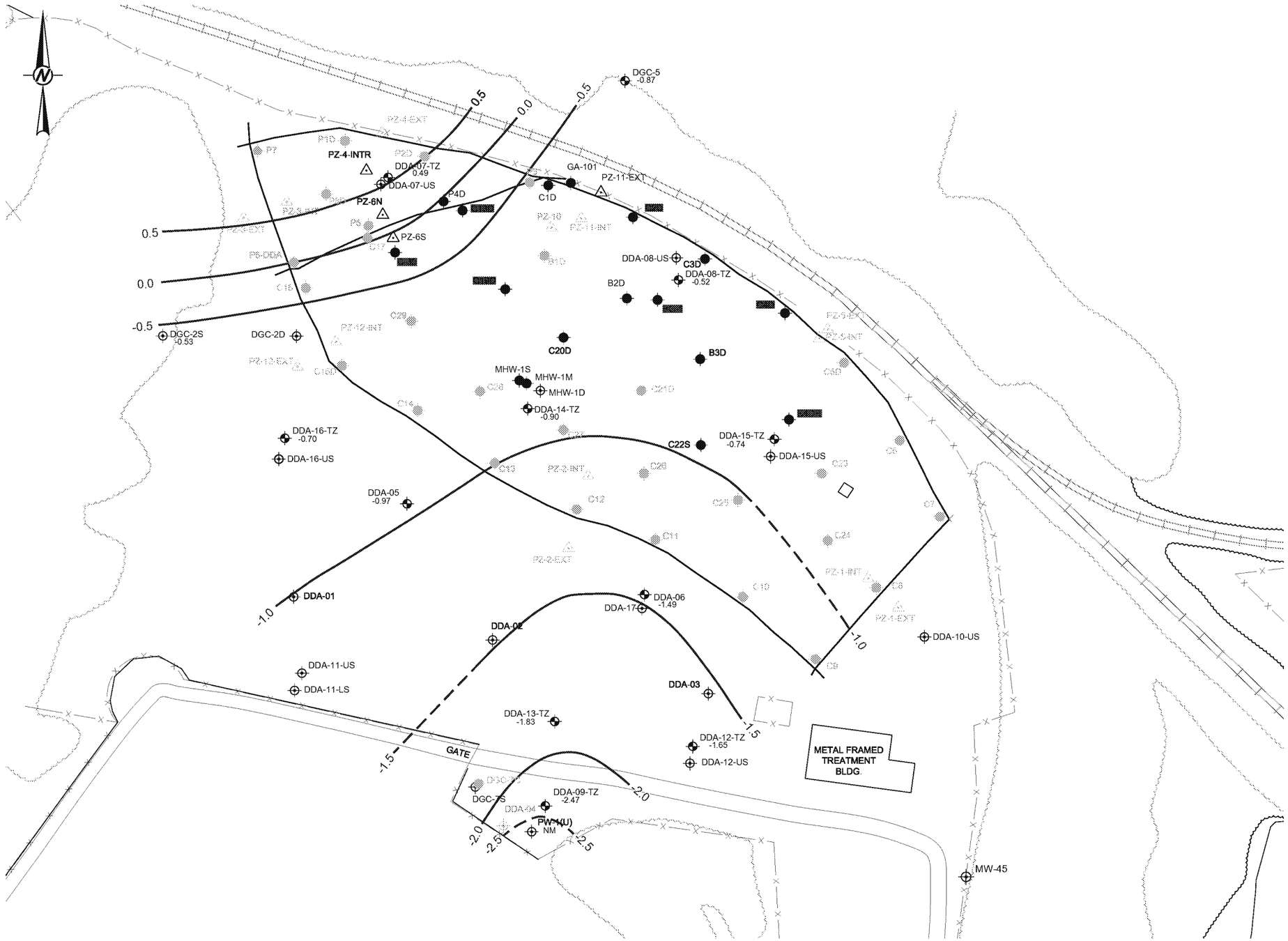
PROJECT
SEMI-ANNUAL REPORT

CONSULTANT
GOLDER

YYYY-MM-DD	2018-08-30
DESIGNED	MBS
PREPARED	GLS
REVIEWED	AA/BAR
APPROVED	TAM

TITLE
LFExS GROUNDWATER ELEVATION CONTOUR MAP, DDA, COLUMBIA - APRIL 2018

PROJECT NO.	CONTROL	REV.	FIGURE
0136052.14	0001-005	0	5



LEGEND

--X-------X-------X-------X	FENCELINE
	CENTERLINE OF SLURRY WALL AROUND DRUM DISPOSAL AREA
	RAILROAD
	DDA LOW-FLOW EXTRACTION SYSTEM (LFExS) WELL
DGC-2S	MONITORING WELL SCREENED IN UPPER POTOMAC AQUIFER
DDA-05	UPPER POTOMAC CONFINING UNIT TRANSITION ZONE MONITORING WELLS
PZ-10	DDA PIEZOMETERS
C1D	COLUMBIA MONITORING WELLS
-2.53	GROUNDWATER ELEVATION (ft-msl)
	GROUNDWATER ELEVATION CONTOURS (ft-msl) (DASHED WHERE INFERRED)

NOTE(S)

1. LOCATIONS OF WELLS AND BORING ARE BASED ON SURVEY BY TAYLOR WISEMAN & TAYLOR (REVISED 2012)
2. GROUNDWATER ELEVATION BASED ON APRIL 2018 MEASUREMENTS
3. * INDICATES DATA NOT INCLUDED IN COUNTOUR
4. FT-MSL = ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL

REFERENCE(S)

1. BASE MAP TAKEN FROM DIGITAL U.S.G.S. 7.5 MINUTE QUADRANGLES OF WILMINGTON SOUTH, DELAWARE/NEW JERSEY (DATED 1984), DELAWARE CITY, DELAWARE (DATED 1984), NEWARK EAST, DELAWARE (DATED 1984) AND SAINT GEORGES, DELAWARE (DATED 1984).

0 40 80
1" = 40' FEET

CLIENT
DELAWARE SAND & GRAVEL SUPERFUND SITE
NEW CASTLE COUNTY, DELAWARE

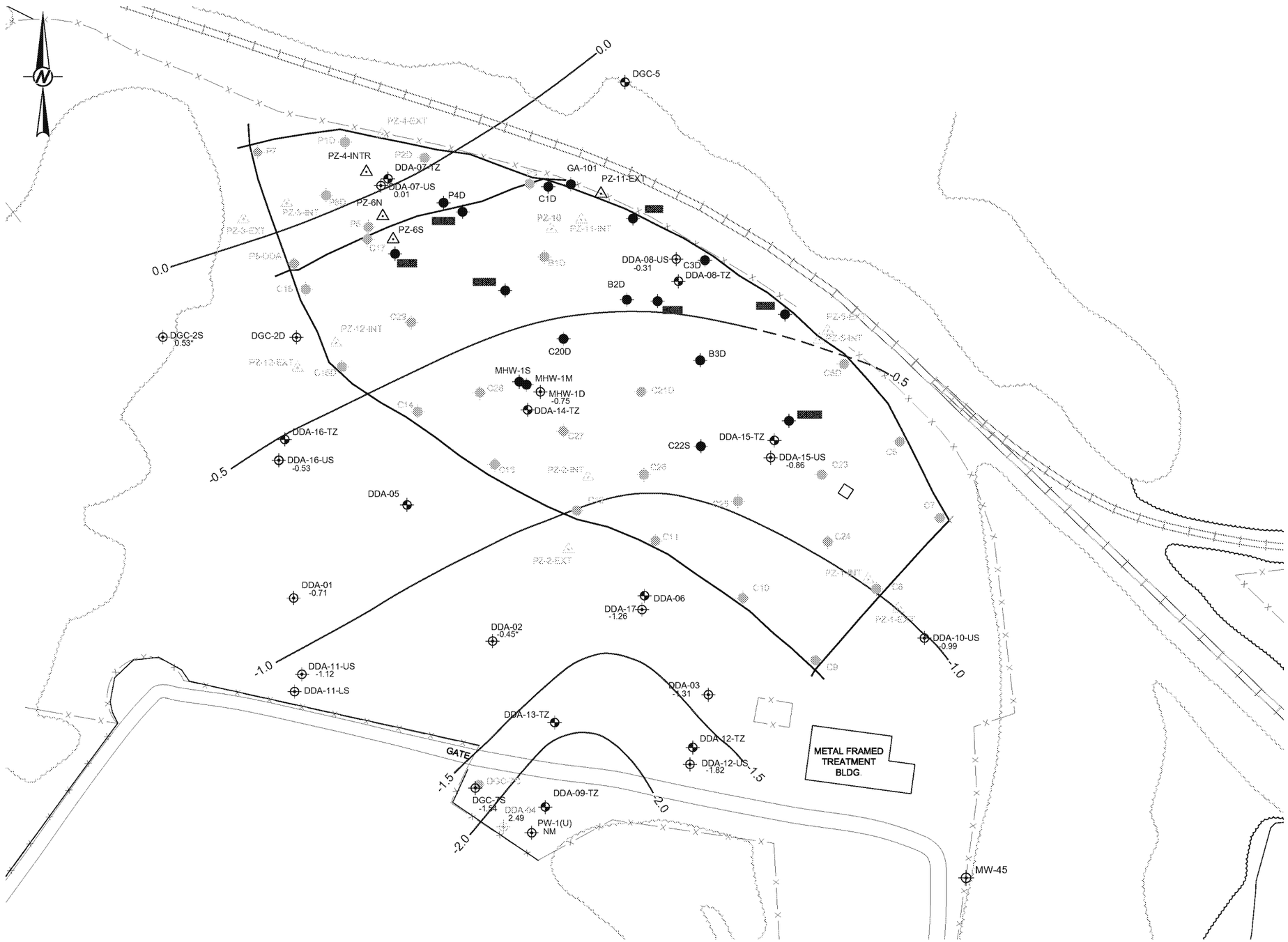
PROJECT
SEMI-ANNUAL REPORT

CONSULTANT
GOLDER

YYYY-MM-DD	2018-08-30
DESIGNED	MBS
PREPARED	GLS
REVIEWED	JAS/BAR
APPROVED	TAM

TITLE
DDA TO WELL PW-1(U)
UPCU TRANSITION ZONE GROUNDWATER ELEVATION CONTOURS
APRIL 2018

PROJECT NO.	CONTROL	REV.	FIGURE
0136052.14	0001-006	0	6



LEGEND

--X-------X-------X-------X	FENCELINE
	CENTERLINE OF SLURRY WALL AROUND DRUM DISPOSAL AREA
	RAILROAD
	DDA LOW-FLOW EXTRACTION SYSTEM (LFExS) WELL
DGC-2S	MONITORING WELL SCREENED IN UPPER POTOMAC AQUIFER
DDA-05	UPPER POTOMAC CONFINING UNIT TRANSITION ZONE MONITORING WELLS
PZ-10	DDA PIEZOMETERS
C1D	COLUMBIA MONITORING WELLS
-2.53	GROUNDWATER ELEVATION (ft-msl)
	GROUNDWATER ELEVATION CONTOURS (ft-msl) (DASHED WHERE INFERRED)
	NM = NOT MEASURED

NOTE(S)

1. LOCATIONS OF WELLS AND BORING ARE BASED ON SURVEY BY TAYLOR WISEMAN & TAYLOR (REVISED 2012)
2. GROUNDWATER ELEVATION BASED ON APRIL 2018 MEASUREMENTS
3. * INDICATES DATA NOT INCLUDED IN CONTOUR
4. FT-MSL = ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL

REFERENCE(S)

1. BASE MAP TAKEN FROM DIGITAL U.S.G.S. 7.5 MINUTE QUADRANGLES OF WILMINGTON SOUTH, DELAWARE/NEW JERSEY (DATED 1984), DELAWARE CITY, DELAWARE (DATED 1984), NEWARK EAST, DELAWARE (DATED 1984) AND SAINT GEORGES, DELAWARE (DATED 1984).

0 40 80
1" = 40' FEET

CLIENT
DELAWARE SAND & GRAVEL SUPERFUND SITE
NEW CASTLE COUNTY, DELAWARE

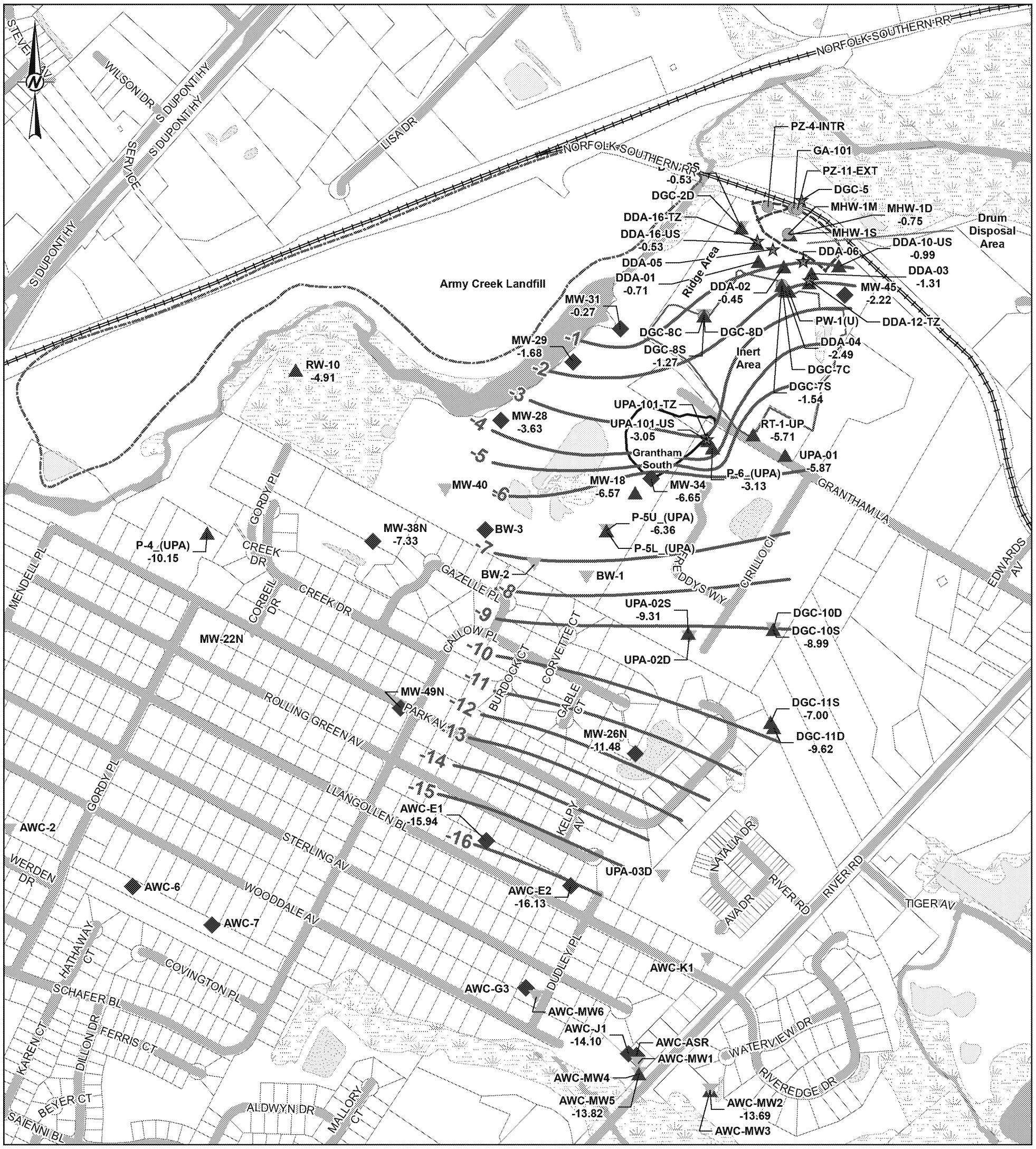
PROJECT
SEMI-ANNUAL REPORT

CONSULTANT
GOLDER

YYYY-MM-DD	2018-08-30
DESIGNED	MBS
PREPARED	GLS
REVIEWED	JAS/BAR
APPROVED	TAM

TITLE
DDA TO WELL PW-1(U)
UPA GROUNDWATER ELEVATION CONTOURS
APRIL 2018

PROJECT NO.	CONTROL	REV.	FIGURE
0136052.14	0001-007	0	7



LEGEND

- ★ WELL SCREENED IN UPCU TRANSITION ZONE
- ▲ WELL SCREENED IN UPA UPPER SAND
- ▼ WELL SCREENED IN UPA LOWER SAND
- ◆ WELL SCREENED ACROSS UPA UPPER SAND AND LOWER SAND
- ● WELL SCREENED IN COLUMBIA AQUIFER
- GROUNDWATER ELEVATION CONTOURS (FT-MSL)
- **-9.04** GROUNDWATER ELEVATION (FT-MSL)

NOTE(S)

1. -8.50 ELEVATION IN FEET - MEAN SEA LEVEL
2. NM - NOT MEASURED
3. NA = MEASURED, BUT IS NOT APPLICABLE TO THE GEOLOGIC UNIT DEPICTED
4. * INDICATES DATAPOINT NOT USED IN CONTOURING

REFERENCE(S)

1. BASE DATA FROM NEW CASTLE COUNTY DELAWARE, DEPARTMENT OF LAND USE, "EPARCEL VIEW MAP" WEB SITE GIS DATA DOWNLOAD. DATA ACQUIRED 01/18/2012.

0 600 1,200
1 " = 600 feet Feet

CLIENT
DELAWARE SAND & GRAVEL SUPERFUND SITE
NEW CASTLE COUNTY, DELAWARE

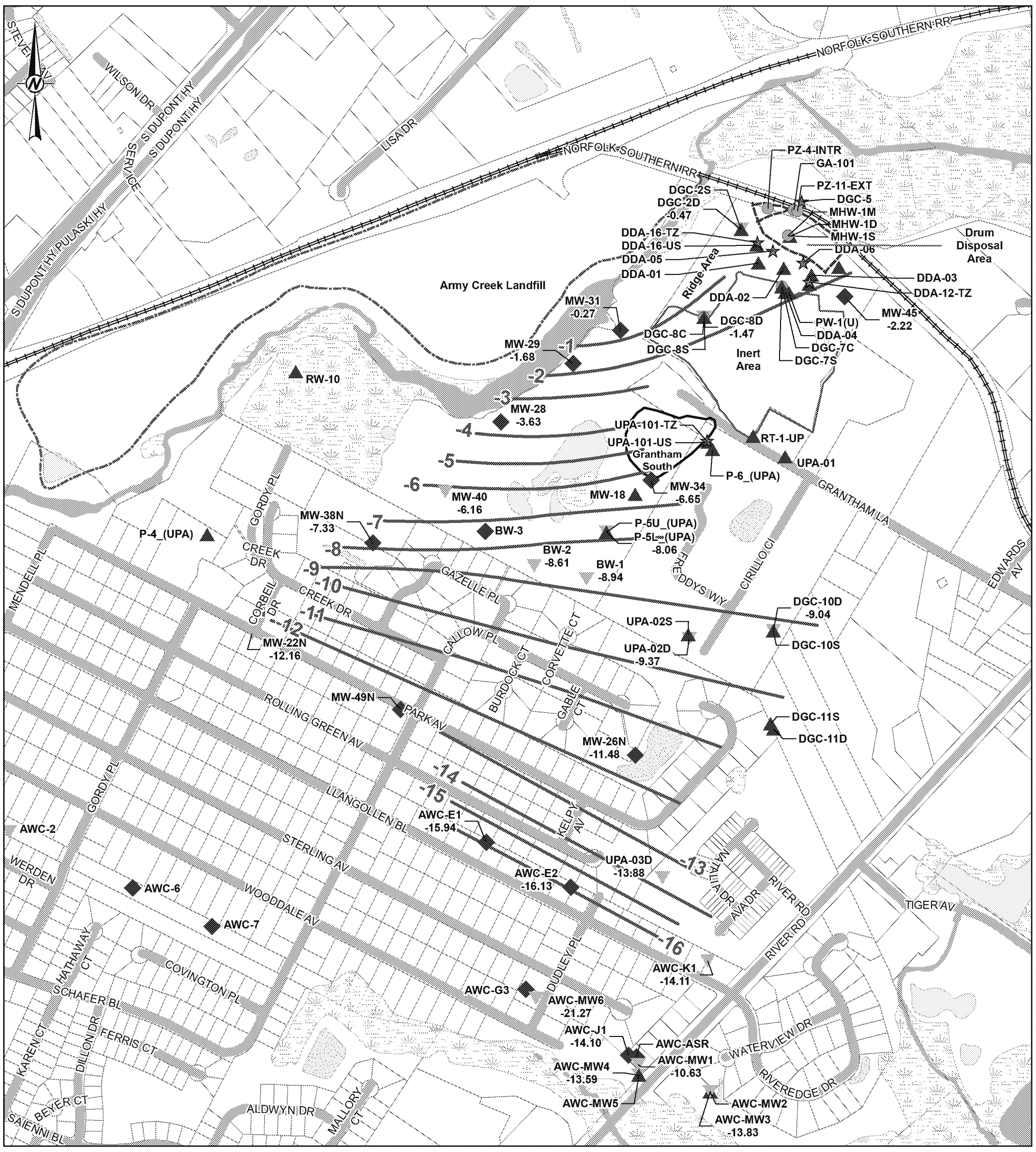
PROJECT
SEMI-ANNUAL REPORT

CONSULTANT
GOLDER

YYYY-MM-DD	2018-08-30
DESIGNED	MBS
PREPARED	AM
REVIEWED	AA/BAR
APPROVED	TAM

TITLE
UPA UPPER SAND GROUNDWATER ELEVATION CONTOURS APRIL 2018

PROJECT NO.	CONTROL	REV.	FIGURE
013-6052	0001-008	0	8



LEGEND

- ★ WELL SCREENED IN UPCU TRANSITION ZONE
- ▲ WELL SCREENED IN UPA UPPER SAND
- ▼ WELL SCREENED IN UPA LOWER SAND
- ◆ WELL SCREENED ACROSS UPA UPPER SAND AND LOWER SAND
- ● WELL SCREENED IN COLUMBIA AQUIFER
- GROUNDWATER ELEVATION CONTOURS (FT-MSL)
- **-9.04** GROUNDWATER ELEVATION (FT-MSL)

NOTE(S)

1. -8.50 ELEVATION IN FEET - MEAN SEA LEVEL
2. NM - NOT MEASURED
3. NA = MEASURED, BUT IS NOT APPLICABLE TO THE GEOLOGIC UNIT DEPICTED
4. * INDICATES DATAPOINT NOT USED IN CONTOURING

REFERENCE(S)

1. BASE DATA FROM NEW CASTLE COUNTY DELAWARE, DEPARTMENT OF LAND USE, "EPARCEL VIEW MAP" WEB SITE GIS DATA DOWNLOAD. DATA ACQUIRED 01/18/2012.

0 600 1,200
1 " = 600 feet Feet

CLIENT
DELAWARE SAND & GRAVEL SUPERFUND SITE
NEW CASTLE COUNTY, DELAWARE

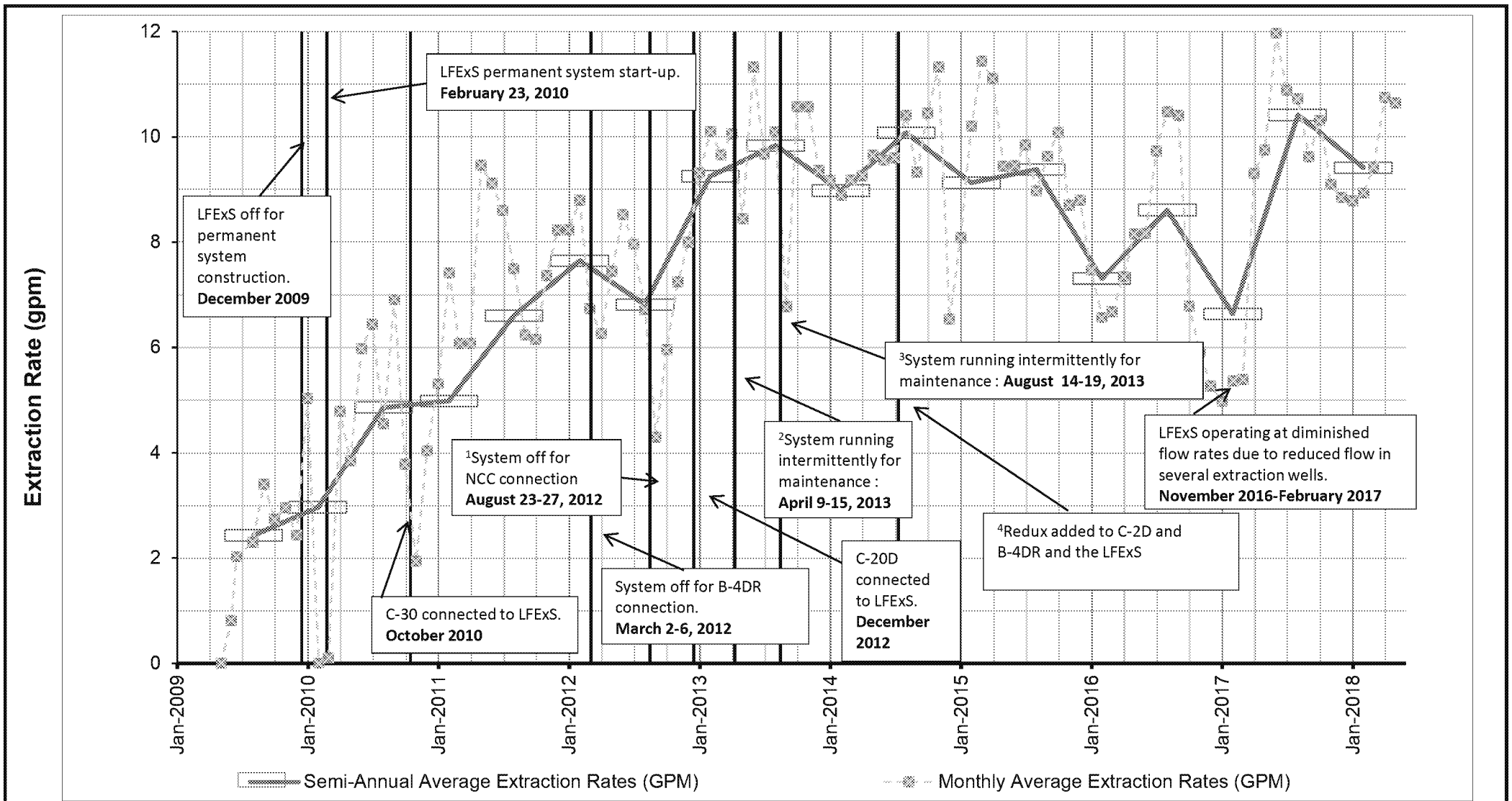
PROJECT
SEMI-ANNUAL REPORT

CONSULTANT
GOLDER

YYYY-MM-DD	2018-08-30
DESIGNED	MBS
PREPARED	AM
REVIEWED	AA/BAR
APPROVED	TAM

TITLE
UPA LOWER SAND
GROUNDWATER ELEVATION CONTOURS
APRIL 2018

PROJECT NO.	CONTROL	REV.	FIGURE
013-6052	0001-009	0	9



Notes:

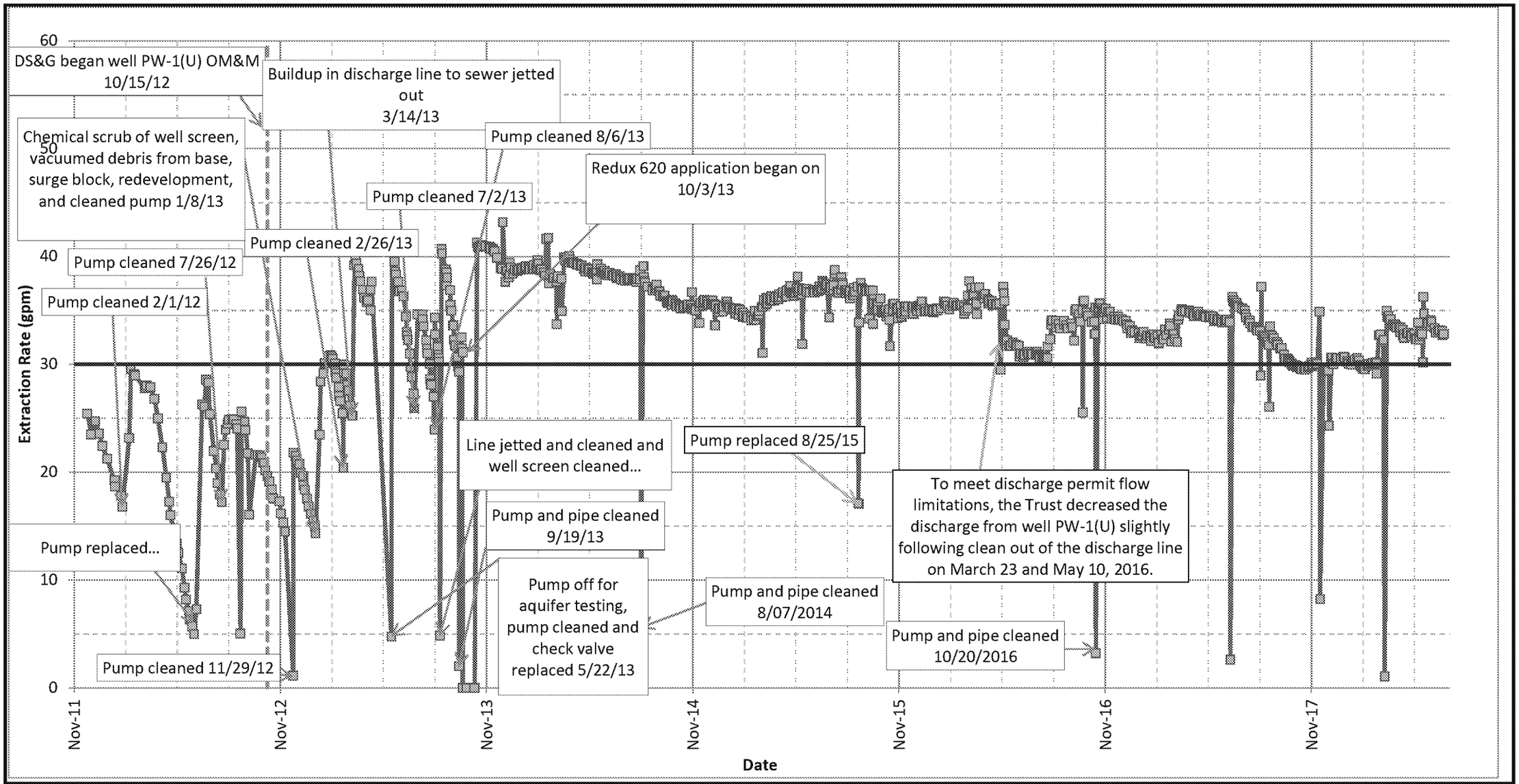
1) **System off for NCC sewer force main connection (August 23-27, 2012).**
2) **System off for quarterly maintenance (April 9-11, 2013) and running at reduced flow rate until prior to discharge pump repair on April 15, 2013.**
3) **System off for maintenance (August 14-15, 2013) and tank cleaning (August 19, 2013).**
4) **Addition of Redux to pumping wells C-2D and B-4DR and the LFExS discharge line via the balancing tank (July 10, 2014).**

LFExS Monthly and Semi-Annual Extraction Rates

GOLDER

Project Number:	013-6052	
Prepared by:	MBS	7/20/2018
Checked by:	VRR	7/30/2018
Reviewed by:	TAM	8/24/2018

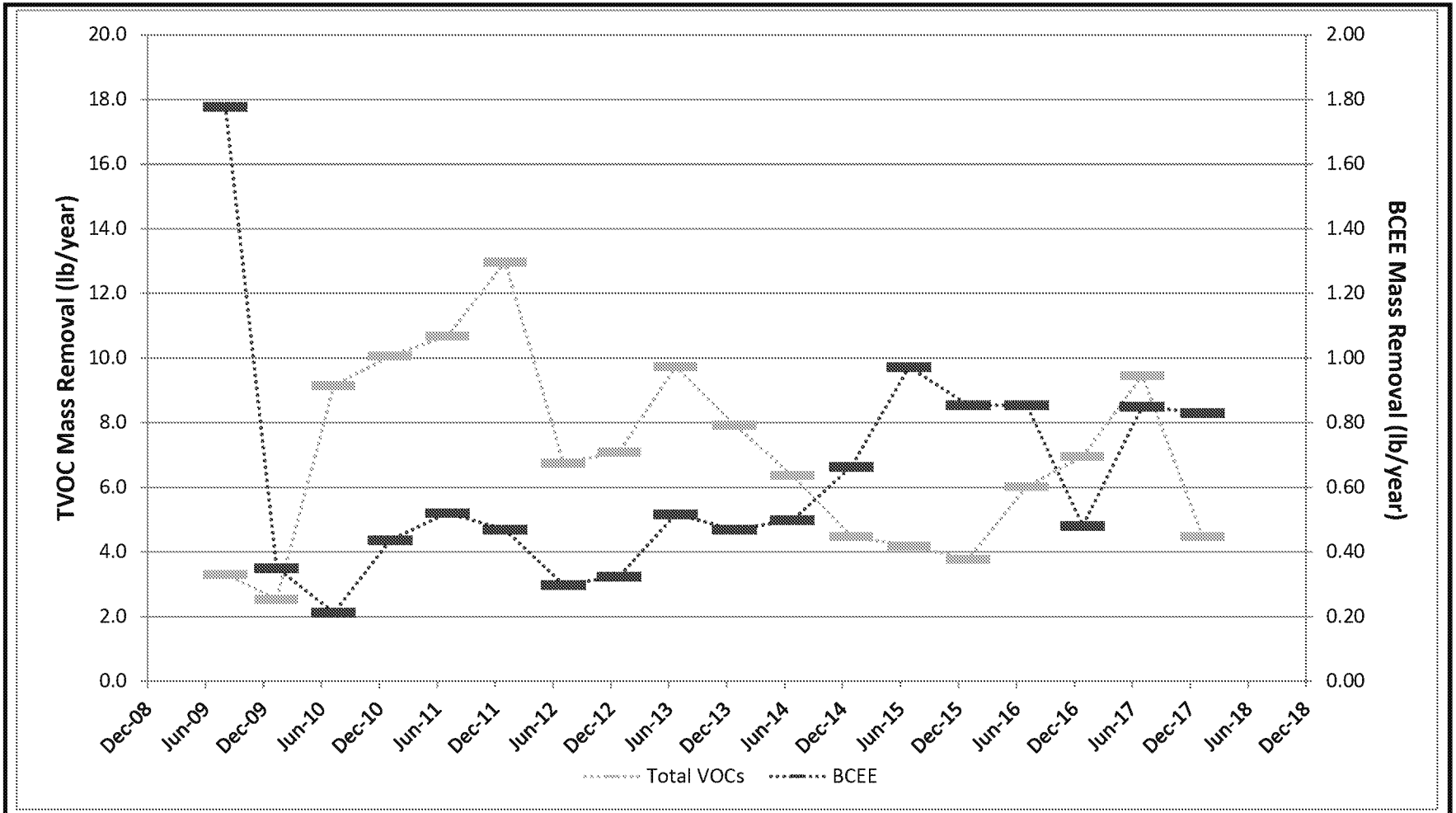
FIGURE 10



Well PW-1(U) Operation and Maintenance Summary

GOLDER

Project Number:	013-6052		FIGURE 11
Prepared by:	MBS	6/21/2018	
Checked by:	VRR	7/30/2018	Notes:
Reviewed by:	TAM	8/24/2018	

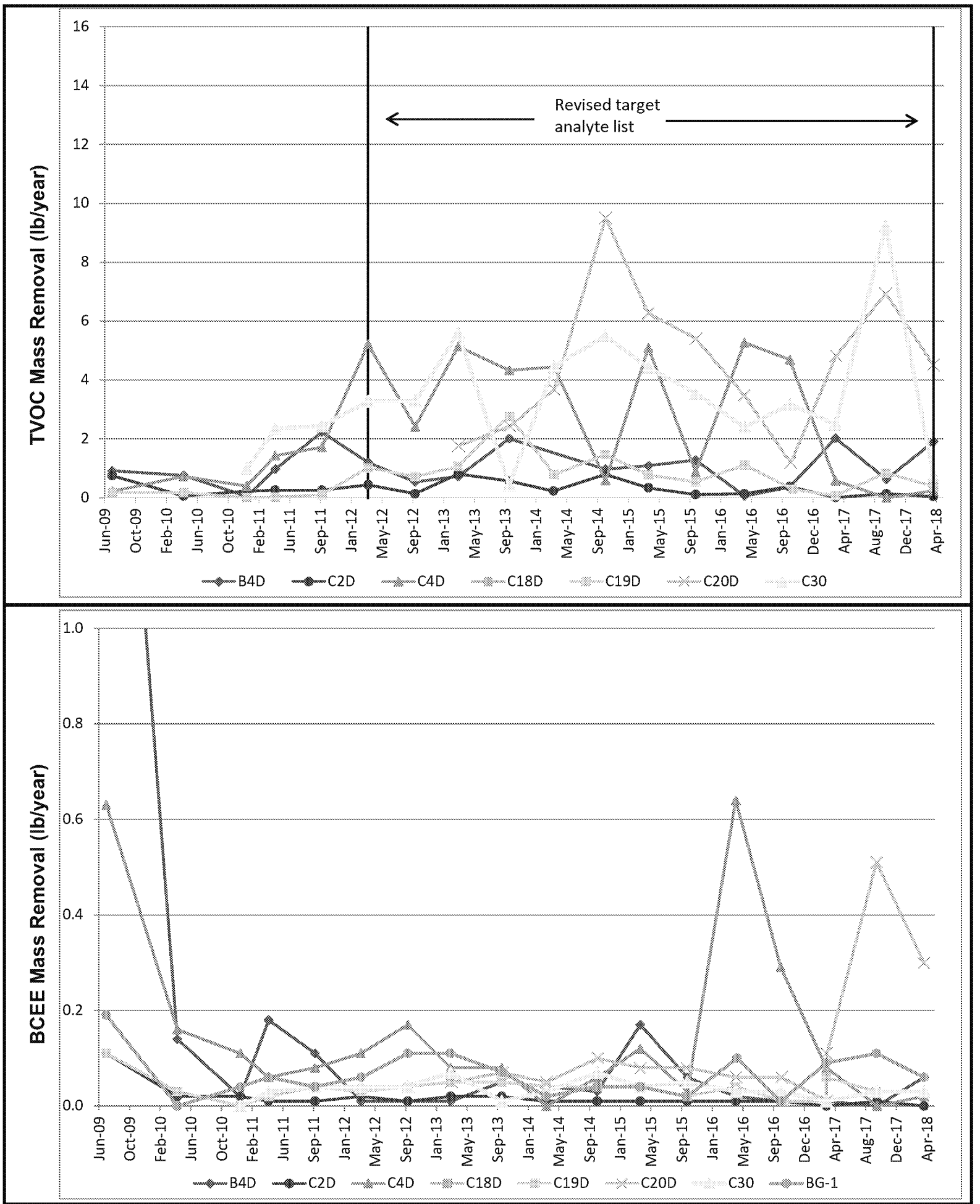


DDA Combined LFExS Mass Removal Rates

GOLDER

Project Number:	013-6052		FIGURE 12
Prepared by:	MBS	5/21/2018	
Checked by:	BPC	7/17/2018	Notes: Mass removal rate represents discharge to sewer and is calculated from an average of two consecutive sampling events.
Reviewed by:	TAM	8/24/2018	

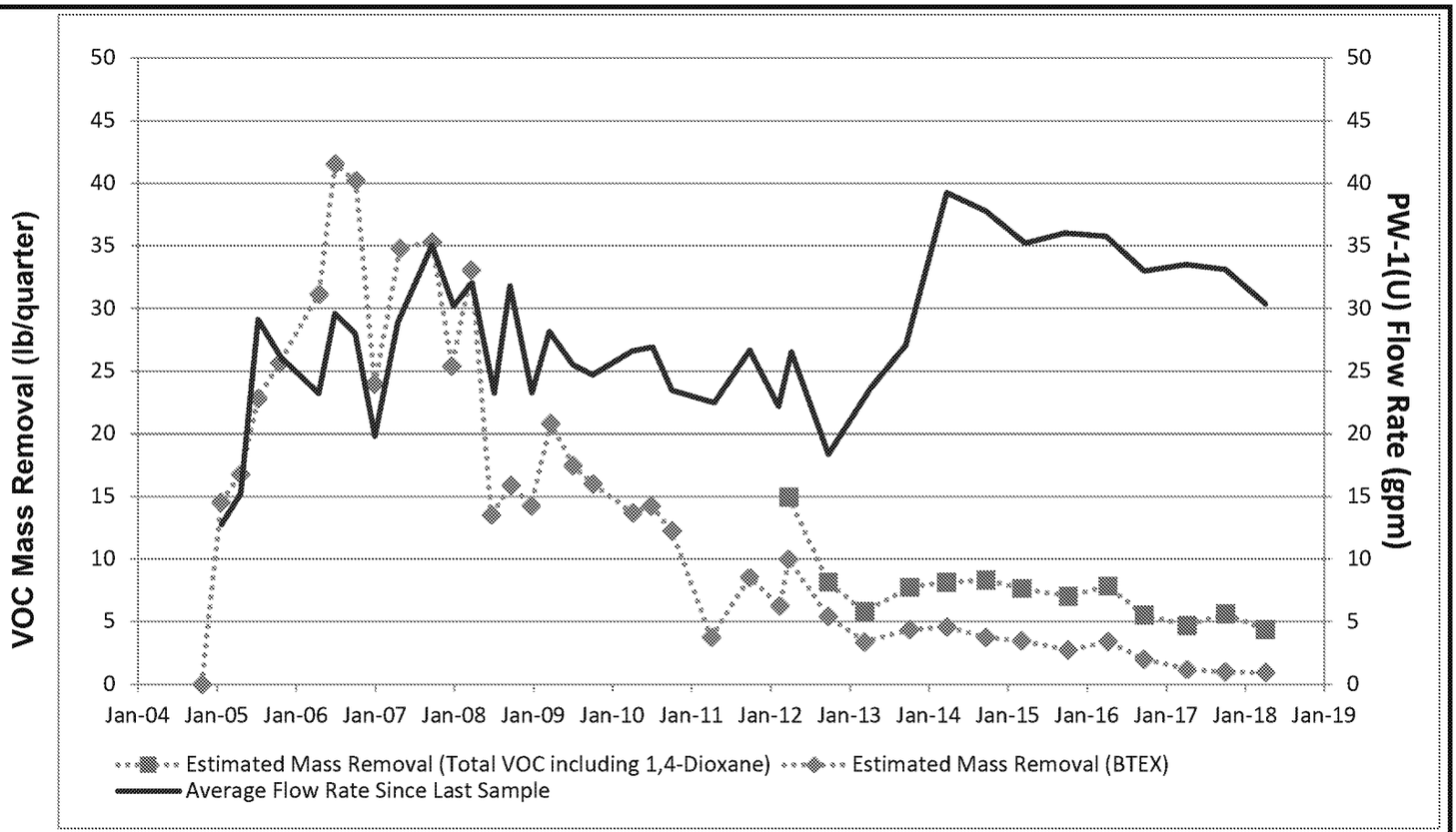
Note: TVOC mass removal does not include 1,4, dioxane in calculation since it is not analyzed for in the TTO sample.

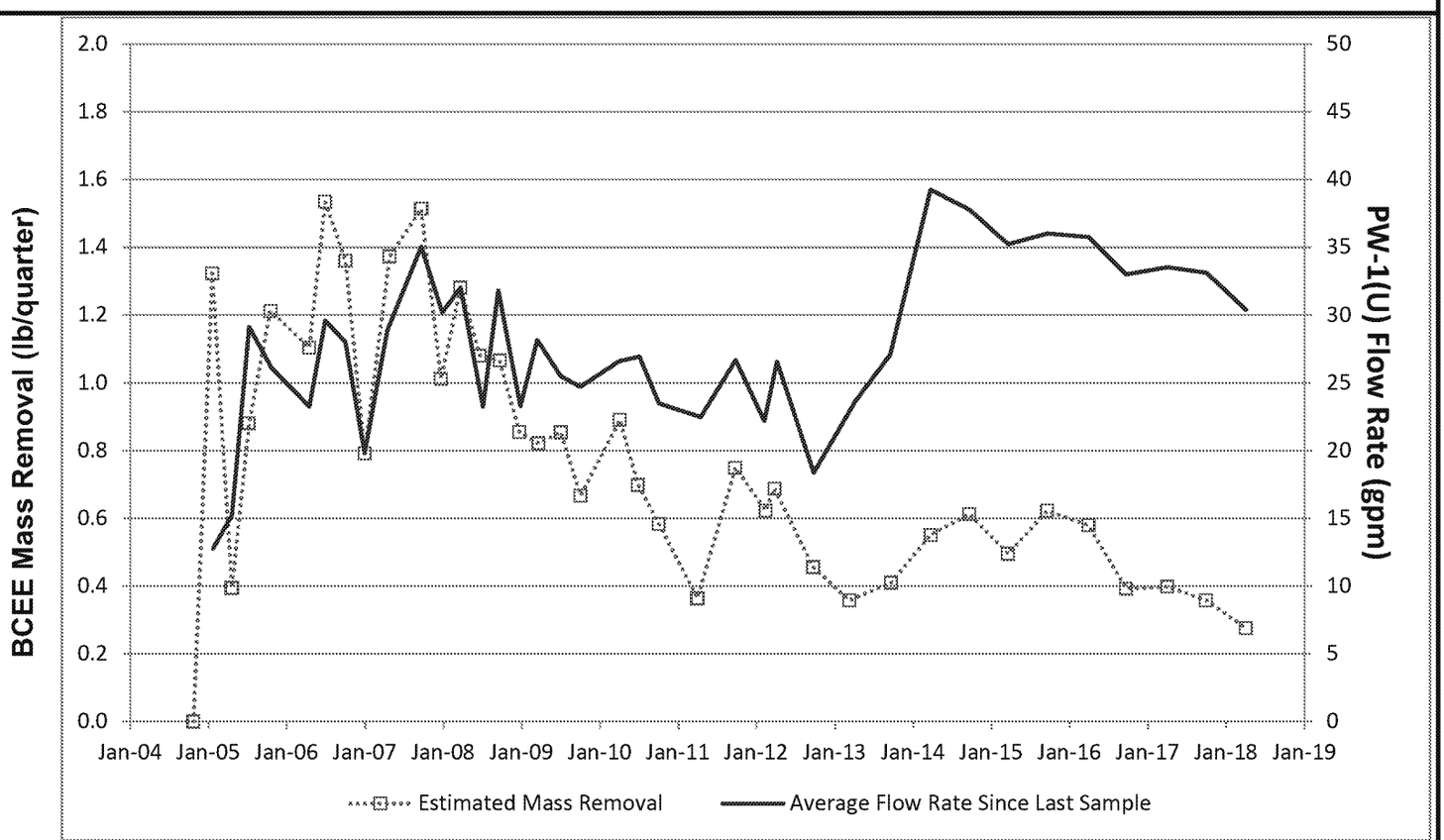


Individual LFExS Well Mass Removal Rates

GOLDER

Project Number:	013-6052		FIGURE 13
Prepared by:	MBS	7/5/2018	
Checked by:	BPC	7/17/2018	Notes:
Reviewed by:	TAM	8/24/2018	





Well PW-1(U) Mass Removal Rates

GOLDER

Project Number:	013-6052		FIGURE 14
Prepared by:	MBS	5/21/2018	
Checked by:	BPC	7/17/2018	Notes:
Reviewed by:	TAM	8/24/2018	

G:\PROJECTS\2001 Projects\013-6052 DS&G\Semi-Annual Reports\2018 Q1Q2\Tables\
Table 6 PW-1-U and Figure 14_Mass Removal with DIOXANE.xlsx
8/28/2018

Appendices

APPENDIX A

Data Quality Assessments - April 2018 (includes Form 1s)

Data Quality Assessment
April 2018 Semi-Annual Groundwater Monitoring Event
Delaware Sand and Gravel Superfund Site
New Castle, DE

This report presents the findings of the data quality assessment performed on the analyses of environmental samples collected for the *Semi-Annual Monitoring Report, April 2018.* The groundwater monitoring was conducted at the Delaware Sand and Gravel (DS&G) Superfund Site (Site), located in New Castle, Delaware. Samples for this Monitoring Event were collected between April 3, 2018 and April 19, 2018. The chemical data for samples collected at the Site were evaluated to identify data quality issues which could affect the use of the data for decision making purposes. A total of 78 primary samples and the following Quality Assurance/Quality Control (QA/QC) samples were collected:

- Thirteen (13) trip blanks;
- Three (3) equipment rinsate blanks;
- Two (2) matrix spike / matrix spike duplicate (MS/MSD) samples; and
- Four (4) field duplicate parameter sets.

Samples were analyzed for Target Compound List (TCL) Volatile Organic Compounds (VOCs), TCL Semivolatile Organic Compounds (SVOCs), Target Analyte List (TAL) total metals (including mercury), dissolved iron and manganese, and ammonia. Not all samples were analyzed for all listed parameters. Refer to Table 1 for the specific analyses for each sample. Test America of Edison, New Jersey performed all chemical analyses utilizing the following methodology:

- TCL VOCs by United States Environmental Protection Agency (USEPA) SW846[1] Method 8260B/8260B Selected Ion Monitoring (SIM) Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS) (December 1996);
- TCL SVOCs by USEPA SW846 Method 8270C/8270C SIM Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS) (January 1998);
- TAL Total Metals by USEPA Method 200.8 Determination of Trace Elements in Waters and Wastes by Inductively Coupled Plasma-Mass Spectrometry (1994);
- Total Mercury by USEPA Method 245.1 Determination of Mercury in Water by Cold Vapor Atomic Absorption Spectrometry (1994);
- Dissolved Iron and Manganese by USEPA SW846 Method 6010C Inductively Coupled Plasma-Atomic Emission Spectrometry (November 2000).
- Ammonia by Standard Method SM4500 NH3 H Ammonia by Selective Electrode (2011)

[1] USEPA, 1996, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846): 3rd edition, Environmental Protection Agency, National Center for Environmental Publications, Cincinnati, Ohio, accessed at URL http://www3.epa.gov/epawaste/hazard/testmethods/sw846/online/.

Information regarding the sample point identifications, analytical methods, QC samples, sampling dates, and contract laboratory sample delivery group (SDG) designations are summarized in Table 1.

All groundwater results were validated following guidelines provided by USEPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Superfund Organic Methods Data Review (January 2017) and NFG for Inorganic Superfund Data Review (January 2017), as applicable to the above listed analytical methods. In general, chemical results for the samples collected at the Site were qualified on the basis of outlying precision or accuracy parameters, or on the basis of professional judgment. The following definitions provide a brief explanation of the qualifiers which may have been assigned to data during the data evaluation process.

J	The analyte is present; however, the reported value may not be accurate or precise.
J-	The analyte is present; however, the reported value may not be accurate or precise. The result is biased low.
J+	The analyte is present; however, the reported value may not be accurate or precise. The result is biased high.
R	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
U	The analyte was analyzed for, but was not detected above the sample reporting limit.
UJ	The analyte was not detected above the sample reporting limit. However, the reporting limit is approximate.

The data generated during this Groundwater Monitoring Event met the QC criteria established in the respective USEPA methods and CLP guidelines, except as noted below. Qualifications may not have been required for all samples. Table 2 summarizes detailed qualifications applied to the data. A summary of the analytical detections is presented in Appendix B of the *Semi-Annual Monitoring Report, April 2018*.

- The 4-Nitrophenol result for sample DGC-8C was rejected when the MS/MSD recovered grossly below acceptance limits.
- The di-n-butyl phthalate results for samples GA-101 and PZ-11-EXT were qualified as non-detect (U) at the sample reporting limit due to method blank contamination.
- Certain metals results were qualified as non-detect (U) at the sample reporting limit due to rinsate blank contamination.
- Certain metals results were qualified as estimated, biased high (J+) due to rinsate blank contamination.
- Certain acetone results were qualified as non-detect (U) at the sample reporting limit, or non-detect (U) at the sample result, due to trip blank contamination.
- The 1,4-Dioxane result for sample PZ-6S was qualified as estimated (J) when associated surrogate recoveries were above and below QC limits.
- Certain SVOC results were qualified as estimated, biased high (J+) when associated surrogate recoveries were above QC limits.

- The n-methylaniline result for sample UPA-01 was qualified as estimated (J) when associated surrogate recoveries were above QC limits and associated LCS/LCSD recoveries were below QC limits.
- Certain SVOC detect results were qualified as estimated, biased low (J-), and non-detect results were qualified as estimated (UJ) when associated surrogate recoveries were below QC limits.
- Certain VOC and SVOC results were qualified as estimated, biased high (J+) when associated LCS/LCSD recoveries were above QC limits.
- Certain VOC and SVOC detect results were qualified as estimated, biased low (J-), and non-detect results were estimated (UJ) when associated LCS/LCSD recoveries were below QC criteria.
- Certain VOC and SVOC results were qualified as estimated (J) when the associated MS/MSD recovered above QC limits.
- Certain VOC, SVOC, and selenium detect results were qualified as estimated, biased low (J-) and non-detect results were qualified as estimated (UJ) when the associated MS/MSD recovered below QC limits.
- Certain ammonia results were qualified ass estimated, biased high (J+) when the associated MS/MSD recovered above QC limits.
- Certain VOC results for DDA-09-TA and the associated field duplicate FDGW_041218 were qualified as estimated (J) when the field duplicate RPD was above QC criteria.
- The lead results for sample BW-1 and the associated field duplicate FDGW_040918 were qualified as estimated (J for detect results, UJ for non-detect results) when the field duplicate RPD was above QC criteria.
- The manganese results for sample MW-26N and the associated field duplicate FDGW_040418 were qualified as estimated (J for detect results, UJ for non-detect results) when the field duplicate RPD was above QC criteria.

Based on the data evaluations and data quality assessment, the analytical data for samples collected at the Site were determined to be acceptable (including estimated data) for their intended use. Generally acceptable levels of accuracy and precision, based on LCS, MS/MSD, field duplicate and surrogate recoveries, were achieved for the data. In addition, the data completeness (i.e. the ratio of the amount of valid data obtained to the amount expected, including estimated data (J/J+/J-/UJ)) was 99.99%.

Table 1
Sample Point Identifications
April 2018 Semi-Annual Groundwater Monitoring Event
Deleware Sand Gravel Superfund Site
New Castle, Delaware

					Analysis/Parameters				
SDG	*Field Identification*	*Matrix*	*QC Samples*	*Collection Date*	*VOCs via 8260B & 8260B SIM*	*SVOCs via 8270C & 8270C SIM*	*Total Metals + Hg via 200.8 / 245.1*	*Dissolved Fe, Mn via 6010C*	*Ammonia via SM4500*
460-153196-1	MW-29	GW	-	4/3/2018	X	X	X	X	X
460-153196-1	RW-10	GW	-	4/3/2018	X	X	X	X	X
460-153196-1	DGC-11S	GW	-	4/3/2018	X	X	X	X	X
460-153196-1	DGC-11D	GW	-	4/3/2018	X	X	X	X	X
460-153196-1	UPA-02S	GW	-	4/3/2018	X	X	X	X	X
460-153196-1	RT-1-UP	GW	-	4/3/2018	X	X	X	X	X
460-153196-1	TBGW-040318	WQ	TB	4/3/2018	X	-	-	-	-
460-153196-1	AWC-E1 (132)	GW	-	4/4/2018	X	X	X	X	X
460-153196-1	AWC-E2 (140)	GW	-	4/4/2018	X	X	X	X	X
460-153196-1	AWC-E1 (156)	GW	-	4/4/2018	X	X	X	X	X
460-153196-1	AWC-E2 (165)	GW	-	4/4/2018	X	X	X	X	X
460-153196-1	MW-40	GW	MS/MSD	4/4/2018	X	X	X	X	X
460-153196-1	MW-31	GW	-	4/4/2018	X	X	X	X	X
460-153196-1	MW-26N	GW	-	4/4/2018	X	X	X	X	X
460-153196-1	RBGW_040418	WQ	-	4/4/2018	X	X	X	X	X
460-153196-1	FDGW_040418	GW	FD (MW-26N)	4/4/2018	X	X	X	X	X
460-153196-1	TBGW_040418	WQ	TB	4/4/2018	X	-	-	-	-
460-153430-1	DGC-10D	GW	-	4/5/2018	X	X	X	X	X
460-153430-1	DGC-10S	GW	-	4/5/2018	X	X	X	X	X
460-153430-1	UPA-02D	GW	-	4/5/2018	X	X	X	X	X
460-153430-1	UPA-03D	GW	-	4/5/2018	X	X	X	X	X
460-153430-1	UPA-101-TZ	GW	-	4/5/2018	X	X	X	X	X
460-153430-1	P6-UPA	GW	-	4/5/2018	X	X	X	X	X
460-153430-1	UPA-101-US	GW	-	4/5/2018	X	X	X	X	X
460-153430-1	TBGW-040518	WQ	TB	4/5/2018	X	-	-	-	-
460-153430-1	MW-28	GW	-	4/6/2018	X	X	X	X	X
460-153430-1	DDA-12-US	GW	-	4/6/2018	X	X	X	X	X
460-153430-1	DDA-12-TZ	GW	-	4/6/2018	X	X	X	X	X
460-153430-1	P-4(UPA)	GW	-	4/6/2018	X	X	X	X	X
460-153430-1	MW-18	GW	-	4/6/2018	X	X	X	X	X
460-153430-1	P-5L(UPA)	GW	-	4/6/2018	X	X	X	X	X
460-153430-1	MW-34	GW	-	4/6/2018	X	X	X	X	X
460-153430-1	TBGW_040618	WQ	TB	4/6/2018	X	-	-	-	-
460-153612-1	DDA-03	GW	-	4/9/2018	X	X	X	X	X
460-153612-1	BW-2	GW	-	4/9/2018	X	X	X	X	X
460-153612-1	BW-1	GW	-	4/9/2018	X	X	X	X	X
460-153612-1	P-5U (UPA)	GW	-	4/9/2018	X	X	X	X	X
460-153612-1	DDA-05	GW	-	4/9/2018	X	X	X	X	X

Table 1
Sample Point Identifications
April 2018 Semi-Annual Groundwater Monitoring Event
Deleware Sand Gravel Superfund Site
New Castle, Delaware

					Analysis/Parameters				
SDG	***Field Identification***	***Matrix***	***QC Samples***	***Collection Date***	***VOCs via 8260B & 8260B SIM***	***SVOCs via 8270C & 8270C SIM***	***Total Metals + Hg via 200.8 / 245.1***	***Dissolved Fe, Mn via 6010C***	***Ammonia via SM4500***
460-153612-1	FDGW_040918	GW	FD (BW-1)	4/9/2018	X	X	X	X	X
460-153612-1	RBGW_040918	WQ	RB	4/9/2018	X	X	X	X	X
460-153612-1	TBGW_040918	WQ	TB	4/9/2018	X	-	-	-	-
460-153612-1	DDA-11-US	GW	-	4/10/2018	X	X	X	X	X
460-153612-1	DDA-17	GW	-	4/10/2018	X	X	X	X	X
460-153612-1	DDA-11-LS	GW	-	4/10/2018	X	X	X	X	X
460-153612-1	DDA-06	GW	-	4/10/2018	X	X	X	X	X
460-153612-1	DDA-16-US	GW	-	4/10/2018	X	X	X	X	X
460-153612-1	DDA-01	GW	-	4/10/2018	X	X	X	X	X
460-153612-1	DDA-16-TZ	GW	-	4/10/2018	X	X	X	X	X
460-153612-1	TBGW_041018	WQ	TB	4/10/2018	X	-	-	-	-
460-153785-1	DGC-2S	GW	-	4/11/2018	X	X	X	X	X
460-153785-1	DDA-07-TZ	GW	-	4/11/2018	X	X	X	X	X
460-153785-1	DDA-07-US	GW	-	4/11/2018	X	X	X	X	X
460-153785-1	DGC-5	GW	-	4/11/2018	X	X	X	X	X
460-153785-1	DDA-10-US	GW	-	4/11/2018	X	X	X	X	X
460-153785-1	UPA-01	GW	-	4/11/2018	X	X	X	X	X
460-153785-1	TBGW_041118	WQ	TB	4/11/2018	X	-	-	-	-
460-153785-1	DDA-02	GW	MS/MSD	4/12/2018	X	X	X	X	X
460-153785-1	DDA-09-TZ	GW	-	4/12/2018	X	X	X	X	X
460-153785-1	DGC-7S	GW	-	4/12/2018	X	X	X	X	X
460-153785-1	DGC-7C	GW	-	4/12/2018	X	X	X	X	X
460-153785-1	FDGW_041218	GW	FD (DDA-09-TZ)	4/12/2018	X	X	X	X	X
460-153785-1	TBGW_041218	WQ	TB	4/12/2018	X	-	-	-	-
460-153785-1	PW-1 (U)	GW	-	4/12/2018	X	X	X	X	X
460-153785-1	RBGW_041218	WQ	RB	4/12/2018	X	X	X	X	X
460-154033-1	BG-1	GW	-	4/13/2018	X	X	X	X	X
460-154033-1	B-4DR	GW	-	4/13/2018	X	X	X	X	X
460-154033-1	C-2D	GW	-	4/13/2018	X	X	X	X	X
460-154033-1	C-19D	GW	-	4/13/2018	X	X	X	X	X
460-154033-1	C-30	GW	-	4/13/2018	X	X	X	X	X
460-154033-1	C-4D	GW	-	4/13/2018	X	X	X	X	X
460-154033-1	C-20D	GW	-	4/13/2018	X	X	X	X	X
460-154033-1	TBGW_041318	WQ	TB	4/13/2018	X	-	-	-	-
460-154033-1	DDA-08-US	GW	-	4/16/2018	X	X	X	X	X
460-154033-1	DDA-08-TZ	GW	-	4/16/2018	X	X	X	X	X
460-154033-1	DDA-15-US	GW	-	4/16/2018	X	X	X	X	X
460-154033-1	DDA-15-TZ	GW	-	4/16/2018	X	X	X	X	X

Table 1
Sample Point Identifications
April 2018 Semi-Annual Groundwater Monitoring Event
Deleware Sand Gravel Superfund Site
New Castle, Delaware

					Analysis/Parameters				
SDG	*Field Identification*	*Matrix*	*QC Samples*	*Collection Date*	*VOCs via 8260B & 8260B SIM*	*SVOCs via 8270C & 8270C SIM*	*Total Metals + Hg via 200.8 / 245.1*	*Dissolved Fe, Mn via 6010C*	*Ammonia via SM4500*
460-154033-1	MHW-1D	GW	-	4/16/2018	X	X	X	X	X
460-154033-1	MHW-1M	GW	-	4/16/2018	X	X	X	X	X
460-154033-1	TBGW_041618	WQ	TB	4/16/2018	X	-	-	-	-
460-154202-1	C-22S	GW	-	4/17/2018	X	X	X	X	X
460-154202-1	B-3D	GW	-	4/17/2018	X	X	X	X	X
460-154202-1	B-2D	GW	-	4/17/2018	X	X	X	X	X
460-154202-1	C-3D	GW	-	4/17/2018	X	X	X	X	X
460-154202-1	PZ-11-EXT	GW	-	4/17/2018	X	X	X	X	X
460-154202-1	GA-101	GW	-	4/17/2018	X	X	X	X	X
460-154202-1	PZ-4-INTR	GW	-	4/17/2018	X	X	X	X	X
460-154202-1	P-4D	GW	-	4/17/2018	X	X	X	X	X
460-154202-1	TBGW_041718	WQ	TB	4/17/2018	X	-	-	-	-
460-154202-1	RBGW_041818	WQ	RB	4/18/2018	X	X	X	X	X
460-154202-1	DGC-8C	GW	-	4/18/2018	X	X	X	X	X
460-154202-1	MHW-1S	GW	-	4/18/2018	X	X	X	X	X
460-154202-1	C-1D	GW	-	4/18/2018	X	X	X	X	X
460-154202-1	DDA-14-TZ	GW	-	4/18/2018	X	X	X	X	X
460-154202-1	PZ-6S	GW	-	4/18/2018	X	X	X	X	X
460-154202-1	FDGW_041818	GW	FD (MHW-1S)	4/18/2018	X	X	X	X	X
460-154202-1	TBGW_041818	WQ	TB	4/18/2018	X	-	-	-	-
460-154202-1	PZ-6N	GW	-	4/19/2018	X	X	X	X	X
460-154202-1	TBGW_041918	WQ	TB	4/19/2018	X	-	-	-	-

Abbreviations:

FD - Field Duplicate
Fe - Iron
GW - Groundwater
Hg - Mercury
Mn - Manganese
MS/MSD - Matrix Spike/Matrix Spike Duplicate
QC - Quality Control
RB - Rinsate Blank
SDG - Sample Delivery Group
SIM - Selective Ion Monitoring
SVOCs - Semivolatile Organic Compounds
TB - Trip Blank
VOCs - Volatile Organic Compounds
WQ - Water, Quality Control

Table 2
Data Qualifications
April 2018 Semi-Annual Groundwater Monitoring Event
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

SDG	Sample Name	Fraction	Constituent	New Result	New RL	Qualifier	Reason
460-153196-1	FDGW_040418	D	Manganese	-	-	J	Field duplicate precision above QC criteria
460-153196-1	MW-26N	D	Manganese	-	-	UJ	Field duplicate precision above QC criteria
460-153612-1	BW-1	T	Lead	-	-	J	Field duplicate precision above QC criteria
460-153612-1	FDGW_040918	T	Lead	-	-	UJ	Field duplicate precision above QC criteria
460-153785-1	DDA-09-TZ	N	Cyclohexane	-	-	J	Field duplicate precision above QC criteria
460-153785-1	DDA-09-TZ	N	Dichlorofluoromethane	-	-	J	Field duplicate precision above QC criteria
460-153785-1	DDA-09-TZ	N	Ethyl ether	-	-	J	Field duplicate precision above QC criteria
460-153785-1	FDGW_041218	N	Cyclohexane	-	-	J	Field duplicate precision above QC criteria
460-153785-1	FDGW_041218	N	Dichlorofluoromethane	-	-	J	Field duplicate precision above QC criteria
460-153785-1	FDGW_041218	N	Ethyl ether	-	-	J	Field duplicate precision above QC criteria
460-153196-1	MW-29	N	Tetrahydrofuran	-	-	J+	LCS recovery above QC criteria
460-153196-1	RT-1-UP	N	Tetrahydrofuran	-	-	J+	LCS recovery above QC criteria
460-153196-1	RW-10	N	Tetrahydrofuran	-	-	J+	LCS recovery above QC criteria
460-153430-1	DDA-12-US	N	Bis(2-chloroethyl) ether	-	-	J+	LCS recovery above QC criteria
460-153430-1	MW-18	N	Bis(2-chloroethyl) ether	-	-	J+	LCS recovery above QC criteria
460-153430-1	MW-28	N	Bis(2-chloroethyl) ether	-	-	J+	LCS recovery above QC criteria
460-153430-1	MW-34	N	Bis(2-chloroethyl) ether	-	-	J+	LCS recovery above QC criteria
460-153430-1	P-5L(UPA)	N	Bis(2-chloroethyl) ether	-	-	J+	LCS recovery above QC criteria
460-154033-1	DDA-15-TZ	N	Dichlorofluoromethane	-	-	J+	LCS/LCSD recovery above QC criteria
460-154202-1	B-2D	N	Dichlorofluoromethane	-	-	J+	LCS/LCSD recovery above QC criteria
460-154202-1	B-3D	N	Chloroethane	-	-	J+	LCS/LCSD recovery above QC criteria
460-154202-1	B-3D	N	Dichlorofluoromethane	-	-	J+	LCS/LCSD recovery above QC criteria
460-154202-1	C-22S	N	Dichlorofluoromethane	-	-	J+	LCS/LCSD recovery above QC criteria
460-153612-1	DDA-01	N	Bromodichloromethane	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-01	N	Bromoform	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-01	N	Carbon tetrachloride	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-01	N	Dibromochloromethane	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-01	N	MTBE	-	-	J-	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-01	N	N-Methylaniline	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-01	N	trans-1,3-Dichloropropene	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-03	N	N-Methylaniline	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-06	N	Bromodichloromethane	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-06	N	Bromoform	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-06	N	Carbon tetrachloride	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-06	N	Dibromochloromethane	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-06	N	N-Methylaniline	-	-	J-	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-06	N	trans-1,3-Dichloropropene	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-11-LS	N	Bromodichloromethane	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-11-LS	N	Bromoform	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-11-LS	N	Carbon tetrachloride	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-11-LS	N	Dibromochloromethane	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-11-LS	N	N-Methylaniline	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-11-LS	N	trans-1,3-Dichloropropene	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-11-US	N	Bromodichloromethane	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-11-US	N	Bromoform	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-11-US	N	Carbon tetrachloride	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-11-US	N	Dibromochloromethane	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-11-US	N	N-Methylaniline	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-11-US	N	trans-1,3-Dichloropropene	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-16-TZ	N	Bromodichloromethane	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-16-TZ	N	Bromoform	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-16-TZ	N	Carbon tetrachloride	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-16-TZ	N	Dibromochloromethane	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-16-TZ	N	MTBE	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-16-TZ	N	N-Methylaniline	-	-	J-	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-16-TZ	N	trans-1,3-Dichloropropene	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-16-US	N	Bromodichloromethane	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-16-US	N	Bromoform	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-16-US	N	Carbon tetrachloride	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-16-US	N	Dibromochloromethane	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-16-US	N	MTBE	-	-	J-	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-16-US	N	N-Methylaniline	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-16-US	N	trans-1,3-Dichloropropene	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-17	N	Bromodichloromethane	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-17	N	Bromoform	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-17	N	Carbon tetrachloride	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-17	N	Dibromochloromethane	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-17	N	N-Methylaniline	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153612-1	DDA-17	N	trans-1,3-Dichloropropene	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153785-1	DDA-07-TZ	N	N-methylaniline	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153785-1	DDA-07-US	N	N-methylaniline	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153785-1	DDA-10-US	N	N-methylaniline	-	-	J-	LCS/LCSD recovery below QC criteria
460-153785-1	DGC-2S	N	1,2,4-Trimethylbenzene	-	-	UJ	LCS/LCSD recovery below QC criteria

Table 2
Data Qualifications
April 2018 Semi-Annual Groundwater Monitoring Event
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

SDG	Sample Name	Fraction	Constituent	New Result	New RL	Qualifier	Reason
460-153785-1	DGC-2S	N	1,3,5-Trimethylbenzene	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153785-1	DGC-2S	N	N-methylaniline	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153785-1	DGC-2S	N	n-Propylbenzene	-	-	UJ	LCS/LCSD recovery below QC criteria
460-153785-1	DGC-5	N	N-methylaniline	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	B-2D	N	1,3-Dichlorobenzene	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	B-2D	N	1,4-Dichlorobenzene	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	B-2D	N	Hexachloroethane	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	B-2D	N	N-Methylaniline	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	B-3D	N	1,3-Dichlorobenzene	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	B-3D	N	1,4-Dichlorobenzene	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	B-3D	N	Hexachloroethane	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	B-3D	N	N-Methylaniline	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	C-22S	N	1,3-Dichlorobenzene	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	C-22S	N	1,4-Dichlorobenzene	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	C-22S	N	Hexachloroethane	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	C-22S	N	N-Methylaniline	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	C-3D	N	1,3-Dichlorobenzene	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	C-3D	N	1,4-Dichlorobenzene	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	C-3D	N	Hexachloroethane	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	C-3D	N	N-Methylaniline	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	GA-101	N	1,3-Dichlorobenzene	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	GA-101	N	1,4-Dichlorobenzene	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	GA-101	N	Hexachloroethane	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	GA-101	N	N-Methylaniline	-	-	J-	LCS/LCSD recovery below QC criteria
460-154202-1	P-4D	N	1,3-Dichlorobenzene	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	P-4D	N	1,4-Dichlorobenzene	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	P-4D	N	Hexachloroethane	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	P-4D	N	N-Methylaniline	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	PZ-11-EXT	N	1,3-Dichlorobenzene	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	PZ-11-EXT	N	1,4-Dichlorobenzene	-	-	J-	LCS/LCSD recovery below QC criteria
460-154202-1	PZ-11-EXT	N	Hexachloroethane	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	PZ-11-EXT	N	N-Methylaniline	-	-	J-	LCS/LCSD recovery below QC criteria
460-154202-1	PZ-4-INTR	N	1,3-Dichlorobenzene	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	PZ-4-INTR	N	1,4-Dichlorobenzene	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	PZ-4-INTR	N	Hexachloroethane	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154202-1	PZ-4-INTR	N	N-Methylaniline	-	-	UJ	LCS/LCSD recovery below QC criteria
460-154033-1	DDA-08-TZ	N	N-Methylaniline	-	-	UJ	LCS/LCSD recovery above QC criteria
460-154202-1	GA-101	N	Di-n-butyl phthalate	10	-	U	Method blank contamination
460-154202-1	PZ-11-EXT	N	Di-n-butyl phthalate	10	-	U	Method blank contamination
460-153196-1	MW-31	T	Selenium	-	-	J-	MS recovery below QC criteria
460-153196-1	MW-40	T	Selenium	-	-	J-	MS recovery below QC criteria
460-153196-1	UPA-02S	T	Selenium	-	-	J-	MS recovery below QC criteria
460-153196-1	AWC-E1(132)	T	Selenium	-	-	UJ	MS recovery below QC criteria
460-153196-1	AWC-E1(156)	T	Selenium	-	-	UJ	MS recovery below QC criteria
460-153196-1	AWC-E2(140)	T	Selenium	-	-	UJ	MS recovery below QC criteria
460-153196-1	AWC-E2(165)	T	Selenium	-	-	UJ	MS recovery below QC criteria
460-153196-1	DGC-11D	T	Selenium	-	-	UJ	MS recovery below QC criteria
460-153196-1	DGC-11S	T	Selenium	-	-	UJ	MS recovery below QC criteria
460-153196-1	FDGW_040418	T	Selenium	-	-	UJ	MS recovery below QC criteria
460-153196-1	MW-26N	T	Selenium	-	-	UJ	MS recovery below QC criteria
460-153196-1	MW-29	T	Selenium	-	-	UJ	MS recovery below QC criteria
460-153196-1	RT-1-UP	T	Selenium	-	-	UJ	MS recovery below QC criteria
460-153196-1	RW-10	T	Selenium	-	-	UJ	MS recovery below QC criteria
460-153196-1	MW-40	N	Tetrachloroethene	-	-	J	MS/MSD recovery above QC criteria
460-153785-1	DDA-02	N	1,4-Dioxane	-	-	J	MS/MSD recovery above QC criteria
460-153430-1	DDA-12-TZ	T	Ammonia	-	-	J+	MS/MSD recovery above QC criteria
460-153430-1	DDA-12-US	T	Ammonia	-	-	J+	MS/MSD recovery above QC criteria
460-153430-1	MW-18	T	Ammonia	-	-	J+	MS/MSD recovery above QC criteria
460-153430-1	MW-28	T	Ammonia	-	-	J+	MS/MSD recovery above QC criteria
460-153430-1	MW-34	T	Ammonia	-	-	J+	MS/MSD recovery above QC criteria
460-153430-1	P-4(UPA)	T	Ammonia	-	-	J+	MS/MSD recovery above QC criteria
460-153430-1	P-5L(UPA)	T	Ammonia	-	-	J+	MS/MSD recovery above QC criteria
460-153785-1	DDA-02	N	cis-1,3-Dichloropropene	-	-	UJ	MS/MSD recovery below QC criteria
460-153785-1	DDA-02	N	Styrene	-	-	UJ	MS/MSD recovery below QC criteria
460-153785-1	DDA-02	N	trans-1,3-Dichloropropene	-	-	UJ	MS/MSD recovery below QC criteria
460-154202-1	DGC-8C	N	3,3'-Dichlorobenzidine	-	-	UJ	MS/MSD recovery below QC criteria
460-154202-1	DGC-8C	N	3-Nitroaniline	-	-	UJ	MS/MSD recovery below QC criteria
460-154202-1	DGC-8C	N	4-Chloroaniline	-	-	UJ	MS/MSD recovery below QC criteria
460-154202-1	DGC-8C	N	n,n'-Dimethylaniline	-	-	UJ	MS/MSD recovery below QC criteria
460-154202-1	DGC-8C	N	N-methylaniline	-	-	UJ	MS/MSD recovery below QC criteria
460-154202-1	DGC-8C	N	4-Nitrophenol	-	-	R	MS/MSD recovery grossly below QC criteria
460-153196-1	AWC-E1(156)	T	Chromium	5	-	U	Rinsate blank contamination
460-153196-1	AWC-E2(165)	T	Copper	5	-	U	Rinsate blank contamination

Table 2
Data Qualifications
April 2018 Semi-Annual Groundwater Monitoring Event
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

SDG	Sample Name	Fraction	Constituent	New Result	New RL	Qualifier	Reason
460-153196-1	MW-31	D	Manganese	-	-	J+	Rinsate blank contamination
460-153196-1	MW-40	T	Ammonia	0.1	-	U	Rinsate blank contamination
460-153196-1	MW-40	T	Copper	5	-	U	Rinsate blank contamination
460-153196-1	MW-40	T	Nickel	5	-	U	Rinsate blank contamination
460-153612-1	DDA-03	T	Ammonia	0.1	-	U	Rinsate blank contamination
460-153785-1	DDA-02	N	Acetone	5	-	U	Rinsate blank contamination
460-153785-1	DDA-02	T	Chromium	-	-	J+	Rinsate blank contamination
460-153785-1	DDA-09-TZ	T	Chromium	-	-	J+	Rinsate blank contamination
460-153785-1	DGC-7S	T	Chromium	5	-	U	Rinsate blank contamination
460-153785-1	DGC-7S	T	Nickel	5	-	U	Rinsate blank contamination
460-153785-1	FDGW_041218	T	Chromium	-	-	J+	Rinsate blank contamination
460-153785-1	PW-1 (U)	T	Nickel	5	-	U	Rinsate blank contamination
460-154202-1	PZ-6S	N	1,4-Dioxane	-	-	J	Surrogate recoveries outside QC limits
460-153430-1	UPA-101-TZ	N	1,2-Dichlorobenzene	-	-	J+	Surrogate recovery above QC limits
460-153430-1	UPA-03D	N	Bis(2-chloroethyl) ether	-	-	J+	Surrogate recovery above QC limits
460-153430-1	UPA-101-TZ	N	Bis(2-chloroethyl) ether	-	-	J+	Surrogate recovery above QC limits
460-153430-1	UPA-101-TZ	N	Diethyl phthalate	-	-	J+	Surrogate recovery above QC limits
460-153430-1	UPA-101-TZ	N	Diphenyl ether	-	-	J+	Surrogate recovery above QC limits
460-153430-1	UPA-101-TZ	N	Naphthalene	-	-	J+	Surrogate recovery above QC limits
460-153430-1	UPA-101-TZ	N	N-Methylaniline	-	-	J+	Surrogate recovery above QC limits
460-153785-1	DDA-02	N	Bis(2-chloroethyl)ether	-	-	J+	Surrogate recovery above QC limits
460-153785-1	DDA-09-TZ	N	1,2-Dichlorobenzene	-	-	J+	Surrogate recovery above QC limits
460-153785-1	DDA-09-TZ	N	Bis(2-chloroethyl)ether	-	-	J+	Surrogate recovery above QC limits
460-153785-1	DDA-09-TZ	N	Diphenyl ether	-	-	J+	Surrogate recovery above QC limits
460-153785-1	DDA-09-TZ	N	N-Methylaniline	-	-	J+	Surrogate recovery above QC limits
460-153785-1	DGC-2S	N	Bis(2-chloroethyl)ether	-	-	J+	Surrogate recovery above QC limits
460-153785-1	DGC-7S	N	Bis(2-chloroethyl)ether	-	-	J+	Surrogate recovery above QC limits
460-153785-1	PW-1 (U)	N	Bis(2-chloroethyl)ether	-	-	J+	Surrogate recovery above QC limits
460-153785-1	UPA-01	N	1,2-Dichlorobenzene	-	-	J+	Surrogate recovery above QC limits
460-153785-1	UPA-01	N	Bis(2-chloroethyl)ether	-	-	J+	Surrogate recovery above QC limits
460-153785-1	UPA-01	N	Diethyl phthalate	-	-	J+	Surrogate recovery above QC limits
460-153785-1	UPA-01	N	Di-n-butyl phthalate	-	-	J+	Surrogate recovery above QC limits
460-153785-1	UPA-01	N	Diphenyl ether	-	-	J+	Surrogate recovery above QC limits
460-153785-1	UPA-01	N	n,n'-Dimethylaniline	-	-	J+	Surrogate recovery above QC limits
460-154033-1	BG-1	N	Diphenyl ether	-	-	J+	Surrogate recovery above QC limits
460-154033-1	BG-1	N	Bis(2-chloroethyl)ether	-	-	J+	Surrogate recovery above QC limits
460-154033-1	C-4D	N	Bisphenol-A	-	-	J+	Surrogate recovery above QC limits
460-154033-1	DDA-15-TZ	N	Diphenyl ether	-	-	J+	Surrogate recovery above QC limits
460-154033-1	DDA-15-TZ	N	Bis(2-chloroethyl)ether	-	-	J+	Surrogate recovery above QC limits
460-154033-1	DDA-15-TZ	N	Naphthalene	-	-	J+	Surrogate recovery above QC limits
460-154033-1	DDA-15-TZ	N	N-Methylaniline	-	-	J+	Surrogate recovery above QC limits
460-154033-1	DDA-15-TZ	N	n,n'-Dimethylaniline	-	-	J+	Surrogate recovery above QC limits
460-154033-1	DDA-15-TZ	N	1,2-Dichlorobenzene	-	-	J+	Surrogate recovery above QC limits
460-154033-1	DDA-15-TZ	N	1,4-Dichlorobenzene	-	-	J+	Surrogate recovery above QC limits
460-154033-1	DDA-15-TZ	N	2-Methylnaphthalene	-	-	J+	Surrogate recovery above QC limits
460-154033-1	DDA-15-US	N	Bis(2-chloroethyl)ether	-	-	J+	Surrogate recovery above QC limits
460-154033-1	MHW-1D	N	Bis(2-chloroethyl)ether	-	-	J+	Surrogate recovery above QC limits
460-154033-1	MHW-1M	N	Bis(2-chloroethyl)ether	-	-	J+	Surrogate recovery above QC limits
460-153785-1	UPA-01	N	N-Methylaniline	-	-	J	Surrogate recovery above QC limits; LCS/LCSD recovery below QC criteria
460-154033-1	B-4DR	N	1,4-Dioxane	-	-	J-	Surrogate recovery below QC limits
460-154202-1	GA-101	N	1,4-Dioxane	-	-	J-	Surrogate recovery below QC limits
460-154202-1	PZ-11-EXT	N	1,4-Dioxane	-	-	J-	Surrogate recovery below QC limits
460-154202-1	PZ-6S	N	2,4,5-Trichlorophenol	-	-	UJ	Surrogate recovery below QC limits
460-154202-1	PZ-6S	N	2,4,6-Trichlorophenol	-	-	UJ	Surrogate recovery below QC limits
460-154202-1	PZ-6S	N	2,4-Dichlorophenol	-	-	J-	Surrogate recovery below QC limits
460-154202-1	PZ-6S	N	2,4-Dimethylphenol	-	-	J-	Surrogate recovery below QC limits
460-154202-1	PZ-6S	N	2,4-Dinitrophenol	-	-	UJ	Surrogate recovery below QC limits
460-154202-1	PZ-6S	N	2-Chlorophenol	-	-	UJ	Surrogate recovery below QC limits
460-154202-1	PZ-6S	N	2-Methylphenol	-	-	J-	Surrogate recovery below QC limits
460-154202-1	PZ-6S	N	2-Nitrophenol	-	-	UJ	Surrogate recovery below QC limits
460-154202-1	PZ-6S	N	4,6-Dinitro-2-methylphenol	-	-	UJ	Surrogate recovery below QC limits
460-154202-1	PZ-6S	N	4-Chloro-3-methylphenol	-	-	UJ	Surrogate recovery below QC limits
460-154202-1	PZ-6S	N	4-Methylphenol	-	-	J-	Surrogate recovery below QC limits
460-154202-1	PZ-6S	N	4-Nitrophenol	-	-	UJ	Surrogate recovery below QC limits
460-154202-1	PZ-6S	N	Bisphenol-A	-	-	J-	Surrogate recovery below QC limits
460-154202-1	PZ-6S	N	Pentachlorophenol	-	-	UJ	Surrogate recovery below QC limits
460-154202-1	PZ-6S	N	Phenol	-	-	UJ	Surrogate recovery below QC limits
460-153196-1	AWC-E2(140)	N	Acetone	5	-	U	Trip blank contamination
460-153196-1	DGC-11D	N	Acetone	5	-	U	Trip blank contamination
460-153196-1	DGC-11S	N	Acetone	5	-	U	Trip blank contamination
460-153196-1	MW-29	N	Acetone	5	-	U	Trip blank contamination
460-153196-1	RT-1-UP	N	Acetone	5	-	U	Trip blank contamination

Table 2
Data Qualifications
April 2018 Semi-Annual Groundwater Monitoring Event
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

SDG	Sample Name	Fraction	Constituent	New Result	New RL	Qualifier	Reason
460-153196-1	RW-10	N	Acetone	5	-	U	Trip blank contamination
460-153196-1	UPA-02S	N	Acetone	5	-	U	Trip blank contamination
460-153430-1	DGC-10S	N	Acetone	5	-	U	Trip blank contamination
460-153430-1	P6-UPA	N	Acetone	-	6.3	U	Trip blank contamination
460-153430-1	UPA-101-TZ	N	Acetone	-	6.1	U	Trip blank contamination
460-153430-1	UPA-101-US	N	Acetone	-	6.6	U	Trip blank contamination
460-153612-1	BW-1	N	Acetone	5	-	U	Trip blank contamination
460-153612-1	DDA-03	N	Acetone	5	-	U	Trip blank contamination
460-153612-1	DDA-05	N	Acetone	5	-	U	Trip blank contamination
460-153612-1	FDGW_040918	N	Acetone	5	-	U	Trip blank contamination
460-154033-1	C-2D	N	Acetone	5	-	U	Trip blank contamination
460-154033-1	C-30	N	Acetone	25	-	U	Trip blank contamination
460-154202-1	B-2D	N	Acetone	5	-	U	Trip blank contamination
460-154202-1	B-3D	N	Acetone	5	-	U	Trip blank contamination
460-154202-1	C-1D	N	Acetone	5	-	U	Trip blank contamination
460-154202-1	C-22S	N	Acetone	5	-	U	Trip blank contamination
460-154202-1	DGC-8C	N	Acetone	5	-	U	Trip blank contamination
460-154202-1	FDGW_041818	N	Acetone	5	-	U	Trip blank contamination
460-154202-1	MHW-1S	N	Acetone	5	-	U	Trip blank contamination
460-154202-1	PZ-4-INTR	N	Acetone	5	-	U	Trip blank contamination

Abbreviations:
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS- Matrix Spike
MSD - Matrix Spike Duplicate
QC - Quality Control
RL - Reporting Limit
RPD - Relative Percent Difference
SDG - Sample Delivery Group

Fraction:
D: Dissolved
N: None
T: Total

Qualifier Definitions:
J: Estimated Result
J-: Estimated Result, Biased Low
J+: Estimated Result, Biased High
R: Rejected Result
U: Non-Detect Result
UJ: Non-Detect Result; RL is Estimated

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G

TestAmerica Job ID: 460-153196-1
SDG: 153196

Client Sample ID: MW-29

Lab Sample ID: 460-153196-1

Date Collected: 04/03/18 09:15
Date Received: 04/03/18 23:10

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**1.5**		0.40	0.20	ug/L			04/04/18 20:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*107*		*72 - 133*		*04/04/18 20:26*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*71 - 144*		*04/04/18 20:26*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 15:51	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/10/18 15:51	1
Vinyl chloride	**0.64**	**J**	1.0	0.060	ug/L			04/10/18 15:51	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/10/18 15:51	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/10/18 15:51	1
Acetone	5 ~~**2.8**~~	~~**J**~~ U	5.0	1.1	ug/L			04/10/18 15:51	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/10/18 15:51	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/10/18 15:51	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/10/18 15:51	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/10/18 15:51	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/10/18 15:51	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/10/18 15:51	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/10/18 15:51	1
2-Butanone	2.2	U ←	5.0	2.2	ug/L			04/10/18 15:51	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/10/18 15:51	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/10/18 15:51	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/10/18 15:51	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/10/18 15:51	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/10/18 15:51	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/10/18 15:51	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 15:51	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/10/18 15:51	1
Benzene	0.090	U	1.0	0.090	ug/L			04/10/18 15:51	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/10/18 15:51	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/10/18 15:51	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/10/18 15:51	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/10/18 15:51	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/10/18 15:51	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/10/18 15:51	1
Toluene	**0.61**	**J**	1.0	0.25	ug/L			04/10/18 15:51	1
Chlorobenzene	**3.8**		1.0	0.24	ug/L			04/10/18 15:51	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/10/18 15:51	1
Styrene	0.17	U	1.0	0.17	ug/L			04/10/18 15:51	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/10/18 15:51	1
Ethyl ether	**6.3**		1.0	0.11	ug/L			04/10/18 15:51	1
MTBE	**0.16**	**J**	1.0	0.13	ug/L			04/10/18 15:51	1
Tetrahydrofuran	**3.4**	* J+	2.0	0.36	ug/L			04/10/18 15:51	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/10/18 15:51	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/10/18 15:51	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/10/18 15:51	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/10/18 15:51	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/10/18 15:51	1

Client Sample ID: MW-29

Lab Sample ID: 460-153196-1

Date Collected: 04/03/18 09:15
Date Received: 04/03/18 23:10

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/10/18 15:51	1
Indane	0.12	U	1.0	0.12	ug/L			04/10/18 15:51	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/10/18 15:51	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/10/18 15:51	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/10/18 15:51*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*74 - 132*		*04/10/18 15:51*	*1*
Bromofluorobenzene	*96*		*77 - 124*		*04/10/18 15:51*	*1*
Toluene-d8 (Surr)	*90*		*80 - 120*		*04/10/18 15:51*	*1*
Dibromofluoromethane (Surr)	*115*		*72 - 131*		*04/10/18 15:51*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/05/18 14:57	04/06/18 15:19	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/05/18 14:57	04/06/18 15:19	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/05/18 14:57	04/06/18 15:19	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/05/18 14:57	04/06/18 15:19	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/05/18 14:57	04/06/18 15:19	1
Bis(2-chloroethyl)ether	0.026	U	0.030	0.026	ug/L		04/05/18 14:57	04/06/18 15:19	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/05/18 14:57	04/06/18 04:02	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/05/18 14:57	04/06/18 04:02	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/05/18 14:57	04/06/18 04:02	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/05/18 14:57	04/06/18 04:02	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/05/18 14:57	04/06/18 04:02	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/05/18 14:57	04/06/18 04:02	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/05/18 14:57	04/06/18 04:02	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/05/18 14:57	04/06/18 04:02	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/05/18 14:57	04/06/18 04:02	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/05/18 14:57	04/06/18 04:02	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/05/18 14:57	04/06/18 04:02	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/05/18 14:57	04/06/18 04:02	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/05/18 14:57	04/06/18 04:02	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/05/18 14:57	04/06/18 04:02	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/05/18 14:57	04/06/18 04:02	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/05/18 14:57	04/06/18 04:02	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/05/18 14:57	04/06/18 04:02	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/05/18 14:57	04/06/18 04:02	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/05/18 14:57	04/06/18 04:02	1
Isophorone	0.80	U	10	0.80	ug/L		04/05/18 14:57	04/06/18 04:02	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/05/18 14:57	04/06/18 04:02	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/05/18 14:57	04/06/18 04:02	1
Naphthalene	1.1	U	10	1.1	ug/L		04/05/18 14:57	04/06/18 04:02	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/05/18 14:57	04/06/18 04:02	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/05/18 14:57	04/06/18 04:02	1

Client Sample ID: MW-29

Date Collected: 04/03/18 09:15
Date Received: 04/03/18 23:10

Lab Sample ID: 460-153196-1
Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/05/18 14:57	04/06/18 04:02	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/05/18 14:57	04/06/18 04:02	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/05/18 14:57	04/06/18 04:02	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/05/18 14:57	04/06/18 04:02	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/05/18 14:57	04/06/18 04:02	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/05/18 14:57	04/06/18 04:02	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/05/18 14:57	04/06/18 04:02	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/05/18 14:57	04/06/18 04:02	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/05/18 14:57	04/06/18 04:02	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/05/18 14:57	04/06/18 04:02	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/05/18 14:57	04/06/18 04:02	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/05/18 14:57	04/06/18 04:02	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/05/18 14:57	04/06/18 04:02	1
Fluorene	0.91	U	10	0.91	ug/L		04/05/18 14:57	04/06/18 04:02	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/05/18 14:57	04/06/18 04:02	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/05/18 14:57	04/06/18 04:02	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/05/18 14:57	04/06/18 04:02	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/05/18 14:57	04/06/18 04:02	1
Anthracene	0.63	U	10	0.63	ug/L		04/05/18 14:57	04/06/18 04:02	1
Carbazole	0.68	U	10	0.68	ug/L		04/05/18 14:57	04/06/18 04:02	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/05/18 14:57	04/06/18 04:02	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/05/18 14:57	04/06/18 04:02	1
Pyrene	1.6	U	10	1.6	ug/L		04/05/18 14:57	04/06/18 04:02	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/05/18 14:57	04/06/18 04:02	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/05/18 14:57	04/06/18 04:02	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/05/18 14:57	04/06/18 04:02	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/05/18 14:57	04/06/18 04:02	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/05/18 14:57	04/06/18 04:02	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/05/18 14:57	04/06/18 04:02	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/05/18 14:57	04/06/18 04:02	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/05/18 14:57	04/06/18 04:02	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/05/18 14:57	04/06/18 04:02	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/05/18 14:57	04/06/18 04:02	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/05/18 14:57	04/06/18 04:02	1
Caprolactam	0.68	U	10	0.68	ug/L		04/05/18 14:57	04/06/18 04:02	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/05/18 14:57	04/06/18 04:02	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/05/18 14:57	04/06/18 04:02	1
N-Methylaniline	0.48	U	5.0	0.48	ug/L		04/05/18 14:57	04/06/18 04:02	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cholestan-2-one	*14*	*J N*	*ug/L*		*14.22*	*1000210-43-4*	*04/05/18 14:57*	*04/06/18 04:02*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*85*		*51 - 108*	*04/05/18 14:57*	*04/06/18 04:02*	*1*
Phenol-d5	*31*		*14 - 39*	*04/05/18 14:57*	*04/06/18 04:02*	*1*
Terphenyl-d14	*109*		*40 - 148*	*04/05/18 14:57*	*04/06/18 04:02*	*1*
2,4,6-Tribromophenol	*88*		*26 - 139*	*04/05/18 14:57*	*04/06/18 04:02*	*1*
2-Fluorophenol	*48*		*25 - 58*	*04/05/18 14:57*	*04/06/18 04:02*	*1*
2-Fluorobiphenyl	*82*		*45 - 107*	*04/05/18 14:57*	*04/06/18 04:02*	*1*

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G

TestAmerica Job ID: 460-153196-1
SDG: 153196

Client Sample ID: MW-29

Lab Sample ID: 460-153196-1
Matrix: Water

Date Collected: 04/03/18 09:15
Date Received: 04/03/18 23:10

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**10400**		250	233	ug/L		04/05/18 21:15	04/06/18 14:19	5
Potassium	**16600**		250	143	ug/L		04/05/18 21:15	04/06/18 14:19	5
Magnesium	**5090**		250	155	ug/L		04/05/18 21:15	04/06/18 14:19	5
Sodium	**23000**		250	213	ug/L		04/05/18 21:15	04/06/18 14:19	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/05/18 21:15	04/06/18 14:19	5
Antimony	1.4	U	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 14:19	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/05/18 21:15	04/06/18 14:19	5
Barium	**178**		5.0	3.2	ug/L		04/05/18 21:15	04/06/18 14:19	5
Thallium	0.60	U	1.0	0.60	ug/L		04/05/18 21:15	04/06/18 14:19	5
Iron	**34500**		150	97.8	ug/L		04/05/18 21:15	04/06/18 14:19	5
Nickel	**3.5**	**J**	5.0	3.1	ug/L		04/05/18 21:15	04/06/18 14:19	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 14:19	5
Silver	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 14:19	5
Arsenic	**2.0**	**J**	2.5	1.5	ug/L		04/05/18 21:15	04/06/18 14:19	5
Copper	3.3	U	5.0	3.3	ug/L		04/05/18 21:15	04/06/18 14:19	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/05/18 21:15	04/06/18 14:19	5
Lead	0.93	U	1.5	0.93	ug/L		04/05/18 21:15	04/06/18 14:19	5
Zinc	16.3	U	20.0	16.3	ug/L		04/05/18 21:15	04/06/18 14:19	5
Selenium	1.4	~~U F1~~ UJ	2.5	1.4	ug/L		04/05/18 21:15	04/09/18 13:51	5
Manganese	**611**		10.0	6.1	ug/L		04/05/18 21:15	04/06/18 14:19	5
Chromium	3.1	U	5.0	3.1	ug/L		04/05/18 21:15	04/06/18 14:19	5
Cobalt	3.1	U	5.0	3.1	ug/L		04/05/18 21:15	04/06/18 14:19	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/05/18 11:53	04/05/18 13:37	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**38500**		150	92.1	ug/L		04/06/18 08:04	04/06/18 18:52	1
Manganese, Dissolved	**634**		15.0	3.1	ug/L		04/06/18 08:04	04/06/18 18:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**24.9**		2.5	1.1	mg/L		04/06/18 12:47	04/09/18 17:03	10

Client Sample ID: RW-10

Lab Sample ID: 460-153196-2
Matrix: Water

Date Collected: 04/03/18 09:20
Date Received: 04/03/18 23:10

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.20	U	0.40	0.20	ug/L			04/04/18 20:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*92*		*72 - 133*		*04/04/18 20:03*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*71 - 144*		*04/04/18 20:03*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 15:27	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G

TestAmerica Job ID: 460-153196-1
SDG: 153196

Client Sample ID: RW-10

Lab Sample ID: 460-153196-2

Date Collected: 04/03/18 09:20
Date Received: 04/03/18 23:10

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	0.18	U	1.0	0.18	ug/L			04/10/18 15:27	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/10/18 15:27	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/10/18 15:27	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/10/18 15:27	1
Acetone	5 ~~1.9~~	~~J~~ U	5.0	1.1	ug/L			04/10/18 15:27	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/10/18 15:27	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/10/18 15:27	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/10/18 15:27	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/10/18 15:27	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/10/18 15:27	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/10/18 15:27	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/10/18 15:27	1
2-Butanone	2.2	U *	5.0	2.2	ug/L			04/10/18 15:27	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/10/18 15:27	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/10/18 15:27	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/10/18 15:27	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/10/18 15:27	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/10/18 15:27	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/10/18 15:27	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 15:27	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/10/18 15:27	1
Benzene	0.090	U	1.0	0.090	ug/L			04/10/18 15:27	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/10/18 15:27	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/10/18 15:27	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/10/18 15:27	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/10/18 15:27	1
Tetrachloroethene	**0.13**	**J**	1.0	0.12	ug/L			04/10/18 15:27	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/10/18 15:27	1
Toluene	0.25	U	1.0	0.25	ug/L			04/10/18 15:27	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/10/18 15:27	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/10/18 15:27	1
Styrene	0.17	U	1.0	0.17	ug/L			04/10/18 15:27	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/10/18 15:27	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/10/18 15:27	1
MTBE	0.13	U	1.0	0.13	ug/L			04/10/18 15:27	1
Tetrahydrofuran	**2.0**	* J+	2.0	0.36	ug/L			04/10/18 15:27	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/10/18 15:27	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/10/18 15:27	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/10/18 15:27	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/10/18 15:27	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/10/18 15:27	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/10/18 15:27	1
Indane	0.12	U	1.0	0.12	ug/L			04/10/18 15:27	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/10/18 15:27	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/10/18 15:27	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/10/18 15:27*	*1*

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G

TestAmerica Job ID: 460-153196-1
SDG: 153196

Client Sample ID: RW-10

Date Collected: 04/03/18 09:20
Date Received: 04/03/18 23:10

Lab Sample ID: 460-153196-2

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*74 - 132*		*04/10/18 15:27*	*1*
Bromofluorobenzene	*98*		*77 - 124*		*04/10/18 15:27*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*04/10/18 15:27*	*1*
Dibromofluoromethane (Surr)	*113*		*72 - 131*		*04/10/18 15:27*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/05/18 14:57	04/06/18 15:40	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/05/18 14:57	04/06/18 15:40	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/05/18 14:57	04/06/18 15:40	1
Hexachlorobenzene	**0.014**	**J**	0.020	0.013	ug/L		04/05/18 14:57	04/06/18 15:40	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/05/18 14:57	04/06/18 15:40	1
Bis(2-chloroethyl)ether	0.026	U	0.030	0.026	ug/L		04/05/18 14:57	04/06/18 15:40	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/05/18 14:57	04/06/18 04:24	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/05/18 14:57	04/06/18 04:24	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/05/18 14:57	04/06/18 04:24	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/05/18 14:57	04/06/18 04:24	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/05/18 14:57	04/06/18 04:24	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/05/18 14:57	04/06/18 04:24	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/05/18 14:57	04/06/18 04:24	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/05/18 14:57	04/06/18 04:24	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/05/18 14:57	04/06/18 04:24	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/05/18 14:57	04/06/18 04:24	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/05/18 14:57	04/06/18 04:24	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/05/18 14:57	04/06/18 04:24	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/05/18 14:57	04/06/18 04:24	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/05/18 14:57	04/06/18 04:24	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/05/18 14:57	04/06/18 04:24	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/05/18 14:57	04/06/18 04:24	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/05/18 14:57	04/06/18 04:24	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/05/18 14:57	04/06/18 04:24	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/05/18 14:57	04/06/18 04:24	1
Isophorone	0.80	U	10	0.80	ug/L		04/05/18 14:57	04/06/18 04:24	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/05/18 14:57	04/06/18 04:24	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/05/18 14:57	04/06/18 04:24	1
Naphthalene	1.1	U	10	1.1	ug/L		04/05/18 14:57	04/06/18 04:24	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/05/18 14:57	04/06/18 04:24	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/05/18 14:57	04/06/18 04:24	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/05/18 14:57	04/06/18 04:24	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/05/18 14:57	04/06/18 04:24	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/05/18 14:57	04/06/18 04:24	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/05/18 14:57	04/06/18 04:24	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/05/18 14:57	04/06/18 04:24	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/05/18 14:57	04/06/18 04:24	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/05/18 14:57	04/06/18 04:24	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/05/18 14:57	04/06/18 04:24	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/05/18 14:57	04/06/18 04:24	1

Client Sample ID: RW-10

Lab Sample ID: 460-153196-2

Date Collected: 04/03/18 09:20
Date Received: 04/03/18 23:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenzofuran	1.1	U	10	1.1	ug/L		04/05/18 14:57	04/06/18 04:24	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/05/18 14:57	04/06/18 04:24	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/05/18 14:57	04/06/18 04:24	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/05/18 14:57	04/06/18 04:24	1
Fluorene	0.91	U	10	0.91	ug/L		04/05/18 14:57	04/06/18 04:24	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/05/18 14:57	04/06/18 04:24	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/05/18 14:57	04/06/18 04:24	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/05/18 14:57	04/06/18 04:24	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/05/18 14:57	04/06/18 04:24	1
Anthracene	0.63	U	10	0.63	ug/L		04/05/18 14:57	04/06/18 04:24	1
Carbazole	0.68	U	10	0.68	ug/L		04/05/18 14:57	04/06/18 04:24	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/05/18 14:57	04/06/18 04:24	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/05/18 14:57	04/06/18 04:24	1
Pyrene	1.6	U	10	1.6	ug/L		04/05/18 14:57	04/06/18 04:24	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/05/18 14:57	04/06/18 04:24	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/05/18 14:57	04/06/18 04:24	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/05/18 14:57	04/06/18 04:24	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/05/18 14:57	04/06/18 04:24	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/05/18 14:57	04/06/18 04:24	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/05/18 14:57	04/06/18 04:24	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/05/18 14:57	04/06/18 04:24	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/05/18 14:57	04/06/18 04:24	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/05/18 14:57	04/06/18 04:24	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/05/18 14:57	04/06/18 04:24	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/05/18 14:57	04/06/18 04:24	1
Caprolactam	0.68	U	10	0.68	ug/L		04/05/18 14:57	04/06/18 04:24	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/05/18 14:57	04/06/18 04:24	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/05/18 14:57	04/06/18 04:24	1
N-Methylaniline	0.48	U *	5.0	0.48	ug/L		04/05/18 14:57	04/06/18 04:24	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/05/18 14:57*	*04/06/18 04:24*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*83*		*51 - 108*	*04/05/18 14:57*	*04/06/18 04:24*	*1*
Phenol-d5	*26*		*14 - 39*	*04/05/18 14:57*	*04/06/18 04:24*	*1*
Terphenyl-d14	*107*		*40 - 148*	*04/05/18 14:57*	*04/06/18 04:24*	*1*
2,4,6-Tribromophenol	*83*		*26 - 139*	*04/05/18 14:57*	*04/06/18 04:24*	*1*
2-Fluorophenol	*41*		*25 - 58*	*04/05/18 14:57*	*04/06/18 04:24*	*1*
2-Fluorobiphenyl	*85*		*45 - 107*	*04/05/18 14:57*	*04/06/18 04:24*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**16300**		250	233	ug/L		04/05/18 21:15	04/06/18 15:30	5
Potassium	**3830**		250	143	ug/L		04/05/18 21:15	04/06/18 15:30	5
Magnesium	**9090**		250	155	ug/L		04/05/18 21:15	04/06/18 15:30	5
Sodium	**23500**		250	213	ug/L		04/05/18 21:15	04/06/18 15:30	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/05/18 21:15	04/06/18 15:30	5
Antimony	1.4	U	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 15:30	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/05/18 21:15	04/06/18 15:30	5

Client Sample ID: RW-10

Lab Sample ID: 460-153196-2

Date Collected: 04/03/18 09:20
Date Received: 04/03/18 23:10

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**80.5**		5.0	3.2	ug/L		04/05/18 21:15	04/06/18 15:30	5
Thallium	0.60	U	1.0	0.60	ug/L		04/05/18 21:15	04/06/18 15:30	5
Iron	**36100**		150	97.8	ug/L		04/05/18 21:15	04/06/18 15:30	5
Nickel	**4.3**	J	5.0	3.1	ug/L		04/05/18 21:15	04/06/18 15:30	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 15:30	5
Silver	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 15:30	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/05/18 21:15	04/06/18 15:30	5
Copper	3.3	U	5.0	3.3	ug/L		04/05/18 21:15	04/06/18 15:30	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/05/18 21:15	04/06/18 15:30	5
Lead	**1.5**		1.5	0.93	ug/L		04/05/18 21:15	04/06/18 15:30	5
Zinc	**950**		20.0	16.3	ug/L		04/05/18 21:15	04/06/18 15:30	5
Selenium	1.4	~~U~~ UJ	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 15:30	5
Manganese	**1130**		10.0	6.1	ug/L		04/05/18 21:15	04/06/18 15:30	5
Chromium	3.1	U	5.0	3.1	ug/L		04/05/18 21:15	04/06/18 15:30	5
Cobalt	**12.0**		5.0	3.1	ug/L		04/05/18 21:15	04/06/18 15:30	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/05/18 11:53	04/05/18 13:39	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**21900**		150	92.1	ug/L		04/06/18 08:04	04/06/18 18:56	1
Manganese, Dissolved	**1080**		15.0	3.1	ug/L		04/06/18 08:04	04/06/18 18:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.30**		0.10	0.045	mg/L		04/06/18 12:47	04/09/18 16:46	1

Client Sample ID: DGC-11S

Lab Sample ID: 460-153196-3

Date Collected: 04/03/18 11:10
Date Received: 04/03/18 23:10

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.20	U	0.40	0.20	ug/L			04/04/18 19:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*72 - 133*		*04/04/18 19:40*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*71 - 144*		*04/04/18 19:40*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 15:04	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/10/18 15:04	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/10/18 15:04	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/10/18 15:04	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/10/18 15:04	1
Acetone	5 ~~2.7~~	~~J~~ U	5.0	1.1	ug/L			04/10/18 15:04	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/10/18 15:04	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/10/18 15:04	1

Client Sample ID: DGC-11S

Lab Sample ID: 460-153196-3

Date Collected: 04/03/18 11:10
Date Received: 04/03/18 23:10

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/10/18 15:04	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/10/18 15:04	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/10/18 15:04	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/10/18 15:04	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/10/18 15:04	1
2-Butanone	2.2	U *	5.0	2.2	ug/L			04/10/18 15:04	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/10/18 15:04	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/10/18 15:04	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/10/18 15:04	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/10/18 15:04	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/10/18 15:04	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/10/18 15:04	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 15:04	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/10/18 15:04	1
Benzene	0.090	U	1.0	0.090	ug/L			04/10/18 15:04	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/10/18 15:04	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/10/18 15:04	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/10/18 15:04	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/10/18 15:04	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/10/18 15:04	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/10/18 15:04	1
Toluene	0.25	U	1.0	0.25	ug/L			04/10/18 15:04	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/10/18 15:04	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/10/18 15:04	1
Styrene	0.17	U	1.0	0.17	ug/L			04/10/18 15:04	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/10/18 15:04	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/10/18 15:04	1
MTBE	0.13	U	1.0	0.13	ug/L			04/10/18 15:04	1
Tetrahydrofuran	0.36	U *	2.0	0.36	ug/L			04/10/18 15:04	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/10/18 15:04	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/10/18 15:04	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/10/18 15:04	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/10/18 15:04	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/10/18 15:04	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/10/18 15:04	1
Indane	0.12	U	1.0	0.12	ug/L			04/10/18 15:04	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/10/18 15:04	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/10/18 15:04	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/10/18 15:04*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*74 - 132*		*04/10/18 15:04*	*1*
Bromofluorobenzene	*99*		*77 - 124*		*04/10/18 15:04*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*04/10/18 15:04*	*1*
Dibromofluoromethane (Surr)	*115*		*72 - 131*		*04/10/18 15:04*	*1*

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G

TestAmerica Job ID: 460-153196-1
SDG: 153196

Client Sample ID: DGC-11S

Lab Sample ID: 460-153196-3

Date Collected: 04/03/18 11:10
Date Received: 04/03/18 23:10

Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/05/18 14:57	04/06/18 16:02	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/05/18 14:57	04/06/18 16:02	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/05/18 14:57	04/06/18 16:02	1
Hexachlorobenzene	**0.024**		0.020	0.013	ug/L		04/05/18 14:57	04/06/18 16:02	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/05/18 14:57	04/06/18 16:02	1
Bis(2-chloroethyl)ether	0.026	U	0.030	0.026	ug/L		04/05/18 14:57	04/06/18 16:02	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/05/18 14:57	04/06/18 04:46	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/05/18 14:57	04/06/18 04:46	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/05/18 14:57	04/06/18 04:46	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/05/18 14:57	04/06/18 04:46	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/05/18 14:57	04/06/18 04:46	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/05/18 14:57	04/06/18 04:46	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/05/18 14:57	04/06/18 04:46	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/05/18 14:57	04/06/18 04:46	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/05/18 14:57	04/06/18 04:46	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/05/18 14:57	04/06/18 04:46	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/05/18 14:57	04/06/18 04:46	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/05/18 14:57	04/06/18 04:46	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/05/18 14:57	04/06/18 04:46	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/05/18 14:57	04/06/18 04:46	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/05/18 14:57	04/06/18 04:46	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/05/18 14:57	04/06/18 04:46	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/05/18 14:57	04/06/18 04:46	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/05/18 14:57	04/06/18 04:46	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/05/18 14:57	04/06/18 04:46	1
Isophorone	0.80	U	10	0.80	ug/L		04/05/18 14:57	04/06/18 04:46	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/05/18 14:57	04/06/18 04:46	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/05/18 14:57	04/06/18 04:46	1
Naphthalene	1.1	U	10	1.1	ug/L		04/05/18 14:57	04/06/18 04:46	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/05/18 14:57	04/06/18 04:46	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/05/18 14:57	04/06/18 04:46	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/05/18 14:57	04/06/18 04:46	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/05/18 14:57	04/06/18 04:46	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/05/18 14:57	04/06/18 04:46	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/05/18 14:57	04/06/18 04:46	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/05/18 14:57	04/06/18 04:46	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/05/18 14:57	04/06/18 04:46	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/05/18 14:57	04/06/18 04:46	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/05/18 14:57	04/06/18 04:46	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/05/18 14:57	04/06/18 04:46	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/05/18 14:57	04/06/18 04:46	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/05/18 14:57	04/06/18 04:46	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/05/18 14:57	04/06/18 04:46	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/05/18 14:57	04/06/18 04:46	1
Fluorene	0.91	U	10	0.91	ug/L		04/05/18 14:57	04/06/18 04:46	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/05/18 14:57	04/06/18 04:46	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/05/18 14:57	04/06/18 04:46	1

Client Sample ID: DGC-11S

Lab Sample ID: 460-153196-3

Date Collected: 04/03/18 11:10
Date Received: 04/03/18 23:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/05/18 14:57	04/06/18 04:46	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/05/18 14:57	04/06/18 04:46	1
Anthracene	0.63	U	10	0.63	ug/L		04/05/18 14:57	04/06/18 04:46	1
Carbazole	0.68	U	10	0.68	ug/L		04/05/18 14:57	04/06/18 04:46	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/05/18 14:57	04/06/18 04:46	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/05/18 14:57	04/06/18 04:46	1
Pyrene	1.6	U	10	1.6	ug/L		04/05/18 14:57	04/06/18 04:46	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/05/18 14:57	04/06/18 04:46	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/05/18 14:57	04/06/18 04:46	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/05/18 14:57	04/06/18 04:46	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/05/18 14:57	04/06/18 04:46	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/05/18 14:57	04/06/18 04:46	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/05/18 14:57	04/06/18 04:46	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/05/18 14:57	04/06/18 04:46	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/05/18 14:57	04/06/18 04:46	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/05/18 14:57	04/06/18 04:46	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/05/18 14:57	04/06/18 04:46	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/05/18 14:57	04/06/18 04:46	1
Caprolactam	0.68	U	10	0.68	ug/L		04/05/18 14:57	04/06/18 04:46	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/05/18 14:57	04/06/18 04:46	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/05/18 14:57	04/06/18 04:46	1
N-Methylaniline	0.48	U *	5.0	0.48	ug/L		04/05/18 14:57	04/06/18 04:46	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/05/18 14:57*	*04/06/18 04:46*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*73*		*51 - 108*	*04/05/18 14:57*	*04/06/18 04:46*	*1*
Phenol-d5	*23*		*14 - 39*	*04/05/18 14:57*	*04/06/18 04:46*	*1*
Terphenyl-d14	*104*		*40 - 148*	*04/05/18 14:57*	*04/06/18 04:46*	*1*
2,4,6-Tribromophenol	*66*		*26 - 139*	*04/05/18 14:57*	*04/06/18 04:46*	*1*
2-Fluorophenol	*36*		*25 - 58*	*04/05/18 14:57*	*04/06/18 04:46*	*1*
2-Fluorobiphenyl	*74*		*45 - 107*	*04/05/18 14:57*	*04/06/18 04:46*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**8740**		250	233	ug/L		04/05/18 21:15	04/06/18 15:32	5
Potassium	**2570**		250	143	ug/L		04/05/18 21:15	04/06/18 15:32	5
Magnesium	**2800**		250	155	ug/L		04/05/18 21:15	04/06/18 15:32	5
Sodium	**4760**		250	213	ug/L		04/05/18 21:15	04/06/18 15:32	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/05/18 21:15	04/06/18 15:32	5
Antimony	1.4	U	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 15:32	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/05/18 21:15	04/06/18 15:32	5
Barium	**35.3**		5.0	3.2	ug/L		04/05/18 21:15	04/06/18 15:32	5
Thallium	0.60	U	1.0	0.60	ug/L		04/05/18 21:15	04/06/18 15:32	5
Iron	**6030**		150	97.8	ug/L		04/05/18 21:15	04/06/18 15:32	5
Nickel	**4.1**	**J**	5.0	3.1	ug/L		04/05/18 21:15	04/06/18 15:32	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 15:32	5
Silver	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 15:32	5
Arsenic	**2.1**	**J**	2.5	1.5	ug/L		04/05/18 21:15	04/06/18 15:32	5

Client Sample ID: DGC-11S

Lab Sample ID: 460-153196-3

Date Collected: 04/03/18 11:10
Date Received: 04/03/18 23:10

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	**3.6**	J	5.0	3.3	ug/L		04/05/18 21:15	04/06/18 15:32	5
Aluminum	**166**		50.0	28.5	ug/L		04/05/18 21:15	04/06/18 15:32	5
Lead	0.93	U	1.5	0.93	ug/L		04/05/18 21:15	04/06/18 15:32	5
Zinc	16.3	U	20.0	16.3	ug/L		04/05/18 21:15	04/06/18 15:32	5
Selenium	1.4	~~U~~ UJ	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 15:32	5
Manganese	**105**		10.0	6.1	ug/L		04/05/18 21:15	04/06/18 15:32	5
Chromium	3.1	U	5.0	3.1	ug/L		04/05/18 21:15	04/06/18 15:32	5
Cobalt	3.1	U	5.0	3.1	ug/L		04/05/18 21:15	04/06/18 15:32	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/05/18 11:53	04/05/18 13:41	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**4510**		150	92.1	ug/L		04/06/18 08:04	04/06/18 19:00	1
Manganese, Dissolved	**102**		15.0	3.1	ug/L		04/06/18 08:04	04/06/18 19:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.078**	J	0.10	0.045	mg/L		04/06/18 12:47	04/09/18 16:47	1

Client Sample ID: DGC-11D

Lab Sample ID: 460-153196-4

Date Collected: 04/03/18 11:11
Date Received: 04/03/18 23:10

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.55**		0.40	0.20	ug/L			04/04/18 19:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*72 - 133*		*04/04/18 19:17*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*71 - 144*		*04/04/18 19:17*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 14:40	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/10/18 14:40	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/10/18 14:40	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/10/18 14:40	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/10/18 14:40	1
Acetone	5 ~~1.6~~	~~J~~ U	5.0	1.1	ug/L			04/10/18 14:40	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/10/18 14:40	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/10/18 14:40	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/10/18 14:40	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/10/18 14:40	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/10/18 14:40	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/10/18 14:40	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/10/18 14:40	1
2-Butanone	2.2	U *	5.0	2.2	ug/L			04/10/18 14:40	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/10/18 14:40	1

Client Sample ID: DGC-11D

Lab Sample ID: 460-153196-4

Date Collected: 04/03/18 11:11
Date Received: 04/03/18 23:10

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/10/18 14:40	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/10/18 14:40	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/10/18 14:40	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/10/18 14:40	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/10/18 14:40	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 14:40	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/10/18 14:40	1
Benzene	0.090	U	1.0	0.090	ug/L			04/10/18 14:40	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/10/18 14:40	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/10/18 14:40	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/10/18 14:40	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/10/18 14:40	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/10/18 14:40	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/10/18 14:40	1
Toluene	0.25	U	1.0	0.25	ug/L			04/10/18 14:40	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/10/18 14:40	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/10/18 14:40	1
Styrene	0.17	U	1.0	0.17	ug/L			04/10/18 14:40	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/10/18 14:40	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/10/18 14:40	1
MTBE	0.13	U	1.0	0.13	ug/L			04/10/18 14:40	1
Tetrahydrofuran	0.36	U *	2.0	0.36	ug/L			04/10/18 14:40	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/10/18 14:40	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/10/18 14:40	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/10/18 14:40	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/10/18 14:40	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/10/18 14:40	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/10/18 14:40	1
Indane	0.12	U	1.0	0.12	ug/L			04/10/18 14:40	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/10/18 14:40	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/10/18 14:40	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/10/18 14:40*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*74 - 132*		*04/10/18 14:40*	*1*
Bromofluorobenzene	*86*		*77 - 124*		*04/10/18 14:40*	*1*
Toluene-d8 (Surr)	*83*		*80 - 120*		*04/10/18 14:40*	*1*
Dibromofluoromethane (Surr)	*101*		*72 - 131*		*04/10/18 14:40*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	**0.019**	**J**	0.050	0.016	ug/L		04/05/18 14:57	04/06/18 16:23	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/05/18 14:57	04/06/18 16:23	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/05/18 14:57	04/06/18 16:23	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/05/18 14:57	04/06/18 16:23	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/05/18 14:57	04/06/18 16:23	1
Bis(2-chloroethyl)ether	0.026	U	0.030	0.026	ug/L		04/05/18 14:57	04/06/18 16:23	1

Client Sample ID: DGC-11D

Lab Sample ID: 460-153196-4

Date Collected: 04/03/18 11:11
Date Received: 04/03/18 23:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/05/18 14:57	04/06/18 05:07	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/05/18 14:57	04/06/18 05:07	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/05/18 14:57	04/06/18 05:07	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/05/18 14:57	04/06/18 05:07	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/05/18 14:57	04/06/18 05:07	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/05/18 14:57	04/06/18 05:07	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/05/18 14:57	04/06/18 05:07	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/05/18 14:57	04/06/18 05:07	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/05/18 14:57	04/06/18 05:07	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/05/18 14:57	04/06/18 05:07	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/05/18 14:57	04/06/18 05:07	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/05/18 14:57	04/06/18 05:07	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/05/18 14:57	04/06/18 05:07	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/05/18 14:57	04/06/18 05:07	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/05/18 14:57	04/06/18 05:07	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/05/18 14:57	04/06/18 05:07	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/05/18 14:57	04/06/18 05:07	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/05/18 14:57	04/06/18 05:07	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/05/18 14:57	04/06/18 05:07	1
Isophorone	0.80	U	10	0.80	ug/L		04/05/18 14:57	04/06/18 05:07	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/05/18 14:57	04/06/18 05:07	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/05/18 14:57	04/06/18 05:07	1
Naphthalene	1.1	U	10	1.1	ug/L		04/05/18 14:57	04/06/18 05:07	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/05/18 14:57	04/06/18 05:07	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/05/18 14:57	04/06/18 05:07	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/05/18 14:57	04/06/18 05:07	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/05/18 14:57	04/06/18 05:07	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/05/18 14:57	04/06/18 05:07	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/05/18 14:57	04/06/18 05:07	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/05/18 14:57	04/06/18 05:07	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/05/18 14:57	04/06/18 05:07	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/05/18 14:57	04/06/18 05:07	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/05/18 14:57	04/06/18 05:07	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/05/18 14:57	04/06/18 05:07	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/05/18 14:57	04/06/18 05:07	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/05/18 14:57	04/06/18 05:07	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/05/18 14:57	04/06/18 05:07	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/05/18 14:57	04/06/18 05:07	1
Fluorene	0.91	U	10	0.91	ug/L		04/05/18 14:57	04/06/18 05:07	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/05/18 14:57	04/06/18 05:07	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/05/18 14:57	04/06/18 05:07	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/05/18 14:57	04/06/18 05:07	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/05/18 14:57	04/06/18 05:07	1
Anthracene	0.63	U	10	0.63	ug/L		04/05/18 14:57	04/06/18 05:07	1
Carbazole	0.68	U	10	0.68	ug/L		04/05/18 14:57	04/06/18 05:07	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/05/18 14:57	04/06/18 05:07	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/05/18 14:57	04/06/18 05:07	1
Pyrene	1.6	U	10	1.6	ug/L		04/05/18 14:57	04/06/18 05:07	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/05/18 14:57	04/06/18 05:07	1

Client Sample ID: DGC-11D

Lab Sample ID: 460-153196-4

Date Collected: 04/03/18 11:11
Date Received: 04/03/18 23:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/05/18 14:57	04/06/18 05:07	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/05/18 14:57	04/06/18 05:07	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/05/18 14:57	04/06/18 05:07	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/05/18 14:57	04/06/18 05:07	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/05/18 14:57	04/06/18 05:07	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/05/18 14:57	04/06/18 05:07	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/05/18 14:57	04/06/18 05:07	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/05/18 14:57	04/06/18 05:07	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/05/18 14:57	04/06/18 05:07	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/05/18 14:57	04/06/18 05:07	1
Caprolactam	0.68	U	10	0.68	ug/L		04/05/18 14:57	04/06/18 05:07	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/05/18 14:57	04/06/18 05:07	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/05/18 14:57	04/06/18 05:07	1
N-Methylaniline	0.48	U *-	5.0	0.48	ug/L		04/05/18 14:57	04/06/18 05:07	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/05/18 14:57*	*04/06/18 05:07*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*77*		*51 - 108*	*04/05/18 14:57*	*04/06/18 05:07*	*1*
Phenol-d5	*25*		*14 - 39*	*04/05/18 14:57*	*04/06/18 05:07*	*1*
Terphenyl-d14	*108*		*40 - 148*	*04/05/18 14:57*	*04/06/18 05:07*	*1*
2,4,6-Tribromophenol	*67*		*26 - 139*	*04/05/18 14:57*	*04/06/18 05:07*	*1*
2-Fluorophenol	*39*		*25 - 58*	*04/05/18 14:57*	*04/06/18 05:07*	*1*
2-Fluorobiphenyl	*78*		*45 - 107*	*04/05/18 14:57*	*04/06/18 05:07*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**15500**		250	233	ug/L		04/05/18 21:15	04/06/18 15:35	5
Potassium	**2110**		250	143	ug/L		04/05/18 21:15	04/06/18 15:35	5
Magnesium	**9130**		250	155	ug/L		04/05/18 21:15	04/06/18 15:35	5
Sodium	**7170**		250	213	ug/L		04/05/18 21:15	04/06/18 15:35	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/05/18 21:15	04/06/18 15:35	5
Antimony	1.4	U	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 15:35	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/05/18 21:15	04/06/18 15:35	5
Barium	**118**		5.0	3.2	ug/L		04/05/18 21:15	04/06/18 15:35	5
Thallium	0.60	U	1.0	0.60	ug/L		04/05/18 21:15	04/06/18 15:35	5
Iron	97.8	U	150	97.8	ug/L		04/05/18 21:15	04/06/18 15:35	5
Nickel	**6.4**		5.0	3.1	ug/L		04/05/18 21:15	04/06/18 15:35	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 15:35	5
Silver	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 15:35	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/05/18 21:15	04/06/18 15:35	5
Copper	**13.4**		5.0	3.3	ug/L		04/05/18 21:15	04/06/18 15:35	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/05/18 21:15	04/06/18 15:35	5
Lead	**1.4**	**J**	1.5	0.93	ug/L		04/05/18 21:15	04/06/18 15:35	5
Zinc	**53.8**		20.0	16.3	ug/L		04/05/18 21:15	04/06/18 15:35	5
Selenium	1.4	~~U~~ UJ	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 15:35	5
Manganese	6.1	U	10.0	6.1	ug/L		04/05/18 21:15	04/06/18 15:35	5
Chromium	3.1	U	5.0	3.1	ug/L		04/05/18 21:15	04/06/18 15:35	5
Cobalt	3.1	U	5.0	3.1	ug/L		04/05/18 21:15	04/06/18 15:35	5

Client Sample ID: DGC-11D

Lab Sample ID: 460-153196-4

Date Collected: 04/03/18 11:11
Date Received: 04/03/18 23:10

Matrix: Water

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/05/18 11:53	04/05/18 13:43	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	92.1	U	150	92.1	ug/L		04/06/18 08:04	04/06/18 19:04	1
Manganese, Dissolved	**3.7**	**J**	15.0	3.1	ug/L		04/06/18 08:04	04/06/18 19:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	0.045	U	0.10	0.045	mg/L		04/06/18 12:47	04/09/18 16:48	1

Client Sample ID: UPA-02S

Lab Sample ID: 460-153196-5

Date Collected: 04/03/18 14:55
Date Received: 04/03/18 23:10

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.24**	**J**	0.40	0.20	ug/L			04/10/18 10:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*72 - 133*		*04/10/18 10:19*	*1*
1,2-Dichloroethane-d4 (Surr)	*80*		*71 - 144*		*04/10/18 10:19*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 14:17	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/10/18 14:17	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/10/18 14:17	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/10/18 14:17	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/10/18 14:17	1
Acetone	5 ~~**2.1**~~ ~~**J**~~ U		5.0	1.1	ug/L			04/10/18 14:17	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/10/18 14:17	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/10/18 14:17	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/10/18 14:17	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/10/18 14:17	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/10/18 14:17	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/10/18 14:17	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/10/18 14:17	1
2-Butanone	2.2	U *	5.0	2.2	ug/L			04/10/18 14:17	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/10/18 14:17	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/10/18 14:17	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/10/18 14:17	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/10/18 14:17	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/10/18 14:17	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/10/18 14:17	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 14:17	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/10/18 14:17	1
Benzene	0.090	U	1.0	0.090	ug/L			04/10/18 14:17	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/10/18 14:17	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/10/18 14:17	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/10/18 14:17	1

Client Sample ID: UPA-02S

Lab Sample ID: 460-153196-5

Date Collected: 04/03/18 14:55
Date Received: 04/03/18 23:10

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/10/18 14:17	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/10/18 14:17	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/10/18 14:17	1
Toluene	0.25	U	1.0	0.25	ug/L			04/10/18 14:17	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/10/18 14:17	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/10/18 14:17	1
Styrene	0.17	U	1.0	0.17	ug/L			04/10/18 14:17	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/10/18 14:17	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/10/18 14:17	1
MTBE	0.13	U	1.0	0.13	ug/L			04/10/18 14:17	1
Tetrahydrofuran	0.36	U *	2.0	0.36	ug/L			04/10/18 14:17	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/10/18 14:17	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/10/18 14:17	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/10/18 14:17	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/10/18 14:17	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/10/18 14:17	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/10/18 14:17	1
Indane	0.12	U	1.0	0.12	ug/L			04/10/18 14:17	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/10/18 14:17	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/10/18 14:17	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/10/18 14:17*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*74 - 132*		*04/10/18 14:17*	*1*
Bromofluorobenzene	*101*		*77 - 124*		*04/10/18 14:17*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*04/10/18 14:17*	*1*
Dibromofluoromethane (Surr)	*118*		*72 - 131*		*04/10/18 14:17*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/05/18 14:57	04/06/18 16:44	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/05/18 14:57	04/06/18 16:44	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/05/18 14:57	04/06/18 16:44	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/05/18 14:57	04/06/18 16:44	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/05/18 14:57	04/06/18 16:44	1
Bis(2-chloroethyl)ether	0.026	U	0.030	0.026	ug/L		04/05/18 14:57	04/06/18 16:44	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/05/18 14:57	04/06/18 05:30	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/05/18 14:57	04/06/18 05:30	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/05/18 14:57	04/06/18 05:30	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/05/18 14:57	04/06/18 05:30	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/05/18 14:57	04/06/18 05:30	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/05/18 14:57	04/06/18 05:30	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/05/18 14:57	04/06/18 05:30	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/05/18 14:57	04/06/18 05:30	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/05/18 14:57	04/06/18 05:30	1

Client Sample ID: UPA-02S

Lab Sample ID: 460-153196-5

Date Collected: 04/03/18 14:55
Date Received: 04/03/18 23:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/05/18 14:57	04/06/18 05:30	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/05/18 14:57	04/06/18 05:30	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/05/18 14:57	04/06/18 05:30	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/05/18 14:57	04/06/18 05:30	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/05/18 14:57	04/06/18 05:30	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/05/18 14:57	04/06/18 05:30	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/05/18 14:57	04/06/18 05:30	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/05/18 14:57	04/06/18 05:30	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/05/18 14:57	04/06/18 05:30	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/05/18 14:57	04/06/18 05:30	1
Isophorone	0.80	U	10	0.80	ug/L		04/05/18 14:57	04/06/18 05:30	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/05/18 14:57	04/06/18 05:30	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/05/18 14:57	04/06/18 05:30	1
Naphthalene	1.1	U	10	1.1	ug/L		04/05/18 14:57	04/06/18 05:30	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/05/18 14:57	04/06/18 05:30	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/05/18 14:57	04/06/18 05:30	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/05/18 14:57	04/06/18 05:30	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/05/18 14:57	04/06/18 05:30	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/05/18 14:57	04/06/18 05:30	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/05/18 14:57	04/06/18 05:30	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/05/18 14:57	04/06/18 05:30	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/05/18 14:57	04/06/18 05:30	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/05/18 14:57	04/06/18 05:30	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/05/18 14:57	04/06/18 05:30	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/05/18 14:57	04/06/18 05:30	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/05/18 14:57	04/06/18 05:30	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/05/18 14:57	04/06/18 05:30	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/05/18 14:57	04/06/18 05:30	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/05/18 14:57	04/06/18 05:30	1
Fluorene	0.91	U	10	0.91	ug/L		04/05/18 14:57	04/06/18 05:30	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/05/18 14:57	04/06/18 05:30	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/05/18 14:57	04/06/18 05:30	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/05/18 14:57	04/06/18 05:30	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/05/18 14:57	04/06/18 05:30	1
Anthracene	0.63	U	10	0.63	ug/L		04/05/18 14:57	04/06/18 05:30	1
Carbazole	0.68	U	10	0.68	ug/L		04/05/18 14:57	04/06/18 05:30	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/05/18 14:57	04/06/18 05:30	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/05/18 14:57	04/06/18 05:30	1
Pyrene	1.6	U	10	1.6	ug/L		04/05/18 14:57	04/06/18 05:30	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/05/18 14:57	04/06/18 05:30	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/05/18 14:57	04/06/18 05:30	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/05/18 14:57	04/06/18 05:30	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/05/18 14:57	04/06/18 05:30	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/05/18 14:57	04/06/18 05:30	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/05/18 14:57	04/06/18 05:30	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/05/18 14:57	04/06/18 05:30	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/05/18 14:57	04/06/18 05:30	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/05/18 14:57	04/06/18 05:30	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/05/18 14:57	04/06/18 05:30	1

Client Sample ID: UPA-02S

Lab Sample ID: 460-153196-5

Date Collected: 04/03/18 14:55
Date Received: 04/03/18 23:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/05/18 14:57	04/06/18 05:30	1
Caprolactam	0.68	U	10	0.68	ug/L		04/05/18 14:57	04/06/18 05:30	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/05/18 14:57	04/06/18 05:30	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/05/18 14:57	04/06/18 05:30	1
N-Methylaniline	0.48	U *	5.0	0.48	ug/L		04/05/18 14:57	04/06/18 05:30	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/05/18 14:57*	*04/06/18 05:30*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*73*		*51 - 108*	*04/05/18 14:57*	*04/06/18 05:30*	*1*
Phenol-d5	*25*		*14 - 39*	*04/05/18 14:57*	*04/06/18 05:30*	*1*
Terphenyl-d14	*107*		*40 - 148*	*04/05/18 14:57*	*04/06/18 05:30*	*1*
2,4,6-Tribromophenol	*67*		*26 - 139*	*04/05/18 14:57*	*04/06/18 05:30*	*1*
2-Fluorophenol	*39*		*25 - 58*	*04/05/18 14:57*	*04/06/18 05:30*	*1*
2-Fluorobiphenyl	*80*		*45 - 107*	*04/05/18 14:57*	*04/06/18 05:30*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**13500**		250	233	ug/L		04/05/18 21:15	04/06/18 15:37	5
Potassium	**1810**		250	143	ug/L		04/05/18 21:15	04/06/18 15:37	5
Magnesium	**7970**		250	155	ug/L		04/05/18 21:15	04/06/18 15:37	5
Sodium	**30200**		250	213	ug/L		04/05/18 21:15	04/06/18 15:37	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/05/18 21:15	04/06/18 15:37	5
Antimony	1.4	U	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 15:37	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/05/18 21:15	04/06/18 15:37	5
Barium	**123**		5.0	3.2	ug/L		04/05/18 21:15	04/06/18 15:37	5
Thallium	0.60	U	1.0	0.60	ug/L		04/05/18 21:15	04/06/18 15:37	5
Iron	**258**		150	97.8	ug/L		04/05/18 21:15	04/06/18 15:37	5
Nickel	**25.8**		5.0	3.1	ug/L		04/05/18 21:15	04/06/18 15:37	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 15:37	5
Silver	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 15:37	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/05/18 21:15	04/06/18 15:37	5
Copper	**11.1**		5.0	3.3	ug/L		04/05/18 21:15	04/06/18 15:37	5
Aluminum	**47.1**	**J**	50.0	28.5	ug/L		04/05/18 21:15	04/06/18 15:37	5
Lead	0.93	U	1.5	0.93	ug/L		04/05/18 21:15	04/06/18 15:37	5
Zinc	**47.3**		20.0	16.3	ug/L		04/05/18 21:15	04/06/18 15:37	5
Selenium	**1.7**	**J J-**	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 15:37	5
Manganese	**40.4**		10.0	6.1	ug/L		04/05/18 21:15	04/06/18 15:37	5
Chromium	**30.6**		5.0	3.1	ug/L		04/05/18 21:15	04/06/18 15:37	5
Cobalt	3.1	U	5.0	3.1	ug/L		04/05/18 21:15	04/06/18 15:37	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/05/18 11:53	04/05/18 13:48	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	92.1	U	150	92.1	ug/L		04/06/18 08:04	04/06/18 19:08	1
Manganese, Dissolved	**39.9**		15.0	3.1	ug/L		04/06/18 08:04	04/06/18 19:08	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G

TestAmerica Job ID: 460-153196-1
SDG: 153196

Client Sample ID: UPA-02S

Lab Sample ID: 460-153196-5
Matrix: Water

Date Collected: 04/03/18 14:55
Date Received: 04/03/18 23:10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.089**	**J**	0.10	0.045	mg/L		04/06/18 12:47	04/09/18 16:50	1

Client Sample ID: RT-1-UP

Lab Sample ID: 460-153196-6
Matrix: Water

Date Collected: 04/03/18 15:50
Date Received: 04/03/18 23:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 13:54	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/10/18 13:54	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/10/18 13:54	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/10/18 13:54	1
Methylene Chloride	**0.22**	**J**	1.0	0.21	ug/L			04/10/18 13:54	1
Acetone	5 ~~**2.0**~~	~~**J**~~ U	5.0	1.1	ug/L			04/10/18 13:54	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/10/18 13:54	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/10/18 13:54	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/10/18 13:54	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/10/18 13:54	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/10/18 13:54	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/10/18 13:54	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/10/18 13:54	1
2-Butanone	2.2	U ~~*~~	5.0	2.2	ug/L			04/10/18 13:54	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/10/18 13:54	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/10/18 13:54	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/10/18 13:54	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/10/18 13:54	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/10/18 13:54	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/10/18 13:54	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 13:54	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/10/18 13:54	1
Benzene	**0.17**	**J**	1.0	0.090	ug/L			04/10/18 13:54	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/10/18 13:54	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/10/18 13:54	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/10/18 13:54	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/10/18 13:54	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/10/18 13:54	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/10/18 13:54	1
Toluene	0.25	U	1.0	0.25	ug/L			04/10/18 13:54	1
Chlorobenzene	**1.6**		1.0	0.24	ug/L			04/10/18 13:54	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/10/18 13:54	1
Styrene	0.17	U	1.0	0.17	ug/L			04/10/18 13:54	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/10/18 13:54	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/10/18 13:54	1
MTBE	0.13	U	1.0	0.13	ug/L			04/10/18 13:54	1
Tetrahydrofuran	**1.2**	~~**J**~~ ~~*~~ J+	2.0	0.36	ug/L			04/10/18 13:54	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/10/18 13:54	1
1,4-Dioxane	**56**		50	8.7	ug/L			04/10/18 13:54	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/10/18 13:54	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/10/18 13:54	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/10/18 13:54	1

Client Sample ID: RT-1-UP

Lab Sample ID: 460-153196-6

Date Collected: 04/03/18 15:50
Date Received: 04/03/18 23:10

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/10/18 13:54	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/10/18 13:54	1
Indane	0.12	U	1.0	0.12	ug/L			04/10/18 13:54	1
Dichlorofluoromethane	**0.22**	**J**	1.0	0.21	ug/L			04/10/18 13:54	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/10/18 13:54	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/10/18 13:54*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*74 - 132*		*04/10/18 13:54*	*1*
Bromofluorobenzene	*97*		*77 - 124*		*04/10/18 13:54*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*		*04/10/18 13:54*	*1*
Dibromofluoromethane (Surr)	*109*		*72 - 131*		*04/10/18 13:54*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.052	0.016	ug/L		04/05/18 14:57	04/06/18 17:05	1
Benzo[a]pyrene	0.023	U	0.052	0.023	ug/L		04/05/18 14:57	04/06/18 17:05	1
Benzo[b]fluoranthene	0.025	U	0.052	0.025	ug/L		04/05/18 14:57	04/06/18 17:05	1
Hexachlorobenzene	0.014	U	0.021	0.014	ug/L		04/05/18 14:57	04/06/18 17:05	1
Pentachlorophenol	0.16	U	0.21	0.16	ug/L		04/05/18 14:57	04/06/18 17:05	1
Bis(2-chloroethyl)ether	**1.4**		0.031	0.027	ug/L		04/05/18 14:57	04/06/18 17:05	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.30	U	10	0.30	ug/L		04/05/18 14:57	04/06/18 05:52	1
2-Chlorophenol	0.39	U	10	0.39	ug/L		04/05/18 14:57	04/06/18 05:52	1
2-Methylphenol	0.27	U	10	0.27	ug/L		04/05/18 14:57	04/06/18 05:52	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/05/18 14:57	04/06/18 05:52	1
2-Nitrophenol	0.78	U	10	0.78	ug/L		04/05/18 14:57	04/06/18 05:52	1
2,4-Dimethylphenol	0.25	U	10	0.25	ug/L		04/05/18 14:57	04/06/18 05:52	1
2,4-Dichlorophenol	0.44	U	10	0.44	ug/L		04/05/18 14:57	04/06/18 05:52	1
4-Chloro-3-methylphenol	0.60	U	10	0.60	ug/L		04/05/18 14:57	04/06/18 05:52	1
2,4,6-Trichlorophenol	0.31	U	10	0.31	ug/L		04/05/18 14:57	04/06/18 05:52	1
2,4,5-Trichlorophenol	0.29	U	10	0.29	ug/L		04/05/18 14:57	04/06/18 05:52	1
2,4-Dinitrophenol	15	U	21	15	ug/L		04/05/18 14:57	04/06/18 05:52	1
4-Nitrophenol	0.72	U	21	0.72	ug/L		04/05/18 14:57	04/06/18 05:52	1
4,6-Dinitro-2-methylphenol	14	U	21	14	ug/L		04/05/18 14:57	04/06/18 05:52	1
1,3-Dichlorobenzene	2.1	U	10	2.1	ug/L		04/05/18 14:57	04/06/18 05:52	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/05/18 14:57	04/06/18 05:52	1
1,2-Dichlorobenzene	1.4	U	10	1.4	ug/L		04/05/18 14:57	04/06/18 05:52	1
N-Nitrosodi-n-propylamine	0.45	U	1.0	0.45	ug/L		04/05/18 14:57	04/06/18 05:52	1
Hexachloroethane	1.2	U	2.1	1.2	ug/L		04/05/18 14:57	04/06/18 05:52	1
Nitrobenzene	0.59	U	1.0	0.59	ug/L		04/05/18 14:57	04/06/18 05:52	1
Isophorone	0.83	U	10	0.83	ug/L		04/05/18 14:57	04/06/18 05:52	1
Bis(2-chloroethoxy)methane	0.25	U	10	0.25	ug/L		04/05/18 14:57	04/06/18 05:52	1
1,2,4-Trichlorobenzene	1.3	U	2.1	1.3	ug/L		04/05/18 14:57	04/06/18 05:52	1
Naphthalene	1.2	U	10	1.2	ug/L		04/05/18 14:57	04/06/18 05:52	1
4-Chloroaniline	2.0	U	10	2.0	ug/L		04/05/18 14:57	04/06/18 05:52	1

Client Sample ID: RT-1-UP

Lab Sample ID: 460-153196-6

Date Collected: 04/03/18 15:50
Date Received: 04/03/18 23:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	0.81	U	1.0	0.81	ug/L		04/05/18 14:57	04/06/18 05:52	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/05/18 14:57	04/06/18 05:52	1
Hexachlorocyclopentadiene	1.8	U	10	1.8	ug/L		04/05/18 14:57	04/06/18 05:52	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/05/18 14:57	04/06/18 05:52	1
2-Nitroaniline	0.49	U	10	0.49	ug/L		04/05/18 14:57	04/06/18 05:52	1
Dimethyl phthalate	0.80	U	10	0.80	ug/L		04/05/18 14:57	04/06/18 05:52	1
Acenaphthylene	0.86	U	10	0.86	ug/L		04/05/18 14:57	04/06/18 05:52	1
2,6-Dinitrotoluene	0.41	U	2.1	0.41	ug/L		04/05/18 14:57	04/06/18 05:52	1
3-Nitroaniline	1.0	U	10	1.0	ug/L		04/05/18 14:57	04/06/18 05:52	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/05/18 14:57	04/06/18 05:52	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/05/18 14:57	04/06/18 05:52	1
2,4-Dinitrotoluene	1.0	U	2.1	1.0	ug/L		04/05/18 14:57	04/06/18 05:52	1
Diethyl phthalate	1.0	U	10	1.0	ug/L		04/05/18 14:57	04/06/18 05:52	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/05/18 14:57	04/06/18 05:52	1
Fluorene	0.95	U	10	0.95	ug/L		04/05/18 14:57	04/06/18 05:52	1
4-Nitroaniline	0.57	U	10	0.57	ug/L		04/05/18 14:57	04/06/18 05:52	1
N-Nitrosodiphenylamine	0.93	U	10	0.93	ug/L		04/05/18 14:57	04/06/18 05:52	1
4-Bromophenyl phenyl ether	0.78	U	10	0.78	ug/L		04/05/18 14:57	04/06/18 05:52	1
Phenanthrene	0.60	U	10	0.60	ug/L		04/05/18 14:57	04/06/18 05:52	1
Anthracene	0.66	U	10	0.66	ug/L		04/05/18 14:57	04/06/18 05:52	1
Carbazole	0.71	U	10	0.71	ug/L		04/05/18 14:57	04/06/18 05:52	1
Di-n-butyl phthalate	0.88	U	10	0.88	ug/L		04/05/18 14:57	04/06/18 05:52	1
Fluoranthene	0.88	U	10	0.88	ug/L		04/05/18 14:57	04/06/18 05:52	1
Pyrene	1.7	U	10	1.7	ug/L		04/05/18 14:57	04/06/18 05:52	1
Butyl benzyl phthalate	0.89	U	10	0.89	ug/L		04/05/18 14:57	04/06/18 05:52	1
3,3'-Dichlorobenzidine	1.5	U	10	1.5	ug/L		04/05/18 14:57	04/06/18 05:52	1
Chrysene	0.94	U	2.1	0.94	ug/L		04/05/18 14:57	04/06/18 05:52	1
Bis(2-ethylhexyl) phthalate	1.8	U	2.1	1.8	ug/L		04/05/18 14:57	04/06/18 05:52	1
Di-n-octyl phthalate	5.0	U	10	5.0	ug/L		04/05/18 14:57	04/06/18 05:52	1
Benzo[k]fluoranthene	0.70	U	1.0	0.70	ug/L		04/05/18 14:57	04/06/18 05:52	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.1	1.3	ug/L		04/05/18 14:57	04/06/18 05:52	1
Dibenz(a,h)anthracene	0.75	U	1.0	0.75	ug/L		04/05/18 14:57	04/06/18 05:52	1
Benzo[g,h,i]perylene	1.5	U	10	1.5	ug/L		04/05/18 14:57	04/06/18 05:52	1
Diphenyl ether	1.3	U	10	1.3	ug/L		04/05/18 14:57	04/06/18 05:52	1
n,n'-Dimethylaniline	0.95	U	1.0	0.95	ug/L		04/05/18 14:57	04/06/18 05:52	1
Caprolactam	0.71	U	10	0.71	ug/L		04/05/18 14:57	04/06/18 05:52	1
bis (2-chloroisopropyl) ether	0.66	U	10	0.66	ug/L		04/05/18 14:57	04/06/18 05:52	1
Bisphenol-A	10	U	10	10	ug/L		04/05/18 14:57	04/06/18 05:52	1
N-Methylaniline	0.50	U *	5.2	0.50	ug/L		04/05/18 14:57	04/06/18 05:52	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*11*	*J*	*ug/L*		*1.71*		*04/05/18 14:57*	*04/06/18 05:52*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*75*		*51 - 108*	*04/05/18 14:57*	*04/06/18 05:52*	*1*
Phenol-d5	*26*		*14 - 39*	*04/05/18 14:57*	*04/06/18 05:52*	*1*
Terphenyl-d14	*109*		*40 - 148*	*04/05/18 14:57*	*04/06/18 05:52*	*1*
2,4,6-Tribromophenol	*66*		*26 - 139*	*04/05/18 14:57*	*04/06/18 05:52*	*1*
2-Fluorophenol	*40*		*25 - 58*	*04/05/18 14:57*	*04/06/18 05:52*	*1*
2-Fluorobiphenyl	*79*		*45 - 107*	*04/05/18 14:57*	*04/06/18 05:52*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**11300**		250	233	ug/L		04/05/18 21:15	04/06/18 15:40	5
Potassium	**1900**		250	143	ug/L		04/05/18 21:15	04/06/18 15:40	5
Magnesium	**3310**		250	155	ug/L		04/05/18 21:15	04/06/18 15:40	5
Sodium	**6470**		250	213	ug/L		04/05/18 21:15	04/06/18 15:40	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/05/18 21:15	04/06/18 15:40	5
Antimony	1.4	U	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 15:40	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/05/18 21:15	04/06/18 15:40	5
Barium	**55.5**		5.0	3.2	ug/L		04/05/18 21:15	04/06/18 15:40	5
Thallium	0.60	U	1.0	0.60	ug/L		04/05/18 21:15	04/06/18 15:40	5
Iron	**7560**		150	97.8	ug/L		04/05/18 21:15	04/06/18 15:40	5
Nickel	**14.0**		5.0	3.1	ug/L		04/05/18 21:15	04/06/18 15:40	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 15:40	5
Silver	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 15:40	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/05/18 21:15	04/06/18 15:40	5
Copper	3.3	U	5.0	3.3	ug/L		04/05/18 21:15	04/06/18 15:40	5
Aluminum	**228**		50.0	28.5	ug/L		04/05/18 21:15	04/06/18 15:40	5
Lead	0.93	U	1.5	0.93	ug/L		04/05/18 21:15	04/06/18 15:40	5
Zinc	16.3	U	20.0	16.3	ug/L		04/05/18 21:15	04/06/18 15:40	5
Selenium	1.4	~~U~~ UJ	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 15:40	5
Manganese	**234**		10.0	6.1	ug/L		04/05/18 21:15	04/06/18 15:40	5
Chromium	3.1	U	5.0	3.1	ug/L		04/05/18 21:15	04/06/18 15:40	5
Cobalt	**24.0**		5.0	3.1	ug/L		04/05/18 21:15	04/06/18 15:40	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/05/18 11:53	04/05/18 13:49	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**8650**		150	92.1	ug/L		04/06/18 08:04	04/06/18 19:12	1
Manganese, Dissolved	**254**		15.0	3.1	ug/L		04/06/18 08:04	04/06/18 19:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.064**	J	0.10	0.045	mg/L		04/06/18 12:47	04/09/18 16:51	1

Client Sample ID: TBGW-040318 Lab Sample ID: 460-153196-7

Date Collected: 04/03/18 00:00 Matrix: Water
Date Received: 04/03/18 23:10

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.20	U	0.40	0.20	ug/L			04/04/18 18:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*92*		*72 - 133*		*04/04/18 18:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*71 - 144*		*04/04/18 18:08*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 13:30	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/10/18 13:30	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/10/18 13:30	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/10/18 13:30	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/10/18 13:30	1

Client Sample ID: TBGW-040318

Lab Sample ID: 460-153196-7

Date Collected: 04/03/18 00:00
Date Received: 04/03/18 23:10

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**5.3**		5.0	1.1	ug/L			04/10/18 13:30	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/10/18 13:30	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/10/18 13:30	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/10/18 13:30	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/10/18 13:30	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/10/18 13:30	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/10/18 13:30	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/10/18 13:30	1
2-Butanone	2.2	U *	5.0	2.2	ug/L			04/10/18 13:30	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/10/18 13:30	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/10/18 13:30	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/10/18 13:30	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/10/18 13:30	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/10/18 13:30	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/10/18 13:30	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 13:30	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/10/18 13:30	1
Benzene	0.090	U	1.0	0.090	ug/L			04/10/18 13:30	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/10/18 13:30	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/10/18 13:30	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/10/18 13:30	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/10/18 13:30	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/10/18 13:30	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/10/18 13:30	1
Toluene	0.25	U	1.0	0.25	ug/L			04/10/18 13:30	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/10/18 13:30	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/10/18 13:30	1
Styrene	0.17	U	1.0	0.17	ug/L			04/10/18 13:30	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/10/18 13:30	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/10/18 13:30	1
MTBE	0.13	U	1.0	0.13	ug/L			04/10/18 13:30	1
Tetrahydrofuran	0.36	U *	2.0	0.36	ug/L			04/10/18 13:30	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/10/18 13:30	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/10/18 13:30	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/10/18 13:30	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/10/18 13:30	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/10/18 13:30	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/10/18 13:30	1
Indane	0.12	U	1.0	0.12	ug/L			04/10/18 13:30	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/10/18 13:30	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/10/18 13:30	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/10/18 13:30*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*74 - 132*		*04/10/18 13:30*	*1*
Bromofluorobenzene	*102*		*77 - 124*		*04/10/18 13:30*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*04/10/18 13:30*	*1*
Dibromofluoromethane (Surr)	*113*		*72 - 131*		*04/10/18 13:30*	*1*

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G

TestAmerica Job ID: 460-153196-1
SDG: 153196

Client Sample ID: AWC-E1(132)

Lab Sample ID: 460-153282-1
Matrix: Water

Date Collected: 04/04/18 08:55
Date Received: 04/04/18 19:30

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**11**		0.40	0.20	ug/L			04/07/18 20:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*104*		*72 - 133*		*04/07/18 20:16*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*71 - 144*		*04/07/18 20:16*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 13:42	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/10/18 13:42	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/10/18 13:42	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/10/18 13:42	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/10/18 13:42	1
Acetone	1.1	U	5.0	1.1	ug/L			04/10/18 13:42	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/10/18 13:42	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/10/18 13:42	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/10/18 13:42	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/10/18 13:42	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/10/18 13:42	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/10/18 13:42	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/10/18 13:42	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/10/18 13:42	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/10/18 13:42	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/10/18 13:42	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/10/18 13:42	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/10/18 13:42	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/10/18 13:42	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/10/18 13:42	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 13:42	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/10/18 13:42	1
Benzene	0.090	U	1.0	0.090	ug/L			04/10/18 13:42	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/10/18 13:42	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/10/18 13:42	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/10/18 13:42	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/10/18 13:42	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/10/18 13:42	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/10/18 13:42	1
Toluene	0.25	U	1.0	0.25	ug/L			04/10/18 13:42	1
Chlorobenzene	**2.6**		1.0	0.24	ug/L			04/10/18 13:42	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/10/18 13:42	1
Styrene	0.17	U	1.0	0.17	ug/L			04/10/18 13:42	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/10/18 13:42	1
Ethyl ether	**4.5**		1.0	0.11	ug/L			04/10/18 13:42	1
MTBE	**0.46**	**J**	1.0	0.13	ug/L			04/10/18 13:42	1
Tetrahydrofuran	**0.65**	**J**	2.0	0.36	ug/L			04/10/18 13:42	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/10/18 13:42	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/10/18 13:42	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/10/18 13:42	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/10/18 13:42	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/10/18 13:42	1

Client Sample ID: AWC-E1(132) Lab Sample ID: 460-153282-1

Date Collected: 04/04/18 08:55 Matrix: Water
Date Received: 04/04/18 19:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/10/18 13:42	1
Indane	0.12	U	1.0	0.12	ug/L			04/10/18 13:42	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/10/18 13:42	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/10/18 13:42	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/10/18 13:42*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*86*		*74 - 132*		*04/10/18 13:42*	*1*
Bromofluorobenzene	*105*		*77 - 124*		*04/10/18 13:42*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*04/10/18 13:42*	*1*
Dibromofluoromethane (Surr)	*99*		*72 - 131*		*04/10/18 13:42*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/06/18 15:34	04/08/18 20:08	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/06/18 15:34	04/08/18 20:08	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/06/18 15:34	04/08/18 20:08	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/06/18 15:34	04/08/18 20:08	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/06/18 15:34	04/08/18 20:08	1
Bis(2-chloroethyl)ether	**1.0**		0.030	0.026	ug/L		04/06/18 15:34	04/08/18 20:08	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/06/18 15:34	04/07/18 12:19	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/06/18 15:34	04/07/18 12:19	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/06/18 15:34	04/07/18 12:19	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/06/18 15:34	04/07/18 12:19	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/06/18 15:34	04/07/18 12:19	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/06/18 15:34	04/07/18 12:19	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/06/18 15:34	04/07/18 12:19	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/06/18 15:34	04/07/18 12:19	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/06/18 15:34	04/07/18 12:19	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/06/18 15:34	04/07/18 12:19	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/06/18 15:34	04/07/18 12:19	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/06/18 15:34	04/07/18 12:19	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/06/18 15:34	04/07/18 12:19	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/06/18 15:34	04/07/18 12:19	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/06/18 15:34	04/07/18 12:19	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/06/18 15:34	04/07/18 12:19	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/06/18 15:34	04/07/18 12:19	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/06/18 15:34	04/07/18 12:19	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/06/18 15:34	04/07/18 12:19	1
Isophorone	0.80	U	10	0.80	ug/L		04/06/18 15:34	04/07/18 12:19	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/06/18 15:34	04/07/18 12:19	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/06/18 15:34	04/07/18 12:19	1
Naphthalene	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 12:19	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/06/18 15:34	04/07/18 12:19	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/06/18 15:34	04/07/18 12:19	1

Client Sample ID: AWC-E1(132)

Lab Sample ID: 460-153282-1

Date Collected: 04/04/18 08:55
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 12:19	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/06/18 15:34	04/07/18 12:19	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/06/18 15:34	04/07/18 12:19	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/06/18 15:34	04/07/18 12:19	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/06/18 15:34	04/07/18 12:19	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/06/18 15:34	04/07/18 12:19	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/06/18 15:34	04/07/18 12:19	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/06/18 15:34	04/07/18 12:19	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 12:19	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 12:19	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/06/18 15:34	04/07/18 12:19	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/06/18 15:34	04/07/18 12:19	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/06/18 15:34	04/07/18 12:19	1
Fluorene	0.91	U	10	0.91	ug/L		04/06/18 15:34	04/07/18 12:19	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/06/18 15:34	04/07/18 12:19	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/06/18 15:34	04/07/18 12:19	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/06/18 15:34	04/07/18 12:19	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/06/18 15:34	04/07/18 12:19	1
Anthracene	0.63	U	10	0.63	ug/L		04/06/18 15:34	04/07/18 12:19	1
Carbazole	0.68	U	10	0.68	ug/L		04/06/18 15:34	04/07/18 12:19	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/06/18 15:34	04/07/18 12:19	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/06/18 15:34	04/07/18 12:19	1
Pyrene	1.6	U	10	1.6	ug/L		04/06/18 15:34	04/07/18 12:19	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/06/18 15:34	04/07/18 12:19	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/06/18 15:34	04/07/18 12:19	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/06/18 15:34	04/07/18 12:19	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/06/18 15:34	04/07/18 12:19	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/06/18 15:34	04/07/18 12:19	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/06/18 15:34	04/07/18 12:19	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/06/18 15:34	04/07/18 12:19	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/06/18 15:34	04/07/18 12:19	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/06/18 15:34	04/07/18 12:19	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/06/18 15:34	04/07/18 12:19	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/06/18 15:34	04/07/18 12:19	1
Caprolactam	0.68	U	10	0.68	ug/L		04/06/18 15:34	04/07/18 12:19	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/06/18 15:34	04/07/18 12:19	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/06/18 15:34	04/07/18 12:19	1
N-Methylaniline	0.48	U *-	5.0	0.48	ug/L		04/06/18 15:34	04/07/18 12:19	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/06/18 15:34*	*04/07/18 12:19*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*103*		*51 - 108*	*04/06/18 15:34*	*04/07/18 12:19*	*1*
Phenol-d5	*27*		*14 - 39*	*04/06/18 15:34*	*04/07/18 12:19*	*1*
Terphenyl-d14	*114*		*40 - 148*	*04/06/18 15:34*	*04/07/18 12:19*	*1*
2,4,6-Tribromophenol	*104*		*26 - 139*	*04/06/18 15:34*	*04/07/18 12:19*	*1*
2-Fluorophenol	*48*		*25 - 58*	*04/06/18 15:34*	*04/07/18 12:19*	*1*
2-Fluorobiphenyl	*96*		*45 - 107*	*04/06/18 15:34*	*04/07/18 12:19*	*1*

Client Sample ID: AWC-E1(132)

Lab Sample ID: 460-153282-1

Date Collected: 04/04/18 08:55
Date Received: 04/04/18 19:30

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 15:45	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/05/18 21:15	04/06/18 15:45	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/05/18 21:15	04/06/18 15:45	5
Barium	**116**		5.0	3.2	ug/L		04/05/18 21:15	04/06/18 15:45	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/05/18 21:15	04/06/18 15:45	5
Calcium	**26200**		250	233	ug/L		04/05/18 21:15	04/06/18 15:45	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/05/18 21:15	04/06/18 15:45	5
Cobalt	**11.5**		5.0	3.1	ug/L		04/05/18 21:15	04/06/18 15:45	5
Chromium	3.1	U	5.0	3.1	ug/L		04/05/18 21:15	04/06/18 15:45	5
Copper	3.3	U	5.0	3.3	ug/L		04/05/18 21:15	04/06/18 15:45	5
Iron	**3450**		150	97.8	ug/L		04/05/18 21:15	04/06/18 15:45	5
Potassium	**3820**		250	143	ug/L		04/05/18 21:15	04/06/18 15:45	5
Magnesium	**12000**		250	155	ug/L		04/05/18 21:15	04/06/18 15:45	5
Manganese	**1430**		10.0	6.1	ug/L		04/05/18 21:15	04/06/18 15:45	5
Sodium	**25600**		250	213	ug/L		04/05/18 21:15	04/06/18 15:45	5
Nickel	**5.8**		5.0	3.1	ug/L		04/05/18 21:15	04/06/18 15:45	5
Lead	0.93	U	1.5	0.93	ug/L		04/05/18 21:15	04/06/18 15:45	5
Antimony	1.4	U	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 15:45	5
Selenium	1.4	~~U~~ UJ	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 15:45	5
Thallium	0.60	U	1.0	0.60	ug/L		04/05/18 21:15	04/06/18 15:45	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 15:45	5
Zinc	16.3	U	20.0	16.3	ug/L		04/05/18 21:15	04/06/18 15:45	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/05/18 12:00	04/05/18 15:03	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**3250**		150	92.1	ug/L		04/06/18 08:04	04/06/18 19:16	1
Manganese, Dissolved	**1330**		15.0	3.1	ug/L		04/06/18 08:04	04/06/18 19:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**1.1**		0.10	0.045	mg/L		04/06/18 12:47	04/09/18 16:33	1

Client Sample ID: AWC-E2(140)

Lab Sample ID: 460-153282-2

Date Collected: 04/04/18 09:00
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 14:07	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/10/18 14:07	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/10/18 14:07	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/10/18 14:07	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/10/18 14:07	1
Acetone	5 ~~1.3~~	~~J~~ U	5.0	1.1	ug/L			04/10/18 14:07	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/10/18 14:07	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/10/18 14:07	1

Client Sample ID: AWC-E2(140)

Lab Sample ID: 460-153282-2

Date Collected: 04/04/18 09:00
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	**0.92**	**J**	1.0	0.24	ug/L			04/10/18 14:07	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/10/18 14:07	1
cis-1,2-Dichloroethene	**0.62**	**J**	1.0	0.26	ug/L			04/10/18 14:07	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/10/18 14:07	1
1,2-Dichloroethane	**1.4**		1.0	0.25	ug/L			04/10/18 14:07	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/10/18 14:07	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/10/18 14:07	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/10/18 14:07	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/10/18 14:07	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/10/18 14:07	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/10/18 14:07	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/10/18 14:07	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 14:07	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/10/18 14:07	1
Benzene	**1.7**		1.0	0.090	ug/L			04/10/18 14:07	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/10/18 14:07	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/10/18 14:07	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/10/18 14:07	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/10/18 14:07	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/10/18 14:07	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/10/18 14:07	1
Toluene	0.25	U	1.0	0.25	ug/L			04/10/18 14:07	1
Chlorobenzene	**8.6**		1.0	0.24	ug/L			04/10/18 14:07	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/10/18 14:07	1
Styrene	0.17	U	1.0	0.17	ug/L			04/10/18 14:07	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/10/18 14:07	1
Ethyl ether	**4.5**		1.0	0.11	ug/L			04/10/18 14:07	1
MTBE	**0.91**	**J**	1.0	0.13	ug/L			04/10/18 14:07	1
Tetrahydrofuran	**12**		2.0	0.36	ug/L			04/10/18 14:07	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/10/18 14:07	1
1,4-Dioxane	**130**		50	8.7	ug/L			04/10/18 14:07	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/10/18 14:07	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/10/18 14:07	1
Isopropylbenzene	**0.46**	**J**	1.0	0.32	ug/L			04/10/18 14:07	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/10/18 14:07	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/10/18 14:07	1
Indane	0.12	U	1.0	0.12	ug/L			04/10/18 14:07	1
Dichlorofluoromethane	**8.4**		1.0	0.21	ug/L			04/10/18 14:07	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/10/18 14:07	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/10/18 14:07*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*74 - 132*		*04/10/18 14:07*	*1*
Bromofluorobenzene	*116*		*77 - 124*		*04/10/18 14:07*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*04/10/18 14:07*	*1*
Dibromofluoromethane (Surr)	*108*		*72 - 131*		*04/10/18 14:07*	*1*

Client Sample ID: AWC-E2(140)

Lab Sample ID: 460-153282-2

Date Collected: 04/04/18 09:00
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.051	0.016	ug/L		04/06/18 15:34	04/08/18 20:29	1
Benzo[a]pyrene	0.022	U	0.051	0.022	ug/L		04/06/18 15:34	04/08/18 20:29	1
Benzo[b]fluoranthene	0.024	U	0.051	0.024	ug/L		04/06/18 15:34	04/08/18 20:29	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/06/18 15:34	04/08/18 20:29	1
Pentachlorophenol	0.16	U	0.20	0.16	ug/L		04/06/18 15:34	04/08/18 20:29	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.30	U	10	0.30	ug/L		04/06/18 15:34	04/07/18 12:40	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/06/18 15:34	04/07/18 12:40	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/06/18 15:34	04/07/18 12:40	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/06/18 15:34	04/07/18 12:40	1
2-Nitrophenol	0.76	U	10	0.76	ug/L		04/06/18 15:34	04/07/18 12:40	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/06/18 15:34	04/07/18 12:40	1
2,4-Dichlorophenol	0.43	U	10	0.43	ug/L		04/06/18 15:34	04/07/18 12:40	1
4-Chloro-3-methylphenol	0.59	U	10	0.59	ug/L		04/06/18 15:34	04/07/18 12:40	1
2,4,6-Trichlorophenol	0.31	U	10	0.31	ug/L		04/06/18 15:34	04/07/18 12:40	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/06/18 15:34	04/07/18 12:40	1
2,4-Dinitrophenol	15	U	20	15	ug/L		04/06/18 15:34	04/07/18 12:40	1
4-Nitrophenol	0.70	U	20	0.70	ug/L		04/06/18 15:34	04/07/18 12:40	1
4,6-Dinitro-2-methylphenol	14	U	20	14	ug/L		04/06/18 15:34	04/07/18 12:40	1
Bis(2-chloroethyl)ether	**24**		1.0	0.30	ug/L		04/06/18 15:34	04/07/18 12:40	1
1,3-Dichlorobenzene	2.1	U	10	2.1	ug/L		04/06/18 15:34	04/07/18 12:40	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/06/18 15:34	04/07/18 12:40	1
1,2-Dichlorobenzene	1.4	U	10	1.4	ug/L		04/06/18 15:34	04/07/18 12:40	1
N-Nitrosodi-n-propylamine	0.44	U	1.0	0.44	ug/L		04/06/18 15:34	04/07/18 12:40	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/06/18 15:34	04/07/18 12:40	1
Nitrobenzene	0.58	U	1.0	0.58	ug/L		04/06/18 15:34	04/07/18 12:40	1
Isophorone	0.81	U	10	0.81	ug/L		04/06/18 15:34	04/07/18 12:40	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/06/18 15:34	04/07/18 12:40	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/06/18 15:34	04/07/18 12:40	1
Naphthalene	1.2	U	10	1.2	ug/L		04/06/18 15:34	04/07/18 12:40	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/06/18 15:34	04/07/18 12:40	1
Hexachlorobutadiene	0.80	U	1.0	0.80	ug/L		04/06/18 15:34	04/07/18 12:40	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 12:40	1
Hexachlorocyclopentadiene	1.8	U	10	1.8	ug/L		04/06/18 15:34	04/07/18 12:40	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/06/18 15:34	04/07/18 12:40	1
2-Nitroaniline	0.48	U	10	0.48	ug/L		04/06/18 15:34	04/07/18 12:40	1
Dimethyl phthalate	0.78	U	10	0.78	ug/L		04/06/18 15:34	04/07/18 12:40	1
Acenaphthylene	0.84	U	10	0.84	ug/L		04/06/18 15:34	04/07/18 12:40	1
2,6-Dinitrotoluene	0.40	U	2.0	0.40	ug/L		04/06/18 15:34	04/07/18 12:40	1
3-Nitroaniline	0.98	U	10	0.98	ug/L		04/06/18 15:34	04/07/18 12:40	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 12:40	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 12:40	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/06/18 15:34	04/07/18 12:40	1
Diethyl phthalate	1.0	U	10	1.0	ug/L		04/06/18 15:34	04/07/18 12:40	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/06/18 15:34	04/07/18 12:40	1
Fluorene	0.93	U	10	0.93	ug/L		04/06/18 15:34	04/07/18 12:40	1
4-Nitroaniline	0.55	U	10	0.55	ug/L		04/06/18 15:34	04/07/18 12:40	1
N-Nitrosodiphenylamine	0.91	U	10	0.91	ug/L		04/06/18 15:34	04/07/18 12:40	1

Client Sample ID: AWC-E2(140)

Lab Sample ID: 460-153282-2

Date Collected: 04/04/18 09:00
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Bromophenyl phenyl ether	0.76	U	10	0.76	ug/L		04/06/18 15:34	04/07/18 12:40	1
Phenanthrene	0.59	U	10	0.59	ug/L		04/06/18 15:34	04/07/18 12:40	1
Anthracene	0.65	U	10	0.65	ug/L		04/06/18 15:34	04/07/18 12:40	1
Carbazole	0.69	U	10	0.69	ug/L		04/06/18 15:34	04/07/18 12:40	1
Di-n-butyl phthalate	0.86	U	10	0.86	ug/L		04/06/18 15:34	04/07/18 12:40	1
Fluoranthene	0.86	U	10	0.86	ug/L		04/06/18 15:34	04/07/18 12:40	1
Pyrene	1.7	U	10	1.7	ug/L		04/06/18 15:34	04/07/18 12:40	1
Butyl benzyl phthalate	0.87	U	10	0.87	ug/L		04/06/18 15:34	04/07/18 12:40	1
3,3'-Dichlorobenzidine	1.5	U	10	1.5	ug/L		04/06/18 15:34	04/07/18 12:40	1
Chrysene	0.93	U	2.0	0.93	ug/L		04/06/18 15:34	04/07/18 12:40	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/06/18 15:34	04/07/18 12:40	1
Di-n-octyl phthalate	4.9	U	10	4.9	ug/L		04/06/18 15:34	04/07/18 12:40	1
Benzo[k]fluoranthene	0.69	U	1.0	0.69	ug/L		04/06/18 15:34	04/07/18 12:40	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/06/18 15:34	04/07/18 12:40	1
Dibenz(a,h)anthracene	0.73	U	1.0	0.73	ug/L		04/06/18 15:34	04/07/18 12:40	1
Benzo[g,h,i]perylene	1.5	U	10	1.5	ug/L		04/06/18 15:34	04/07/18 12:40	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/06/18 15:34	04/07/18 12:40	1
n,n'-Dimethylaniline	0.93	U	1.0	0.93	ug/L		04/06/18 15:34	04/07/18 12:40	1
Caprolactam	0.70	U	10	0.70	ug/L		04/06/18 15:34	04/07/18 12:40	1
bis (2-chloroisopropyl) ether	0.64	U	10	0.64	ug/L		04/06/18 15:34	04/07/18 12:40	1
Bisphenol-A	10	U	10	10	ug/L		04/06/18 15:34	04/07/18 12:40	1
N-Methylaniline	**0.72**	**J ***	5.1	0.49	ug/L		04/06/18 15:34	04/07/18 12:40	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Benzene, chloro-	*6.6*	*J N*	*ug/L*		*2.65*	*108-90-7*	*04/06/18 15:34*	*04/07/18 12:40*	*1*
Phenol, 4-(hexyloxy)-	*7.2*	*J N*	*ug/L*		*5.72*	*18979-55-0*	*04/06/18 15:34*	*04/07/18 12:40*	*1*
Unknown	*60*	*J*	*ug/L*		*6.73*		*04/06/18 15:34*	*04/07/18 12:40*	*1*
Unknown	*11*	*J*	*ug/L*		*7.02*		*04/06/18 15:34*	*04/07/18 12:40*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*101*		*51 - 108*	*04/06/18 15:34*	*04/07/18 12:40*	*1*
Phenol-d5	*26*		*14 - 39*	*04/06/18 15:34*	*04/07/18 12:40*	*1*
Terphenyl-d14	*94*		*40 - 148*	*04/06/18 15:34*	*04/07/18 12:40*	*1*
2,4,6-Tribromophenol	*98*		*26 - 139*	*04/06/18 15:34*	*04/07/18 12:40*	*1*
2-Fluorophenol	*49*		*25 - 58*	*04/06/18 15:34*	*04/07/18 12:40*	*1*
2-Fluorobiphenyl	*95*		*45 - 107*	*04/06/18 15:34*	*04/07/18 12:40*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 16:02	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/05/18 21:15	04/06/18 16:02	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/05/18 21:15	04/06/18 16:02	5
Barium	**98.3**		5.0	3.2	ug/L		04/05/18 21:15	04/06/18 16:02	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/05/18 21:15	04/06/18 16:02	5
Calcium	**19300**		250	233	ug/L		04/05/18 21:15	04/06/18 16:02	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/05/18 21:15	04/06/18 16:02	5
Cobalt	**14.2**		5.0	3.1	ug/L		04/05/18 21:15	04/06/18 16:02	5
Chromium	3.1	U	5.0	3.1	ug/L		04/05/18 21:15	04/06/18 16:02	5
Copper	3.3	U	5.0	3.3	ug/L		04/05/18 21:15	04/06/18 16:02	5
Iron	**2120**		150	97.8	ug/L		04/05/18 21:15	04/06/18 16:02	5

Client Sample ID: AWC-E2(140)

Lab Sample ID: 460-153282-2

Date Collected: 04/04/18 09:00
Date Received: 04/04/18 19:30

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	**2180**		250	143	ug/L		04/05/18 21:15	04/06/18 16:02	5
Magnesium	**7900**		250	155	ug/L		04/05/18 21:15	04/06/18 16:02	5
Manganese	**982**		10.0	6.1	ug/L		04/05/18 21:15	04/06/18 16:02	5
Sodium	**18600**		250	213	ug/L		04/05/18 21:15	04/06/18 16:02	5
Nickel	**13.0**		5.0	3.1	ug/L		04/05/18 21:15	04/06/18 16:02	5
Lead	0.93	U	1.5	0.93	ug/L		04/05/18 21:15	04/06/18 16:02	5
Antimony	1.4	U	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 16:02	5
Selenium	1.4	~~U~~ UJ	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 16:02	5
Thallium	0.60	U	1.0	0.60	ug/L		04/05/18 21:15	04/06/18 16:02	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 16:02	5
Zinc	16.3	U	20.0	16.3	ug/L		04/05/18 21:15	04/06/18 16:02	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/05/18 12:00	04/05/18 15:05	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**1840**		150	92.1	ug/L		04/06/18 08:04	04/06/18 19:20	1
Manganese, Dissolved	**938**		15.0	3.1	ug/L		04/06/18 08:04	04/06/18 19:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.18**		0.10	0.045	mg/L		04/06/18 12:47	04/09/18 16:34	1

Client Sample ID: AWC-E1(156)

Lab Sample ID: 460-153282-3

Date Collected: 04/04/18 09:55
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**16**		0.40	0.20	ug/L			04/09/18 02:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*72 - 133*		*04/09/18 02:01*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*71 - 144*		*04/09/18 02:01*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 14:33	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/10/18 14:33	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/10/18 14:33	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/10/18 14:33	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/10/18 14:33	1
Acetone	1.1	U	5.0	1.1	ug/L			04/10/18 14:33	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/10/18 14:33	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/10/18 14:33	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/10/18 14:33	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/10/18 14:33	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/10/18 14:33	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/10/18 14:33	1

Client Sample ID: AWC-E1(156)

Lab Sample ID: 460-153282-3

Date Collected: 04/04/18 09:55
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/10/18 14:33	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/10/18 14:33	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/10/18 14:33	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/10/18 14:33	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/10/18 14:33	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/10/18 14:33	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/10/18 14:33	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/10/18 14:33	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 14:33	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/10/18 14:33	1
Benzene	0.090	U	1.0	0.090	ug/L			04/10/18 14:33	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/10/18 14:33	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/10/18 14:33	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/10/18 14:33	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/10/18 14:33	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/10/18 14:33	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/10/18 14:33	1
Toluene	0.25	U	1.0	0.25	ug/L			04/10/18 14:33	1
Chlorobenzene	**2.5**		1.0	0.24	ug/L			04/10/18 14:33	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/10/18 14:33	1
Styrene	0.17	U	1.0	0.17	ug/L			04/10/18 14:33	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/10/18 14:33	1
Ethyl ether	**5.1**		1.0	0.11	ug/L			04/10/18 14:33	1
MTBE	**0.43**	**J**	1.0	0.13	ug/L			04/10/18 14:33	1
Tetrahydrofuran	**0.51**	**J**	2.0	0.36	ug/L			04/10/18 14:33	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/10/18 14:33	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/10/18 14:33	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/10/18 14:33	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/10/18 14:33	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/10/18 14:33	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/10/18 14:33	1
Indane	0.12	U	1.0	0.12	ug/L			04/10/18 14:33	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/10/18 14:33	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/10/18 14:33	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/10/18 14:33*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*82*		*74 - 132*		*04/10/18 14:33*	*1*
Bromofluorobenzene	*103*		*77 - 124*		*04/10/18 14:33*	*1*
Toluene-d8 (Surr)	*93*		*80 - 120*		*04/10/18 14:33*	*1*
Dibromofluoromethane (Surr)	*97*		*72 - 131*		*04/10/18 14:33*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/06/18 15:34	04/08/18 20:50	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/06/18 15:34	04/08/18 20:50	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/06/18 15:34	04/08/18 20:50	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/06/18 15:34	04/08/18 20:50	1

Client Sample ID: AWC-E1(156)

Lab Sample ID: 460-153282-3

Date Collected: 04/04/18 09:55
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/06/18 15:34	04/08/18 20:50	1
Bis(2-chloroethyl)ether	**0.98**		0.030	0.026	ug/L		04/06/18 15:34	04/08/18 20:50	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/06/18 15:34	04/07/18 13:01	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/06/18 15:34	04/07/18 13:01	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/06/18 15:34	04/07/18 13:01	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/06/18 15:34	04/07/18 13:01	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/06/18 15:34	04/07/18 13:01	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/06/18 15:34	04/07/18 13:01	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/06/18 15:34	04/07/18 13:01	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/06/18 15:34	04/07/18 13:01	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/06/18 15:34	04/07/18 13:01	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/06/18 15:34	04/07/18 13:01	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/06/18 15:34	04/07/18 13:01	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/06/18 15:34	04/07/18 13:01	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/06/18 15:34	04/07/18 13:01	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/06/18 15:34	04/07/18 13:01	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/06/18 15:34	04/07/18 13:01	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/06/18 15:34	04/07/18 13:01	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/06/18 15:34	04/07/18 13:01	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/06/18 15:34	04/07/18 13:01	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/06/18 15:34	04/07/18 13:01	1
Isophorone	0.80	U	10	0.80	ug/L		04/06/18 15:34	04/07/18 13:01	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/06/18 15:34	04/07/18 13:01	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/06/18 15:34	04/07/18 13:01	1
Naphthalene	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 13:01	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/06/18 15:34	04/07/18 13:01	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/06/18 15:34	04/07/18 13:01	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 13:01	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/06/18 15:34	04/07/18 13:01	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/06/18 15:34	04/07/18 13:01	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/06/18 15:34	04/07/18 13:01	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/06/18 15:34	04/07/18 13:01	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/06/18 15:34	04/07/18 13:01	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/06/18 15:34	04/07/18 13:01	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/06/18 15:34	04/07/18 13:01	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 13:01	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 13:01	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/06/18 15:34	04/07/18 13:01	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/06/18 15:34	04/07/18 13:01	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/06/18 15:34	04/07/18 13:01	1
Fluorene	0.91	U	10	0.91	ug/L		04/06/18 15:34	04/07/18 13:01	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/06/18 15:34	04/07/18 13:01	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/06/18 15:34	04/07/18 13:01	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/06/18 15:34	04/07/18 13:01	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/06/18 15:34	04/07/18 13:01	1
Anthracene	0.63	U	10	0.63	ug/L		04/06/18 15:34	04/07/18 13:01	1
Carbazole	0.68	U	10	0.68	ug/L		04/06/18 15:34	04/07/18 13:01	1

Client Sample ID: AWC-E1(156)

Lab Sample ID: 460-153282-3

Date Collected: 04/04/18 09:55
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/06/18 15:34	04/07/18 13:01	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/06/18 15:34	04/07/18 13:01	1
Pyrene	1.6	U	10	1.6	ug/L		04/06/18 15:34	04/07/18 13:01	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/06/18 15:34	04/07/18 13:01	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/06/18 15:34	04/07/18 13:01	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/06/18 15:34	04/07/18 13:01	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/06/18 15:34	04/07/18 13:01	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/06/18 15:34	04/07/18 13:01	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/06/18 15:34	04/07/18 13:01	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/06/18 15:34	04/07/18 13:01	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/06/18 15:34	04/07/18 13:01	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/06/18 15:34	04/07/18 13:01	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/06/18 15:34	04/07/18 13:01	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/06/18 15:34	04/07/18 13:01	1
Caprolactam	0.68	U	10	0.68	ug/L		04/06/18 15:34	04/07/18 13:01	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/06/18 15:34	04/07/18 13:01	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/06/18 15:34	04/07/18 13:01	1
N-Methylaniline	0.48	U *	5.0	0.48	ug/L		04/06/18 15:34	04/07/18 13:01	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/06/18 15:34*	*04/07/18 13:01*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*102*		*51 - 108*	*04/06/18 15:34*	*04/07/18 13:01*	*1*
Phenol-d5	*27*		*14 - 39*	*04/06/18 15:34*	*04/07/18 13:01*	*1*
Terphenyl-d14	*113*		*40 - 148*	*04/06/18 15:34*	*04/07/18 13:01*	*1*
2,4,6-Tribromophenol	*108*		*26 - 139*	*04/06/18 15:34*	*04/07/18 13:01*	*1*
2-Fluorophenol	*49*		*25 - 58*	*04/06/18 15:34*	*04/07/18 13:01*	*1*
2-Fluorobiphenyl	*98*		*45 - 107*	*04/06/18 15:34*	*04/07/18 13:01*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 16:04	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/05/18 21:15	04/06/18 16:04	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/05/18 21:15	04/06/18 16:04	5
Barium	**115**		5.0	3.2	ug/L		04/05/18 21:15	04/06/18 16:04	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/05/18 21:15	04/06/18 16:04	5
Calcium	**25900**		250	233	ug/L		04/05/18 21:15	04/06/18 16:04	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/05/18 21:15	04/06/18 16:04	5
Cobalt	**9.0**		5.0	3.1	ug/L		04/05/18 21:15	04/06/18 16:04	5
Chromium	5 ~~**3.3**~~	~~**J**~~ U	5.0	3.1	ug/L		04/05/18 21:15	04/06/18 16:04	5
Copper	3.3	U	5.0	3.3	ug/L		04/05/18 21:15	04/06/18 16:04	5
Iron	**7740**		150	97.8	ug/L		04/05/18 21:15	04/06/18 16:04	5
Potassium	**3900**		250	143	ug/L		04/05/18 21:15	04/06/18 16:04	5
Magnesium	**11900**		250	155	ug/L		04/05/18 21:15	04/06/18 16:04	5
Manganese	**1210**		10.0	6.1	ug/L		04/05/18 21:15	04/06/18 16:04	5
Sodium	**26800**		250	213	ug/L		04/05/18 21:15	04/06/18 16:04	5
Nickel	**5.8**		5.0	3.1	ug/L		04/05/18 21:15	04/06/18 16:04	5
Lead	0.93	U	1.5	0.93	ug/L		04/05/18 21:15	04/06/18 16:04	5
Antimony	1.4	U	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 16:04	5

Client Sample ID: AWC-E1(156)

Lab Sample ID: 460-153282-3

Date Collected: 04/04/18 09:55
Date Received: 04/04/18 19:30

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	1.4	~~U~~ UJ	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 16:04	5
Thallium	0.60	U	1.0	0.60	ug/L		04/05/18 21:15	04/06/18 16:04	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 16:04	5
Zinc	16.3	U	20.0	16.3	ug/L		04/05/18 21:15	04/06/18 16:04	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/05/18 11:53	04/05/18 13:53	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**6190**		150	92.1	ug/L		04/06/18 08:04	04/06/18 19:24	1
Manganese, Dissolved	**1080**		15.0	3.1	ug/L		04/06/18 08:04	04/06/18 19:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**1.3**		0.10	0.045	mg/L		04/06/18 12:47	04/09/18 16:35	1

Client Sample ID: AWC-E2(165)

Lab Sample ID: 460-153282-4

Date Collected: 04/04/18 10:10
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 14:58	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/10/18 14:58	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/10/18 14:58	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/10/18 14:58	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/10/18 14:58	1
Acetone	1.1	U	5.0	1.1	ug/L			04/10/18 14:58	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/10/18 14:58	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/10/18 14:58	1
1,1-Dichloroethane	**0.93**	**J**	1.0	0.24	ug/L			04/10/18 14:58	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/10/18 14:58	1
cis-1,2-Dichloroethene	**0.52**	**J**	1.0	0.26	ug/L			04/10/18 14:58	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/10/18 14:58	1
1,2-Dichloroethane	**1.4**		1.0	0.25	ug/L			04/10/18 14:58	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/10/18 14:58	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/10/18 14:58	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/10/18 14:58	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/10/18 14:58	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/10/18 14:58	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/10/18 14:58	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/10/18 14:58	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 14:58	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/10/18 14:58	1
Benzene	**1.5**		1.0	0.090	ug/L			04/10/18 14:58	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/10/18 14:58	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/10/18 14:58	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/10/18 14:58	1

Client Sample ID: AWC-E2(165)

Lab Sample ID: 460-153282-4

Date Collected: 04/04/18 10:10
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/10/18 14:58	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/10/18 14:58	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/10/18 14:58	1
Toluene	0.25	U	1.0	0.25	ug/L			04/10/18 14:58	1
Chlorobenzene	**9.2**		1.0	0.24	ug/L			04/10/18 14:58	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/10/18 14:58	1
Styrene	0.17	U	1.0	0.17	ug/L			04/10/18 14:58	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/10/18 14:58	1
Ethyl ether	**4.2**		1.0	0.11	ug/L			04/10/18 14:58	1
MTBE	**1.0**		1.0	0.13	ug/L			04/10/18 14:58	1
Tetrahydrofuran	**12**		2.0	0.36	ug/L			04/10/18 14:58	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/10/18 14:58	1
1,4-Dioxane	**130**		50	8.7	ug/L			04/10/18 14:58	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/10/18 14:58	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/10/18 14:58	1
Isopropylbenzene	**0.40**	**J**	1.0	0.32	ug/L			04/10/18 14:58	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/10/18 14:58	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/10/18 14:58	1
Indane	0.12	U	1.0	0.12	ug/L			04/10/18 14:58	1
Dichlorofluoromethane	**7.5**		1.0	0.21	ug/L			04/10/18 14:58	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/10/18 14:58	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/10/18 14:58*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*82*		*74 - 132*		*04/10/18 14:58*	*1*
Bromofluorobenzene	*102*		*77 - 124*		*04/10/18 14:58*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*04/10/18 14:58*	*1*
Dibromofluoromethane (Surr)	*98*		*72 - 131*		*04/10/18 14:58*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	**0.017**	**J**	0.050	0.016	ug/L		04/06/18 15:34	04/08/18 21:11	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/06/18 15:34	04/08/18 21:11	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/06/18 15:34	04/08/18 21:11	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/06/18 15:34	04/08/18 21:11	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/06/18 15:34	04/08/18 21:11	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/06/18 15:34	04/07/18 13:23	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/06/18 15:34	04/07/18 13:23	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/06/18 15:34	04/07/18 13:23	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/06/18 15:34	04/07/18 13:23	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/06/18 15:34	04/07/18 13:23	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/06/18 15:34	04/07/18 13:23	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/06/18 15:34	04/07/18 13:23	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/06/18 15:34	04/07/18 13:23	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/06/18 15:34	04/07/18 13:23	1

Client Sample ID: AWC-E2(165)

Lab Sample ID: 460-153282-4

Date Collected: 04/04/18 10:10
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/06/18 15:34	04/07/18 13:23	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/06/18 15:34	04/07/18 13:23	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/06/18 15:34	04/07/18 13:23	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/06/18 15:34	04/07/18 13:23	1
Bis(2-chloroethyl)ether	**28**		1.0	0.30	ug/L		04/06/18 15:34	04/07/18 13:23	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/06/18 15:34	04/07/18 13:23	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/06/18 15:34	04/07/18 13:23	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/06/18 15:34	04/07/18 13:23	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/06/18 15:34	04/07/18 13:23	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/06/18 15:34	04/07/18 13:23	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/06/18 15:34	04/07/18 13:23	1
Isophorone	0.80	U	10	0.80	ug/L		04/06/18 15:34	04/07/18 13:23	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/06/18 15:34	04/07/18 13:23	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/06/18 15:34	04/07/18 13:23	1
Naphthalene	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 13:23	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/06/18 15:34	04/07/18 13:23	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/06/18 15:34	04/07/18 13:23	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 13:23	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/06/18 15:34	04/07/18 13:23	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/06/18 15:34	04/07/18 13:23	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/06/18 15:34	04/07/18 13:23	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/06/18 15:34	04/07/18 13:23	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/06/18 15:34	04/07/18 13:23	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/06/18 15:34	04/07/18 13:23	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/06/18 15:34	04/07/18 13:23	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 13:23	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 13:23	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/06/18 15:34	04/07/18 13:23	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/06/18 15:34	04/07/18 13:23	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/06/18 15:34	04/07/18 13:23	1
Fluorene	0.91	U	10	0.91	ug/L		04/06/18 15:34	04/07/18 13:23	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/06/18 15:34	04/07/18 13:23	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/06/18 15:34	04/07/18 13:23	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/06/18 15:34	04/07/18 13:23	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/06/18 15:34	04/07/18 13:23	1
Anthracene	0.63	U	10	0.63	ug/L		04/06/18 15:34	04/07/18 13:23	1
Carbazole	0.68	U	10	0.68	ug/L		04/06/18 15:34	04/07/18 13:23	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/06/18 15:34	04/07/18 13:23	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/06/18 15:34	04/07/18 13:23	1
Pyrene	1.6	U	10	1.6	ug/L		04/06/18 15:34	04/07/18 13:23	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/06/18 15:34	04/07/18 13:23	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/06/18 15:34	04/07/18 13:23	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/06/18 15:34	04/07/18 13:23	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/06/18 15:34	04/07/18 13:23	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/06/18 15:34	04/07/18 13:23	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/06/18 15:34	04/07/18 13:23	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/06/18 15:34	04/07/18 13:23	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/06/18 15:34	04/07/18 13:23	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/06/18 15:34	04/07/18 13:23	1

Client Sample ID: AWC-E2(165)

Lab Sample ID: 460-153282-4

Date Collected: 04/04/18 10:10
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diphenyl ether	**1.4**	**J**	10	1.2	ug/L		04/06/18 15:34	04/07/18 13:23	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/06/18 15:34	04/07/18 13:23	1
Caprolactam	0.68	U	10	0.68	ug/L		04/06/18 15:34	04/07/18 13:23	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/06/18 15:34	04/07/18 13:23	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/06/18 15:34	04/07/18 13:23	1
N-Methylaniline	0.48	U *	5.0	0.48	ug/L		04/06/18 15:34	04/07/18 13:23	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*7.9*	*J*	*ug/L*		*2.65*		*04/06/18 15:34*	*04/07/18 13:23*	*1*
Phenol, 4-(hexyloxy)-	*8.0*	*J N*	*ug/L*		*5.72*	*18979-55-0*	*04/06/18 15:34*	*04/07/18 13:23*	*1*
Unknown	*67*	*J*	*ug/L*		*6.73*		*04/06/18 15:34*	*04/07/18 13:23*	*1*
Unknown	*13*	*J*	*ug/L*		*7.02*		*04/06/18 15:34*	*04/07/18 13:23*	*1*
Unknown	*8.5*	*J*	*ug/L*		*9.58*		*04/06/18 15:34*	*04/07/18 13:23*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*103*		*51 - 108*	*04/06/18 15:34*	*04/07/18 13:23*	*1*
Phenol-d5	*28*		*14 - 39*	*04/06/18 15:34*	*04/07/18 13:23*	*1*
Terphenyl-d14	*113*		*40 - 148*	*04/06/18 15:34*	*04/07/18 13:23*	*1*
2,4,6-Tribromophenol	*114*		*26 - 139*	*04/06/18 15:34*	*04/07/18 13:23*	*1*
2-Fluorophenol	*50*		*25 - 58*	*04/06/18 15:34*	*04/07/18 13:23*	*1*
2-Fluorobiphenyl	*103*		*45 - 107*	*04/06/18 15:34*	*04/07/18 13:23*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 16:06	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/05/18 21:15	04/06/18 16:06	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/05/18 21:15	04/06/18 16:06	5
Barium	**111**		5.0	3.2	ug/L		04/05/18 21:15	04/06/18 16:06	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/05/18 21:15	04/06/18 16:06	5
Calcium	**22100**		250	233	ug/L		04/05/18 21:15	04/06/18 16:06	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/05/18 21:15	04/06/18 16:06	5
Cobalt	**13.5**		5.0	3.1	ug/L		04/05/18 21:15	04/06/18 16:06	5
Chromium	3.1	U	5.0	3.1	ug/L		04/05/18 21:15	04/06/18 16:06	5
Copper	5 ~~**3.5**~~	~~**J**~~ U	5.0	3.3	ug/L		04/05/18 21:15	04/06/18 16:06	5
Iron	**2670**		150	97.8	ug/L		04/05/18 21:15	04/06/18 16:06	5
Potassium	**2460**		250	143	ug/L		04/05/18 21:15	04/06/18 16:06	5
Magnesium	**9130**		250	155	ug/L		04/05/18 21:15	04/06/18 16:06	5
Manganese	**865**		10.0	6.1	ug/L		04/05/18 21:15	04/06/18 16:06	5
Sodium	**22700**		250	213	ug/L		04/05/18 21:15	04/06/18 16:06	5
Nickel	**16.0**		5.0	3.1	ug/L		04/05/18 21:15	04/06/18 16:06	5
Lead	0.93	U	1.5	0.93	ug/L		04/05/18 21:15	04/06/18 16:06	5
Antimony	1.4	U	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 16:06	5
Selenium	1.4	~~U~~ UJ	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 16:06	5
Thallium	0.60	U	1.0	0.60	ug/L		04/05/18 21:15	04/06/18 16:06	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 16:06	5
Zinc	**17.6**	**J**	20.0	16.3	ug/L		04/05/18 21:15	04/06/18 16:06	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/05/18 11:53	04/05/18 13:55	1

Client Sample ID: AWC-E2(165)

Lab Sample ID: 460-153282-4

Date Collected: 04/04/18 10:10
Date Received: 04/04/18 19:30

Matrix: Water

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**804**		150	92.1	ug/L		04/06/18 08:04	04/06/18 19:28	1
Manganese, Dissolved	**753**		15.0	3.1	ug/L		04/06/18 08:04	04/06/18 19:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.18**		0.10	0.045	mg/L		04/06/18 12:47	04/09/18 16:41	1

Client Sample ID: MW-40

Lab Sample ID: 460-153282-5

Date Collected: 04/04/18 13:55
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.48**		0.40	0.20	ug/L			04/09/18 01:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*103*		*72 - 133*		*04/09/18 01:16*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*71 - 144*		*04/09/18 01:16*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U ~~F1~~	1.0	0.22	ug/L			04/10/18 13:16	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/10/18 13:16	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/10/18 13:16	1
Chloroethane	0.37	U ~~F1~~	1.0	0.37	ug/L			04/10/18 13:16	1
Methylene Chloride	0.21	U ~~F1~~	1.0	0.21	ug/L			04/10/18 13:16	1
Acetone	1.1	U	5.0	1.1	ug/L			04/10/18 13:16	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/10/18 13:16	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/10/18 13:16	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/10/18 13:16	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/10/18 13:16	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/10/18 13:16	1
Chloroform	**0.86**	**J**	1.0	0.22	ug/L			04/10/18 13:16	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/10/18 13:16	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/10/18 13:16	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/10/18 13:16	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/10/18 13:16	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/10/18 13:16	1
1,2-Dichloropropane	0.18	U ~~F1~~	1.0	0.18	ug/L			04/10/18 13:16	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/10/18 13:16	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/10/18 13:16	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 13:16	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/10/18 13:16	1
Benzene	0.090	U	1.0	0.090	ug/L			04/10/18 13:16	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/10/18 13:16	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/10/18 13:16	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/10/18 13:16	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/10/18 13:16	1
Tetrachloroethene	**5.8**	~~F1~~ J	1.0	0.12	ug/L			04/10/18 13:16	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/10/18 13:16	1

Client Sample ID: MW-40

Lab Sample ID: 460-153282-5

Date Collected: 04/04/18 13:55
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	0.25	U	1.0	0.25	ug/L			04/10/18 13:16	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/10/18 13:16	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/10/18 13:16	1
Styrene	0.17	U	1.0	0.17	ug/L			04/10/18 13:16	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/10/18 13:16	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/10/18 13:16	1
MTBE	**0.21**	**J**	1.0	0.13	ug/L			04/10/18 13:16	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/10/18 13:16	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/10/18 13:16	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/10/18 13:16	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/10/18 13:16	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/10/18 13:16	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/10/18 13:16	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/10/18 13:16	1
Indane	0.12	U	1.0	0.12	ug/L			04/10/18 13:16	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/10/18 13:16	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/10/18 13:16	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/10/18 13:16*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*82*		*74 - 132*		*04/10/18 13:16*	*1*
Bromofluorobenzene	*104*		*77 - 124*		*04/10/18 13:16*	*1*
Toluene-d8 (Surr)	*93*		*80 - 120*		*04/10/18 13:16*	*1*
Dibromofluoromethane (Surr)	*100*		*72 - 131*		*04/10/18 13:16*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.051	0.016	ug/L		04/06/18 15:34	04/08/18 18:22	1
Benzo[a]pyrene	0.022	U	0.051	0.022	ug/L		04/06/18 15:34	04/08/18 18:22	1
Benzo[b]fluoranthene	0.024	U	0.051	0.024	ug/L		04/06/18 15:34	04/08/18 18:22	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/06/18 15:34	04/08/18 18:22	1
Pentachlorophenol	0.16	U	0.20	0.16	ug/L		04/06/18 15:34	04/08/18 18:22	1
Bis(2-chloroethyl)ether	0.027	U	0.031	0.027	ug/L		04/06/18 15:34	04/08/18 18:22	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.30	U	10	0.30	ug/L		04/06/18 15:34	04/07/18 10:13	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/06/18 15:34	04/07/18 10:13	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/06/18 15:34	04/07/18 10:13	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/06/18 15:34	04/07/18 10:13	1
2-Nitrophenol	0.76	U	10	0.76	ug/L		04/06/18 15:34	04/07/18 10:13	1
2,4-Dimethylphenol	0.24	U ~~F1~~	10	0.24	ug/L		04/06/18 15:34	04/07/18 10:13	1
2,4-Dichlorophenol	0.43	U ~~F1~~	10	0.43	ug/L		04/06/18 15:34	04/07/18 10:13	1
4-Chloro-3-methylphenol	0.59	U	10	0.59	ug/L		04/06/18 15:34	04/07/18 10:13	1
2,4,6-Trichlorophenol	0.31	U	10	0.31	ug/L		04/06/18 15:34	04/07/18 10:13	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/06/18 15:34	04/07/18 10:13	1
2,4-Dinitrophenol	15	U	20	15	ug/L		04/06/18 15:34	04/07/18 10:13	1
4-Nitrophenol	0.70	U	20	0.70	ug/L		04/06/18 15:34	04/07/18 10:13	1

Client Sample ID: MW-40

Lab Sample ID: 460-153282-5

Date Collected: 04/04/18 13:55
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,6-Dinitro-2-methylphenol	14	U	20	14	ug/L		04/06/18 15:34	04/07/18 10:13	1
1,3-Dichlorobenzene	2.1	U	10	2.1	ug/L		04/06/18 15:34	04/07/18 10:13	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/06/18 15:34	04/07/18 10:13	1
1,2-Dichlorobenzene	1.4	U	10	1.4	ug/L		04/06/18 15:34	04/07/18 10:13	1
N-Nitrosodi-n-propylamine	0.44	U	1.0	0.44	ug/L		04/06/18 15:34	04/07/18 10:13	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/06/18 15:34	04/07/18 10:13	1
Nitrobenzene	0.58	U	1.0	0.58	ug/L		04/06/18 15:34	04/07/18 10:13	1
Isophorone	0.81	U ~~F1~~	10	0.81	ug/L		04/06/18 15:34	04/07/18 10:13	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/06/18 15:34	04/07/18 10:13	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/06/18 15:34	04/07/18 10:13	1
Naphthalene	1.2	U	10	1.2	ug/L		04/06/18 15:34	04/07/18 10:13	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/06/18 15:34	04/07/18 10:13	1
Hexachlorobutadiene	0.80	U	1.0	0.80	ug/L		04/06/18 15:34	04/07/18 10:13	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 10:13	1
Hexachlorocyclopentadiene	1.8	U	10	1.8	ug/L		04/06/18 15:34	04/07/18 10:13	1
2-Chloronaphthalene	1.2	U ~~F1~~	10	1.2	ug/L		04/06/18 15:34	04/07/18 10:13	1
2-Nitroaniline	0.48	U	10	0.48	ug/L		04/06/18 15:34	04/07/18 10:13	1
Dimethyl phthalate	0.78	U	10	0.78	ug/L		04/06/18 15:34	04/07/18 10:13	1
Acenaphthylene	0.84	U	10	0.84	ug/L		04/06/18 15:34	04/07/18 10:13	1
2,6-Dinitrotoluene	0.40	U	2.0	0.40	ug/L		04/06/18 15:34	04/07/18 10:13	1
3-Nitroaniline	0.98	U	10	0.98	ug/L		04/06/18 15:34	04/07/18 10:13	1
Acenaphthene	1.1	U ~~F1~~	10	1.1	ug/L		04/06/18 15:34	04/07/18 10:13	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 10:13	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/06/18 15:34	04/07/18 10:13	1
Diethyl phthalate	1.0	U	10	1.0	ug/L		04/06/18 15:34	04/07/18 10:13	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/06/18 15:34	04/07/18 10:13	1
Fluorene	0.93	U	10	0.93	ug/L		04/06/18 15:34	04/07/18 10:13	1
4-Nitroaniline	0.55	U	10	0.55	ug/L		04/06/18 15:34	04/07/18 10:13	1
N-Nitrosodiphenylamine	0.91	U	10	0.91	ug/L		04/06/18 15:34	04/07/18 10:13	1
4-Bromophenyl phenyl ether	0.76	U	10	0.76	ug/L		04/06/18 15:34	04/07/18 10:13	1
Phenanthrene	0.59	U	10	0.59	ug/L		04/06/18 15:34	04/07/18 10:13	1
Anthracene	0.65	U	10	0.65	ug/L		04/06/18 15:34	04/07/18 10:13	1
Carbazole	0.69	U	10	0.69	ug/L		04/06/18 15:34	04/07/18 10:13	1
Di-n-butyl phthalate	0.86	U	10	0.86	ug/L		04/06/18 15:34	04/07/18 10:13	1
Fluoranthene	0.86	U	10	0.86	ug/L		04/06/18 15:34	04/07/18 10:13	1
Pyrene	1.7	U	10	1.7	ug/L		04/06/18 15:34	04/07/18 10:13	1
Butyl benzyl phthalate	0.87	U	10	0.87	ug/L		04/06/18 15:34	04/07/18 10:13	1
3,3'-Dichlorobenzidine	1.5	U ~~F1~~	10	1.5	ug/L		04/06/18 15:34	04/07/18 10:13	1
Chrysene	0.93	U ~~F1~~	2.0	0.93	ug/L		04/06/18 15:34	04/07/18 10:13	1
Bis(2-ethylhexyl) phthalate	1.7	U ~~F1~~	2.0	1.7	ug/L		04/06/18 15:34	04/07/18 10:13	1
Di-n-octyl phthalate	4.9	U	10	4.9	ug/L		04/06/18 15:34	04/07/18 10:13	1
Benzo[k]fluoranthene	0.69	U	1.0	0.69	ug/L		04/06/18 15:34	04/07/18 10:13	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/06/18 15:34	04/07/18 10:13	1
Dibenz(a,h)anthracene	0.73	U ~~F1~~	1.0	0.73	ug/L		04/06/18 15:34	04/07/18 10:13	1
Benzo[g,h,i]perylene	1.5	U	10	1.5	ug/L		04/06/18 15:34	04/07/18 10:13	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/06/18 15:34	04/07/18 10:13	1
n,n'-Dimethylaniline	0.93	U	1.0	0.93	ug/L		04/06/18 15:34	04/07/18 10:13	1
Caprolactam	0.70	U	10	0.70	ug/L		04/06/18 15:34	04/07/18 10:13	1
bis (2-chloroisopropyl) ether	0.64	U	10	0.64	ug/L		04/06/18 15:34	04/07/18 10:13	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G

TestAmerica Job ID: 460-153196-1
SDG: 153196

Client Sample ID: MW-40

Lab Sample ID: 460-153282-5

Date Collected: 04/04/18 13:55
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bisphenol-A	10	U	10	10	ug/L		04/06/18 15:34	04/07/18 10:13	1
N-Methylaniline	0.49	U*	5.1	0.49	ug/L		04/06/18 15:34	04/07/18 10:13	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/06/18 15:34*	*04/07/18 10:13*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*110*	*X*	*51 - 108*	*04/06/18 15:34*	*04/07/18 10:13*	*1*
Phenol-d5	*29*		*14 - 39*	*04/06/18 15:34*	*04/07/18 10:13*	*1*
Terphenyl-d14	*120*		*40 - 148*	*04/06/18 15:34*	*04/07/18 10:13*	*1*
2,4,6-Tribromophenol	*117*		*26 - 139*	*04/06/18 15:34*	*04/07/18 10:13*	*1*
2-Fluorophenol	*54*		*25 - 58*	*04/06/18 15:34*	*04/07/18 10:13*	*1*
2-Fluorobiphenyl	*107*		*45 - 107*	*04/06/18 15:34*	*04/07/18 10:13*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 14:04	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/05/18 21:15	04/06/18 14:04	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/05/18 21:15	04/06/18 14:04	5
Barium	**99.4**		5.0	3.2	ug/L		04/05/18 21:15	04/06/18 14:04	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/05/18 21:15	04/06/18 14:04	5
Calcium	**16500**		250	233	ug/L		04/05/18 21:15	04/06/18 14:04	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/05/18 21:15	04/06/18 14:04	5
Cobalt	3.1	U	5.0	3.1	ug/L		04/05/18 21:15	04/06/18 14:04	5
Chromium	3.1	U	5.0	3.1	ug/L		04/05/18 21:15	04/06/18 14:04	5
Copper	5 ~~4.4~~	~~J~~ U	5.0	3.3	ug/L		04/05/18 21:15	04/06/18 14:04	5
Iron	97.8	U	150	97.8	ug/L		04/05/18 21:15	04/06/18 14:04	5
Potassium	**2660**		250	143	ug/L		04/05/18 21:15	04/06/18 14:04	5
Magnesium	**7260**		250	155	ug/L		04/05/18 21:15	04/06/18 14:04	5
Manganese	6.1	U	10.0	6.1	ug/L		04/05/18 21:15	04/06/18 14:04	5
Sodium	**20500**		250	213	ug/L		04/05/18 21:15	04/06/18 14:04	5
Nickel	5 ~~3.5~~	~~J~~ U	5.0	3.1	ug/L		04/05/18 21:15	04/06/18 14:04	5
Lead	**4.7**		1.5	0.93	ug/L		04/05/18 21:15	04/06/18 14:04	5
Antimony	1.4	U	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 14:04	5
Selenium	**2.0**	~~J~~ J-	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 14:04	5
Thallium	0.60	U	1.0	0.60	ug/L		04/05/18 21:15	04/06/18 14:04	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 14:04	5
Zinc	16.3	U	20.0	16.3	ug/L		04/05/18 21:15	04/06/18 14:04	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/05/18 12:00	04/05/18 14:20	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	92.1	U	150	92.1	ug/L		04/06/18 08:04	04/06/18 18:25	1
Manganese, Dissolved	3.1	U	15.0	3.1	ug/L		04/06/18 08:04	04/06/18 18:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	0.10 ~~0.071~~	~~J~~ U	0.10	0.045	mg/L		04/06/18 12:47	04/09/18 16:28	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G

TestAmerica Job ID: 460-153196-1
SDG: 153196

Client Sample ID: MW-31

Lab Sample ID: 460-153282-6

Date Collected: 04/04/18 15:30
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.24**	**J**	0.40	0.20	ug/L			04/09/18 00:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*103*		*72 - 133*		*04/09/18 00:50*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*71 - 144*		*04/09/18 00:50*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 15:23	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/10/18 15:23	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/10/18 15:23	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/10/18 15:23	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/10/18 15:23	1
Acetone	1.1	U	5.0	1.1	ug/L			04/10/18 15:23	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/10/18 15:23	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/10/18 15:23	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/10/18 15:23	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/10/18 15:23	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/10/18 15:23	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/10/18 15:23	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/10/18 15:23	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/10/18 15:23	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/10/18 15:23	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/10/18 15:23	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/10/18 15:23	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/10/18 15:23	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/10/18 15:23	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/10/18 15:23	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 15:23	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/10/18 15:23	1
Benzene	0.090	U	1.0	0.090	ug/L			04/10/18 15:23	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/10/18 15:23	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/10/18 15:23	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/10/18 15:23	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/10/18 15:23	1
Tetrachloroethene	**2.0**		1.0	0.12	ug/L			04/10/18 15:23	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/10/18 15:23	1
Toluene	0.25	U	1.0	0.25	ug/L			04/10/18 15:23	1
Chlorobenzene	**0.59**	**J**	1.0	0.24	ug/L			04/10/18 15:23	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/10/18 15:23	1
Styrene	0.17	U	1.0	0.17	ug/L			04/10/18 15:23	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/10/18 15:23	1
Ethyl ether	**0.66**	**J**	1.0	0.11	ug/L			04/10/18 15:23	1
MTBE	0.13	U	1.0	0.13	ug/L			04/10/18 15:23	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/10/18 15:23	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/10/18 15:23	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/10/18 15:23	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/10/18 15:23	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/10/18 15:23	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/10/18 15:23	1

Client Sample ID: MW-31

Date Collected: 04/04/18 15:30
Date Received: 04/04/18 19:30

Lab Sample ID: 460-153282-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/10/18 15:23	1
Indane	0.12	U	1.0	0.12	ug/L			04/10/18 15:23	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/10/18 15:23	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/10/18 15:23	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/10/18 15:23*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*84*		*74 - 132*		*04/10/18 15:23*	*1*
Bromofluorobenzene	*103*		*77 - 124*		*04/10/18 15:23*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*04/10/18 15:23*	*1*
Dibromofluoromethane (Surr)	*99*		*72 - 131*		*04/10/18 15:23*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/06/18 15:34	04/08/18 21:32	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/06/18 15:34	04/08/18 21:32	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/06/18 15:34	04/08/18 21:32	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/06/18 15:34	04/08/18 21:32	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/06/18 15:34	04/08/18 21:32	1
Bis(2-chloroethyl)ether	0.026	U	0.030	0.026	ug/L		04/06/18 15:34	04/08/18 21:32	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/06/18 15:34	04/07/18 13:45	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/06/18 15:34	04/07/18 13:45	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/06/18 15:34	04/07/18 13:45	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/06/18 15:34	04/07/18 13:45	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/06/18 15:34	04/07/18 13:45	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/06/18 15:34	04/07/18 13:45	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/06/18 15:34	04/07/18 13:45	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/06/18 15:34	04/07/18 13:45	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/06/18 15:34	04/07/18 13:45	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/06/18 15:34	04/07/18 13:45	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/06/18 15:34	04/07/18 13:45	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/06/18 15:34	04/07/18 13:45	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/06/18 15:34	04/07/18 13:45	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/06/18 15:34	04/07/18 13:45	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/06/18 15:34	04/07/18 13:45	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/06/18 15:34	04/07/18 13:45	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/06/18 15:34	04/07/18 13:45	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/06/18 15:34	04/07/18 13:45	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/06/18 15:34	04/07/18 13:45	1
Isophorone	0.80	U	10	0.80	ug/L		04/06/18 15:34	04/07/18 13:45	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/06/18 15:34	04/07/18 13:45	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/06/18 15:34	04/07/18 13:45	1
Naphthalene	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 13:45	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/06/18 15:34	04/07/18 13:45	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/06/18 15:34	04/07/18 13:45	1

Client Sample ID: MW-31

Date Collected: 04/04/18 15:30
Date Received: 04/04/18 19:30

Lab Sample ID: 460-153282-6
Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 13:45	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/06/18 15:34	04/07/18 13:45	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/06/18 15:34	04/07/18 13:45	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/06/18 15:34	04/07/18 13:45	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/06/18 15:34	04/07/18 13:45	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/06/18 15:34	04/07/18 13:45	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/06/18 15:34	04/07/18 13:45	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/06/18 15:34	04/07/18 13:45	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 13:45	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 13:45	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/06/18 15:34	04/07/18 13:45	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/06/18 15:34	04/07/18 13:45	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/06/18 15:34	04/07/18 13:45	1
Fluorene	0.91	U	10	0.91	ug/L		04/06/18 15:34	04/07/18 13:45	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/06/18 15:34	04/07/18 13:45	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/06/18 15:34	04/07/18 13:45	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/06/18 15:34	04/07/18 13:45	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/06/18 15:34	04/07/18 13:45	1
Anthracene	0.63	U	10	0.63	ug/L		04/06/18 15:34	04/07/18 13:45	1
Carbazole	0.68	U	10	0.68	ug/L		04/06/18 15:34	04/07/18 13:45	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/06/18 15:34	04/07/18 13:45	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/06/18 15:34	04/07/18 13:45	1
Pyrene	1.6	U	10	1.6	ug/L		04/06/18 15:34	04/07/18 13:45	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/06/18 15:34	04/07/18 13:45	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/06/18 15:34	04/07/18 13:45	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/06/18 15:34	04/07/18 13:45	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/06/18 15:34	04/07/18 13:45	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/06/18 15:34	04/07/18 13:45	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/06/18 15:34	04/07/18 13:45	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/06/18 15:34	04/07/18 13:45	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/06/18 15:34	04/07/18 13:45	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/06/18 15:34	04/07/18 13:45	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/06/18 15:34	04/07/18 13:45	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/06/18 15:34	04/07/18 13:45	1
Caprolactam	0.68	U	10	0.68	ug/L		04/06/18 15:34	04/07/18 13:45	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/06/18 15:34	04/07/18 13:45	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/06/18 15:34	04/07/18 13:45	1
N-Methylaniline	0.48	U *	5.0	0.48	ug/L		04/06/18 15:34	04/07/18 13:45	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/06/18 15:34*	*04/07/18 13:45*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*101*		*51 - 108*	*04/06/18 15:34*	*04/07/18 13:45*	*1*
Phenol-d5	*27*		*14 - 39*	*04/06/18 15:34*	*04/07/18 13:45*	*1*
Terphenyl-d14	*113*		*40 - 148*	*04/06/18 15:34*	*04/07/18 13:45*	*1*
2,4,6-Tribromophenol	*103*		*26 - 139*	*04/06/18 15:34*	*04/07/18 13:45*	*1*
2-Fluorophenol	*50*		*25 - 58*	*04/06/18 15:34*	*04/07/18 13:45*	*1*
2-Fluorobiphenyl	*96*		*45 - 107*	*04/06/18 15:34*	*04/07/18 13:45*	*1*

Client Sample ID: MW-31

Lab Sample ID: 460-153282-6

Date Collected: 04/04/18 15:30
Date Received: 04/04/18 19:30

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 16:09	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/05/18 21:15	04/06/18 16:09	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/05/18 21:15	04/06/18 16:09	5
Barium	**157**		5.0	3.2	ug/L		04/05/18 21:15	04/06/18 16:09	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/05/18 21:15	04/06/18 16:09	5
Calcium	**15500**		250	233	ug/L		04/05/18 21:15	04/06/18 16:09	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/05/18 21:15	04/06/18 16:09	5
Cobalt	3.1	U	5.0	3.1	ug/L		04/05/18 21:15	04/06/18 16:09	5
Chromium	3.1	U	5.0	3.1	ug/L		04/05/18 21:15	04/06/18 16:09	5
Copper	3.3	U	5.0	3.3	ug/L		04/05/18 21:15	04/06/18 16:09	5
Iron	**20500**		150	97.8	ug/L		04/05/18 21:15	04/06/18 16:09	5
Potassium	**5150**		250	143	ug/L		04/05/18 21:15	04/06/18 16:09	5
Magnesium	**7760**		250	155	ug/L		04/05/18 21:15	04/06/18 16:09	5
Manganese	**80.6**		10.0	6.1	ug/L		04/05/18 21:15	04/06/18 16:09	5
Sodium	**17700**		250	213	ug/L		04/05/18 21:15	04/06/18 16:09	5
Nickel	**6.2**		5.0	3.1	ug/L		04/05/18 21:15	04/06/18 16:09	5
Lead	**1.4**	J	1.5	0.93	ug/L		04/05/18 21:15	04/06/18 16:09	5
Antimony	1.4	U	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 16:09	5
Selenium	**2.3**	J J-	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 16:09	5
Thallium	0.60	U	1.0	0.60	ug/L		04/05/18 21:15	04/06/18 16:09	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 16:09	5
Zinc	16.3	U	20.0	16.3	ug/L		04/05/18 21:15	04/06/18 16:09	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/05/18 12:00	04/05/18 14:56	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**803**		150	92.1	ug/L		04/06/18 08:04	04/06/18 19:43	1
Manganese, Dissolved	**52.3**	J+	15.0	3.1	ug/L		04/06/18 08:04	04/06/18 19:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**2.6**		0.25	0.11	mg/L		04/06/18 12:47	04/09/18 16:43	1

Client Sample ID: MW-26N

Lab Sample ID: 460-153282-7

Date Collected: 04/04/18 15:35
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 15:49	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/10/18 15:49	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/10/18 15:49	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/10/18 15:49	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/10/18 15:49	1
Acetone	1.1	U	5.0	1.1	ug/L			04/10/18 15:49	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/10/18 15:49	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/10/18 15:49	1

Client Sample ID: MW-26N

Lab Sample ID: 460-153282-7

Date Collected: 04/04/18 15:35
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	**0.44**	**J**	1.0	0.24	ug/L			04/10/18 15:49	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/10/18 15:49	1
cis-1,2-Dichloroethene	**0.52**	**J**	1.0	0.26	ug/L			04/10/18 15:49	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/10/18 15:49	1
1,2-Dichloroethane	**1.1**		1.0	0.25	ug/L			04/10/18 15:49	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/10/18 15:49	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/10/18 15:49	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/10/18 15:49	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/10/18 15:49	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/10/18 15:49	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/10/18 15:49	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/10/18 15:49	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 15:49	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/10/18 15:49	1
Benzene	**0.50**	**J**	1.0	0.090	ug/L			04/10/18 15:49	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/10/18 15:49	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/10/18 15:49	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/10/18 15:49	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/10/18 15:49	1
Tetrachloroethene	**0.58**	**J**	1.0	0.12	ug/L			04/10/18 15:49	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/10/18 15:49	1
Toluene	0.25	U	1.0	0.25	ug/L			04/10/18 15:49	1
Chlorobenzene	**13**		1.0	0.24	ug/L			04/10/18 15:49	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/10/18 15:49	1
Styrene	0.17	U	1.0	0.17	ug/L			04/10/18 15:49	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/10/18 15:49	1
Ethyl ether	**2.5**		1.0	0.11	ug/L			04/10/18 15:49	1
MTBE	**2.3**		1.0	0.13	ug/L			04/10/18 15:49	1
Tetrahydrofuran	**7.0**		2.0	0.36	ug/L			04/10/18 15:49	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/10/18 15:49	1
1,4-Dioxane	**100**		50	8.7	ug/L			04/10/18 15:49	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/10/18 15:49	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/10/18 15:49	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/10/18 15:49	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/10/18 15:49	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/10/18 15:49	1
Indane	0.12	U	1.0	0.12	ug/L			04/10/18 15:49	1
Dichlorofluoromethane	**3.5**		1.0	0.21	ug/L			04/10/18 15:49	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/10/18 15:49	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/10/18 15:49*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*82*		*74 - 132*		*04/10/18 15:49*	*1*
Bromofluorobenzene	*104*		*77 - 124*		*04/10/18 15:49*	*1*
Toluene-d8 (Surr)	*91*		*80 - 120*		*04/10/18 15:49*	*1*
Dibromofluoromethane (Surr)	*96*		*72 - 131*		*04/10/18 15:49*	*1*

Client Sample ID: MW-26N

Lab Sample ID: 460-153282-7

Date Collected: 04/04/18 15:35
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/06/18 15:34	04/08/18 21:54	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/06/18 15:34	04/08/18 21:54	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/06/18 15:34	04/08/18 21:54	1
Hexachlorobenzene	**0.023**		0.020	0.013	ug/L		04/06/18 15:34	04/08/18 21:54	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/06/18 15:34	04/08/18 21:54	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/06/18 15:34	04/07/18 14:06	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/06/18 15:34	04/07/18 14:06	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/06/18 15:34	04/07/18 14:06	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/06/18 15:34	04/07/18 14:06	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/06/18 15:34	04/07/18 14:06	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/06/18 15:34	04/07/18 14:06	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/06/18 15:34	04/07/18 14:06	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/06/18 15:34	04/07/18 14:06	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/06/18 15:34	04/07/18 14:06	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/06/18 15:34	04/07/18 14:06	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/06/18 15:34	04/07/18 14:06	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/06/18 15:34	04/07/18 14:06	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/06/18 15:34	04/07/18 14:06	1
Bis(2-chloroethyl)ether	**16**		1.0	0.30	ug/L		04/06/18 15:34	04/07/18 14:06	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/06/18 15:34	04/07/18 14:06	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/06/18 15:34	04/07/18 14:06	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/06/18 15:34	04/07/18 14:06	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/06/18 15:34	04/07/18 14:06	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/06/18 15:34	04/07/18 14:06	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/06/18 15:34	04/07/18 14:06	1
Isophorone	0.80	U	10	0.80	ug/L		04/06/18 15:34	04/07/18 14:06	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/06/18 15:34	04/07/18 14:06	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/06/18 15:34	04/07/18 14:06	1
Naphthalene	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 14:06	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/06/18 15:34	04/07/18 14:06	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/06/18 15:34	04/07/18 14:06	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 14:06	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/06/18 15:34	04/07/18 14:06	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/06/18 15:34	04/07/18 14:06	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/06/18 15:34	04/07/18 14:06	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/06/18 15:34	04/07/18 14:06	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/06/18 15:34	04/07/18 14:06	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/06/18 15:34	04/07/18 14:06	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/06/18 15:34	04/07/18 14:06	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 14:06	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 14:06	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/06/18 15:34	04/07/18 14:06	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/06/18 15:34	04/07/18 14:06	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/06/18 15:34	04/07/18 14:06	1
Fluorene	0.91	U	10	0.91	ug/L		04/06/18 15:34	04/07/18 14:06	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/06/18 15:34	04/07/18 14:06	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/06/18 15:34	04/07/18 14:06	1

Client Sample ID: MW-26N

Lab Sample ID: 460-153282-7

Date Collected: 04/04/18 15:35
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/06/18 15:34	04/07/18 14:06	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/06/18 15:34	04/07/18 14:06	1
Anthracene	0.63	U	10	0.63	ug/L		04/06/18 15:34	04/07/18 14:06	1
Carbazole	0.68	U	10	0.68	ug/L		04/06/18 15:34	04/07/18 14:06	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/06/18 15:34	04/07/18 14:06	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/06/18 15:34	04/07/18 14:06	1
Pyrene	1.6	U	10	1.6	ug/L		04/06/18 15:34	04/07/18 14:06	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/06/18 15:34	04/07/18 14:06	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/06/18 15:34	04/07/18 14:06	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/06/18 15:34	04/07/18 14:06	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/06/18 15:34	04/07/18 14:06	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/06/18 15:34	04/07/18 14:06	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/06/18 15:34	04/07/18 14:06	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/06/18 15:34	04/07/18 14:06	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/06/18 15:34	04/07/18 14:06	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/06/18 15:34	04/07/18 14:06	1
Diphenyl ether	**1.4**	**J**	10	1.2	ug/L		04/06/18 15:34	04/07/18 14:06	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/06/18 15:34	04/07/18 14:06	1
Caprolactam	0.68	U	10	0.68	ug/L		04/06/18 15:34	04/07/18 14:06	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/06/18 15:34	04/07/18 14:06	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/06/18 15:34	04/07/18 14:06	1
N-Methylaniline	0.48	U *-	5.0	0.48	ug/L		04/06/18 15:34	04/07/18 14:06	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Benzene, chloro-	*8.3*	*J N*	*ug/L*		*2.65*	*108-90-7*	*04/06/18 15:34*	*04/07/18 14:06*	*1*
Unknown	*38*	*J*	*ug/L*		*6.73*		*04/06/18 15:34*	*04/07/18 14:06*	*1*
Unknown	*14*	*J*	*ug/L*		*9.58*		*04/06/18 15:34*	*04/07/18 14:06*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*101*		*51 - 108*	*04/06/18 15:34*	*04/07/18 14:06*	*1*
Phenol-d5	*26*		*14 - 39*	*04/06/18 15:34*	*04/07/18 14:06*	*1*
Terphenyl-d14	*109*		*40 - 148*	*04/06/18 15:34*	*04/07/18 14:06*	*1*
2,4,6-Tribromophenol	*106*		*26 - 139*	*04/06/18 15:34*	*04/07/18 14:06*	*1*
2-Fluorophenol	*48*		*25 - 58*	*04/06/18 15:34*	*04/07/18 14:06*	*1*
2-Fluorobiphenyl	*92*		*45 - 107*	*04/06/18 15:34*	*04/07/18 14:06*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 16:11	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/05/18 21:15	04/06/18 16:11	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/05/18 21:15	04/06/18 16:11	5
Barium	**59.7**		5.0	3.2	ug/L		04/05/18 21:15	04/06/18 16:11	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/05/18 21:15	04/06/18 16:11	5
Calcium	**26700**		250	233	ug/L		04/05/18 21:15	04/06/18 16:11	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/05/18 21:15	04/06/18 16:11	5
Cobalt	**18.0**		5.0	3.1	ug/L		04/05/18 21:15	04/06/18 16:11	5
Chromium	3.1	U	5.0	3.1	ug/L		04/05/18 21:15	04/06/18 16:11	5
Copper	**5.2**		5.0	3.3	ug/L		04/05/18 21:15	04/06/18 16:11	5
Iron	97.8	U	150	97.8	ug/L		04/05/18 21:15	04/06/18 16:11	5
Potassium	**4060**		250	143	ug/L		04/05/18 21:15	04/06/18 16:11	5

Client Sample ID: MW-26N

Lab Sample ID: 460-153282-7

Date Collected: 04/04/18 15:35
Date Received: 04/04/18 19:30

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	**12200**		250	155	ug/L		04/05/18 21:15	04/06/18 16:11	5
Manganese	**1800**		10.0	6.1	ug/L		04/05/18 21:15	04/06/18 16:11	5
Sodium	**25700**		250	213	ug/L		04/05/18 21:15	04/06/18 16:11	5
Nickel	**9.4**		5.0	3.1	ug/L		04/05/18 21:15	04/06/18 16:11	5
Lead	0.93	U	1.5	0.93	ug/L		04/05/18 21:15	04/06/18 16:11	5
Antimony	1.4	U	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 16:11	5
Selenium	1.4	~~U~~ UJ	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 16:11	5
Thallium	0.60	U	1.0	0.60	ug/L		04/05/18 21:15	04/06/18 16:11	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 16:11	5
Zinc	**16.7**	**J**	20.0	16.3	ug/L		04/05/18 21:15	04/06/18 16:11	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/05/18 12:00	04/05/18 14:58	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	92.1	U	150	92.1	ug/L		04/06/18 08:04	04/06/18 19:47	1
Manganese, Dissolved	3.1	~~U~~ UJ	15.0	3.1	ug/L		04/06/18 08:04	04/06/18 19:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**1.0**		0.10	0.045	mg/L		04/06/18 12:47	04/09/18 16:53	1

Client Sample ID: RBGW_040418

Lab Sample ID: 460-153282-8

Date Collected: 04/04/18 12:30
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.20	U	0.40	0.20	ug/L			04/07/18 16:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*104*		*72 - 133*		*04/07/18 16:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*71 - 144*		*04/07/18 16:48*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 16:39	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/10/18 16:39	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/10/18 16:39	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/10/18 16:39	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/10/18 16:39	1
Acetone	**2.4**	**J**	5.0	1.1	ug/L			04/10/18 16:39	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/10/18 16:39	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/10/18 16:39	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/10/18 16:39	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/10/18 16:39	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/10/18 16:39	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/10/18 16:39	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/10/18 16:39	1

Client Sample ID: RBGW_040418

Lab Sample ID: 460-153282-8

Date Collected: 04/04/18 12:30
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone	2.2	U	5.0	2.2	ug/L			04/10/18 16:39	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/10/18 16:39	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/10/18 16:39	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/10/18 16:39	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/10/18 16:39	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/10/18 16:39	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/10/18 16:39	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 16:39	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/10/18 16:39	1
Benzene	0.090	U	1.0	0.090	ug/L			04/10/18 16:39	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/10/18 16:39	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/10/18 16:39	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/10/18 16:39	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/10/18 16:39	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/10/18 16:39	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/10/18 16:39	1
Toluene	0.25	U	1.0	0.25	ug/L			04/10/18 16:39	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/10/18 16:39	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/10/18 16:39	1
Styrene	0.17	U	1.0	0.17	ug/L			04/10/18 16:39	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/10/18 16:39	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/10/18 16:39	1
MTBE	0.13	U	1.0	0.13	ug/L			04/10/18 16:39	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/10/18 16:39	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/10/18 16:39	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/10/18 16:39	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/10/18 16:39	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/10/18 16:39	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/10/18 16:39	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/10/18 16:39	1
Indane	0.12	U	1.0	0.12	ug/L			04/10/18 16:39	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/10/18 16:39	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/10/18 16:39	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/10/18 16:39*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*74 - 132*		*04/10/18 16:39*	*1*
Bromofluorobenzene	*119*		*77 - 124*		*04/10/18 16:39*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*04/10/18 16:39*	*1*
Dibromofluoromethane (Surr)	*115*		*72 - 131*		*04/10/18 16:39*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/06/18 15:34	04/08/18 22:15	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/06/18 15:34	04/08/18 22:15	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/06/18 15:34	04/08/18 22:15	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/06/18 15:34	04/08/18 22:15	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/06/18 15:34	04/08/18 22:15	1

Client Sample ID: RBGW_040418

Lab Sample ID: 460-153282-8

Date Collected: 04/04/18 12:30
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	0.026	U	0.030	0.026	ug/L		04/06/18 15:34	04/08/18 22:15	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/06/18 15:34	04/07/18 14:29	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/06/18 15:34	04/07/18 14:29	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/06/18 15:34	04/07/18 14:29	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/06/18 15:34	04/07/18 14:29	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/06/18 15:34	04/07/18 14:29	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/06/18 15:34	04/07/18 14:29	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/06/18 15:34	04/07/18 14:29	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/06/18 15:34	04/07/18 14:29	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/06/18 15:34	04/07/18 14:29	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/06/18 15:34	04/07/18 14:29	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/06/18 15:34	04/07/18 14:29	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/06/18 15:34	04/07/18 14:29	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/06/18 15:34	04/07/18 14:29	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/06/18 15:34	04/07/18 14:29	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/06/18 15:34	04/07/18 14:29	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/06/18 15:34	04/07/18 14:29	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/06/18 15:34	04/07/18 14:29	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/06/18 15:34	04/07/18 14:29	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/06/18 15:34	04/07/18 14:29	1
Isophorone	0.80	U	10	0.80	ug/L		04/06/18 15:34	04/07/18 14:29	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/06/18 15:34	04/07/18 14:29	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/06/18 15:34	04/07/18 14:29	1
Naphthalene	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 14:29	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/06/18 15:34	04/07/18 14:29	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/06/18 15:34	04/07/18 14:29	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 14:29	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/06/18 15:34	04/07/18 14:29	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/06/18 15:34	04/07/18 14:29	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/06/18 15:34	04/07/18 14:29	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/06/18 15:34	04/07/18 14:29	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/06/18 15:34	04/07/18 14:29	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/06/18 15:34	04/07/18 14:29	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/06/18 15:34	04/07/18 14:29	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 14:29	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 14:29	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/06/18 15:34	04/07/18 14:29	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/06/18 15:34	04/07/18 14:29	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/06/18 15:34	04/07/18 14:29	1
Fluorene	0.91	U	10	0.91	ug/L		04/06/18 15:34	04/07/18 14:29	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/06/18 15:34	04/07/18 14:29	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/06/18 15:34	04/07/18 14:29	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/06/18 15:34	04/07/18 14:29	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/06/18 15:34	04/07/18 14:29	1
Anthracene	0.63	U	10	0.63	ug/L		04/06/18 15:34	04/07/18 14:29	1
Carbazole	0.68	U	10	0.68	ug/L		04/06/18 15:34	04/07/18 14:29	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/06/18 15:34	04/07/18 14:29	1

Client Sample ID: RBGW_040418

Lab Sample ID: 460-153282-8

Date Collected: 04/04/18 12:30
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	0.84	U	10	0.84	ug/L		04/06/18 15:34	04/07/18 14:29	1
Pyrene	1.6	U	10	1.6	ug/L		04/06/18 15:34	04/07/18 14:29	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/06/18 15:34	04/07/18 14:29	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/06/18 15:34	04/07/18 14:29	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/06/18 15:34	04/07/18 14:29	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/06/18 15:34	04/07/18 14:29	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/06/18 15:34	04/07/18 14:29	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/06/18 15:34	04/07/18 14:29	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/06/18 15:34	04/07/18 14:29	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/06/18 15:34	04/07/18 14:29	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/06/18 15:34	04/07/18 14:29	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/06/18 15:34	04/07/18 14:29	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/06/18 15:34	04/07/18 14:29	1
Caprolactam	0.68	U	10	0.68	ug/L		04/06/18 15:34	04/07/18 14:29	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/06/18 15:34	04/07/18 14:29	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/06/18 15:34	04/07/18 14:29	1
N-Methylaniline	0.48	U *	5.0	0.48	ug/L		04/06/18 15:34	04/07/18 14:29	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/06/18 15:34*	*04/07/18 14:29*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*88*		*51 - 108*	*04/06/18 15:34*	*04/07/18 14:29*	*1*
Phenol-d5	*22*		*14 - 39*	*04/06/18 15:34*	*04/07/18 14:29*	*1*
Terphenyl-d14	*104*		*40 - 148*	*04/06/18 15:34*	*04/07/18 14:29*	*1*
2,4,6-Tribromophenol	*89*		*26 - 139*	*04/06/18 15:34*	*04/07/18 14:29*	*1*
2-Fluorophenol	*40*		*25 - 58*	*04/06/18 15:34*	*04/07/18 14:29*	*1*
2-Fluorobiphenyl	*80*		*45 - 107*	*04/06/18 15:34*	*04/07/18 14:29*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 15:57	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/05/18 21:15	04/06/18 15:57	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/05/18 21:15	04/06/18 15:57	5
Barium	3.2	U	5.0	3.2	ug/L		04/05/18 21:15	04/06/18 15:57	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/05/18 21:15	04/06/18 15:57	5
Calcium	233	U	250	233	ug/L		04/05/18 21:15	04/06/18 15:57	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/05/18 21:15	04/06/18 15:57	5
Cobalt	3.1	U	5.0	3.1	ug/L		04/05/18 21:15	04/06/18 15:57	5
Chromium	**6.2**		5.0	3.1	ug/L		04/05/18 21:15	04/06/18 15:57	5
Copper	**3.8**	**J**	5.0	3.3	ug/L		04/05/18 21:15	04/06/18 15:57	5
Iron	**180**		150	97.8	ug/L		04/05/18 21:15	04/06/18 15:57	5
Potassium	143	U	250	143	ug/L		04/05/18 21:15	04/06/18 15:57	5
Magnesium	155	U	250	155	ug/L		04/05/18 21:15	04/06/18 15:57	5
Manganese	6.1	U	10.0	6.1	ug/L		04/05/18 21:15	04/06/18 15:57	5
Sodium	213	U	250	213	ug/L		04/05/18 21:15	04/06/18 15:57	5
Nickel	**4.6**	**J**	5.0	3.1	ug/L		04/05/18 21:15	04/06/18 15:57	5
Lead	0.93	U	1.5	0.93	ug/L		04/05/18 21:15	04/06/18 15:57	5
Antimony	1.4	U	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 15:57	5
Selenium	1.4	U	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 15:57	5

Client Sample ID: RBGW_040418

Lab Sample ID: 460-153282-8

Date Collected: 04/04/18 12:30
Date Received: 04/04/18 19:30

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	0.60	U	1.0	0.60	ug/L		04/05/18 21:15	04/06/18 15:57	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 15:57	5
Zinc	16.3	U	20.0	16.3	ug/L		04/05/18 21:15	04/06/18 15:57	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/05/18 12:00	04/05/18 15:00	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	92.1	U	150	92.1	ug/L		04/06/18 08:04	04/06/18 19:51	1
Manganese, Dissolved	**37.2**		15.0	3.1	ug/L		04/06/18 08:04	04/06/18 19:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.061**	**J**	0.10	0.045	mg/L		04/06/18 12:47	04/09/18 16:54	1

Client Sample ID: FDGW_040418

Lab Sample ID: 460-153282-9

Date Collected: 04/04/18 00:00
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 16:14	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/10/18 16:14	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/10/18 16:14	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/10/18 16:14	1
Methylene Chloride	**0.23**	**J**	1.0	0.21	ug/L			04/10/18 16:14	1
Acetone	1.1	U	5.0	1.1	ug/L			04/10/18 16:14	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/10/18 16:14	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/10/18 16:14	1
1,1-Dichloroethane	**0.52**	**J**	1.0	0.24	ug/L			04/10/18 16:14	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/10/18 16:14	1
cis-1,2-Dichloroethene	**0.59**	**J**	1.0	0.26	ug/L			04/10/18 16:14	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/10/18 16:14	1
1,2-Dichloroethane	**1.4**		1.0	0.25	ug/L			04/10/18 16:14	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/10/18 16:14	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/10/18 16:14	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/10/18 16:14	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/10/18 16:14	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/10/18 16:14	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/10/18 16:14	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/10/18 16:14	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 16:14	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/10/18 16:14	1
Benzene	**0.53**	**J**	1.0	0.090	ug/L			04/10/18 16:14	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/10/18 16:14	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/10/18 16:14	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/10/18 16:14	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/10/18 16:14	1

Client Sample ID: FDGW_040418

Lab Sample ID: 460-153282-9

Date Collected: 04/04/18 00:00
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**0.68**	**J**	1.0	0.12	ug/L			04/10/18 16:14	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/10/18 16:14	1
Toluene	0.25	U	1.0	0.25	ug/L			04/10/18 16:14	1
Chlorobenzene	**15**		1.0	0.24	ug/L			04/10/18 16:14	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/10/18 16:14	1
Styrene	0.17	U	1.0	0.17	ug/L			04/10/18 16:14	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/10/18 16:14	1
Ethyl ether	**3.1**		1.0	0.11	ug/L			04/10/18 16:14	1
MTBE	**2.7**		1.0	0.13	ug/L			04/10/18 16:14	1
Tetrahydrofuran	**9.2**		2.0	0.36	ug/L			04/10/18 16:14	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/10/18 16:14	1
1,4-Dioxane	**110**		50	8.7	ug/L			04/10/18 16:14	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/10/18 16:14	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/10/18 16:14	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/10/18 16:14	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/10/18 16:14	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/10/18 16:14	1
Indane	0.12	U	1.0	0.12	ug/L			04/10/18 16:14	1
Dichlorofluoromethane	**3.8**		1.0	0.21	ug/L			04/10/18 16:14	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/10/18 16:14	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/10/18 16:14*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*74 - 132*		*04/10/18 16:14*	*1*
Bromofluorobenzene	*119*		*77 - 124*		*04/10/18 16:14*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*04/10/18 16:14*	*1*
Dibromofluoromethane (Surr)	*111*		*72 - 131*		*04/10/18 16:14*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/06/18 15:34	04/08/18 22:36	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/06/18 15:34	04/08/18 22:36	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/06/18 15:34	04/08/18 22:36	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/06/18 15:34	04/08/18 22:36	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/06/18 15:34	04/08/18 22:36	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/06/18 15:34	04/07/18 14:51	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/06/18 15:34	04/07/18 14:51	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/06/18 15:34	04/07/18 14:51	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/06/18 15:34	04/07/18 14:51	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/06/18 15:34	04/07/18 14:51	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/06/18 15:34	04/07/18 14:51	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/06/18 15:34	04/07/18 14:51	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/06/18 15:34	04/07/18 14:51	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/06/18 15:34	04/07/18 14:51	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/06/18 15:34	04/07/18 14:51	1

Client Sample ID: FDGW_040418

Lab Sample ID: 460-153282-9

Date Collected: 04/04/18 00:00
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrophenol	14	U	20	14	ug/L		04/06/18 15:34	04/07/18 14:51	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/06/18 15:34	04/07/18 14:51	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/06/18 15:34	04/07/18 14:51	1
Bis(2-chloroethyl)ether	**16**		1.0	0.30	ug/L		04/06/18 15:34	04/07/18 14:51	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/06/18 15:34	04/07/18 14:51	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/06/18 15:34	04/07/18 14:51	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/06/18 15:34	04/07/18 14:51	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/06/18 15:34	04/07/18 14:51	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/06/18 15:34	04/07/18 14:51	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/06/18 15:34	04/07/18 14:51	1
Isophorone	0.80	U	10	0.80	ug/L		04/06/18 15:34	04/07/18 14:51	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/06/18 15:34	04/07/18 14:51	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/06/18 15:34	04/07/18 14:51	1
Naphthalene	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 14:51	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/06/18 15:34	04/07/18 14:51	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/06/18 15:34	04/07/18 14:51	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 14:51	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/06/18 15:34	04/07/18 14:51	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/06/18 15:34	04/07/18 14:51	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/06/18 15:34	04/07/18 14:51	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/06/18 15:34	04/07/18 14:51	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/06/18 15:34	04/07/18 14:51	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/06/18 15:34	04/07/18 14:51	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/06/18 15:34	04/07/18 14:51	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 14:51	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/06/18 15:34	04/07/18 14:51	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/06/18 15:34	04/07/18 14:51	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/06/18 15:34	04/07/18 14:51	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/06/18 15:34	04/07/18 14:51	1
Fluorene	0.91	U	10	0.91	ug/L		04/06/18 15:34	04/07/18 14:51	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/06/18 15:34	04/07/18 14:51	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/06/18 15:34	04/07/18 14:51	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/06/18 15:34	04/07/18 14:51	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/06/18 15:34	04/07/18 14:51	1
Anthracene	0.63	U	10	0.63	ug/L		04/06/18 15:34	04/07/18 14:51	1
Carbazole	0.68	U	10	0.68	ug/L		04/06/18 15:34	04/07/18 14:51	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/06/18 15:34	04/07/18 14:51	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/06/18 15:34	04/07/18 14:51	1
Pyrene	1.6	U	10	1.6	ug/L		04/06/18 15:34	04/07/18 14:51	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/06/18 15:34	04/07/18 14:51	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/06/18 15:34	04/07/18 14:51	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/06/18 15:34	04/07/18 14:51	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/06/18 15:34	04/07/18 14:51	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/06/18 15:34	04/07/18 14:51	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/06/18 15:34	04/07/18 14:51	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/06/18 15:34	04/07/18 14:51	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/06/18 15:34	04/07/18 14:51	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/06/18 15:34	04/07/18 14:51	1
Diphenyl ether	**1.4**	**J**	10	1.2	ug/L		04/06/18 15:34	04/07/18 14:51	1

Client Sample ID: FDGW_040418

Lab Sample ID: 460-153282-9

Date Collected: 04/04/18 00:00
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/06/18 15:34	04/07/18 14:51	1
Caprolactam	0.68	U	10	0.68	ug/L		04/06/18 15:34	04/07/18 14:51	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/06/18 15:34	04/07/18 14:51	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/06/18 15:34	04/07/18 14:51	1
N-Methylaniline	0.48	U *	5.0	0.48	ug/L		04/06/18 15:34	04/07/18 14:51	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Benzene, chloro-	*8.6*	*J N*	*ug/L*		*2.65*	*108-90-7*	*04/06/18 15:34*	*04/07/18 14:51*	*1*
Unknown	*38*	*J*	*ug/L*		*6.73*		*04/06/18 15:34*	*04/07/18 14:51*	*1*
Acetamide, N-methyl-N-phenyl-	*6.5*	*J N*	*ug/L*		*7.02*	*579-10-2*	*04/06/18 15:34*	*04/07/18 14:51*	*1*
Unknown	*14*	*J*	*ug/L*		*9.58*		*04/06/18 15:34*	*04/07/18 14:51*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*104*		*51 - 108*	*04/06/18 15:34*	*04/07/18 14:51*	*1*
Phenol-d5	*28*		*14 - 39*	*04/06/18 15:34*	*04/07/18 14:51*	*1*
Terphenyl-d14	*110*		*40 - 148*	*04/06/18 15:34*	*04/07/18 14:51*	*1*
2,4,6-Tribromophenol	*106*		*26 - 139*	*04/06/18 15:34*	*04/07/18 14:51*	*1*
2-Fluorophenol	*52*		*25 - 58*	*04/06/18 15:34*	*04/07/18 14:51*	*1*
2-Fluorobiphenyl	*100*		*45 - 107*	*04/06/18 15:34*	*04/07/18 14:51*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 16:16	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/05/18 21:15	04/06/18 16:16	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/05/18 21:15	04/06/18 16:16	5
Barium	**61.6**		5.0	3.2	ug/L		04/05/18 21:15	04/06/18 16:16	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/05/18 21:15	04/06/18 16:16	5
Calcium	**27500**		250	233	ug/L		04/05/18 21:15	04/06/18 16:16	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/05/18 21:15	04/06/18 16:16	5
Cobalt	**18.4**		5.0	3.1	ug/L		04/05/18 21:15	04/06/18 16:16	5
Chromium	3.1	U	5.0	3.1	ug/L		04/05/18 21:15	04/06/18 16:16	5
Copper	**5.6**		5.0	3.3	ug/L		04/05/18 21:15	04/06/18 16:16	5
Iron	97.8	U	150	97.8	ug/L		04/05/18 21:15	04/06/18 16:16	5
Potassium	**4110**		250	143	ug/L		04/05/18 21:15	04/06/18 16:16	5
Magnesium	**12400**		250	155	ug/L		04/05/18 21:15	04/06/18 16:16	5
Manganese	**1830**		10.0	6.1	ug/L		04/05/18 21:15	04/06/18 16:16	5
Sodium	**26100**		250	213	ug/L		04/05/18 21:15	04/06/18 16:16	5
Nickel	**9.7**		5.0	3.1	ug/L		04/05/18 21:15	04/06/18 16:16	5
Lead	0.93	U	1.5	0.93	ug/L		04/05/18 21:15	04/06/18 16:16	5
Antimony	1.4	U	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 16:16	5
Selenium	1.4	~~U~~ UJ	2.5	1.4	ug/L		04/05/18 21:15	04/06/18 16:16	5
Thallium	0.60	U	1.0	0.60	ug/L		04/05/18 21:15	04/06/18 16:16	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/05/18 21:15	04/06/18 16:16	5
Zinc	16.3	U	20.0	16.3	ug/L		04/05/18 21:15	04/06/18 16:16	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/05/18 12:00	04/05/18 15:02	1

Client Sample ID: FDGW_040418 Lab Sample ID: 460-153282-9

Date Collected: 04/04/18 00:00 Matrix: Water
Date Received: 04/04/18 19:30

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**97.0**	**J**	150	92.1	ug/L		04/09/18 08:48	04/09/18 21:15	1
Manganese, Dissolved	**1760**	J	15.0	3.1	ug/L		04/09/18 08:48	04/09/18 21:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.90**		0.10	0.045	mg/L		04/06/18 12:47	04/09/18 17:00	1

Client Sample ID: TBGW_040418 Lab Sample ID: 460-153282-10

Date Collected: 04/04/18 00:00 Matrix: Water
Date Received: 04/04/18 19:30

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.20	U	0.40	0.20	ug/L			04/07/18 15:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*104*		*72 - 133*		*04/07/18 15:19*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*71 - 144*		*04/07/18 15:19*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 12:51	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/10/18 12:51	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/10/18 12:51	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/10/18 12:51	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/10/18 12:51	1
Acetone	**21**		5.0	1.1	ug/L			04/10/18 12:51	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/10/18 12:51	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/10/18 12:51	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/10/18 12:51	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/10/18 12:51	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/10/18 12:51	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/10/18 12:51	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/10/18 12:51	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/10/18 12:51	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/10/18 12:51	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/10/18 12:51	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/10/18 12:51	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/10/18 12:51	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/10/18 12:51	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/10/18 12:51	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/10/18 12:51	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/10/18 12:51	1
Benzene	0.090	U	1.0	0.090	ug/L			04/10/18 12:51	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/10/18 12:51	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/10/18 12:51	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/10/18 12:51	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/10/18 12:51	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/10/18 12:51	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/10/18 12:51	1

Client Sample ID: TBGW_040418

Lab Sample ID: 460-153282-10

Date Collected: 04/04/18 00:00
Date Received: 04/04/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	0.25	U	1.0	0.25	ug/L			04/10/18 12:51	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/10/18 12:51	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/10/18 12:51	1
Styrene	0.17	U	1.0	0.17	ug/L			04/10/18 12:51	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/10/18 12:51	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/10/18 12:51	1
MTBE	0.13	U	1.0	0.13	ug/L			04/10/18 12:51	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/10/18 12:51	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/10/18 12:51	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/10/18 12:51	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/10/18 12:51	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/10/18 12:51	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/10/18 12:51	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/10/18 12:51	1
Indane	0.12	U	1.0	0.12	ug/L			04/10/18 12:51	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/10/18 12:51	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/10/18 12:51	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/10/18 12:51*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*74 - 132*		*04/10/18 12:51*	*1*
Bromofluorobenzene	*112*		*77 - 124*		*04/10/18 12:51*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*04/10/18 12:51*	*1*
Dibromofluoromethane (Surr)	*110*		*72 - 131*		*04/10/18 12:51*	*1*

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G

TestAmerica Job ID: 460-154033-1

Client Sample ID: BG-1

Lab Sample ID: 460-154033-1

Date Collected: 04/13/18 08:10
Date Received: 04/13/18 20:10

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**32**		0.40	0.20	ug/L			04/15/18 00:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*72 - 133*		*04/15/18 00:09*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*71 - 144*		*04/15/18 00:09*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/19/18 13:32	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/19/18 13:32	1
Vinyl chloride	**0.12**	**J**	1.0	0.060	ug/L			04/19/18 13:32	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/19/18 13:32	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/19/18 13:32	1
Acetone	1.1	U	5.0	1.1	ug/L			04/19/18 13:32	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/19/18 13:32	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/19/18 13:32	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/19/18 13:32	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/19/18 13:32	1
cis-1,2-Dichloroethene	**0.65**	**J**	1.0	0.26	ug/L			04/19/18 13:32	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/19/18 13:32	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/19/18 13:32	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/19/18 13:32	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/19/18 13:32	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/19/18 13:32	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/19/18 13:32	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/19/18 13:32	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/19/18 13:32	1
Trichloroethene	**0.78**	**J**	1.0	0.22	ug/L			04/19/18 13:32	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/19/18 13:32	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/19/18 13:32	1
Benzene	**10**		1.0	0.090	ug/L			04/19/18 13:32	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/19/18 13:32	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/19/18 13:32	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/19/18 13:32	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/19/18 13:32	1
Tetrachloroethene	**0.16**	**J**	1.0	0.12	ug/L			04/19/18 13:32	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/19/18 13:32	1
Toluene	**11**		1.0	0.25	ug/L			04/19/18 13:32	1
Chlorobenzene	**1.3**		1.0	0.24	ug/L			04/19/18 13:32	1
Ethylbenzene	**0.84**	**J**	1.0	0.30	ug/L			04/19/18 13:32	1
Styrene	0.17	U	1.0	0.17	ug/L			04/19/18 13:32	1
Xylenes, Total	**16**		2.0	0.28	ug/L			04/19/18 13:32	1
Ethyl ether	**0.40**	**J**	1.0	0.11	ug/L			04/19/18 13:32	1
MTBE	**0.51**	**J**	1.0	0.13	ug/L			04/19/18 13:32	1
Tetrahydrofuran	**1.3**	**J**	2.0	0.36	ug/L			04/19/18 13:32	1
Cyclohexane	**2.5**		1.0	0.26	ug/L			04/19/18 13:32	1
1,2,4-Trimethylbenzene	**13**		1.0	0.23	ug/L			04/19/18 13:32	1
1,3,5-Trimethylbenzene	**6.1**		1.0	0.25	ug/L			04/19/18 13:32	1
Isopropylbenzene	**3.9**		1.0	0.32	ug/L			04/19/18 13:32	1
N-Propylbenzene	**4.4**		1.0	0.29	ug/L			04/19/18 13:32	1

Client Sample ID: BG-1 Lab Sample ID: 460-154033-1

Date Collected: 04/13/18 08:10 Matrix: Water
Date Received: 04/13/18 20:10

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	**3.9**		1.0	0.22	ug/L			04/19/18 13:32	1
Indane	**3.4**		1.0	0.12	ug/L			04/19/18 13:32	1
Dichlorofluoromethane	**0.98**	J	1.0	0.21	ug/L			04/19/18 13:32	1
1,2,3-Trimethylbenzene	**7.9**		1.0	0.11	ug/L			04/19/18 13:32	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/19/18 13:32*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*74 - 132*		*04/19/18 13:32*	*1*
Bromofluorobenzene	*94*		*77 - 124*		*04/19/18 13:32*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*04/19/18 13:32*	*1*
Dibromofluoromethane (Surr)	*106*		*72 - 131*		*04/19/18 13:32*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.051	0.016	ug/L		04/18/18 15:25	04/19/18 10:41	1
Benzo[a]pyrene	0.022	U	0.051	0.022	ug/L		04/18/18 15:25	04/19/18 10:41	1
Benzo[b]fluoranthene	0.024	U	0.051	0.024	ug/L		04/18/18 15:25	04/19/18 10:41	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/18/18 15:25	04/19/18 10:41	1
Pentachlorophenol	0.16	U	0.20	0.16	ug/L		04/18/18 15:25	04/19/18 10:41	1
Bis(2-chloroethyl)ether	**3.4**	J+	0.031	0.027	ug/L		04/18/18 15:25	04/19/18 10:41	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.30	U	10	0.30	ug/L		04/18/18 15:25	04/19/18 06:03	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/18/18 15:25	04/19/18 06:03	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/18/18 15:25	04/19/18 06:03	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/18/18 15:25	04/19/18 06:03	1
2-Nitrophenol	0.76	U	10	0.76	ug/L		04/18/18 15:25	04/19/18 06:03	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/18/18 15:25	04/19/18 06:03	1
2,4-Dichlorophenol	0.43	U	10	0.43	ug/L		04/18/18 15:25	04/19/18 06:03	1
4-Chloro-3-methylphenol	0.59	U	10	0.59	ug/L		04/18/18 15:25	04/19/18 06:03	1
2,4,6-Trichlorophenol	0.31	U	10	0.31	ug/L		04/18/18 15:25	04/19/18 06:03	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/18/18 15:25	04/19/18 06:03	1
2,4-Dinitrophenol	15	U	20	15	ug/L		04/18/18 15:25	04/19/18 06:03	1
4-Nitrophenol	0.70	U	20	0.70	ug/L		04/18/18 15:25	04/19/18 06:03	1
4,6-Dinitro-2-methylphenol	14	U	20	14	ug/L		04/18/18 15:25	04/19/18 06:03	1
1,3-Dichlorobenzene	2.1	U	10	2.1	ug/L		04/18/18 15:25	04/19/18 06:03	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/18/18 15:25	04/19/18 06:03	1
1,2-Dichlorobenzene	1.4	U	10	1.4	ug/L		04/18/18 15:25	04/19/18 06:03	1
N-Nitrosodi-n-propylamine	0.44	U	1.0	0.44	ug/L		04/18/18 15:25	04/19/18 06:03	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/18/18 15:25	04/19/18 06:03	1
Nitrobenzene	0.58	U	1.0	0.58	ug/L		04/18/18 15:25	04/19/18 06:03	1
Isophorone	0.81	U	10	0.81	ug/L		04/18/18 15:25	04/19/18 06:03	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/18/18 15:25	04/19/18 06:03	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/18/18 15:25	04/19/18 06:03	1
Naphthalene	1.2	U	10	1.2	ug/L		04/18/18 15:25	04/19/18 06:03	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/18/18 15:25	04/19/18 06:03	1
Hexachlorobutadiene	0.80	U	1.0	0.80	ug/L		04/18/18 15:25	04/19/18 06:03	1

Client Sample ID: BG-1

Date Collected: 04/13/18 08:10
Date Received: 04/13/18 20:10

Lab Sample ID: 460-154033-1

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/18/18 15:25	04/19/18 06:03	1
Hexachlorocyclopentadiene	1.8	U	10	1.8	ug/L		04/18/18 15:25	04/19/18 06:03	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/18/18 15:25	04/19/18 06:03	1
2-Nitroaniline	0.48	U	10	0.48	ug/L		04/18/18 15:25	04/19/18 06:03	1
Dimethyl phthalate	0.78	U	10	0.78	ug/L		04/18/18 15:25	04/19/18 06:03	1
Acenaphthylene	0.84	U	10	0.84	ug/L		04/18/18 15:25	04/19/18 06:03	1
2,6-Dinitrotoluene	0.40	U	2.0	0.40	ug/L		04/18/18 15:25	04/19/18 06:03	1
3-Nitroaniline	0.98	U	10	0.98	ug/L		04/18/18 15:25	04/19/18 06:03	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/18/18 15:25	04/19/18 06:03	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/18/18 15:25	04/19/18 06:03	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/18/18 15:25	04/19/18 06:03	1
Diethyl phthalate	1.0	U	10	1.0	ug/L		04/18/18 15:25	04/19/18 06:03	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/18/18 15:25	04/19/18 06:03	1
Fluorene	0.93	U	10	0.93	ug/L		04/18/18 15:25	04/19/18 06:03	1
4-Nitroaniline	0.55	U	10	0.55	ug/L		04/18/18 15:25	04/19/18 06:03	1
N-Nitrosodiphenylamine	0.91	U	10	0.91	ug/L		04/18/18 15:25	04/19/18 06:03	1
4-Bromophenyl phenyl ether	0.76	U	10	0.76	ug/L		04/18/18 15:25	04/19/18 06:03	1
Phenanthrene	0.59	U	10	0.59	ug/L		04/18/18 15:25	04/19/18 06:03	1
Anthracene	0.65	U	10	0.65	ug/L		04/18/18 15:25	04/19/18 06:03	1
Carbazole	0.69	U	10	0.69	ug/L		04/18/18 15:25	04/19/18 06:03	1
Di-n-butyl phthalate	0.86	U	10	0.86	ug/L		04/18/18 15:25	04/19/18 06:03	1
Fluoranthene	0.86	U	10	0.86	ug/L		04/18/18 15:25	04/19/18 06:03	1
Pyrene	1.7	U	10	1.7	ug/L		04/18/18 15:25	04/19/18 06:03	1
Butyl benzyl phthalate	0.87	U	10	0.87	ug/L		04/18/18 15:25	04/19/18 06:03	1
3,3'-Dichlorobenzidine	1.5	U	10	1.5	ug/L		04/18/18 15:25	04/19/18 06:03	1
Chrysene	0.93	U	2.0	0.93	ug/L		04/18/18 15:25	04/19/18 06:03	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/18/18 15:25	04/19/18 06:03	1
Di-n-octyl phthalate	4.9	U	10	4.9	ug/L		04/18/18 15:25	04/19/18 06:03	1
Benzo[k]fluoranthene	0.69	U	1.0	0.69	ug/L		04/18/18 15:25	04/19/18 06:03	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/18/18 15:25	04/19/18 06:03	1
Dibenz(a,h)anthracene	0.73	U	1.0	0.73	ug/L		04/18/18 15:25	04/19/18 06:03	1
Benzo[g,h,i]perylene	1.5	U	10	1.5	ug/L		04/18/18 15:25	04/19/18 06:03	1
Diphenyl ether	**2.0**	**J** J+	10	1.2	ug/L		04/18/18 15:25	04/19/18 06:03	1
n,n'-Dimethylaniline	0.93	U	1.0	0.93	ug/L		04/18/18 15:25	04/19/18 06:03	1
Caprolactam	0.70	U	10	0.70	ug/L		04/18/18 15:25	04/19/18 06:03	1
bis (2-chloroisopropyl) ether	0.64	U	10	0.64	ug/L		04/18/18 15:25	04/19/18 06:03	1
Bisphenol-A	10	U	10	10	ug/L		04/18/18 15:25	04/19/18 06:03	1
N-Methylaniline	0.49	U	5.1	0.49	ug/L		04/18/18 15:25	04/19/18 06:03	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane	*7.6*	*J N*	*ug/L*		*1.61*	*123-91-1*	*04/18/18 15:25*	*04/19/18 06:03*	*1*
Benzene, 1,2,3-trimethyl-	*13*	*J N*	*ug/L*		*3.95*	*526-73-8*	*04/18/18 15:25*	*04/19/18 06:03*	*1*
Benzene, 1,2,3-trimethyl-	*7.3*	*J N*	*ug/L*		*4.18*	*526-73-8*	*04/18/18 15:25*	*04/19/18 06:03*	*1*
Unknown	*11*	*J*	*ug/L*		*6.81*		*04/18/18 15:25*	*04/19/18 06:03*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*107*		*51 - 108*	*04/18/18 15:25*	*04/19/18 06:03*	*1*
Phenol-d5	*29*		*14 - 39*	*04/18/18 15:25*	*04/19/18 06:03*	*1*
Terphenyl-d14	*124*		*40 - 148*	*04/18/18 15:25*	*04/19/18 06:03*	*1*
2,4,6-Tribromophenol	*117*		*26 - 139*	*04/18/18 15:25*	*04/19/18 06:03*	*1*

Client Sample ID: BG-1

Lab Sample ID: 460-154033-1

Date Collected: 04/13/18 08:10
Date Received: 04/13/18 20:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*53*		*25 - 58*	*04/18/18 15:25*	*04/19/18 06:03*	*1*
2-Fluorobiphenyl	*111*	*X*	*45 - 107*	*04/18/18 15:25*	*04/19/18 06:03*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/15/18 19:30	04/17/18 21:49	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/15/18 19:30	04/17/18 21:49	5
Arsenic	**3.5**		2.5	1.5	ug/L		04/15/18 19:30	04/17/18 21:49	5
Barium	**472**		5.0	3.2	ug/L		04/15/18 19:30	04/17/18 21:49	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/15/18 19:30	04/17/18 21:49	5
Calcium	**15900**		250	233	ug/L		04/15/18 19:30	04/17/18 21:49	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/15/18 19:30	04/17/18 21:49	5
Cobalt	**39.1**		5.0	3.1	ug/L		04/15/18 19:30	04/17/18 21:49	5
Chromium	3.1	U	5.0	3.1	ug/L		04/15/18 19:30	04/17/18 21:49	5
Copper	3.3	U	5.0	3.3	ug/L		04/15/18 19:30	04/17/18 21:49	5
Iron	**48000**		150	97.8	ug/L		04/15/18 19:30	04/17/18 21:49	5
Potassium	**3190**		250	143	ug/L		04/15/18 19:30	04/17/18 21:49	5
Magnesium	**12300**		250	155	ug/L		04/15/18 19:30	04/17/18 21:49	5
Manganese	**5340**		10.0	6.1	ug/L		04/15/18 19:30	04/17/18 21:49	5
Sodium	**43100**		250	213	ug/L		04/15/18 19:30	04/19/18 15:26	5
Nickel	**20.6**		5.0	3.1	ug/L		04/15/18 19:30	04/17/18 21:49	5
Lead	0.93	U	1.5	0.93	ug/L		04/15/18 19:30	04/17/18 21:49	5
Antimony	1.4	U	2.5	1.4	ug/L		04/15/18 19:30	04/17/18 21:49	5
Selenium	1.4	U	2.5	1.4	ug/L		04/15/18 19:30	04/17/18 21:49	5
Thallium	0.60	U	1.0	0.60	ug/L		04/15/18 19:30	04/17/18 21:49	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/15/18 19:30	04/17/18 21:49	5
Zinc	**21.9**		20.0	16.3	ug/L		04/15/18 19:30	04/17/18 21:49	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/18/18 12:02	04/18/18 14:00	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**52700**		150	92.1	ug/L		04/15/18 17:45	04/17/18 16:01	1
Manganese, Dissolved	**5890**		15.0	3.1	ug/L		04/15/18 17:45	04/17/18 16:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.84**		0.10	0.045	mg/L		04/19/18 11:30	04/19/18 13:17	1

Client Sample ID: B-4DR

Lab Sample ID: 460-154033-2

Date Collected: 04/13/18 08:30
Date Received: 04/13/18 20:10

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**41**	J-	0.40	0.20	ug/L			04/15/18 00:32	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G

TestAmerica Job ID: 460-154033-1

Client Sample ID: B-4DR

Lab Sample ID: 460-154033-2

Date Collected: 04/13/18 08:30
Date Received: 04/13/18 20:10

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*45*	*X **	*72 - 133*		*04/15/18 00:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*137*		*71 - 144*		*04/15/18 00:32*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	2.2	U	10	2.2	ug/L			04/19/18 15:14	10
Bromomethane	1.8	U	10	1.8	ug/L			04/19/18 15:14	10
Vinyl chloride	**1.0**	**J**	10	0.60	ug/L			04/19/18 15:14	10
Chloroethane	3.7	U	10	3.7	ug/L			04/19/18 15:14	10
Methylene Chloride	2.1	U	10	2.1	ug/L			04/19/18 15:14	10
Acetone	11	U	50	11	ug/L			04/19/18 15:14	10
Carbon disulfide	2.2	U	10	2.2	ug/L			04/19/18 15:14	10
1,1-Dichloroethene	3.4	U	10	3.4	ug/L			04/19/18 15:14	10
1,1-Dichloroethane	2.4	U	10	2.4	ug/L			04/19/18 15:14	10
trans-1,2-Dichloroethene	1.8	U	10	1.8	ug/L			04/19/18 15:14	10
cis-1,2-Dichloroethene	2.6	U	10	2.6	ug/L			04/19/18 15:14	10
Chloroform	2.2	U	10	2.2	ug/L			04/19/18 15:14	10
1,2-Dichloroethane	2.5	U	10	2.5	ug/L			04/19/18 15:14	10
2-Butanone	22	U	50	22	ug/L			04/19/18 15:14	10
1,1,1-Trichloroethane	2.8	U	10	2.8	ug/L			04/19/18 15:14	10
Carbon tetrachloride	3.3	U	10	3.3	ug/L			04/19/18 15:14	10
Bromodichloromethane	1.5	U	10	1.5	ug/L			04/19/18 15:14	10
1,2-Dichloropropane	1.8	U	10	1.8	ug/L			04/19/18 15:14	10
cis-1,3-Dichloropropene	1.6	U	10	1.6	ug/L			04/19/18 15:14	10
Trichloroethene	2.2	U	10	2.2	ug/L			04/19/18 15:14	10
Dibromochloromethane	2.2	U	10	2.2	ug/L			04/19/18 15:14	10
1,1,2-Trichloroethane	0.80	U	10	0.80	ug/L			04/19/18 15:14	10
Benzene	**4.3**	**J**	10	0.90	ug/L			04/19/18 15:14	10
trans-1,3-Dichloropropene	1.9	U	10	1.9	ug/L			04/19/18 15:14	10
Bromoform	1.8	U	10	1.8	ug/L			04/19/18 15:14	10
4-Methyl-2-pentanone	6.3	U	50	6.3	ug/L			04/19/18 15:14	10
2-Hexanone	7.2	U	50	7.2	ug/L			04/19/18 15:14	10
Tetrachloroethene	1.2	U	10	1.2	ug/L			04/19/18 15:14	10
1,1,2,2-Tetrachloroethane	1.9	U	10	1.9	ug/L			04/19/18 15:14	10
Toluene	**3.7**	**J**	10	2.5	ug/L			04/19/18 15:14	10
Chlorobenzene	**2600**		10	2.4	ug/L			04/19/18 15:14	10
Ethylbenzene	**22**		10	3.0	ug/L			04/19/18 15:14	10
Styrene	1.7	U	10	1.7	ug/L			04/19/18 15:14	10
Xylenes, Total	**150**		20	2.8	ug/L			04/19/18 15:14	10
Ethyl ether	**1.1**	**J**	10	1.1	ug/L			04/19/18 15:14	10
MTBE	1.3	U	10	1.3	ug/L			04/19/18 15:14	10
Tetrahydrofuran	**10**	**J**	20	3.6	ug/L			04/19/18 15:14	10
Cyclohexane	**3.5**	**J**	10	2.6	ug/L			04/19/18 15:14	10
1,2,4-Trimethylbenzene	**88**		10	2.3	ug/L			04/19/18 15:14	10
1,3,5-Trimethylbenzene	**370**		10	2.5	ug/L			04/19/18 15:14	10
Isopropylbenzene	**10**		10	3.2	ug/L			04/19/18 15:14	10
N-Propylbenzene	**8.1**	**J**	10	2.9	ug/L			04/19/18 15:14	10
Methylcyclohexane	**3.8**	**J**	10	2.2	ug/L			04/19/18 15:14	10
Indane	**97**		10	1.2	ug/L			04/19/18 15:14	10
Dichlorofluoromethane	2.1	U	10	2.1	ug/L			04/19/18 15:14	10

Client Sample ID: B-4DR

Lab Sample ID: 460-154033-2

Date Collected: 04/13/18 08:30
Date Received: 04/13/18 20:10

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trimethylbenzene	**100**		10	1.1	ug/L			04/19/18 15:14	10

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Benzene, 1-ethyl-3-methyl-	*110*	*J N*	*ug/L*		*9.76*	*620-14-4*		*04/19/18 15:14*	*10*
Benzene, 1-ethyl-2-methyl-	*300*	*J N*	*ug/L*		*10.22*	*611-14-3*		*04/19/18 15:14*	*10*
Benzene, 1-methyl-2-(1-methylethyl)-	*70*	*J N*	*ug/L*		*11.93*	*527-84-4*		*04/19/18 15:14*	*10*
Unknown	*1900*	*J*	*ug/L*		*13.43*			*04/19/18 15:14*	*10*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*74 - 132*		*04/19/18 15:14*	*10*
Bromofluorobenzene	*91*		*77 - 124*		*04/19/18 15:14*	*10*
Toluene-d8 (Surr)	*101*		*80 - 120*		*04/19/18 15:14*	*10*
Dibromofluoromethane (Surr)	*103*		*72 - 131*		*04/19/18 15:14*	*10*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/17/18 15:41	04/18/18 05:52	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/17/18 15:41	04/18/18 05:52	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/17/18 15:41	04/18/18 05:52	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/17/18 15:41	04/18/18 05:52	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/17/18 15:41	04/18/18 05:52	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	1.5	U	50	1.5	ug/L		04/17/18 15:41	04/19/18 15:35	5
2-Chlorophenol	1.9	U	50	1.9	ug/L		04/17/18 15:41	04/19/18 15:35	5
2-Methylphenol	1.3	U	50	1.3	ug/L		04/17/18 15:41	04/19/18 15:35	5
4-Methylphenol	1.2	U	50	1.2	ug/L		04/17/18 15:41	04/19/18 15:35	5
2-Nitrophenol	3.7	U	50	3.7	ug/L		04/17/18 15:41	04/19/18 15:35	5
2,4-Dimethylphenol	1.2	U	50	1.2	ug/L		04/17/18 15:41	04/19/18 15:35	5
2,4-Dichlorophenol	2.1	U	50	2.1	ug/L		04/17/18 15:41	04/19/18 15:35	5
4-Chloro-3-methylphenol	2.9	U	50	2.9	ug/L		04/17/18 15:41	04/19/18 15:35	5
2,4,6-Trichlorophenol	1.5	U	50	1.5	ug/L		04/17/18 15:41	04/19/18 15:35	5
2,4,5-Trichlorophenol	1.4	U	50	1.4	ug/L		04/17/18 15:41	04/19/18 15:35	5
2,4-Dinitrophenol	72	U	100	72	ug/L		04/17/18 15:41	04/19/18 15:35	5
4-Nitrophenol	3.4	U	100	3.4	ug/L		04/17/18 15:41	04/19/18 15:35	5
4,6-Dinitro-2-methylphenol	66	U	100	66	ug/L		04/17/18 15:41	04/19/18 15:35	5
Bis(2-chloroethyl)ether	**120**		5.0	1.5	ug/L		04/17/18 15:41	04/19/18 15:35	5
1,3-Dichlorobenzene	**16**	**J**	50	10	ug/L		04/17/18 15:41	04/19/18 15:35	5
1,4-Dichlorobenzene	**71**		50	6.4	ug/L		04/17/18 15:41	04/19/18 15:35	5
1,2-Dichlorobenzene	**24**	**J**	50	6.7	ug/L		04/17/18 15:41	04/19/18 15:35	5
N-Nitrosodi-n-propylamine	2.2	U	5.0	2.2	ug/L		04/17/18 15:41	04/19/18 15:35	5
Hexachloroethane	6.0	U	10	6.0	ug/L		04/17/18 15:41	04/19/18 15:35	5
Nitrobenzene	2.8	U	5.0	2.8	ug/L		04/17/18 15:41	04/19/18 15:35	5
Isophorone	4.0	U	50	4.0	ug/L		04/17/18 15:41	04/19/18 15:35	5
Bis(2-chloroethoxy)methane	1.2	U	50	1.2	ug/L		04/17/18 15:41	04/19/18 15:35	5
1,2,4-Trichlorobenzene	6.3	U	10	6.3	ug/L		04/17/18 15:41	04/19/18 15:35	5
Naphthalene	**26**	**J**	50	5.7	ug/L		04/17/18 15:41	04/19/18 15:35	5
4-Chloroaniline	9.4	U	50	9.4	ug/L		04/17/18 15:41	04/19/18 15:35	5
Hexachlorobutadiene	3.9	U	5.0	3.9	ug/L		04/17/18 15:41	04/19/18 15:35	5

Client Sample ID: B-4DR

Lab Sample ID: 460-154033-2

Date Collected: 04/13/18 08:30
Date Received: 04/13/18 20:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	5.5	U	50	5.5	ug/L		04/17/18 15:41	04/19/18 15:35	5
Hexachlorocyclopentadiene	8.6	U	50	8.6	ug/L		04/17/18 15:41	04/19/18 15:35	5
2-Chloronaphthalene	5.9	U	50	5.9	ug/L		04/17/18 15:41	04/19/18 15:35	5
2-Nitroaniline	2.4	U	50	2.4	ug/L		04/17/18 15:41	04/19/18 15:35	5
Dimethyl phthalate	3.8	U	50	3.8	ug/L		04/17/18 15:41	04/19/18 15:35	5
Acenaphthylene	4.1	U	50	4.1	ug/L		04/17/18 15:41	04/19/18 15:35	5
2,6-Dinitrotoluene	2.0	U	10	2.0	ug/L		04/17/18 15:41	04/19/18 15:35	5
3-Nitroaniline	4.8	U	50	4.8	ug/L		04/17/18 15:41	04/19/18 15:35	5
Acenaphthene	5.4	U	50	5.4	ug/L		04/17/18 15:41	04/19/18 15:35	5
Dibenzofuran	5.5	U	50	5.5	ug/L		04/17/18 15:41	04/19/18 15:35	5
2,4-Dinitrotoluene	5.0	U	10	5.0	ug/L		04/17/18 15:41	04/19/18 15:35	5
Diethyl phthalate	4.9	U	50	4.9	ug/L		04/17/18 15:41	04/19/18 15:35	5
4-Chlorophenyl phenyl ether	6.4	U	50	6.4	ug/L		04/17/18 15:41	04/19/18 15:35	5
Fluorene	4.6	U	50	4.6	ug/L		04/17/18 15:41	04/19/18 15:35	5
4-Nitroaniline	2.7	U	50	2.7	ug/L		04/17/18 15:41	04/19/18 15:35	5
N-Nitrosodiphenylamine	4.5	U	50	4.5	ug/L		04/17/18 15:41	04/19/18 15:35	5
4-Bromophenyl phenyl ether	3.7	U	50	3.7	ug/L		04/17/18 15:41	04/19/18 15:35	5
Phenanthrene	2.9	U	50	2.9	ug/L		04/17/18 15:41	04/19/18 15:35	5
Anthracene	3.2	U	50	3.2	ug/L		04/17/18 15:41	04/19/18 15:35	5
Carbazole	3.4	U	50	3.4	ug/L		04/17/18 15:41	04/19/18 15:35	5
Di-n-butyl phthalate	4.2	U	50	4.2	ug/L		04/17/18 15:41	04/19/18 15:35	5
Fluoranthene	4.2	U	50	4.2	ug/L		04/17/18 15:41	04/19/18 15:35	5
Pyrene	8.2	U	50	8.2	ug/L		04/17/18 15:41	04/19/18 15:35	5
Butyl benzyl phthalate	4.3	U	50	4.3	ug/L		04/17/18 15:41	04/19/18 15:35	5
3,3'-Dichlorobenzidine	7.2	U	50	7.2	ug/L		04/17/18 15:41	04/19/18 15:35	5
Chrysene	4.5	U	10	4.5	ug/L		04/17/18 15:41	04/19/18 15:35	5
Bis(2-ethylhexyl) phthalate	8.5	U	10	8.5	ug/L		04/17/18 15:41	04/19/18 15:35	5
Di-n-octyl phthalate	24	U	50	24	ug/L		04/17/18 15:41	04/19/18 15:35	5
Benzo[k]fluoranthene	3.4	U	5.0	3.4	ug/L		04/17/18 15:41	04/19/18 15:35	5
Indeno[1,2,3-cd]pyrene	6.4	U	10	6.4	ug/L		04/17/18 15:41	04/19/18 15:35	5
Dibenz(a,h)anthracene	3.6	U	5.0	3.6	ug/L		04/17/18 15:41	04/19/18 15:35	5
Benzo[g,h,i]perylene	7.1	U	50	7.1	ug/L		04/17/18 15:41	04/19/18 15:35	5
Diphenyl ether	**140**		50	6.0	ug/L		04/17/18 15:41	04/19/18 15:35	5
n,n'-Dimethylaniline	**10**		5.0	4.5	ug/L		04/17/18 15:41	04/19/18 15:35	5
Caprolactam	3.4	U	50	3.4	ug/L		04/17/18 15:41	04/19/18 15:35	5
bis (2-chloroisopropyl) ether	3.1	U	50	3.1	ug/L		04/17/18 15:41	04/19/18 15:35	5
Bisphenol-A	**280**		50	50	ug/L		04/17/18 15:41	04/19/18 15:35	5
N-Methylaniline	**8.0**	**J**	25	2.4	ug/L		04/17/18 15:41	04/19/18 15:35	5

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane	*190*	*J N*	*ug/L*		*1.69*	*110-82-7*	*04/17/18 15:41*	*04/19/18 15:35*	*5*
Benzene, chloro-	*1100*	*J N*	*ug/L*		*3.08*	*108-90-7*	*04/17/18 15:41*	*04/19/18 15:35*	*5*
Benzene, 1,3-dimethyl-	*94*	*J N*	*ug/L*		*3.27*	*108-38-3*	*04/17/18 15:41*	*04/19/18 15:35*	*5*
Benzene, 1-ethyl-2-methyl-	*230*	*J N*	*ug/L*		*4.20*	*611-14-3*	*04/17/18 15:41*	*04/19/18 15:35*	*5*
Benzene, 1,2,4-trimethyl-	*66*	*J N*	*ug/L*		*4.33*	*95-63-6*	*04/17/18 15:41*	*04/19/18 15:35*	*5*
Benzene, 1,2,3-trimethyl-	*70*	*J N*	*ug/L*		*4.55*	*526-73-8*	*04/17/18 15:41*	*04/19/18 15:35*	*5*
Unknown	*2000*	*J*	*ug/L*		*6.12*		*04/17/18 15:41*	*04/19/18 15:35*	*5*
Benzene, 1,2-dipropoxy-	*100*	*J N*	*ug/L*		*6.53*	*6280-98-4*	*04/17/18 15:41*	*04/19/18 15:35*	*5*
Unknown	*210*	*J*	*ug/L*		*6.69*		*04/17/18 15:41*	*04/19/18 15:35*	*5*
Unknown	*200*	*J*	*ug/L*		*6.78*		*04/17/18 15:41*	*04/19/18 15:35*	*5*

Client Sample ID: B-4DR

Lab Sample ID: 460-154033-2

Date Collected: 04/13/18 08:30
Date Received: 04/13/18 20:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	570	J	ug/L		7.13		04/17/18 15:41	04/19/18 15:35	5
Unknown	110	J	ug/L		7.25		04/17/18 15:41	04/19/18 15:35	5
Unknown	70	J	ug/L		7.42		04/17/18 15:41	04/19/18 15:35	5
1,3,5-Triazine-2,4,6(1H,3H,5H) -trione, 1,3,5-tri-2-propenyl-	230	J N	ug/L		8.08	1025-15-6	04/17/18 15:41	04/19/18 15:35	5
Altretamine	180	J N	ug/L		8.22	645-05-6	04/17/18 15:41	04/19/18 15:35	5
Urea, N,N'-dimethyl-N,N'-diphenyl-	150	J N	ug/L		8.92	611-92-7	04/17/18 15:41	04/19/18 15:35	5
Unknown	79	J	ug/L		11.15		04/17/18 15:41	04/19/18 15:35	5
Unknown	510	J	ug/L		12.23		04/17/18 15:41	04/19/18 15:35	5
Unknown	300	J	ug/L		12.39		04/17/18 15:41	04/19/18 15:35	5
Unknown	140	J	ug/L		12.57		04/17/18 15:41	04/19/18 15:35	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	90		51 - 108	04/17/18 15:41	04/19/18 15:35	5
Phenol-d5	32		14 - 39	04/17/18 15:41	04/19/18 15:35	5
Terphenyl-d14	98		40 - 148	04/17/18 15:41	04/19/18 15:35	5
2,4,6-Tribromophenol	105		26 - 139	04/17/18 15:41	04/19/18 15:35	5
2-Fluorophenol	48		25 - 58	04/17/18 15:41	04/19/18 15:35	5
2-Fluorobiphenyl	94		45 - 107	04/17/18 15:41	04/19/18 15:35	5

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/15/18 19:30	04/17/18 21:51	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/15/18 19:30	04/17/18 21:51	5
Arsenic	**5.9**		2.5	1.5	ug/L		04/15/18 19:30	04/17/18 21:51	5
Barium	**112**		5.0	3.2	ug/L		04/15/18 19:30	04/17/18 21:51	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/15/18 19:30	04/17/18 21:51	5
Calcium	**7410**		250	233	ug/L		04/15/18 19:30	04/17/18 21:51	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/15/18 19:30	04/17/18 21:51	5
Cobalt	**21.2**		5.0	3.1	ug/L		04/15/18 19:30	04/17/18 21:51	5
Chromium	3.1	U	5.0	3.1	ug/L		04/15/18 19:30	04/17/18 21:51	5
Copper	3.3	U	5.0	3.3	ug/L		04/15/18 19:30	04/17/18 21:51	5
Iron	**49100**		150	97.8	ug/L		04/15/18 19:30	04/17/18 21:51	5
Potassium	**3040**		250	143	ug/L		04/15/18 19:30	04/17/18 21:51	5
Magnesium	**11800**		250	155	ug/L		04/15/18 19:30	04/17/18 21:51	5
Manganese	**2460**		10.0	6.1	ug/L		04/15/18 19:30	04/17/18 21:51	5
Sodium	**71800**		250	213	ug/L		04/15/18 19:30	04/19/18 15:28	5
Nickel	**69.7**		5.0	3.1	ug/L		04/15/18 19:30	04/17/18 21:51	5
Lead	0.93	U	1.5	0.93	ug/L		04/15/18 19:30	04/17/18 21:51	5
Antimony	1.4	U	2.5	1.4	ug/L		04/15/18 19:30	04/17/18 21:51	5
Selenium	1.4	U	2.5	1.4	ug/L		04/15/18 19:30	04/17/18 21:51	5
Thallium	0.60	U	1.0	0.60	ug/L		04/15/18 19:30	04/17/18 21:51	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/15/18 19:30	04/17/18 21:51	5
Zinc	16.3	U	20.0	16.3	ug/L		04/15/18 19:30	04/17/18 21:51	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/18/18 12:02	04/18/18 14:05	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G

TestAmerica Job ID: 460-154033-1

Client Sample ID: B-4DR

Lab Sample ID: 460-154033-2
Matrix: Water

Date Collected: 04/13/18 08:30
Date Received: 04/13/18 20:10

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**54300**		150	92.1	ug/L		04/15/18 17:45	04/17/18 16:05	1
Manganese, Dissolved	**2800**		15.0	3.1	ug/L		04/15/18 17:45	04/17/18 16:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**3.3**		0.10	0.045	mg/L		04/19/18 11:30	04/19/18 13:18	1

Client Sample ID: C-2D

Lab Sample ID: 460-154033-3
Matrix: Water

Date Collected: 04/13/18 09:10
Date Received: 04/13/18 20:10

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**25**		0.40	0.20	ug/L			04/15/18 00:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*92*		*72 - 133*		*04/15/18 00:55*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*71 - 144*		*04/15/18 00:55*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/19/18 13:57	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/19/18 13:57	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/19/18 13:57	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/19/18 13:57	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/19/18 13:57	1
Acetone	5 ~~**1.3**~~	~~J~~ U	5.0	1.1	ug/L			04/19/18 13:57	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/19/18 13:57	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/19/18 13:57	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/19/18 13:57	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/19/18 13:57	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/19/18 13:57	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/19/18 13:57	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/19/18 13:57	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/19/18 13:57	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/19/18 13:57	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/19/18 13:57	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/19/18 13:57	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/19/18 13:57	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/19/18 13:57	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/19/18 13:57	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/19/18 13:57	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/19/18 13:57	1
Benzene	**3.7**		1.0	0.090	ug/L			04/19/18 13:57	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/19/18 13:57	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/19/18 13:57	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/19/18 13:57	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/19/18 13:57	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/19/18 13:57	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/19/18 13:57	1

Client Sample ID: C-2D

Lab Sample ID: 460-154033-3

Date Collected: 04/13/18 09:10
Date Received: 04/13/18 20:10

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	0.25	U	1.0	0.25	ug/L			04/19/18 13:57	1
Chlorobenzene	**10**		1.0	0.24	ug/L			04/19/18 13:57	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/19/18 13:57	1
Styrene	0.17	U	1.0	0.17	ug/L			04/19/18 13:57	1
Xylenes, Total	**0.48**	**J**	2.0	0.28	ug/L			04/19/18 13:57	1
Ethyl ether	**0.28**	**J**	1.0	0.11	ug/L			04/19/18 13:57	1
MTBE	0.13	U	1.0	0.13	ug/L			04/19/18 13:57	1
Tetrahydrofuran	**3.1**		2.0	0.36	ug/L			04/19/18 13:57	1
Cyclohexane	**0.76**	**J**	1.0	0.26	ug/L			04/19/18 13:57	1
1,2,4-Trimethylbenzene	**0.71**	**J**	1.0	0.23	ug/L			04/19/18 13:57	1
1,3,5-Trimethylbenzene	**2.5**		1.0	0.25	ug/L			04/19/18 13:57	1
Isopropylbenzene	**2.0**		1.0	0.32	ug/L			04/19/18 13:57	1
N-Propylbenzene	**1.7**		1.0	0.29	ug/L			04/19/18 13:57	1
Methylcyclohexane	**1.0**		1.0	0.22	ug/L			04/19/18 13:57	1
Indane	**20**		1.0	0.12	ug/L			04/19/18 13:57	1
Dichlorofluoromethane	**0.63**	**J**	1.0	0.21	ug/L			04/19/18 13:57	1
1,2,3-Trimethylbenzene	**0.72**	**J**	1.0	0.11	ug/L			04/19/18 13:57	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/19/18 13:57*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*74 - 132*		*04/19/18 13:57*	*1*
Bromofluorobenzene	*92*		*77 - 124*		*04/19/18 13:57*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*04/19/18 13:57*	*1*
Dibromofluoromethane (Surr)	*105*		*72 - 131*		*04/19/18 13:57*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/17/18 15:41	04/18/18 06:13	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/17/18 15:41	04/18/18 06:13	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/17/18 15:41	04/18/18 06:13	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/17/18 15:41	04/18/18 06:13	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/17/18 15:41	04/18/18 06:13	1
Bis(2-chloroethyl)ether	**2.1**		0.030	0.026	ug/L		04/17/18 15:41	04/18/18 06:13	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/17/18 15:41	04/18/18 07:27	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/17/18 15:41	04/18/18 07:27	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/17/18 15:41	04/18/18 07:27	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/17/18 15:41	04/18/18 07:27	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/17/18 15:41	04/18/18 07:27	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/17/18 15:41	04/18/18 07:27	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/17/18 15:41	04/18/18 07:27	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/17/18 15:41	04/18/18 07:27	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/17/18 15:41	04/18/18 07:27	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/17/18 15:41	04/18/18 07:27	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/17/18 15:41	04/18/18 07:27	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/17/18 15:41	04/18/18 07:27	1

Client Sample ID: C-2D

Lab Sample ID: 460-154033-3

Date Collected: 04/13/18 09:10
Date Received: 04/13/18 20:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/17/18 15:41	04/18/18 07:27	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/17/18 15:41	04/18/18 07:27	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/17/18 15:41	04/18/18 07:27	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/17/18 15:41	04/18/18 07:27	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/17/18 15:41	04/18/18 07:27	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/17/18 15:41	04/18/18 07:27	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/17/18 15:41	04/18/18 07:27	1
Isophorone	0.80	U	10	0.80	ug/L		04/17/18 15:41	04/18/18 07:27	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/17/18 15:41	04/18/18 07:27	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/17/18 15:41	04/18/18 07:27	1
Naphthalene	1.1	U	10	1.1	ug/L		04/17/18 15:41	04/18/18 07:27	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/17/18 15:41	04/18/18 07:27	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/17/18 15:41	04/18/18 07:27	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/17/18 15:41	04/18/18 07:27	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/17/18 15:41	04/18/18 07:27	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/17/18 15:41	04/18/18 07:27	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/17/18 15:41	04/18/18 07:27	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/17/18 15:41	04/18/18 07:27	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/17/18 15:41	04/18/18 07:27	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/17/18 15:41	04/18/18 07:27	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/17/18 15:41	04/18/18 07:27	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/17/18 15:41	04/18/18 07:27	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/17/18 15:41	04/18/18 07:27	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/17/18 15:41	04/18/18 07:27	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/17/18 15:41	04/18/18 07:27	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/17/18 15:41	04/18/18 07:27	1
Fluorene	0.91	U	10	0.91	ug/L		04/17/18 15:41	04/18/18 07:27	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/17/18 15:41	04/18/18 07:27	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/17/18 15:41	04/18/18 07:27	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/17/18 15:41	04/18/18 07:27	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/17/18 15:41	04/18/18 07:27	1
Anthracene	0.63	U	10	0.63	ug/L		04/17/18 15:41	04/18/18 07:27	1
Carbazole	0.68	U	10	0.68	ug/L		04/17/18 15:41	04/18/18 07:27	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/17/18 15:41	04/18/18 07:27	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/17/18 15:41	04/18/18 07:27	1
Pyrene	1.6	U	10	1.6	ug/L		04/17/18 15:41	04/18/18 07:27	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/17/18 15:41	04/18/18 07:27	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/17/18 15:41	04/18/18 07:27	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/17/18 15:41	04/18/18 07:27	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/17/18 15:41	04/18/18 07:27	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/17/18 15:41	04/18/18 07:27	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/17/18 15:41	04/18/18 07:27	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/17/18 15:41	04/18/18 07:27	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/17/18 15:41	04/18/18 07:27	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/17/18 15:41	04/18/18 07:27	1
Diphenyl ether	**8.4**	**J**	10	1.2	ug/L		04/17/18 15:41	04/18/18 07:27	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/17/18 15:41	04/18/18 07:27	1
Caprolactam	0.68	U	10	0.68	ug/L		04/17/18 15:41	04/18/18 07:27	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/17/18 15:41	04/18/18 07:27	1

Client Sample ID: C-2D

Lab Sample ID: 460-154033-3

Date Collected: 04/13/18 09:10
Date Received: 04/13/18 20:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bisphenol-A	**9.9**	**J**	10	9.9	ug/L		04/17/18 15:41	04/18/18 07:27	1
N-Methylaniline	0.48	U	5.0	0.48	ug/L		04/17/18 15:41	04/18/18 07:27	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Indane	*16*	*J N*	*ug/L*		*4.30*	*496-11-7*	*04/17/18 15:41*	*04/18/18 07:27*	*1*
Unknown	*8.6*	*J*	*ug/L*		*5.80*		*04/17/18 15:41*	*04/18/18 07:27*	*1*
Unknown	*22*	*J*	*ug/L*		*6.82*		*04/17/18 15:41*	*04/18/18 07:27*	*1*
Unknown	*10*	*J*	*ug/L*		*8.04*		*04/17/18 15:41*	*04/18/18 07:27*	*1*
Unknown	*7.1*	*J*	*ug/L*		*8.21*		*04/17/18 15:41*	*04/18/18 07:27*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*101*		*51 - 108*	*04/17/18 15:41*	*04/18/18 07:27*	*1*
Phenol-d5	*33*		*14 - 39*	*04/17/18 15:41*	*04/18/18 07:27*	*1*
Terphenyl-d14	*129*		*40 - 148*	*04/17/18 15:41*	*04/18/18 07:27*	*1*
2,4,6-Tribromophenol	*115*		*26 - 139*	*04/17/18 15:41*	*04/18/18 07:27*	*1*
2-Fluorophenol	*50*		*25 - 58*	*04/17/18 15:41*	*04/18/18 07:27*	*1*
2-Fluorobiphenyl	*100*		*45 - 107*	*04/17/18 15:41*	*04/18/18 07:27*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/15/18 19:30	04/17/18 15:56	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/15/18 19:30	04/17/18 15:56	5
Arsenic	**9.4**		2.5	1.5	ug/L		04/15/18 19:30	04/17/18 15:56	5
Barium	**175**		5.0	3.2	ug/L		04/15/18 19:30	04/17/18 15:56	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/15/18 19:30	04/17/18 15:56	5
Calcium	**25700**		250	233	ug/L		04/15/18 19:30	04/17/18 15:56	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/15/18 19:30	04/17/18 15:56	5
Cobalt	**13.0**		5.0	3.1	ug/L		04/15/18 19:30	04/17/18 15:56	5
Chromium	3.1	U	5.0	3.1	ug/L		04/15/18 19:30	04/17/18 15:56	5
Copper	**9.6**		5.0	3.3	ug/L		04/15/18 19:30	04/17/18 15:56	5
Iron	**30400**		150	97.8	ug/L		04/15/18 19:30	04/17/18 15:56	5
Potassium	**1490**		250	143	ug/L		04/15/18 19:30	04/17/18 15:56	5
Magnesium	**15600**		250	155	ug/L		04/15/18 19:30	04/17/18 15:56	5
Manganese	**2460**		10.0	6.1	ug/L		04/15/18 19:30	04/17/18 15:56	5
Sodium	**8080**		250	213	ug/L		04/15/18 19:30	04/17/18 15:56	5
Nickel	**3.1**	**J**	5.0	3.1	ug/L		04/15/18 19:30	04/17/18 15:56	5
Lead	0.93	U	1.5	0.93	ug/L		04/15/18 19:30	04/17/18 15:56	5
Antimony	1.4	U	2.5	1.4	ug/L		04/15/18 19:30	04/17/18 15:56	5
Selenium	1.4	U	2.5	1.4	ug/L		04/15/18 19:30	04/17/18 15:56	5
Thallium	0.60	U	1.0	0.60	ug/L		04/15/18 19:30	04/17/18 15:56	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/15/18 19:30	04/17/18 15:56	5
Zinc	16.3	U	20.0	16.3	ug/L		04/15/18 19:30	04/17/18 15:56	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/18/18 12:02	04/18/18 14:07	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**33400**		150	92.1	ug/L		04/15/18 17:45	04/17/18 16:09	1
Manganese, Dissolved	**2780**		15.0	3.1	ug/L		04/15/18 17:45	04/17/18 16:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**1.2**		0.10	0.045	mg/L		04/19/18 11:30	04/19/18 13:20	1

Client Sample ID: C-19D — Lab Sample ID: 460-154033-4

Date Collected: 04/13/18 09:25 — Matrix: Water
Date Received: 04/13/18 20:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/19/18 14:23	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/19/18 14:23	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/19/18 14:23	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/19/18 14:23	1
Methylene Chloride	**0.28**	**J**	1.0	0.21	ug/L			04/19/18 14:23	1
Acetone	1.1	U	5.0	1.1	ug/L			04/19/18 14:23	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/19/18 14:23	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/19/18 14:23	1
1,1-Dichloroethane	**0.91**	**J**	1.0	0.24	ug/L			04/19/18 14:23	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/19/18 14:23	1
cis-1,2-Dichloroethene	**0.42**	**J**	1.0	0.26	ug/L			04/19/18 14:23	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/19/18 14:23	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/19/18 14:23	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/19/18 14:23	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/19/18 14:23	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/19/18 14:23	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/19/18 14:23	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/19/18 14:23	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/19/18 14:23	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/19/18 14:23	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/19/18 14:23	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/19/18 14:23	1
Benzene	**24**		1.0	0.090	ug/L			04/19/18 14:23	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/19/18 14:23	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/19/18 14:23	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/19/18 14:23	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/19/18 14:23	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/19/18 14:23	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/19/18 14:23	1
Toluene	0.25	U	1.0	0.25	ug/L			04/19/18 14:23	1
Chlorobenzene	**33**		1.0	0.24	ug/L			04/19/18 14:23	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/19/18 14:23	1
Styrene	0.17	U	1.0	0.17	ug/L			04/19/18 14:23	1
Xylenes, Total	**0.66**	**J**	2.0	0.28	ug/L			04/19/18 14:23	1
Ethyl ether	**2.1**		1.0	0.11	ug/L			04/19/18 14:23	1
MTBE	0.13	U	1.0	0.13	ug/L			04/19/18 14:23	1
Tetrahydrofuran	**6.8**		2.0	0.36	ug/L			04/19/18 14:23	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/19/18 14:23	1
1,4-Dioxane	**250**		50	8.7	ug/L			04/19/18 14:23	1
1,2,4-Trimethylbenzene	**0.94**	**J**	1.0	0.23	ug/L			04/19/18 14:23	1
1,3,5-Trimethylbenzene	**0.95**	**J**	1.0	0.25	ug/L			04/19/18 14:23	1
Isopropylbenzene	**1.6**		1.0	0.32	ug/L			04/19/18 14:23	1
N-Propylbenzene	**1.1**		1.0	0.29	ug/L			04/19/18 14:23	1
Methylcyclohexane	**0.32**	**J**	1.0	0.22	ug/L			04/19/18 14:23	1
Indane	**6.6**		1.0	0.12	ug/L			04/19/18 14:23	1

Client Sample ID: C-19D

Lab Sample ID: 460-154033-4

Date Collected: 04/13/18 09:25
Date Received: 04/13/18 20:10

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorofluoromethane	**0.48**	**J**	1.0	0.21	ug/L			04/19/18 14:23	1
1,2,3-Trimethylbenzene	**1.9**		1.0	0.11	ug/L			04/19/18 14:23	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*6.8*	*J*	*ug/L*		*13.43*			*04/19/18 14:23*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*74 - 132*		*04/19/18 14:23*	*1*
Bromofluorobenzene	*91*		*77 - 124*		*04/19/18 14:23*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*04/19/18 14:23*	*1*
Dibromofluoromethane (Surr)	*105*		*72 - 131*		*04/19/18 14:23*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.051	0.016	ug/L		04/17/18 15:41	04/18/18 06:34	1
Benzo[a]pyrene	0.022	U	0.051	0.022	ug/L		04/17/18 15:41	04/18/18 06:34	1
Benzo[b]fluoranthene	0.024	U	0.051	0.024	ug/L		04/17/18 15:41	04/18/18 06:34	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/17/18 15:41	04/18/18 06:34	1
Pentachlorophenol	0.16	U	0.20	0.16	ug/L		04/17/18 15:41	04/18/18 06:34	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.30	U	10	0.30	ug/L		04/17/18 15:41	04/18/18 07:51	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/17/18 15:41	04/18/18 07:51	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/17/18 15:41	04/18/18 07:51	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/17/18 15:41	04/18/18 07:51	1
2-Nitrophenol	0.76	U	10	0.76	ug/L		04/17/18 15:41	04/18/18 07:51	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/17/18 15:41	04/18/18 07:51	1
2,4-Dichlorophenol	0.43	U	10	0.43	ug/L		04/17/18 15:41	04/18/18 07:51	1
4-Chloro-3-methylphenol	0.59	U	10	0.59	ug/L		04/17/18 15:41	04/18/18 07:51	1
2,4,6-Trichlorophenol	0.31	U	10	0.31	ug/L		04/17/18 15:41	04/18/18 07:51	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/17/18 15:41	04/18/18 07:51	1
2,4-Dinitrophenol	15	U	20	15	ug/L		04/17/18 15:41	04/18/18 07:51	1
4-Nitrophenol	0.70	U	20	0.70	ug/L		04/17/18 15:41	04/18/18 07:51	1
4,6-Dinitro-2-methylphenol	14	U	20	14	ug/L		04/17/18 15:41	04/18/18 07:51	1
Bis(2-chloroethyl)ether	**30**		1.0	0.30	ug/L		04/17/18 15:41	04/18/18 07:51	1
1,3-Dichlorobenzene	2.1	U	10	2.1	ug/L		04/17/18 15:41	04/18/18 07:51	1
1,4-Dichlorobenzene	**1.4**	**J**	10	1.3	ug/L		04/17/18 15:41	04/18/18 07:51	1
1,2-Dichlorobenzene	1.4	U	10	1.4	ug/L		04/17/18 15:41	04/18/18 07:51	1
N-Nitrosodi-n-propylamine	0.44	U	1.0	0.44	ug/L		04/17/18 15:41	04/18/18 07:51	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/17/18 15:41	04/18/18 07:51	1
Nitrobenzene	0.58	U	1.0	0.58	ug/L		04/17/18 15:41	04/18/18 07:51	1
Isophorone	0.81	U	10	0.81	ug/L		04/17/18 15:41	04/18/18 07:51	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/17/18 15:41	04/18/18 07:51	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/17/18 15:41	04/18/18 07:51	1
Naphthalene	1.2	U	10	1.2	ug/L		04/17/18 15:41	04/18/18 07:51	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/17/18 15:41	04/18/18 07:51	1
Hexachlorobutadiene	0.80	U	1.0	0.80	ug/L		04/17/18 15:41	04/18/18 07:51	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/17/18 15:41	04/18/18 07:51	1
Hexachlorocyclopentadiene	1.8	U	10	1.8	ug/L		04/17/18 15:41	04/18/18 07:51	1

Client Sample ID: C-19D

Lab Sample ID: 460-154033-4

Date Collected: 04/13/18 09:25
Date Received: 04/13/18 20:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/17/18 15:41	04/18/18 07:51	1
2-Nitroaniline	0.48	U	10	0.48	ug/L		04/17/18 15:41	04/18/18 07:51	1
Dimethyl phthalate	0.78	U	10	0.78	ug/L		04/17/18 15:41	04/18/18 07:51	1
Acenaphthylene	0.84	U	10	0.84	ug/L		04/17/18 15:41	04/18/18 07:51	1
2,6-Dinitrotoluene	0.40	U	2.0	0.40	ug/L		04/17/18 15:41	04/18/18 07:51	1
3-Nitroaniline	0.98	U	10	0.98	ug/L		04/17/18 15:41	04/18/18 07:51	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/17/18 15:41	04/18/18 07:51	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/17/18 15:41	04/18/18 07:51	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/17/18 15:41	04/18/18 07:51	1
Diethyl phthalate	**1.8**	**J**	10	1.0	ug/L		04/17/18 15:41	04/18/18 07:51	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/17/18 15:41	04/18/18 07:51	1
Fluorene	0.93	U	10	0.93	ug/L		04/17/18 15:41	04/18/18 07:51	1
4-Nitroaniline	0.55	U	10	0.55	ug/L		04/17/18 15:41	04/18/18 07:51	1
N-Nitrosodiphenylamine	0.91	U	10	0.91	ug/L		04/17/18 15:41	04/18/18 07:51	1
4-Bromophenyl phenyl ether	0.76	U	10	0.76	ug/L		04/17/18 15:41	04/18/18 07:51	1
Phenanthrene	0.59	U	10	0.59	ug/L		04/17/18 15:41	04/18/18 07:51	1
Anthracene	0.65	U	10	0.65	ug/L		04/17/18 15:41	04/18/18 07:51	1
Carbazole	0.69	U	10	0.69	ug/L		04/17/18 15:41	04/18/18 07:51	1
Di-n-butyl phthalate	0.86	U	10	0.86	ug/L		04/17/18 15:41	04/18/18 07:51	1
Fluoranthene	0.86	U	10	0.86	ug/L		04/17/18 15:41	04/18/18 07:51	1
Pyrene	1.7	U	10	1.7	ug/L		04/17/18 15:41	04/18/18 07:51	1
Butyl benzyl phthalate	0.87	U	10	0.87	ug/L		04/17/18 15:41	04/18/18 07:51	1
3,3'-Dichlorobenzidine	1.5	U	10	1.5	ug/L		04/17/18 15:41	04/18/18 07:51	1
Chrysene	0.93	U	2.0	0.93	ug/L		04/17/18 15:41	04/18/18 07:51	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/17/18 15:41	04/18/18 07:51	1
Di-n-octyl phthalate	4.9	U	10	4.9	ug/L		04/17/18 15:41	04/18/18 07:51	1
Benzo[k]fluoranthene	0.69	U	1.0	0.69	ug/L		04/17/18 15:41	04/18/18 07:51	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/17/18 15:41	04/18/18 07:51	1
Dibenz(a,h)anthracene	0.73	U	1.0	0.73	ug/L		04/17/18 15:41	04/18/18 07:51	1
Benzo[g,h,i]perylene	1.5	U	10	1.5	ug/L		04/17/18 15:41	04/18/18 07:51	1
Diphenyl ether	**9.4**	**J**	10	1.2	ug/L		04/17/18 15:41	04/18/18 07:51	1
n,n'-Dimethylaniline	0.93	U	1.0	0.93	ug/L		04/17/18 15:41	04/18/18 07:51	1
Caprolactam	0.70	U	10	0.70	ug/L		04/17/18 15:41	04/18/18 07:51	1
bis (2-chloroisopropyl) ether	0.64	U	10	0.64	ug/L		04/17/18 15:41	04/18/18 07:51	1
Bisphenol-A	**52**		10	10	ug/L		04/17/18 15:41	04/18/18 07:51	1
N-Methylaniline	0.49	U	5.1	0.49	ug/L		04/17/18 15:41	04/18/18 07:51	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane	*20*	*J N*	*ug/L*		*1.61*	*123-91-1*	*04/17/18 15:41*	*04/18/18 07:51*	*1*
Unknown	*8.5*	*J*	*ug/L*		*4.41*		*04/17/18 15:41*	*04/18/18 07:51*	*1*
Unknown	*7.6*	*J*	*ug/L*		*5.49*		*04/17/18 15:41*	*04/18/18 07:51*	*1*
Unknown	*24*	*J*	*ug/L*		*5.80*		*04/17/18 15:41*	*04/18/18 07:51*	*1*
Unknown	*12*	*J*	*ug/L*		*5.97*		*04/17/18 15:41*	*04/18/18 07:51*	*1*
Unknown	*77*	*J*	*ug/L*		*6.82*		*04/17/18 15:41*	*04/18/18 07:51*	*1*
Unknown	*6.9*	*J*	*ug/L*		*7.12*		*04/17/18 15:41*	*04/18/18 07:51*	*1*
Unknown	*17*	*J*	*ug/L*		*8.04*		*04/17/18 15:41*	*04/18/18 07:51*	*1*
Unknown	*13*	*J*	*ug/L*		*8.21*		*04/17/18 15:41*	*04/18/18 07:51*	*1*
Unknown	*10*	*J*	*ug/L*		*8.35*		*04/17/18 15:41*	*04/18/18 07:51*	*1*
Unknown	*7.5*	*J*	*ug/L*		*9.41*		*04/17/18 15:41*	*04/18/18 07:51*	*1*
Unknown	*8.2*	*J*	*ug/L*		*11.41*		*04/17/18 15:41*	*04/18/18 07:51*	*1*

Client Sample ID: C-19D

Lab Sample ID: 460-154033-4

Date Collected: 04/13/18 09:25
Date Received: 04/13/18 20:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	23	J	ug/L		11.90		04/17/18 15:41	04/18/18 07:51	1
Unknown	6.7	J	ug/L		12.17		04/17/18 15:41	04/18/18 07:51	1
Unknown	12	J	ug/L		12.61		04/17/18 15:41	04/18/18 07:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	99		51 - 108	04/17/18 15:41	04/18/18 07:51	1
Phenol-d5	33		14 - 39	04/17/18 15:41	04/18/18 07:51	1
Terphenyl-d14	125		40 - 148	04/17/18 15:41	04/18/18 07:51	1
2,4,6-Tribromophenol	116		26 - 139	04/17/18 15:41	04/18/18 07:51	1
2-Fluorophenol	49		25 - 58	04/17/18 15:41	04/18/18 07:51	1
2-Fluorobiphenyl	99		45 - 107	04/17/18 15:41	04/18/18 07:51	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/15/18 19:30	04/17/18 21:54	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/15/18 19:30	04/17/18 21:54	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/15/18 19:30	04/17/18 21:54	5
Barium	**129**		5.0	3.2	ug/L		04/15/18 19:30	04/17/18 21:54	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/15/18 19:30	04/17/18 21:54	5
Calcium	**18500**		250	233	ug/L		04/15/18 19:30	04/17/18 21:54	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/15/18 19:30	04/17/18 21:54	5
Cobalt	**67.1**		5.0	3.1	ug/L		04/15/18 19:30	04/17/18 21:54	5
Chromium	3.1	U	5.0	3.1	ug/L		04/15/18 19:30	04/17/18 21:54	5
Copper	**9.1**		5.0	3.3	ug/L		04/15/18 19:30	04/17/18 21:54	5
Iron	**26600**		150	97.8	ug/L		04/15/18 19:30	04/17/18 21:54	5
Potassium	**2390**		250	143	ug/L		04/15/18 19:30	04/17/18 21:54	5
Magnesium	**20900**		250	155	ug/L		04/15/18 19:30	04/17/18 21:54	5
Manganese	**5700**		10.0	6.1	ug/L		04/15/18 19:30	04/17/18 21:54	5
Sodium	**16300**		250	213	ug/L		04/15/18 19:30	04/19/18 15:30	5
Nickel	**15.2**		5.0	3.1	ug/L		04/15/18 19:30	04/17/18 21:54	5
Lead	0.93	U	1.5	0.93	ug/L		04/15/18 19:30	04/17/18 21:54	5
Antimony	1.4	U	2.5	1.4	ug/L		04/15/18 19:30	04/17/18 21:54	5
Selenium	1.4	U	2.5	1.4	ug/L		04/15/18 19:30	04/17/18 21:54	5
Thallium	**0.60**	**J**	1.0	0.60	ug/L		04/15/18 19:30	04/17/18 21:54	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/15/18 19:30	04/17/18 21:54	5
Zinc	16.3	U	20.0	16.3	ug/L		04/15/18 19:30	04/17/18 21:54	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/18/18 12:02	04/18/18 14:08	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**29500**		150	92.1	ug/L		04/15/18 17:45	04/17/18 16:13	1
Manganese, Dissolved	**6820**		15.0	3.1	ug/L		04/15/18 17:45	04/17/18 16:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**2.4**		0.10	0.045	mg/L		04/19/18 11:30	04/19/18 13:21	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G

TestAmerica Job ID: 460-154033-1

Client Sample ID: C-30

Lab Sample ID: 460-154033-5

Date Collected: 04/13/18 09:55
Date Received: 04/13/18 20:10

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**40**		0.80	0.40	ug/L			04/16/18 04:02	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*72 - 133*		*04/16/18 04:02*	*2*
1,2-Dichloroethane-d4 (Surr)	*94*		*71 - 144*		*04/16/18 04:02*	*2*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.1	U	5.0	1.1	ug/L			04/19/18 15:40	5
Bromomethane	0.90	U	5.0	0.90	ug/L			04/19/18 15:40	5
Vinyl chloride	**0.81**	**J**	5.0	0.30	ug/L			04/19/18 15:40	5
Chloroethane	1.9	U	5.0	1.9	ug/L			04/19/18 15:40	5
Methylene Chloride	1.1	U	5.0	1.1	ug/L			04/19/18 15:40	5
Acetone	25 ~~**9.3**~~	~~**J**~~ U	25	5.4	ug/L			04/19/18 15:40	5
Carbon disulfide	1.1	U	5.0	1.1	ug/L			04/19/18 15:40	5
1,1-Dichloroethene	1.7	U	5.0	1.7	ug/L			04/19/18 15:40	5
1,1-Dichloroethane	1.2	U	5.0	1.2	ug/L			04/19/18 15:40	5
trans-1,2-Dichloroethene	0.90	U	5.0	0.90	ug/L			04/19/18 15:40	5
cis-1,2-Dichloroethene	**4.8**	**J**	5.0	1.3	ug/L			04/19/18 15:40	5
Chloroform	1.1	U	5.0	1.1	ug/L			04/19/18 15:40	5
1,2-Dichloroethane	1.3	U	5.0	1.3	ug/L			04/19/18 15:40	5
2-Butanone	11	U	25	11	ug/L			04/19/18 15:40	5
1,1,1-Trichloroethane	1.4	U	5.0	1.4	ug/L			04/19/18 15:40	5
Carbon tetrachloride	1.7	U	5.0	1.7	ug/L			04/19/18 15:40	5
Bromodichloromethane	0.75	U	5.0	0.75	ug/L			04/19/18 15:40	5
1,2-Dichloropropane	0.90	U	5.0	0.90	ug/L			04/19/18 15:40	5
cis-1,3-Dichloropropene	0.80	U	5.0	0.80	ug/L			04/19/18 15:40	5
Trichloroethene	1.1	U	5.0	1.1	ug/L			04/19/18 15:40	5
Dibromochloromethane	1.1	U	5.0	1.1	ug/L			04/19/18 15:40	5
1,1,2-Trichloroethane	0.40	U	5.0	0.40	ug/L			04/19/18 15:40	5
Benzene	**39**		5.0	0.45	ug/L			04/19/18 15:40	5
trans-1,3-Dichloropropene	0.95	U	5.0	0.95	ug/L			04/19/18 15:40	5
Bromoform	0.90	U	5.0	0.90	ug/L			04/19/18 15:40	5
4-Methyl-2-pentanone	3.2	U	25	3.2	ug/L			04/19/18 15:40	5
2-Hexanone	3.6	U	25	3.6	ug/L			04/19/18 15:40	5
Tetrachloroethene	0.60	U	5.0	0.60	ug/L			04/19/18 15:40	5
1,1,2,2-Tetrachloroethane	0.95	U	5.0	0.95	ug/L			04/19/18 15:40	5
Toluene	**380**		5.0	1.3	ug/L			04/19/18 15:40	5
Chlorobenzene	**1900**		5.0	1.2	ug/L			04/19/18 15:40	5
Ethylbenzene	**50**		5.0	1.5	ug/L			04/19/18 15:40	5
Styrene	**0.95**	**J**	5.0	0.85	ug/L			04/19/18 15:40	5
Xylenes, Total	**260**		10	1.4	ug/L			04/19/18 15:40	5
Ethyl ether	**0.78**	**J**	5.0	0.55	ug/L			04/19/18 15:40	5
MTBE	0.65	U	5.0	0.65	ug/L			04/19/18 15:40	5
Tetrahydrofuran	**4.4**	**J**	10	1.8	ug/L			04/19/18 15:40	5
Cyclohexane	**2.9**	**J**	5.0	1.3	ug/L			04/19/18 15:40	5
1,2,4-Trimethylbenzene	**95**		5.0	1.2	ug/L			04/19/18 15:40	5
1,3,5-Trimethylbenzene	**230**		5.0	1.3	ug/L			04/19/18 15:40	5
Isopropylbenzene	**8.6**		5.0	1.6	ug/L			04/19/18 15:40	5
N-Propylbenzene	**10**		5.0	1.5	ug/L			04/19/18 15:40	5

Client Sample ID: C-30

Lab Sample ID: 460-154033-5

Date Collected: 04/13/18 09:55
Date Received: 04/13/18 20:10

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	**4.0**	**J**	5.0	1.1	ug/L			04/19/18 15:40	5
Indane	**68**		5.0	0.60	ug/L			04/19/18 15:40	5
Dichlorofluoromethane	**1.3**	**J**	5.0	1.1	ug/L			04/19/18 15:40	5
1,2,3-Trimethylbenzene	**77**		5.0	0.55	ug/L			04/19/18 15:40	5

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Benzene, 1-ethyl-3-methyl-	*100*	*J N*	*ug/L*		*9.75*	*620-14-4*		*04/19/18 15:40*	*5*
Benzene, 1-ethyl-2-methyl-	*210*	*J N*	*ug/L*		*10.22*	*611-14-3*		*04/19/18 15:40*	*5*
Benzene, 1,2-dichloro-	*28*	*J N*	*ug/L*		*11.65*	*95-50-1*		*04/19/18 15:40*	*5*
Benzene, 1-methyl-2-(1-methylethyl)-	*38*	*J N*	*ug/L*		*11.93*	*527-84-4*		*04/19/18 15:40*	*5*
Benzene, 1,2-dipropoxy-	*1500*	*J N*	*ug/L*		*13.43*	*6280-98-4*		*04/19/18 15:40*	*5*
Diphenyl ether	*33*	*J N*	*ug/L*		*14.13*	*101-84-8*		*04/19/18 15:40*	*5*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*74 - 132*		*04/19/18 15:40*	*5*
Bromofluorobenzene	*93*		*77 - 124*		*04/19/18 15:40*	*5*
Toluene-d8 (Surr)	*102*		*80 - 120*		*04/19/18 15:40*	*5*
Dibromofluoromethane (Surr)	*106*		*72 - 131*		*04/19/18 15:40*	*5*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.051	0.016	ug/L		04/17/18 15:41	04/18/18 05:30	1
Benzo[a]pyrene	0.022	U	0.051	0.022	ug/L		04/17/18 15:41	04/18/18 05:30	1
Benzo[b]fluoranthene	0.024	U	0.051	0.024	ug/L		04/17/18 15:41	04/18/18 05:30	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/17/18 15:41	04/18/18 05:30	1
Pentachlorophenol	0.16	U	0.20	0.16	ug/L		04/17/18 15:41	04/18/18 05:30	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	1.5	U	52	1.5	ug/L		04/17/18 15:41	04/19/18 15:56	5
2-Chlorophenol	**2.0**	**J**	52	2.0	ug/L		04/17/18 15:41	04/19/18 15:56	5
2-Methylphenol	1.3	U	52	1.3	ug/L		04/17/18 15:41	04/19/18 15:56	5
4-Methylphenol	1.2	U	52	1.2	ug/L		04/17/18 15:41	04/19/18 15:56	5
2-Nitrophenol	3.9	U	52	3.9	ug/L		04/17/18 15:41	04/19/18 15:56	5
2,4-Dimethylphenol	1.2	U	52	1.2	ug/L		04/17/18 15:41	04/19/18 15:56	5
2,4-Dichlorophenol	2.2	U	52	2.2	ug/L		04/17/18 15:41	04/19/18 15:56	5
4-Chloro-3-methylphenol	3.0	U	52	3.0	ug/L		04/17/18 15:41	04/19/18 15:56	5
2,4,6-Trichlorophenol	1.6	U	52	1.6	ug/L		04/17/18 15:41	04/19/18 15:56	5
2,4,5-Trichlorophenol	1.5	U	52	1.5	ug/L		04/17/18 15:41	04/19/18 15:56	5
2,4-Dinitrophenol	75	U	100	75	ug/L		04/17/18 15:41	04/19/18 15:56	5
4-Nitrophenol	3.6	U	100	3.6	ug/L		04/17/18 15:41	04/19/18 15:56	5
4,6-Dinitro-2-methylphenol	69	U	100	69	ug/L		04/17/18 15:41	04/19/18 15:56	5
Bis(2-chloroethyl)ether	**130**		5.2	1.5	ug/L		04/17/18 15:41	04/19/18 15:56	5
1,3-Dichlorobenzene	11	U	52	11	ug/L		04/17/18 15:41	04/19/18 15:56	5
1,4-Dichlorobenzene	**34**	**J**	52	6.6	ug/L		04/17/18 15:41	04/19/18 15:56	5
1,2-Dichlorobenzene	**13**	**J**	52	7.0	ug/L		04/17/18 15:41	04/19/18 15:56	5
N-Nitrosodi-n-propylamine	2.2	U	5.2	2.2	ug/L		04/17/18 15:41	04/19/18 15:56	5
Hexachloroethane	6.2	U	10	6.2	ug/L		04/17/18 15:41	04/19/18 15:56	5
Nitrobenzene	3.0	U	5.2	3.0	ug/L		04/17/18 15:41	04/19/18 15:56	5
Isophorone	4.2	U	52	4.2	ug/L		04/17/18 15:41	04/19/18 15:56	5

Client Sample ID: C-30

Lab Sample ID: 460-154033-5

Date Collected: 04/13/18 09:55
Date Received: 04/13/18 20:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethoxy)methane	1.2	U	52	1.2	ug/L		04/17/18 15:41	04/19/18 15:56	5
1,2,4-Trichlorobenzene	6.5	U	10	6.5	ug/L		04/17/18 15:41	04/19/18 15:56	5
Naphthalene	**16**	**J**	52	5.9	ug/L		04/17/18 15:41	04/19/18 15:56	5
4-Chloroaniline	9.8	U	52	9.8	ug/L		04/17/18 15:41	04/19/18 15:56	5
Hexachlorobutadiene	4.1	U	5.2	4.1	ug/L		04/17/18 15:41	04/19/18 15:56	5
2-Methylnaphthalene	5.7	U	52	5.7	ug/L		04/17/18 15:41	04/19/18 15:56	5
Hexachlorocyclopentadiene	9.0	U	52	9.0	ug/L		04/17/18 15:41	04/19/18 15:56	5
2-Chloronaphthalene	6.1	U	52	6.1	ug/L		04/17/18 15:41	04/19/18 15:56	5
2-Nitroaniline	2.5	U	52	2.5	ug/L		04/17/18 15:41	04/19/18 15:56	5
Dimethyl phthalate	4.0	U	52	4.0	ug/L		04/17/18 15:41	04/19/18 15:56	5
Acenaphthylene	4.3	U	52	4.3	ug/L		04/17/18 15:41	04/19/18 15:56	5
2,6-Dinitrotoluene	2.0	U	10	2.0	ug/L		04/17/18 15:41	04/19/18 15:56	5
3-Nitroaniline	5.0	U	52	5.0	ug/L		04/17/18 15:41	04/19/18 15:56	5
Acenaphthene	5.6	U	52	5.6	ug/L		04/17/18 15:41	04/19/18 15:56	5
Dibenzofuran	5.7	U	52	5.7	ug/L		04/17/18 15:41	04/19/18 15:56	5
2,4-Dinitrotoluene	5.2	U	10	5.2	ug/L		04/17/18 15:41	04/19/18 15:56	5
Diethyl phthalate	5.1	U	52	5.1	ug/L		04/17/18 15:41	04/19/18 15:56	5
4-Chlorophenyl phenyl ether	6.7	U	52	6.7	ug/L		04/17/18 15:41	04/19/18 15:56	5
Fluorene	4.8	U	52	4.8	ug/L		04/17/18 15:41	04/19/18 15:56	5
4-Nitroaniline	2.8	U	52	2.8	ug/L		04/17/18 15:41	04/19/18 15:56	5
N-Nitrosodiphenylamine	4.6	U	52	4.6	ug/L		04/17/18 15:41	04/19/18 15:56	5
4-Bromophenyl phenyl ether	3.9	U	52	3.9	ug/L		04/17/18 15:41	04/19/18 15:56	5
Phenanthrene	3.0	U	52	3.0	ug/L		04/17/18 15:41	04/19/18 15:56	5
Anthracene	3.3	U	52	3.3	ug/L		04/17/18 15:41	04/19/18 15:56	5
Carbazole	3.5	U	52	3.5	ug/L		04/17/18 15:41	04/19/18 15:56	5
Di-n-butyl phthalate	4.4	U	52	4.4	ug/L		04/17/18 15:41	04/19/18 15:56	5
Fluoranthene	4.4	U	52	4.4	ug/L		04/17/18 15:41	04/19/18 15:56	5
Pyrene	8.6	U	52	8.6	ug/L		04/17/18 15:41	04/19/18 15:56	5
Butyl benzyl phthalate	4.4	U	52	4.4	ug/L		04/17/18 15:41	04/19/18 15:56	5
3,3'-Dichlorobenzidine	7.4	U	52	7.4	ug/L		04/17/18 15:41	04/19/18 15:56	5
Chrysene	4.7	U	10	4.7	ug/L		04/17/18 15:41	04/19/18 15:56	5
Bis(2-ethylhexyl) phthalate	8.9	U	10	8.9	ug/L		04/17/18 15:41	04/19/18 15:56	5
Di-n-octyl phthalate	25	U	52	25	ug/L		04/17/18 15:41	04/19/18 15:56	5
Benzo[k]fluoranthene	3.5	U	5.2	3.5	ug/L		04/17/18 15:41	04/19/18 15:56	5
Indeno[1,2,3-cd]pyrene	6.7	U	10	6.7	ug/L		04/17/18 15:41	04/19/18 15:56	5
Dibenz(a,h)anthracene	3.8	U	5.2	3.8	ug/L		04/17/18 15:41	04/19/18 15:56	5
Benzo[g,h,i]perylene	7.4	U	52	7.4	ug/L		04/17/18 15:41	04/19/18 15:56	5
Diphenyl ether	**77**		52	6.3	ug/L		04/17/18 15:41	04/19/18 15:56	5
n,n'-Dimethylaniline	**8.2**		5.2	4.7	ug/L		04/17/18 15:41	04/19/18 15:56	5
Caprolactam	3.6	U	52	3.6	ug/L		04/17/18 15:41	04/19/18 15:56	5
bis (2-chloroisopropyl) ether	3.3	U	52	3.3	ug/L		04/17/18 15:41	04/19/18 15:56	5
Bisphenol-A	**270**		52	52	ug/L		04/17/18 15:41	04/19/18 15:56	5
N-Methylaniline	**6.0**	**J**	26	2.5	ug/L		04/17/18 15:41	04/19/18 15:56	5

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane	*200*	*J N*	*ug/L*		*1.70*	*110-82-7*	*04/17/18 15:41*	*04/19/18 15:56*	*5*
Butane, 2-methoxy-2-methyl-	*98*	*J N*	*ug/L*		*1.76*	*994-05-8*	*04/17/18 15:41*	*04/19/18 15:56*	*5*
Toluene	*190*	*J N*	*ug/L*		*2.40*	*108-88-3*	*04/17/18 15:41*	*04/19/18 15:56*	*5*
Benzene, chloro-	*850*	*J N*	*ug/L*		*3.08*	*108-90-7*	*04/17/18 15:41*	*04/19/18 15:56*	*5*
Benzene, 1,3-dimethyl-	*150*	*J N*	*ug/L*		*3.28*	*108-38-3*	*04/17/18 15:41*	*04/19/18 15:56*	*5*

Client Sample ID: C-30

Lab Sample ID: 460-154033-5

Date Collected: 04/13/18 09:55
Date Received: 04/13/18 20:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Benzene, 1-ethyl-2-methyl-	200	J N	ug/L		4.20	611-14-3	04/17/18 15:41	04/19/18 15:56	5
Benzene, 1,2,3-trimethyl-	75	J N	ug/L		4.54	526-73-8	04/17/18 15:41	04/19/18 15:56	5
Benzene, 1,2-dipropoxy-	1800	J N	ug/L		6.12	6280-98-4	04/17/18 15:41	04/19/18 15:56	5
Unknown	80	J	ug/L		6.53		04/17/18 15:41	04/19/18 15:56	5
Unknown	170	J	ug/L		6.69		04/17/18 15:41	04/19/18 15:56	5
Unknown	180	J	ug/L		6.77		04/17/18 15:41	04/19/18 15:56	5
Unknown	470	J	ug/L		7.13		04/17/18 15:41	04/19/18 15:56	5
Unknown	120	J	ug/L		7.25		04/17/18 15:41	04/19/18 15:56	5
Unknown	100	J	ug/L		7.42		04/17/18 15:41	04/19/18 15:56	5
1,3,5-Triazine-2,4,6(1H,3H,5H) -trione, 1,3,5-tri-2-propenyl-	190	J N	ug/L		8.08	1025-15-6	04/17/18 15:41	04/19/18 15:56	5
Altretamine	180	J N	ug/L		8.22	645-05-6	04/17/18 15:41	04/19/18 15:56	5
Urea, N,N'-dimethyl-N,N'-diphenyl-	92	J N	ug/L		8.92	611-92-7	04/17/18 15:41	04/19/18 15:56	5
Unknown	430	J	ug/L		12.22		04/17/18 15:41	04/19/18 15:56	5
Unknown	280	J	ug/L		12.39		04/17/18 15:41	04/19/18 15:56	5
Unknown	150	J	ug/L		12.57		04/17/18 15:41	04/19/18 15:56	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	81		51 - 108	04/17/18 15:41	04/19/18 15:56	5
Phenol-d5	27		14 - 39	04/17/18 15:41	04/19/18 15:56	5
Terphenyl-d14	93		40 - 148	04/17/18 15:41	04/19/18 15:56	5
2,4,6-Tribromophenol	93		26 - 139	04/17/18 15:41	04/19/18 15:56	5
2-Fluorophenol	40		25 - 58	04/17/18 15:41	04/19/18 15:56	5
2-Fluorobiphenyl	89		45 - 107	04/17/18 15:41	04/19/18 15:56	5

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/15/18 19:30	04/17/18 21:59	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/15/18 19:30	04/17/18 21:59	5
Arsenic	**10.9**		2.5	1.5	ug/L		04/15/18 19:30	04/17/18 21:59	5
Barium	**145**		5.0	3.2	ug/L		04/15/18 19:30	04/17/18 21:59	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/15/18 19:30	04/17/18 21:59	5
Calcium	**8370**		250	233	ug/L		04/15/18 19:30	04/17/18 21:59	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/15/18 19:30	04/17/18 21:59	5
Cobalt	**54.6**		5.0	3.1	ug/L		04/15/18 19:30	04/17/18 21:59	5
Chromium	3.1	U	5.0	3.1	ug/L		04/15/18 19:30	04/17/18 21:59	5
Copper	**343**		5.0	3.3	ug/L		04/15/18 19:30	04/17/18 21:59	5
Iron	**57400**		150	97.8	ug/L		04/15/18 19:30	04/17/18 21:59	5
Potassium	**2930**		250	143	ug/L		04/15/18 19:30	04/17/18 21:59	5
Magnesium	**12700**		250	155	ug/L		04/15/18 19:30	04/17/18 21:59	5
Manganese	**2450**		10.0	6.1	ug/L		04/15/18 19:30	04/17/18 21:59	5
Sodium	**71900**		250	213	ug/L		04/15/18 19:30	04/19/18 15:35	5
Nickel	**57.6**		5.0	3.1	ug/L		04/15/18 19:30	04/17/18 21:59	5
Lead	**12.9**		1.5	0.93	ug/L		04/15/18 19:30	04/17/18 21:59	5
Antimony	1.4	U	2.5	1.4	ug/L		04/15/18 19:30	04/17/18 21:59	5
Selenium	1.4	U	2.5	1.4	ug/L		04/15/18 19:30	04/17/18 21:59	5
Thallium	**2.0**		1.0	0.60	ug/L		04/15/18 19:30	04/17/18 21:59	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/15/18 19:30	04/17/18 21:59	5
Zinc	**33.1**		20.0	16.3	ug/L		04/15/18 19:30	04/17/18 21:59	5

Client Sample ID: C-30

Lab Sample ID: 460-154033-5

Date Collected: 04/13/18 09:55
Date Received: 04/13/18 20:10

Matrix: Water

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/18/18 12:02	04/18/18 14:10	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**65500**		150	92.1	ug/L		04/15/18 17:45	04/17/18 16:16	1
Manganese, Dissolved	**2830**		15.0	3.1	ug/L		04/15/18 17:45	04/17/18 16:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**7.6**		0.50	0.23	mg/L		04/19/18 11:30	04/19/18 13:34	5

Client Sample ID: C-4D

Lab Sample ID: 460-154033-6

Date Collected: 04/13/18 10:30
Date Received: 04/13/18 20:10

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/19/18 14:49	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/19/18 14:49	1
Vinyl chloride	**0.12**	**J**	1.0	0.060	ug/L			04/19/18 14:49	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/19/18 14:49	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/19/18 14:49	1
Acetone	1.1	U	5.0	1.1	ug/L			04/19/18 14:49	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/19/18 14:49	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/19/18 14:49	1
1,1-Dichloroethane	**0.67**	**J**	1.0	0.24	ug/L			04/19/18 14:49	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/19/18 14:49	1
cis-1,2-Dichloroethene	**0.33**	**J**	1.0	0.26	ug/L			04/19/18 14:49	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/19/18 14:49	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/19/18 14:49	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/19/18 14:49	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/19/18 14:49	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/19/18 14:49	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/19/18 14:49	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/19/18 14:49	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/19/18 14:49	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/19/18 14:49	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/19/18 14:49	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/19/18 14:49	1
Benzene	**17**		1.0	0.090	ug/L			04/19/18 14:49	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/19/18 14:49	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/19/18 14:49	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/19/18 14:49	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/19/18 14:49	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/19/18 14:49	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/19/18 14:49	1
Toluene	**0.83**	**J**	1.0	0.25	ug/L			04/19/18 14:49	1
Chlorobenzene	**33**		1.0	0.24	ug/L			04/19/18 14:49	1
Ethylbenzene	**0.72**	**J**	1.0	0.30	ug/L			04/19/18 14:49	1
Styrene	0.17	U	1.0	0.17	ug/L			04/19/18 14:49	1

Client Sample ID: C-4D

Lab Sample ID: 460-154033-6

Date Collected: 04/13/18 10:30
Date Received: 04/13/18 20:10

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	**14**		2.0	0.28	ug/L			04/19/18 14:49	1
Ethyl ether	**0.83**	**J**	1.0	0.11	ug/L			04/19/18 14:49	1
MTBE	0.13	U	1.0	0.13	ug/L			04/19/18 14:49	1
Tetrahydrofuran	**12**		2.0	0.36	ug/L			04/19/18 14:49	1
Cyclohexane	**30**		1.0	0.26	ug/L			04/19/18 14:49	1
1,4-Dioxane	**72**		50	8.7	ug/L			04/19/18 14:49	1
1,2,4-Trimethylbenzene	**5.2**		1.0	0.23	ug/L			04/19/18 14:49	1
1,3,5-Trimethylbenzene	**15**		1.0	0.25	ug/L			04/19/18 14:49	1
Isopropylbenzene	**43**		1.0	0.32	ug/L			04/19/18 14:49	1
N-Propylbenzene	**44**		1.0	0.29	ug/L			04/19/18 14:49	1
Methylcyclohexane	**52**		1.0	0.22	ug/L			04/19/18 14:49	1
Indane	**61**		1.0	0.12	ug/L			04/19/18 14:49	1
Dichlorofluoromethane	**2.8**		1.0	0.21	ug/L			04/19/18 14:49	1
1,2,3-Trimethylbenzene	**47**		1.0	0.11	ug/L			04/19/18 14:49	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclopentane, methyl-	*11*	*J N*	*ug/L*		*2.62*	*96-37-7*		*04/19/18 14:49*	*1*
Pentane, 2,3-dimethyl-	*20*	*J N*	*ug/L*		*3.19*	*565-59-3*		*04/19/18 14:49*	*1*
Unknown alkane	*17*	*J*	*ug/L*		*3.43*			*04/19/18 14:49*	*1*
Cyclopentane, 1,3-dimethyl-	*14*	*J N*	*ug/L*		*3.48*	*2453-00-1*		*04/19/18 14:49*	*1*
Cyclopentane, 1,2-dimethyl-, cis-	*20*	*J N*	*ug/L*		*3.53*	*1192-18-3*		*04/19/18 14:49*	*1*
Unknown Cycloalkane	*7.1*	*J*	*ug/L*		*4.31*			*04/19/18 14:49*	*1*
Benzene, 1,3-dichloro-	*6.5*	*J N*	*ug/L*		*11.65*	*541-73-1*		*04/19/18 14:49*	*1*
Benzene, 1-ethyl-2,3-dimethyl-	*8.9*	*J N*	*ug/L*		*11.93*	*933-98-2*		*04/19/18 14:49*	*1*
Unknown	*39*	*J*	*ug/L*		*13.42*			*04/19/18 14:49*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*74 - 132*		*04/19/18 14:49*	*1*
Bromofluorobenzene	*93*		*77 - 124*		*04/19/18 14:49*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*04/19/18 14:49*	*1*
Dibromofluoromethane (Surr)	*103*		*72 - 131*		*04/19/18 14:49*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.052	0.016	ug/L		04/17/18 15:41	04/18/18 07:17	1
Benzo[a]pyrene	0.023	U	0.052	0.023	ug/L		04/17/18 15:41	04/18/18 07:17	1
Benzo[b]fluoranthene	0.025	U	0.052	0.025	ug/L		04/17/18 15:41	04/18/18 07:17	1
Hexachlorobenzene	0.014	U	0.021	0.014	ug/L		04/17/18 15:41	04/18/18 07:17	1
Pentachlorophenol	0.16	U	0.21	0.16	ug/L		04/17/18 15:41	04/18/18 07:17	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.30	U	10	0.30	ug/L		04/17/18 15:41	04/18/18 08:37	1
2-Chlorophenol	0.39	U	10	0.39	ug/L		04/17/18 15:41	04/18/18 08:37	1
2-Methylphenol	0.27	U	10	0.27	ug/L		04/17/18 15:41	04/18/18 08:37	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/17/18 15:41	04/18/18 08:37	1
2-Nitrophenol	0.78	U	10	0.78	ug/L		04/17/18 15:41	04/18/18 08:37	1
2,4-Dimethylphenol	0.25	U	10	0.25	ug/L		04/17/18 15:41	04/18/18 08:37	1
2,4-Dichlorophenol	0.44	U	10	0.44	ug/L		04/17/18 15:41	04/18/18 08:37	1
4-Chloro-3-methylphenol	0.60	U	10	0.60	ug/L		04/17/18 15:41	04/18/18 08:37	1

Client Sample ID: C-4D

Lab Sample ID: 460-154033-6

Date Collected: 04/13/18 10:30
Date Received: 04/13/18 20:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	0.31	U	10	0.31	ug/L		04/17/18 15:41	04/18/18 08:37	1
2,4,5-Trichlorophenol	0.29	U	10	0.29	ug/L		04/17/18 15:41	04/18/18 08:37	1
2,4-Dinitrophenol	15	U	21	15	ug/L		04/17/18 15:41	04/18/18 08:37	1
4-Nitrophenol	0.72	U	21	0.72	ug/L		04/17/18 15:41	04/18/18 08:37	1
4,6-Dinitro-2-methylphenol	14	U	21	14	ug/L		04/17/18 15:41	04/18/18 08:37	1
Bis(2-chloroethyl)ether	**36**		1.0	0.31	ug/L		04/17/18 15:41	04/18/18 08:37	1
1,3-Dichlorobenzene	2.1	U	10	2.1	ug/L		04/17/18 15:41	04/18/18 08:37	1
1,4-Dichlorobenzene	**4.9**	**J**	10	1.3	ug/L		04/17/18 15:41	04/18/18 08:37	1
1,2-Dichlorobenzene	**6.4**	**J**	10	1.4	ug/L		04/17/18 15:41	04/18/18 08:37	1
N-Nitrosodi-n-propylamine	0.45	U	1.0	0.45	ug/L		04/17/18 15:41	04/18/18 08:37	1
Hexachloroethane	1.2	U	2.1	1.2	ug/L		04/17/18 15:41	04/18/18 08:37	1
Nitrobenzene	0.59	U	1.0	0.59	ug/L		04/17/18 15:41	04/18/18 08:37	1
Isophorone	0.83	U	10	0.83	ug/L		04/17/18 15:41	04/18/18 08:37	1
Bis(2-chloroethoxy)methane	0.25	U	10	0.25	ug/L		04/17/18 15:41	04/18/18 08:37	1
1,2,4-Trichlorobenzene	1.3	U	2.1	1.3	ug/L		04/17/18 15:41	04/18/18 08:37	1
Naphthalene	**3.6**	**J**	10	1.2	ug/L		04/17/18 15:41	04/18/18 08:37	1
4-Chloroaniline	2.0	U	10	2.0	ug/L		04/17/18 15:41	04/18/18 08:37	1
Hexachlorobutadiene	0.81	U	1.0	0.81	ug/L		04/17/18 15:41	04/18/18 08:37	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/17/18 15:41	04/18/18 08:37	1
Hexachlorocyclopentadiene	1.8	U	10	1.8	ug/L		04/17/18 15:41	04/18/18 08:37	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/17/18 15:41	04/18/18 08:37	1
2-Nitroaniline	0.49	U	10	0.49	ug/L		04/17/18 15:41	04/18/18 08:37	1
Dimethyl phthalate	0.80	U	10	0.80	ug/L		04/17/18 15:41	04/18/18 08:37	1
Acenaphthylene	0.86	U	10	0.86	ug/L		04/17/18 15:41	04/18/18 08:37	1
2,6-Dinitrotoluene	0.41	U	2.1	0.41	ug/L		04/17/18 15:41	04/18/18 08:37	1
3-Nitroaniline	1.0	U	10	1.0	ug/L		04/17/18 15:41	04/18/18 08:37	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/17/18 15:41	04/18/18 08:37	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/17/18 15:41	04/18/18 08:37	1
2,4-Dinitrotoluene	1.0	U	2.1	1.0	ug/L		04/17/18 15:41	04/18/18 08:37	1
Diethyl phthalate	1.0	U	10	1.0	ug/L		04/17/18 15:41	04/18/18 08:37	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/17/18 15:41	04/18/18 08:37	1
Fluorene	0.95	U	10	0.95	ug/L		04/17/18 15:41	04/18/18 08:37	1
4-Nitroaniline	0.57	U	10	0.57	ug/L		04/17/18 15:41	04/18/18 08:37	1
N-Nitrosodiphenylamine	0.93	U	10	0.93	ug/L		04/17/18 15:41	04/18/18 08:37	1
4-Bromophenyl phenyl ether	0.78	U	10	0.78	ug/L		04/17/18 15:41	04/18/18 08:37	1
Phenanthrene	0.60	U	10	0.60	ug/L		04/17/18 15:41	04/18/18 08:37	1
Anthracene	0.66	U	10	0.66	ug/L		04/17/18 15:41	04/18/18 08:37	1
Carbazole	0.71	U	10	0.71	ug/L		04/17/18 15:41	04/18/18 08:37	1
Di-n-butyl phthalate	0.88	U	10	0.88	ug/L		04/17/18 15:41	04/18/18 08:37	1
Fluoranthene	0.88	U	10	0.88	ug/L		04/17/18 15:41	04/18/18 08:37	1
Pyrene	1.7	U	10	1.7	ug/L		04/17/18 15:41	04/18/18 08:37	1
Butyl benzyl phthalate	0.89	U	10	0.89	ug/L		04/17/18 15:41	04/18/18 08:37	1
3,3'-Dichlorobenzidine	1.5	U	10	1.5	ug/L		04/17/18 15:41	04/18/18 08:37	1
Chrysene	0.94	U	2.1	0.94	ug/L		04/17/18 15:41	04/18/18 08:37	1
Bis(2-ethylhexyl) phthalate	1.8	U	2.1	1.8	ug/L		04/17/18 15:41	04/18/18 08:37	1
Di-n-octyl phthalate	5.0	U	10	5.0	ug/L		04/17/18 15:41	04/18/18 08:37	1
Benzo[k]fluoranthene	0.70	U	1.0	0.70	ug/L		04/17/18 15:41	04/18/18 08:37	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.1	1.3	ug/L		04/17/18 15:41	04/18/18 08:37	1
Dibenz(a,h)anthracene	0.75	U	1.0	0.75	ug/L		04/17/18 15:41	04/18/18 08:37	1

Client Sample ID: C-4D

Lab Sample ID: 460-154033-6

Date Collected: 04/13/18 10:30
Date Received: 04/13/18 20:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	1.5	U	10	1.5	ug/L		04/17/18 15:41	04/18/18 08:37	1
Diphenyl ether	**19**		10	1.3	ug/L		04/17/18 15:41	04/18/18 08:37	1
n,n'-Dimethylaniline	**3.6**		1.0	0.95	ug/L		04/17/18 15:41	04/18/18 08:37	1
Caprolactam	0.71	U	10	0.71	ug/L		04/17/18 15:41	04/18/18 08:37	1
bis (2-chloroisopropyl) ether	0.66	U	10	0.66	ug/L		04/17/18 15:41	04/18/18 08:37	1
Bisphenol-A	**38**	J+	10	10	ug/L		04/17/18 15:41	04/18/18 08:37	1
N-Methylaniline	**2.6**	**J**	5.2	0.50	ug/L		04/17/18 15:41	04/18/18 08:37	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1, 4 dioxane	*12*	*J*	*ug/L*		*1.61*		*04/17/18 15:41*	*04/18/18 08:37*	*1*
Benzene, (1-methylethyl)-	*36*	*J N*	*ug/L*		*3.35*	*98-82-8*	*04/17/18 15:41*	*04/18/18 08:37*	*1*
Benzene, propyl-	*34*	*J N*	*ug/L*		*3.62*	*103-65-1*	*04/17/18 15:41*	*04/18/18 08:37*	*1*
Benzene, 1,2,3-trimethyl-	*37*	*J N*	*ug/L*		*4.18*	*526-73-8*	*04/17/18 15:41*	*04/18/18 08:37*	*1*
Benzene, 2-ethyl-1,3-dimethyl-	*16*	*J N*	*ug/L*		*4.44*	*2870-04-4*	*04/17/18 15:41*	*04/18/18 08:37*	*1*
Phenol, 2-propoxy-	*7.0*	*J N*	*ug/L*		*5.22*	*6280-96-2*	*04/17/18 15:41*	*04/18/18 08:37*	*1*
Unknown	*110*	*J*	*ug/L*		*5.80*		*04/17/18 15:41*	*04/18/18 08:37*	*1*
Unknown	*13*	*J*	*ug/L*		*5.97*		*04/17/18 15:41*	*04/18/18 08:37*	*1*
Unknown	*8.2*	*J*	*ug/L*		*6.46*		*04/17/18 15:41*	*04/18/18 08:37*	*1*
Unknown	*110*	*J*	*ug/L*		*6.82*		*04/17/18 15:41*	*04/18/18 08:37*	*1*
Unknown	*14*	*J*	*ug/L*		*6.93*		*04/17/18 15:41*	*04/18/18 08:37*	*1*
Acetamide, N-methyl-N-phenyl-	*15*	*J N*	*ug/L*		*7.12*	*579-10-2*	*04/17/18 15:41*	*04/18/18 08:37*	*1*
Ethyl citrate	*10*	*J N*	*ug/L*		*7.73*	*77-93-0*	*04/17/18 15:41*	*04/18/18 08:37*	*1*
Altretamine	*12*	*J N*	*ug/L*		*7.92*	*645-05-6*	*04/17/18 15:41*	*04/18/18 08:37*	*1*
Unknown	*17*	*J*	*ug/L*		*8.04*		*04/17/18 15:41*	*04/18/18 08:37*	*1*
Unknown	*9.9*	*J*	*ug/L*		*8.22*		*04/17/18 15:41*	*04/18/18 08:37*	*1*
Urea, N,N'-dimethyl-N,N'-diphenyl-	*7.1*	*J N*	*ug/L*		*8.61*	*611-92-7*	*04/17/18 15:41*	*04/18/18 08:37*	*1*
Unknown	*9.0*	*J*	*ug/L*		*11.90*		*04/17/18 15:41*	*04/18/18 08:37*	*1*
Unknown	*22*	*J*	*ug/L*		*12.15*		*04/17/18 15:41*	*04/18/18 08:37*	*1*
Unknown	*34*	*J*	*ug/L*		*12.46*		*04/17/18 15:41*	*04/18/18 08:37*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*103*		*51 - 108*	*04/17/18 15:41*	*04/18/18 08:37*	*1*
Phenol-d5	*34*		*14 - 39*	*04/17/18 15:41*	*04/18/18 08:37*	*1*
Terphenyl-d14	*130*		*40 - 148*	*04/17/18 15:41*	*04/18/18 08:37*	*1*
2,4,6-Tribromophenol	*115*		*26 - 139*	*04/17/18 15:41*	*04/18/18 08:37*	*1*
2-Fluorophenol	*61*	*X*	*25 - 58*	*04/17/18 15:41*	*04/18/18 08:37*	*1*
2-Fluorobiphenyl	*103*		*45 - 107*	*04/17/18 15:41*	*04/18/18 08:37*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/15/18 19:30	04/17/18 22:01	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/15/18 19:30	04/17/18 22:01	5
Arsenic	**3.4**		2.5	1.5	ug/L		04/15/18 19:30	04/17/18 22:01	5
Barium	**880**		5.0	3.2	ug/L		04/15/18 19:30	04/17/18 22:01	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/15/18 19:30	04/17/18 22:01	5
Calcium	**12300**		250	233	ug/L		04/15/18 19:30	04/17/18 22:01	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/15/18 19:30	04/17/18 22:01	5
Cobalt	**17.8**		5.0	3.1	ug/L		04/15/18 19:30	04/17/18 22:01	5
Chromium	3.1	U	5.0	3.1	ug/L		04/15/18 19:30	04/17/18 22:01	5
Copper	**8.5**		5.0	3.3	ug/L		04/15/18 19:30	04/17/18 22:01	5

Client Sample ID: C-4D

Lab Sample ID: 460-154033-6

Date Collected: 04/13/18 10:30
Date Received: 04/13/18 20:10

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**26200**		150	97.8	ug/L		04/15/18 19:30	04/17/18 22:01	5
Potassium	**2880**		250	143	ug/L		04/15/18 19:30	04/17/18 22:01	5
Magnesium	**25000**		250	155	ug/L		04/15/18 19:30	04/17/18 22:01	5
Manganese	**1400**		10.0	6.1	ug/L		04/15/18 19:30	04/17/18 22:01	5
Sodium	**49900**		250	213	ug/L		04/15/18 19:30	04/19/18 15:38	5
Nickel	**6.7**		5.0	3.1	ug/L		04/15/18 19:30	04/17/18 22:01	5
Lead	0.93	U	1.5	0.93	ug/L		04/15/18 19:30	04/17/18 22:01	5
Antimony	1.4	U	2.5	1.4	ug/L		04/15/18 19:30	04/17/18 22:01	5
Selenium	1.4	U	2.5	1.4	ug/L		04/15/18 19:30	04/17/18 22:01	5
Thallium	0.60	U	1.0	0.60	ug/L		04/15/18 19:30	04/17/18 22:01	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/15/18 19:30	04/17/18 22:01	5
Zinc	16.3	U	20.0	16.3	ug/L		04/15/18 19:30	04/17/18 22:01	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/18/18 12:02	04/18/18 14:12	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**28800**		150	92.1	ug/L		04/15/18 17:45	04/17/18 16:20	1
Manganese, Dissolved	**1590**		15.0	3.1	ug/L		04/15/18 17:45	04/17/18 16:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**3.0**		0.10	0.045	mg/L		04/19/18 11:30	04/19/18 13:28	1

Client Sample ID: C-20D

Lab Sample ID: 460-154033-7

Date Collected: 04/13/18 10:50
Date Received: 04/13/18 20:10

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/19/18 13:06	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/19/18 13:06	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/19/18 13:06	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/19/18 13:06	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/19/18 13:06	1
Acetone	1.1	U	5.0	1.1	ug/L			04/19/18 13:06	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/19/18 13:06	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/19/18 13:06	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/19/18 13:06	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/19/18 13:06	1
cis-1,2-Dichloroethene	**0.36**	**J**	1.0	0.26	ug/L			04/19/18 13:06	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/19/18 13:06	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/19/18 13:06	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/19/18 13:06	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/19/18 13:06	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/19/18 13:06	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/19/18 13:06	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/19/18 13:06	1

Client Sample ID: C-20D

Lab Sample ID: 460-154033-7

Date Collected: 04/13/18 10:50
Date Received: 04/13/18 20:10

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/19/18 13:06	1
Trichloroethene	**0.45**	**J**	1.0	0.22	ug/L			04/19/18 13:06	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/19/18 13:06	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/19/18 13:06	1
Benzene	**1.8**		1.0	0.090	ug/L			04/19/18 13:06	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/19/18 13:06	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/19/18 13:06	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/19/18 13:06	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/19/18 13:06	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/19/18 13:06	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/19/18 13:06	1
Toluene	0.25	U	1.0	0.25	ug/L			04/19/18 13:06	1
Chlorobenzene	**10**		1.0	0.24	ug/L			04/19/18 13:06	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/19/18 13:06	1
Styrene	0.17	U	1.0	0.17	ug/L			04/19/18 13:06	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/19/18 13:06	1
Ethyl ether	**1.8**		1.0	0.11	ug/L			04/19/18 13:06	1
MTBE	**0.19**	**J**	1.0	0.13	ug/L			04/19/18 13:06	1
Tetrahydrofuran	**1.9**	**J**	2.0	0.36	ug/L			04/19/18 13:06	1
Cyclohexane	**1.1**		1.0	0.26	ug/L			04/19/18 13:06	1
1,4-Dioxane	**180**		50	8.7	ug/L			04/19/18 13:06	1
1,2,4-Trimethylbenzene	**0.31**	**J**	1.0	0.23	ug/L			04/19/18 13:06	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/19/18 13:06	1
Isopropylbenzene	**2.3**		1.0	0.32	ug/L			04/19/18 13:06	1
N-Propylbenzene	**2.5**		1.0	0.29	ug/L			04/19/18 13:06	1
Methylcyclohexane	**1.5**		1.0	0.22	ug/L			04/19/18 13:06	1
Indane	**4.0**		1.0	0.12	ug/L			04/19/18 13:06	1
Dichlorofluoromethane	**1.0**		1.0	0.21	ug/L			04/19/18 13:06	1
1,2,3-Trimethylbenzene	**1.4**		1.0	0.11	ug/L			04/19/18 13:06	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*9.6*	*J*	*ug/L*		*13.43*			*04/19/18 13:06*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*74 - 132*		*04/19/18 13:06*	*1*
Bromofluorobenzene	*94*		*77 - 124*		*04/19/18 13:06*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*04/19/18 13:06*	*1*
Dibromofluoromethane (Surr)	*105*		*72 - 131*		*04/19/18 13:06*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.052	0.016	ug/L		04/17/18 15:41	04/18/18 07:38	1
Benzo[a]pyrene	0.023	U	0.052	0.023	ug/L		04/17/18 15:41	04/18/18 07:38	1
Benzo[b]fluoranthene	0.025	U	0.052	0.025	ug/L		04/17/18 15:41	04/18/18 07:38	1
Hexachlorobenzene	0.014	U	0.021	0.014	ug/L		04/17/18 15:41	04/18/18 07:38	1
Pentachlorophenol	0.16	U	0.21	0.16	ug/L		04/17/18 15:41	04/18/18 07:38	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.30	U	10	0.30	ug/L		04/17/18 15:41	04/18/18 09:01	1

Client Sample ID: C-20D

Lab Sample ID: 460-154033-7

Date Collected: 04/13/18 10:50
Date Received: 04/13/18 20:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	0.39	U	10	0.39	ug/L		04/17/18 15:41	04/18/18 09:01	1
2-Methylphenol	0.27	U	10	0.27	ug/L		04/17/18 15:41	04/18/18 09:01	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/17/18 15:41	04/18/18 09:01	1
2-Nitrophenol	0.78	U	10	0.78	ug/L		04/17/18 15:41	04/18/18 09:01	1
2,4-Dimethylphenol	0.25	U	10	0.25	ug/L		04/17/18 15:41	04/18/18 09:01	1
2,4-Dichlorophenol	0.44	U	10	0.44	ug/L		04/17/18 15:41	04/18/18 09:01	1
4-Chloro-3-methylphenol	0.60	U	10	0.60	ug/L		04/17/18 15:41	04/18/18 09:01	1
2,4,6-Trichlorophenol	0.31	U	10	0.31	ug/L		04/17/18 15:41	04/18/18 09:01	1
2,4,5-Trichlorophenol	0.29	U	10	0.29	ug/L		04/17/18 15:41	04/18/18 09:01	1
2,4-Dinitrophenol	15	U	21	15	ug/L		04/17/18 15:41	04/18/18 09:01	1
4-Nitrophenol	0.72	U	21	0.72	ug/L		04/17/18 15:41	04/18/18 09:01	1
4,6-Dinitro-2-methylphenol	14	U	21	14	ug/L		04/17/18 15:41	04/18/18 09:01	1
Bis(2-chloroethyl)ether	**14**		1.0	0.31	ug/L		04/17/18 15:41	04/18/18 09:01	1
1,3-Dichlorobenzene	2.1	U	10	2.1	ug/L		04/17/18 15:41	04/18/18 09:01	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/17/18 15:41	04/18/18 09:01	1
1,2-Dichlorobenzene	1.4	U	10	1.4	ug/L		04/17/18 15:41	04/18/18 09:01	1
N-Nitrosodi-n-propylamine	0.45	U	1.0	0.45	ug/L		04/17/18 15:41	04/18/18 09:01	1
Hexachloroethane	1.2	U	2.1	1.2	ug/L		04/17/18 15:41	04/18/18 09:01	1
Nitrobenzene	0.59	U	1.0	0.59	ug/L		04/17/18 15:41	04/18/18 09:01	1
Isophorone	0.83	U	10	0.83	ug/L		04/17/18 15:41	04/18/18 09:01	1
Bis(2-chloroethoxy)methane	0.25	U	10	0.25	ug/L		04/17/18 15:41	04/18/18 09:01	1
1,2,4-Trichlorobenzene	1.3	U	2.1	1.3	ug/L		04/17/18 15:41	04/18/18 09:01	1
Naphthalene	1.2	U	10	1.2	ug/L		04/17/18 15:41	04/18/18 09:01	1
4-Chloroaniline	2.0	U	10	2.0	ug/L		04/17/18 15:41	04/18/18 09:01	1
Hexachlorobutadiene	0.81	U	1.0	0.81	ug/L		04/17/18 15:41	04/18/18 09:01	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/17/18 15:41	04/18/18 09:01	1
Hexachlorocyclopentadiene	1.8	U	10	1.8	ug/L		04/17/18 15:41	04/18/18 09:01	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/17/18 15:41	04/18/18 09:01	1
2-Nitroaniline	0.49	U	10	0.49	ug/L		04/17/18 15:41	04/18/18 09:01	1
Dimethyl phthalate	0.80	U	10	0.80	ug/L		04/17/18 15:41	04/18/18 09:01	1
Acenaphthylene	0.86	U	10	0.86	ug/L		04/17/18 15:41	04/18/18 09:01	1
2,6-Dinitrotoluene	0.41	U	2.1	0.41	ug/L		04/17/18 15:41	04/18/18 09:01	1
3-Nitroaniline	1.0	U	10	1.0	ug/L		04/17/18 15:41	04/18/18 09:01	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/17/18 15:41	04/18/18 09:01	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/17/18 15:41	04/18/18 09:01	1
2,4-Dinitrotoluene	1.0	U	2.1	1.0	ug/L		04/17/18 15:41	04/18/18 09:01	1
Diethyl phthalate	1.0	U	10	1.0	ug/L		04/17/18 15:41	04/18/18 09:01	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/17/18 15:41	04/18/18 09:01	1
Fluorene	0.95	U	10	0.95	ug/L		04/17/18 15:41	04/18/18 09:01	1
4-Nitroaniline	0.57	U	10	0.57	ug/L		04/17/18 15:41	04/18/18 09:01	1
N-Nitrosodiphenylamine	0.93	U	10	0.93	ug/L		04/17/18 15:41	04/18/18 09:01	1
4-Bromophenyl phenyl ether	0.78	U	10	0.78	ug/L		04/17/18 15:41	04/18/18 09:01	1
Phenanthrene	0.60	U	10	0.60	ug/L		04/17/18 15:41	04/18/18 09:01	1
Anthracene	0.66	U	10	0.66	ug/L		04/17/18 15:41	04/18/18 09:01	1
Carbazole	0.71	U	10	0.71	ug/L		04/17/18 15:41	04/18/18 09:01	1
Di-n-butyl phthalate	0.88	U	10	0.88	ug/L		04/17/18 15:41	04/18/18 09:01	1
Fluoranthene	0.88	U	10	0.88	ug/L		04/17/18 15:41	04/18/18 09:01	1
Pyrene	1.7	U	10	1.7	ug/L		04/17/18 15:41	04/18/18 09:01	1
Butyl benzyl phthalate	0.89	U	10	0.89	ug/L		04/17/18 15:41	04/18/18 09:01	1

Client Sample ID: C-20D

Lab Sample ID: 460-154033-7

Date Collected: 04/13/18 10:50
Date Received: 04/13/18 20:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3,3'-Dichlorobenzidine	1.5	U	10	1.5	ug/L		04/17/18 15:41	04/18/18 09:01	1
Chrysene	0.94	U	2.1	0.94	ug/L		04/17/18 15:41	04/18/18 09:01	1
Bis(2-ethylhexyl) phthalate	1.8	U	2.1	1.8	ug/L		04/17/18 15:41	04/18/18 09:01	1
Di-n-octyl phthalate	5.0	U	10	5.0	ug/L		04/17/18 15:41	04/18/18 09:01	1
Benzo[k]fluoranthene	0.70	U	1.0	0.70	ug/L		04/17/18 15:41	04/18/18 09:01	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.1	1.3	ug/L		04/17/18 15:41	04/18/18 09:01	1
Dibenz(a,h)anthracene	0.75	U	1.0	0.75	ug/L		04/17/18 15:41	04/18/18 09:01	1
Benzo[g,h,i]perylene	1.5	U	10	1.5	ug/L		04/17/18 15:41	04/18/18 09:01	1
Diphenyl ether	**2.9**	**J**	10	1.3	ug/L		04/17/18 15:41	04/18/18 09:01	1
n,n'-Dimethylaniline	0.95	U	1.0	0.95	ug/L		04/17/18 15:41	04/18/18 09:01	1
Caprolactam	0.71	U	10	0.71	ug/L		04/17/18 15:41	04/18/18 09:01	1
bis (2-chloroisopropyl) ether	0.66	U	10	0.66	ug/L		04/17/18 15:41	04/18/18 09:01	1
Bisphenol-A	**20**		10	10	ug/L		04/17/18 15:41	04/18/18 09:01	1
N-Methylaniline	0.50	U	5.2	0.50	ug/L		04/17/18 15:41	04/18/18 09:01	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane	*16*	*J N*	*ug/L*		*1.61*	*123-91-1*	*04/17/18 15:41*	*04/18/18 09:01*	*1*
Unknown	*22*	*J*	*ug/L*		*5.80*		*04/17/18 15:41*	*04/18/18 09:01*	*1*
Unknown	*42*	*J*	*ug/L*		*6.82*		*04/17/18 15:41*	*04/18/18 09:01*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*100*		*51 - 108*	*04/17/18 15:41*	*04/18/18 09:01*	*1*
Phenol-d5	*34*		*14 - 39*	*04/17/18 15:41*	*04/18/18 09:01*	*1*
Terphenyl-d14	*129*		*40 - 148*	*04/17/18 15:41*	*04/18/18 09:01*	*1*
2,4,6-Tribromophenol	*108*		*26 - 139*	*04/17/18 15:41*	*04/18/18 09:01*	*1*
2-Fluorophenol	*51*		*25 - 58*	*04/17/18 15:41*	*04/18/18 09:01*	*1*
2-Fluorobiphenyl	*97*		*45 - 107*	*04/17/18 15:41*	*04/18/18 09:01*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/15/18 19:30	04/17/18 22:03	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/15/18 19:30	04/17/18 22:03	5
Arsenic	**3.8**		2.5	1.5	ug/L		04/15/18 19:30	04/17/18 22:03	5
Barium	**293**		5.0	3.2	ug/L		04/15/18 19:30	04/17/18 22:03	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/15/18 19:30	04/17/18 22:03	5
Calcium	**19400**		250	233	ug/L		04/15/18 19:30	04/17/18 22:03	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/15/18 19:30	04/17/18 22:03	5
Cobalt	**54.6**		5.0	3.1	ug/L		04/15/18 19:30	04/17/18 22:03	5
Chromium	3.1	U	5.0	3.1	ug/L		04/15/18 19:30	04/17/18 22:03	5
Copper	3.3	U	5.0	3.3	ug/L		04/15/18 19:30	04/17/18 22:03	5
Iron	**27600**		150	97.8	ug/L		04/15/18 19:30	04/17/18 22:03	5
Potassium	**2630**		250	143	ug/L		04/15/18 19:30	04/17/18 22:03	5
Magnesium	**19200**		250	155	ug/L		04/15/18 19:30	04/17/18 22:03	5
Manganese	**8360**		10.0	6.1	ug/L		04/15/18 19:30	04/17/18 22:03	5
Sodium	**40500**		250	213	ug/L		04/15/18 19:30	04/19/18 15:43	5
Nickel	**8.8**		5.0	3.1	ug/L		04/15/18 19:30	04/17/18 22:03	5
Lead	0.93	U	1.5	0.93	ug/L		04/15/18 19:30	04/17/18 22:03	5
Antimony	1.4	U	2.5	1.4	ug/L		04/15/18 19:30	04/17/18 22:03	5
Selenium	1.4	U	2.5	1.4	ug/L		04/15/18 19:30	04/17/18 22:03	5
Thallium	0.60	U	1.0	0.60	ug/L		04/15/18 19:30	04/17/18 22:03	5

Client Sample ID: C-20D

Lab Sample ID: 460-154033-7
Date Collected: 04/13/18 10:50
Matrix: Water
Date Received: 04/13/18 20:10

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vanadium	3.0	U	5.0	3.0	ug/L		04/15/18 19:30	04/17/18 22:03	5
Zinc	16.3	U	20.0	16.3	ug/L		04/15/18 19:30	04/17/18 22:03	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/18/18 12:02	04/18/18 14:13	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**30000**		150	92.1	ug/L		04/15/18 17:45	04/17/18 16:36	1
Manganese, Dissolved	**9660**		15.0	3.1	ug/L		04/15/18 17:45	04/17/18 16:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.69**		0.10	0.045	mg/L		04/19/18 11:30	04/19/18 13:30	1

Client Sample ID: TBGW_041318

Lab Sample ID: 460-154033-8
Date Collected: 04/13/18 00:00
Matrix: Water
Date Received: 04/13/18 20:10

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.20	U	0.40	0.20	ug/L			04/14/18 20:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*72 - 133*		*04/14/18 20:41*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*71 - 144*		*04/14/18 20:41*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/19/18 12:40	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/19/18 12:40	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/19/18 12:40	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/19/18 12:40	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/19/18 12:40	1
Acetone	**1.7**	**J**	5.0	1.1	ug/L			04/19/18 12:40	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/19/18 12:40	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/19/18 12:40	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/19/18 12:40	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/19/18 12:40	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/19/18 12:40	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/19/18 12:40	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/19/18 12:40	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/19/18 12:40	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/19/18 12:40	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/19/18 12:40	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/19/18 12:40	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/19/18 12:40	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/19/18 12:40	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/19/18 12:40	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/19/18 12:40	1

Client Sample ID: TBGW_041318 Lab Sample ID: 460-154033-8

Date Collected: 04/13/18 00:00 Matrix: Water
Date Received: 04/13/18 20:10

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/19/18 12:40	1
Benzene	0.090	U	1.0	0.090	ug/L			04/19/18 12:40	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/19/18 12:40	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/19/18 12:40	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/19/18 12:40	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/19/18 12:40	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/19/18 12:40	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/19/18 12:40	1
Toluene	0.25	U	1.0	0.25	ug/L			04/19/18 12:40	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/19/18 12:40	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/19/18 12:40	1
Styrene	0.17	U	1.0	0.17	ug/L			04/19/18 12:40	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/19/18 12:40	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/19/18 12:40	1
MTBE	0.13	U	1.0	0.13	ug/L			04/19/18 12:40	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/19/18 12:40	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/19/18 12:40	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/19/18 12:40	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/19/18 12:40	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/19/18 12:40	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/19/18 12:40	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/19/18 12:40	1
Indane	0.12	U	1.0	0.12	ug/L			04/19/18 12:40	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/19/18 12:40	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/19/18 12:40	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/19/18 12:40*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*74 - 132*		*04/19/18 12:40*	*1*
Bromofluorobenzene	*92*		*77 - 124*		*04/19/18 12:40*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*04/19/18 12:40*	*1*
Dibromofluoromethane (Surr)	*105*		*72 - 131*		*04/19/18 12:40*	*1*

Client Sample ID: DDA-08-US Lab Sample ID: 460-154091-1

Date Collected: 04/16/18 09:55 Matrix: Water
Date Received: 04/16/18 19:30

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.52**		0.40	0.20	ug/L			04/18/18 16:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*72 - 133*		*04/18/18 16:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*71 - 144*		*04/18/18 16:57*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/20/18 22:57	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/20/18 22:57	1

Client Sample ID: DDA-08-US

Lab Sample ID: 460-154091-1

Date Collected: 04/16/18 09:55
Date Received: 04/16/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/20/18 22:57	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/20/18 22:57	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/20/18 22:57	1
Acetone	1.1	U	5.0	1.1	ug/L			04/20/18 22:57	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/20/18 22:57	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/20/18 22:57	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/20/18 22:57	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/20/18 22:57	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/20/18 22:57	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/20/18 22:57	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/20/18 22:57	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/20/18 22:57	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/20/18 22:57	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/20/18 22:57	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/20/18 22:57	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/20/18 22:57	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/20/18 22:57	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/20/18 22:57	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/20/18 22:57	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/20/18 22:57	1
Benzene	0.090	U	1.0	0.090	ug/L			04/20/18 22:57	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/20/18 22:57	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/20/18 22:57	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/20/18 22:57	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/20/18 22:57	1
Tetrachloroethene	**1.8**		1.0	0.12	ug/L			04/20/18 22:57	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/20/18 22:57	1
Toluene	0.25	U	1.0	0.25	ug/L			04/20/18 22:57	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/20/18 22:57	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/20/18 22:57	1
Styrene	0.17	U	1.0	0.17	ug/L			04/20/18 22:57	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/20/18 22:57	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/20/18 22:57	1
MTBE	**0.58**	**J**	1.0	0.13	ug/L			04/20/18 22:57	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/20/18 22:57	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/20/18 22:57	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/20/18 22:57	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/20/18 22:57	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/20/18 22:57	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/20/18 22:57	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/20/18 22:57	1
Indane	0.12	U	1.0	0.12	ug/L			04/20/18 22:57	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/20/18 22:57	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/20/18 22:57	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/20/18 22:57*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*119*		*74 - 132*		*04/20/18 22:57*	*1*

Client Sample ID: DDA-08-US

Lab Sample ID: 460-154091-1

Date Collected: 04/16/18 09:55
Date Received: 04/16/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Bromofluorobenzene	92		77 - 124		04/20/18 22:57	1
Toluene-d8 (Surr)	105		80 - 120		04/20/18 22:57	1
Dibromofluoromethane (Surr)	109		72 - 131		04/20/18 22:57	1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.051	0.016	ug/L		04/17/18 14:32	04/18/18 11:36	1
Benzo[a]pyrene	0.022	U	0.051	0.022	ug/L		04/17/18 14:32	04/18/18 11:36	1
Benzo[b]fluoranthene	0.024	U	0.051	0.024	ug/L		04/17/18 14:32	04/18/18 11:36	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/17/18 14:32	04/18/18 11:36	1
Pentachlorophenol	0.16	U	0.20	0.16	ug/L		04/17/18 14:32	04/18/18 11:36	1
Bis(2-chloroethyl)ether	0.026	U	0.030	0.026	ug/L		04/17/18 14:32	04/18/18 11:36	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.30	U	10	0.30	ug/L		04/17/18 14:32	04/18/18 08:20	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/17/18 14:32	04/18/18 08:20	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/17/18 14:32	04/18/18 08:20	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/17/18 14:32	04/18/18 08:20	1
2-Nitrophenol	0.76	U	10	0.76	ug/L		04/17/18 14:32	04/18/18 08:20	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/17/18 14:32	04/18/18 08:20	1
2,4-Dichlorophenol	0.43	U	10	0.43	ug/L		04/17/18 14:32	04/18/18 08:20	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/17/18 14:32	04/18/18 08:20	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/17/18 14:32	04/18/18 08:20	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/17/18 14:32	04/18/18 08:20	1
2,4-Dinitrophenol	15	U	20	15	ug/L		04/17/18 14:32	04/18/18 08:20	1
4-Nitrophenol	0.70	U	20	0.70	ug/L		04/17/18 14:32	04/18/18 08:20	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/17/18 14:32	04/18/18 08:20	1
1,3-Dichlorobenzene	2.1	U	10	2.1	ug/L		04/17/18 14:32	04/18/18 08:20	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/17/18 14:32	04/18/18 08:20	1
1,2-Dichlorobenzene	1.4	U	10	1.4	ug/L		04/17/18 14:32	04/18/18 08:20	1
N-Nitrosodi-n-propylamine	0.44	U	1.0	0.44	ug/L		04/17/18 14:32	04/18/18 08:20	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/17/18 14:32	04/18/18 08:20	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/17/18 14:32	04/18/18 08:20	1
Isophorone	0.81	U	10	0.81	ug/L		04/17/18 14:32	04/18/18 08:20	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/17/18 14:32	04/18/18 08:20	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/17/18 14:32	04/18/18 08:20	1
Naphthalene	1.1	U	10	1.1	ug/L		04/17/18 14:32	04/18/18 08:20	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/17/18 14:32	04/18/18 08:20	1
Hexachlorobutadiene	0.79	U	1.0	0.79	ug/L		04/17/18 14:32	04/18/18 08:20	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/17/18 14:32	04/18/18 08:20	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/17/18 14:32	04/18/18 08:20	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/17/18 14:32	04/18/18 08:20	1
2-Nitroaniline	0.48	U	10	0.48	ug/L		04/17/18 14:32	04/18/18 08:20	1
Dimethyl phthalate	0.78	U	10	0.78	ug/L		04/17/18 14:32	04/18/18 08:20	1
Acenaphthylene	0.83	U	10	0.83	ug/L		04/17/18 14:32	04/18/18 08:20	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/17/18 14:32	04/18/18 08:20	1
3-Nitroaniline	0.97	U	10	0.97	ug/L		04/17/18 14:32	04/18/18 08:20	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/17/18 14:32	04/18/18 08:20	1

Client Sample ID: DDA-08-US

Lab Sample ID: 460-154091-1

Date Collected: 04/16/18 09:55
Date Received: 04/16/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenzofuran	1.1	U	10	1.1	ug/L		04/17/18 14:32	04/18/18 08:20	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/17/18 14:32	04/18/18 08:20	1
Diethyl phthalate	0.99	U	10	0.99	ug/L		04/17/18 14:32	04/18/18 08:20	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/17/18 14:32	04/18/18 08:20	1
Fluorene	0.92	U	10	0.92	ug/L		04/17/18 14:32	04/18/18 08:20	1
4-Nitroaniline	0.55	U	10	0.55	ug/L		04/17/18 14:32	04/18/18 08:20	1
N-Nitrosodiphenylamine	0.90	U	10	0.90	ug/L		04/17/18 14:32	04/18/18 08:20	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/17/18 14:32	04/18/18 08:20	1
Phenanthrene	0.59	U	10	0.59	ug/L		04/17/18 14:32	04/18/18 08:20	1
Anthracene	0.64	U	10	0.64	ug/L		04/17/18 14:32	04/18/18 08:20	1
Carbazole	0.69	U	10	0.69	ug/L		04/17/18 14:32	04/18/18 08:20	1
Di-n-butyl phthalate	0.85	U	10	0.85	ug/L		04/17/18 14:32	04/18/18 08:20	1
Fluoranthene	0.85	U	10	0.85	ug/L		04/17/18 14:32	04/18/18 08:20	1
Pyrene	1.7	U	10	1.7	ug/L		04/17/18 14:32	04/18/18 08:20	1
Butyl benzyl phthalate	0.86	U	10	0.86	ug/L		04/17/18 14:32	04/18/18 08:20	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/17/18 14:32	04/18/18 08:20	1
Chrysene	0.92	U	2.0	0.92	ug/L		04/17/18 14:32	04/18/18 08:20	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/17/18 14:32	04/18/18 08:20	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/17/18 14:32	04/18/18 08:20	1
Benzo[k]fluoranthene	0.68	U	1.0	0.68	ug/L		04/17/18 14:32	04/18/18 08:20	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/17/18 14:32	04/18/18 08:20	1
Dibenz(a,h)anthracene	0.73	U *	1.0	0.73	ug/L		04/17/18 14:32	04/18/18 08:20	1
Benzo[g,h,i]perylene	1.4	U *	10	1.4	ug/L		04/17/18 14:32	04/18/18 08:20	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/17/18 14:32	04/18/18 08:20	1
n,n'-Dimethylaniline	0.92	U	1.0	0.92	ug/L		04/17/18 14:32	04/18/18 08:20	1
Caprolactam	0.69	U	10	0.69	ug/L		04/17/18 14:32	04/18/18 08:20	1
bis (2-chloroisopropyl) ether	0.64	U	10	0.64	ug/L		04/17/18 14:32	04/18/18 08:20	1
Bisphenol-A	10	U	10	10	ug/L		04/17/18 14:32	04/18/18 08:20	1
N-Methylaniline	0.49	U	5.1	0.49	ug/L		04/17/18 14:32	04/18/18 08:20	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/17/18 14:32*	*04/18/18 08:20*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*116*	*X*	*51 - 108*	*04/17/18 14:32*	*04/18/18 08:20*	*1*
Phenol-d5	*29*		*14 - 39*	*04/17/18 14:32*	*04/18/18 08:20*	*1*
Terphenyl-d14	*126*		*40 - 148*	*04/17/18 14:32*	*04/18/18 08:20*	*1*
2,4,6-Tribromophenol	*104*		*26 - 139*	*04/17/18 14:32*	*04/18/18 08:20*	*1*
2-Fluorophenol	*55*		*25 - 58*	*04/17/18 14:32*	*04/18/18 08:20*	*1*
2-Fluorobiphenyl	*114*	*X*	*45 - 107*	*04/17/18 14:32*	*04/18/18 08:20*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 18:20	5
Aluminum	**70.2**		50.0	28.5	ug/L		04/19/18 23:10	04/20/18 18:20	5
Arsenic	**7.4**		2.5	1.5	ug/L		04/19/18 23:10	04/20/18 18:20	5
Barium	**263**		5.0	3.2	ug/L		04/19/18 23:10	04/20/18 18:20	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/19/18 23:10	04/20/18 18:20	5
Calcium	**16300**		250	233	ug/L		04/19/18 23:10	04/20/18 18:20	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/19/18 23:10	04/20/18 18:20	5

Client Sample ID: DDA-08-US

Lab Sample ID: 460-154091-1

Date Collected: 04/16/18 09:55
Date Received: 04/16/18 19:30

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**96.2**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:20	5
Chromium	3.1	U	5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:20	5
Copper	3.3	U	5.0	3.3	ug/L		04/19/18 23:10	04/20/18 18:20	5
Iron	**15700**		150	97.8	ug/L		04/19/18 23:10	04/20/18 18:20	5
Potassium	**2940**		250	143	ug/L		04/19/18 23:10	04/20/18 18:20	5
Magnesium	**7360**		250	155	ug/L		04/19/18 23:10	04/20/18 18:20	5
Manganese	**6690**		10.0	6.1	ug/L		04/19/18 23:10	04/20/18 18:20	5
Sodium	**29200**		250	213	ug/L		04/19/18 23:10	04/20/18 18:20	5
Nickel	**4.1**	**J**	5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:20	5
Lead	0.93	U	1.5	0.93	ug/L		04/19/18 23:10	04/20/18 18:20	5
Antimony	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 18:20	5
Selenium	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 18:20	5
Thallium	0.60	U	1.0	0.60	ug/L		04/19/18 23:10	04/20/18 18:20	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 18:20	5
Zinc	**30.1**		20.0	16.3	ug/L		04/19/18 23:10	04/20/18 18:20	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12	U	0.20	0.12	ug/L		04/19/18 11:35	04/19/18 13:21	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**15600**		150	92.1	ug/L		04/17/18 08:25	04/20/18 17:37	1
Manganese, Dissolved	**7520**		15.0	3.1	ug/L		04/17/18 08:25	04/20/18 17:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.17**		0.10	0.045	mg/L		04/19/18 11:30	04/19/18 13:01	1

Client Sample ID: DDA-08-TZ

Lab Sample ID: 460-154091-2

Date Collected: 04/16/18 10:05
Date Received: 04/16/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/20/18 23:30	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/20/18 23:30	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/20/18 23:30	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/20/18 23:30	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/20/18 23:30	1
Acetone	1.1	U	5.0	1.1	ug/L			04/20/18 23:30	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/20/18 23:30	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/20/18 23:30	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/20/18 23:30	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/20/18 23:30	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/20/18 23:30	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/20/18 23:30	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/20/18 23:30	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/20/18 23:30	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/20/18 23:30	1

Client Sample ID: DDA-08-TZ — Lab Sample ID: 460-154091-2

Date Collected: 04/16/18 10:05 Matrix: Water
Date Received: 04/16/18 19:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/20/18 23:30	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/20/18 23:30	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/20/18 23:30	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/20/18 23:30	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/20/18 23:30	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/20/18 23:30	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/20/18 23:30	1
Benzene	**9.1**		1.0	0.090	ug/L			04/20/18 23:30	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/20/18 23:30	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/20/18 23:30	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/20/18 23:30	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/20/18 23:30	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/20/18 23:30	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/20/18 23:30	1
Toluene	0.25	U	1.0	0.25	ug/L			04/20/18 23:30	1
Chlorobenzene	**0.31**	**J**	1.0	0.24	ug/L			04/20/18 23:30	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/20/18 23:30	1
Styrene	0.17	U	1.0	0.17	ug/L			04/20/18 23:30	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/20/18 23:30	1
Ethyl ether	**0.51**	**J**	1.0	0.11	ug/L			04/20/18 23:30	1
MTBE	**0.71**	**J**	1.0	0.13	ug/L			04/20/18 23:30	1
Tetrahydrofuran	**0.93**	**J**	2.0	0.36	ug/L			04/20/18 23:30	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/20/18 23:30	1
1,4-Dioxane	**58**		50	8.7	ug/L			04/20/18 23:30	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/20/18 23:30	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/20/18 23:30	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/20/18 23:30	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/20/18 23:30	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/20/18 23:30	1
Indane	**0.45**	**J**	1.0	0.12	ug/L			04/20/18 23:30	1
Dichlorofluoromethane	**0.22**	**J**	1.0	0.21	ug/L			04/20/18 23:30	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/20/18 23:30	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/20/18 23:30*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*116*		*74 - 132*		*04/20/18 23:30*	*1*
Bromofluorobenzene	*91*		*77 - 124*		*04/20/18 23:30*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*04/20/18 23:30*	*1*
Dibromofluoromethane (Surr)	*109*		*72 - 131*		*04/20/18 23:30*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/19/18 16:11	04/20/18 11:00	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/19/18 16:11	04/20/18 11:00	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/19/18 16:11	04/20/18 11:00	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/19/18 16:11	04/20/18 11:00	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/19/18 16:11	04/20/18 11:00	1
Bis(2-chloroethyl)ether	**3.9**		0.030	0.026	ug/L		04/19/18 16:11	04/20/18 11:00	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G

TestAmerica Job ID: 460-154033-1

Client Sample ID: DDA-08-TZ

Lab Sample ID: 460-154091-2

Date Collected: 04/16/18 10:05
Date Received: 04/16/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/19/18 16:11	04/20/18 10:07	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/19/18 16:11	04/20/18 10:07	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/19/18 16:11	04/20/18 10:07	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/19/18 16:11	04/20/18 10:07	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/19/18 16:11	04/20/18 10:07	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/19/18 16:11	04/20/18 10:07	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/19/18 16:11	04/20/18 10:07	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/19/18 16:11	04/20/18 10:07	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/19/18 16:11	04/20/18 10:07	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/19/18 16:11	04/20/18 10:07	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/19/18 16:11	04/20/18 10:07	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/19/18 16:11	04/20/18 10:07	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/19/18 16:11	04/20/18 10:07	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/19/18 16:11	04/20/18 10:07	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/19/18 16:11	04/20/18 10:07	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/19/18 16:11	04/20/18 10:07	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/19/18 16:11	04/20/18 10:07	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/19/18 16:11	04/20/18 10:07	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/19/18 16:11	04/20/18 10:07	1
Isophorone	0.80	U	10	0.80	ug/L		04/19/18 16:11	04/20/18 10:07	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/19/18 16:11	04/20/18 10:07	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/19/18 16:11	04/20/18 10:07	1
Naphthalene	1.1	U	10	1.1	ug/L		04/19/18 16:11	04/20/18 10:07	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/19/18 16:11	04/20/18 10:07	1
Hexachlorobutadiene	0.78	U *	1.0	0.78	ug/L		04/19/18 16:11	04/20/18 10:07	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/19/18 16:11	04/20/18 10:07	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/19/18 16:11	04/20/18 10:07	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/19/18 16:11	04/20/18 10:07	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/19/18 16:11	04/20/18 10:07	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/19/18 16:11	04/20/18 10:07	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/19/18 16:11	04/20/18 10:07	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/19/18 16:11	04/20/18 10:07	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/19/18 16:11	04/20/18 10:07	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/19/18 16:11	04/20/18 10:07	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/19/18 16:11	04/20/18 10:07	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/19/18 16:11	04/20/18 10:07	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/19/18 16:11	04/20/18 10:07	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/19/18 16:11	04/20/18 10:07	1
Fluorene	0.91	U	10	0.91	ug/L		04/19/18 16:11	04/20/18 10:07	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/19/18 16:11	04/20/18 10:07	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/19/18 16:11	04/20/18 10:07	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/19/18 16:11	04/20/18 10:07	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/19/18 16:11	04/20/18 10:07	1
Anthracene	0.63	U	10	0.63	ug/L		04/19/18 16:11	04/20/18 10:07	1
Carbazole	0.68	U	10	0.68	ug/L		04/19/18 16:11	04/20/18 10:07	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/19/18 16:11	04/20/18 10:07	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/19/18 16:11	04/20/18 10:07	1
Pyrene	1.6	U	10	1.6	ug/L		04/19/18 16:11	04/20/18 10:07	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/19/18 16:11	04/20/18 10:07	1

Client Sample ID: DDA-08-TZ — Lab Sample ID: 460-154091-2

Date Collected: 04/16/18 10:05 Matrix: Water
Date Received: 04/16/18 19:30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/19/18 16:11	04/20/18 10:07	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/19/18 16:11	04/20/18 10:07	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/19/18 16:11	04/20/18 10:07	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/19/18 16:11	04/20/18 10:07	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/19/18 16:11	04/20/18 10:07	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/19/18 16:11	04/20/18 10:07	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/19/18 16:11	04/20/18 10:07	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/19/18 16:11	04/20/18 10:07	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/19/18 16:11	04/20/18 10:07	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/19/18 16:11	04/20/18 10:07	1
Caprolactam	0.68	U	10	0.68	ug/L		04/19/18 16:11	04/20/18 10:07	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/19/18 16:11	04/20/18 10:07	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/19/18 16:11	04/20/18 10:07	1
N-Methylaniline	0.48	~~U~~ UJ	5.0	0.48	ug/L		04/19/18 16:11	04/20/18 10:07	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*8.2*	*J*	*ug/L*		*6.79*		*04/19/18 16:11*	*04/20/18 10:07*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*80*		*51 - 108*	*04/19/18 16:11*	*04/20/18 10:07*	*1*
Phenol-d5	*21*		*14 - 39*	*04/19/18 16:11*	*04/20/18 10:07*	*1*
Terphenyl-d14	*88*		*40 - 148*	*04/19/18 16:11*	*04/20/18 10:07*	*1*
2,4,6-Tribromophenol	*87*		*26 - 139*	*04/19/18 16:11*	*04/20/18 10:07*	*1*
2-Fluorophenol	*34*		*25 - 58*	*04/19/18 16:11*	*04/20/18 10:07*	*1*
2-Fluorobiphenyl	*85*		*45 - 107*	*04/19/18 16:11*	*04/20/18 10:07*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 18:23	5
Aluminum	**71.7**		50.0	28.5	ug/L		04/19/18 23:10	04/20/18 18:23	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/19/18 23:10	04/20/18 18:23	5
Barium	**586**		5.0	3.2	ug/L		04/19/18 23:10	04/20/18 18:23	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/19/18 23:10	04/20/18 18:23	5
Calcium	**22500**		250	233	ug/L		04/19/18 23:10	04/20/18 18:23	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/19/18 23:10	04/20/18 18:23	5
Cobalt	**7.0**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:23	5
Chromium	**4.4**	**J**	5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:23	5
Copper	3.3	U	5.0	3.3	ug/L		04/19/18 23:10	04/20/18 18:23	5
Iron	**26800**		150	97.8	ug/L		04/19/18 23:10	04/20/18 18:23	5
Potassium	**2870**		250	143	ug/L		04/19/18 23:10	04/20/18 18:23	5
Magnesium	**15900**		250	155	ug/L		04/19/18 23:10	04/20/18 18:23	5
Manganese	**459**		10.0	6.1	ug/L		04/19/18 23:10	04/20/18 18:23	5
Sodium	**33300**		250	213	ug/L		04/19/18 23:10	04/20/18 18:23	5
Nickel	**3.7**	**J**	5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:23	5
Lead	0.93	U	1.5	0.93	ug/L		04/19/18 23:10	04/20/18 18:23	5
Antimony	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 18:23	5
Selenium	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 18:23	5
Thallium	0.60	U	1.0	0.60	ug/L		04/19/18 23:10	04/20/18 18:23	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 18:23	5
Zinc	16.3	U	20.0	16.3	ug/L		04/19/18 23:10	04/20/18 18:23	5

Client Sample ID: DDA-08-TZ — Lab Sample ID: 460-154091-2

Date Collected: 04/16/18 10:05
Date Received: 04/16/18 19:30
Matrix: Water

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12	U	0.20	0.12	ug/L		04/19/18 11:35	04/19/18 13:23	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**29400**		150	92.1	ug/L		04/17/18 08:25	04/20/18 17:41	1
Manganese, Dissolved	**475**		15.0	3.1	ug/L		04/17/18 08:25	04/20/18 17:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**1.7**		0.10	0.045	mg/L		04/19/18 11:30	04/19/18 13:02	1

Client Sample ID: DDA-15-US — Lab Sample ID: 460-154091-3

Date Collected: 04/16/18 11:50
Date Received: 04/16/18 19:30
Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**1.4**		0.40	0.20	ug/L			04/18/18 17:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*		*72 - 133*		*04/18/18 17:20*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*71 - 144*		*04/18/18 17:20*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/20/18 17:21	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/20/18 17:21	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/20/18 17:21	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/20/18 17:21	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/20/18 17:21	1
Acetone	1.1	U	5.0	1.1	ug/L			04/20/18 17:21	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/20/18 17:21	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/20/18 17:21	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/20/18 17:21	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/20/18 17:21	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/20/18 17:21	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/20/18 17:21	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/20/18 17:21	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/20/18 17:21	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/20/18 17:21	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/20/18 17:21	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/20/18 17:21	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/20/18 17:21	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/20/18 17:21	1
Trichloroethene	**1.2**		1.0	0.22	ug/L			04/20/18 17:21	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/20/18 17:21	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/20/18 17:21	1
Benzene	0.090	U	1.0	0.090	ug/L			04/20/18 17:21	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/20/18 17:21	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/20/18 17:21	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/20/18 17:21	1

Client Sample ID: DDA-15-US Lab Sample ID: 460-154091-3

Date Collected: 04/16/18 11:50 Matrix: Water
Date Received: 04/16/18 19:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/20/18 17:21	1
Tetrachloroethene	**2.7**		1.0	0.12	ug/L			04/20/18 17:21	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/20/18 17:21	1
Toluene	0.25	U	1.0	0.25	ug/L			04/20/18 17:21	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/20/18 17:21	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/20/18 17:21	1
Styrene	0.17	U	1.0	0.17	ug/L			04/20/18 17:21	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/20/18 17:21	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/20/18 17:21	1
MTBE	**0.47**	**J**	1.0	0.13	ug/L			04/20/18 17:21	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/20/18 17:21	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/20/18 17:21	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/20/18 17:21	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/20/18 17:21	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/20/18 17:21	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/20/18 17:21	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/20/18 17:21	1
Indane	0.12	U	1.0	0.12	ug/L			04/20/18 17:21	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/20/18 17:21	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/20/18 17:21	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/20/18 17:21*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*116*		*74 - 132*		*04/20/18 17:21*	*1*
Bromofluorobenzene	*93*		*77 - 124*		*04/20/18 17:21*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*04/20/18 17:21*	*1*
Dibromofluoromethane (Surr)	*111*		*72 - 131*		*04/20/18 17:21*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/17/18 14:32	04/18/18 12:17	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/17/18 14:32	04/18/18 12:17	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/17/18 14:32	04/18/18 12:17	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/17/18 14:32	04/18/18 12:17	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/17/18 14:32	04/18/18 12:17	1
Bis(2-chloroethyl)ether	**0.092**	J+	0.030	0.026	ug/L		04/17/18 14:32	04/18/18 12:17	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/17/18 14:32	04/18/18 08:41	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/17/18 14:32	04/18/18 08:41	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/17/18 14:32	04/18/18 08:41	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/17/18 14:32	04/18/18 08:41	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/17/18 14:32	04/18/18 08:41	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/17/18 14:32	04/18/18 08:41	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/17/18 14:32	04/18/18 08:41	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/17/18 14:32	04/18/18 08:41	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/17/18 14:32	04/18/18 08:41	1

Client Sample ID: DDA-15-US

Lab Sample ID: 460-154091-3

Date Collected: 04/16/18 11:50
Date Received: 04/16/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/17/18 14:32	04/18/18 08:41	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/17/18 14:32	04/18/18 08:41	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/17/18 14:32	04/18/18 08:41	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/17/18 14:32	04/18/18 08:41	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/17/18 14:32	04/18/18 08:41	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/17/18 14:32	04/18/18 08:41	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/17/18 14:32	04/18/18 08:41	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/17/18 14:32	04/18/18 08:41	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/17/18 14:32	04/18/18 08:41	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/17/18 14:32	04/18/18 08:41	1
Isophorone	0.80	U	10	0.80	ug/L		04/17/18 14:32	04/18/18 08:41	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/17/18 14:32	04/18/18 08:41	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/17/18 14:32	04/18/18 08:41	1
Naphthalene	1.1	U	10	1.1	ug/L		04/17/18 14:32	04/18/18 08:41	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/17/18 14:32	04/18/18 08:41	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/17/18 14:32	04/18/18 08:41	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/17/18 14:32	04/18/18 08:41	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/17/18 14:32	04/18/18 08:41	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/17/18 14:32	04/18/18 08:41	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/17/18 14:32	04/18/18 08:41	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/17/18 14:32	04/18/18 08:41	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/17/18 14:32	04/18/18 08:41	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/17/18 14:32	04/18/18 08:41	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/17/18 14:32	04/18/18 08:41	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/17/18 14:32	04/18/18 08:41	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/17/18 14:32	04/18/18 08:41	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/17/18 14:32	04/18/18 08:41	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/17/18 14:32	04/18/18 08:41	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/17/18 14:32	04/18/18 08:41	1
Fluorene	0.91	U	10	0.91	ug/L		04/17/18 14:32	04/18/18 08:41	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/17/18 14:32	04/18/18 08:41	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/17/18 14:32	04/18/18 08:41	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/17/18 14:32	04/18/18 08:41	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/17/18 14:32	04/18/18 08:41	1
Anthracene	0.63	U	10	0.63	ug/L		04/17/18 14:32	04/18/18 08:41	1
Carbazole	0.68	U	10	0.68	ug/L		04/17/18 14:32	04/18/18 08:41	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/17/18 14:32	04/18/18 08:41	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/17/18 14:32	04/18/18 08:41	1
Pyrene	1.6	U	10	1.6	ug/L		04/17/18 14:32	04/18/18 08:41	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/17/18 14:32	04/18/18 08:41	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/17/18 14:32	04/18/18 08:41	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/17/18 14:32	04/18/18 08:41	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/17/18 14:32	04/18/18 08:41	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/17/18 14:32	04/18/18 08:41	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/17/18 14:32	04/18/18 08:41	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/17/18 14:32	04/18/18 08:41	1
Dibenz(a,h)anthracene	0.72	U *	1.0	0.72	ug/L		04/17/18 14:32	04/18/18 08:41	1
Benzo[g,h,i]perylene	1.4	U *	10	1.4	ug/L		04/17/18 14:32	04/18/18 08:41	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/17/18 14:32	04/18/18 08:41	1

Client Sample ID: DDA-15-US

Lab Sample ID: 460-154091-3

Date Collected: 04/16/18 11:50
Date Received: 04/16/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/17/18 14:32	04/18/18 08:41	1
Caprolactam	0.68	U	10	0.68	ug/L		04/17/18 14:32	04/18/18 08:41	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/17/18 14:32	04/18/18 08:41	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/17/18 14:32	04/18/18 08:41	1
N-Methylaniline	0.48	U	5.0	0.48	ug/L		04/17/18 14:32	04/18/18 08:41	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/17/18 14:32*	*04/18/18 08:41*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*114*	*X*	*51 - 108*	*04/17/18 14:32*	*04/18/18 08:41*	*1*
Phenol-d5	*28*		*14 - 39*	*04/17/18 14:32*	*04/18/18 08:41*	*1*
Terphenyl-d14	*121*		*40 - 148*	*04/17/18 14:32*	*04/18/18 08:41*	*1*
2,4,6-Tribromophenol	*98*		*26 - 139*	*04/17/18 14:32*	*04/18/18 08:41*	*1*
2-Fluorophenol	*54*		*25 - 58*	*04/17/18 14:32*	*04/18/18 08:41*	*1*
2-Fluorobiphenyl	*113*	*X*	*45 - 107*	*04/17/18 14:32*	*04/18/18 08:41*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 18:25	5
Aluminum	**145**		50.0	28.5	ug/L		04/19/18 23:10	04/20/18 18:25	5
Arsenic	**6.8**		2.5	1.5	ug/L		04/19/18 23:10	04/20/18 18:25	5
Barium	**467**		5.0	3.2	ug/L		04/19/18 23:10	04/20/18 18:25	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/19/18 23:10	04/20/18 18:25	5
Calcium	**15400**		250	233	ug/L		04/19/18 23:10	04/20/18 18:25	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/19/18 23:10	04/20/18 18:25	5
Cobalt	**35.0**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:25	5
Chromium	3.1	U	5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:25	5
Copper	3.3	U	5.0	3.3	ug/L		04/19/18 23:10	04/20/18 18:25	5
Iron	**35100**		150	97.8	ug/L		04/19/18 23:10	04/20/18 18:25	5
Potassium	**3110**		250	143	ug/L		04/19/18 23:10	04/20/18 18:25	5
Magnesium	**7520**		250	155	ug/L		04/19/18 23:10	04/20/18 18:25	5
Manganese	**5390**		10.0	6.1	ug/L		04/19/18 23:10	04/20/18 18:25	5
Sodium	**31400**		250	213	ug/L		04/19/18 23:10	04/20/18 18:25	5
Nickel	3.1	U	5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:25	5
Lead	0.93	U	1.5	0.93	ug/L		04/19/18 23:10	04/20/18 18:25	5
Antimony	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 18:25	5
Selenium	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 18:25	5
Thallium	0.60	U	1.0	0.60	ug/L		04/19/18 23:10	04/20/18 18:25	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 18:25	5
Zinc	16.3	U	20.0	16.3	ug/L		04/19/18 23:10	04/20/18 18:25	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12	U	0.20	0.12	ug/L		04/19/18 11:35	04/19/18 13:28	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**38900**		150	92.1	ug/L		04/17/18 08:25	04/20/18 17:45	1
Manganese, Dissolved	**5690**		15.0	3.1	ug/L		04/17/18 08:25	04/20/18 17:45	1

Client Sample ID: DDA-15-US

Lab Sample ID: 460-154091-3

Date Collected: 04/16/18 11:50
Date Received: 04/16/18 19:30

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.20**		0.10	0.045	mg/L		04/19/18 11:30	04/19/18 13:04	1

Client Sample ID: DDA-15-TZ

Lab Sample ID: 460-154091-4

Date Collected: 04/16/18 12:15
Date Received: 04/16/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.44	U	2.0	0.44	ug/L			04/21/18 18:18	2
Bromomethane	0.36	U	2.0	0.36	ug/L			04/21/18 18:18	2
Vinyl chloride	0.12	U	2.0	0.12	ug/L			04/21/18 18:18	2
Chloroethane	0.74	U *-	2.0	0.74	ug/L			04/21/18 18:18	2
Methylene Chloride	0.42	U	2.0	0.42	ug/L			04/21/18 18:18	2
Acetone	2.1	U	10	2.1	ug/L			04/21/18 18:18	2
Carbon disulfide	0.44	U	2.0	0.44	ug/L			04/21/18 18:18	2
1,1-Dichloroethene	0.68	U	2.0	0.68	ug/L			04/21/18 18:18	2
1,1-Dichloroethane	**0.84**	**J**	2.0	0.48	ug/L			04/21/18 18:18	2
trans-1,2-Dichloroethene	0.36	U	2.0	0.36	ug/L			04/21/18 18:18	2
cis-1,2-Dichloroethene	0.52	U	2.0	0.52	ug/L			04/21/18 18:18	2
Chloroform	0.44	U	2.0	0.44	ug/L			04/21/18 18:18	2
1,2-Dichloroethane	0.50	U	2.0	0.50	ug/L			04/21/18 18:18	2
2-Butanone	4.4	U	10	4.4	ug/L			04/21/18 18:18	2
1,1,1-Trichloroethane	0.56	U	2.0	0.56	ug/L			04/21/18 18:18	2
Carbon tetrachloride	0.66	U	2.0	0.66	ug/L			04/21/18 18:18	2
Bromodichloromethane	0.30	U	2.0	0.30	ug/L			04/21/18 18:18	2
1,2-Dichloropropane	0.36	U	2.0	0.36	ug/L			04/21/18 18:18	2
cis-1,3-Dichloropropene	0.32	U	2.0	0.32	ug/L			04/21/18 18:18	2
Trichloroethene	0.44	U	2.0	0.44	ug/L			04/21/18 18:18	2
Dibromochloromethane	0.44	U	2.0	0.44	ug/L			04/21/18 18:18	2
1,1,2-Trichloroethane	0.16	U	2.0	0.16	ug/L			04/21/18 18:18	2
Benzene	**50**		2.0	0.18	ug/L			04/21/18 18:18	2
trans-1,3-Dichloropropene	0.38	U	2.0	0.38	ug/L			04/21/18 18:18	2
Bromoform	0.36	U	2.0	0.36	ug/L			04/21/18 18:18	2
4-Methyl-2-pentanone	1.3	U	10	1.3	ug/L			04/21/18 18:18	2
2-Hexanone	1.4	U	10	1.4	ug/L			04/21/18 18:18	2
Tetrachloroethene	0.24	U	2.0	0.24	ug/L			04/21/18 18:18	2
1,1,2,2-Tetrachloroethane	0.38	U	2.0	0.38	ug/L			04/21/18 18:18	2
Toluene	**1.2**	**J**	2.0	0.50	ug/L			04/21/18 18:18	2
Chlorobenzene	**6.4**		2.0	0.48	ug/L			04/21/18 18:18	2
Ethylbenzene	**1.5**	**J**	2.0	0.60	ug/L			04/21/18 18:18	2
Styrene	0.34	U	2.0	0.34	ug/L			04/21/18 18:18	2
Xylenes, Total	**610**		4.0	0.56	ug/L			04/21/18 18:18	2
Ethyl ether	**1.5**	**J**	2.0	0.22	ug/L			04/21/18 18:18	2
MTBE	0.26	U	2.0	0.26	ug/L			04/21/18 18:18	2
Tetrahydrofuran	**26**		4.0	0.72	ug/L			04/21/18 18:18	2
Cyclohexane	**24**		2.0	0.52	ug/L			04/21/18 18:18	2
1,4-Dioxane	**250**		100	17	ug/L			04/21/18 18:18	2
1,2,4-Trimethylbenzene	**470**		2.0	0.46	ug/L			04/21/18 18:18	2
1,3,5-Trimethylbenzene	**110**		2.0	0.50	ug/L			04/21/18 18:18	2
Isopropylbenzene	**44**		2.0	0.64	ug/L			04/21/18 18:18	2

Client Sample ID: DDA-15-TZ — Lab Sample ID: 460-154091-4

Date Collected: 04/16/18 12:15 Matrix: Water
Date Received: 04/16/18 19:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	**78**		2.0	0.58	ug/L			04/21/18 18:18	2
Methylcyclohexane	**64**		2.0	0.44	ug/L			04/21/18 18:18	2
Indane	**50**		2.0	0.24	ug/L			04/21/18 18:18	2
Dichlorofluoromethane	**11**	* J+	2.0	0.42	ug/L			04/21/18 18:18	2
1,2,3-Trimethylbenzene	**110**		2.0	0.22	ug/L			04/21/18 18:18	2

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Pentane, 2,3-dimethyl-	*18*	*J N*	*ug/L*		*3.19*	*565-59-3*		*04/21/18 18:18*	*2*
Unknown	*18*	*J*	*ug/L*		*3.42*			*04/21/18 18:18*	*2*
Isopropylcyclobutane	*21*	*J N*	*ug/L*		*3.53*	*872-56-0*		*04/21/18 18:18*	*2*
Benzene, 1-ethyl-3-methyl-	*150*	*J N*	*ug/L*		*9.74*	*620-14-4*		*04/21/18 18:18*	*2*
Unknown	*120*	*J*	*ug/L*		*10.22*			*04/21/18 18:18*	*2*
Benzene, 1,2-dichloro-	*15*	*J N*	*ug/L*		*11.64*	*95-50-1*		*04/21/18 18:18*	*2*
Benzene, 2-ethyl-1,4-dimethyl-	*14*	*J N*	*ug/L*		*11.85*	*1758-88-9*		*04/21/18 18:18*	*2*
Benzene, 1-methyl-2-(1-methylethyl)-	*18*	*J N*	*ug/L*		*11.93*	*527-84-4*		*04/21/18 18:18*	*2*
1,4-Benzenediol, diacetate	*34*	*J N*	*ug/L*		*13.43*	*1205-91-0*		*04/21/18 18:18*	*2*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*120*		*74 - 132*		*04/21/18 18:18*	*2*
Bromofluorobenzene	*97*		*77 - 124*		*04/21/18 18:18*	*2*
Toluene-d8 (Surr)	*107*		*80 - 120*		*04/21/18 18:18*	*2*
Dibromofluoromethane (Surr)	*108*		*72 - 131*		*04/21/18 18:18*	*2*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/18/18 15:25	04/19/18 11:02	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/18/18 15:25	04/19/18 11:02	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/18/18 15:25	04/19/18 11:02	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/18/18 15:25	04/19/18 11:02	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/18/18 15:25	04/19/18 11:02	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/18/18 15:25	04/19/18 06:49	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/18/18 15:25	04/19/18 06:49	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/18/18 15:25	04/19/18 06:49	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/18/18 15:25	04/19/18 06:49	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/18/18 15:25	04/19/18 06:49	1
2,4-Dimethylphenol	**1.2**	**J**	10	0.24	ug/L		04/18/18 15:25	04/19/18 06:49	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/18/18 15:25	04/19/18 06:49	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/18/18 15:25	04/19/18 06:49	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/18/18 15:25	04/19/18 06:49	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/18/18 15:25	04/19/18 06:49	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/18/18 15:25	04/19/18 06:49	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/18/18 15:25	04/19/18 06:49	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/18/18 15:25	04/19/18 06:49	1
Bis(2-chloroethyl)ether	**120**	J+	1.0	0.30	ug/L		04/18/18 15:25	04/19/18 06:49	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/18/18 15:25	04/19/18 06:49	1
1,4-Dichlorobenzene	**1.6**	**J** J+	10	1.3	ug/L		04/18/18 15:25	04/19/18 06:49	1
1,2-Dichlorobenzene	**9.3**	**J** J+	10	1.3	ug/L		04/18/18 15:25	04/19/18 06:49	1

Client Sample ID: DDA-15-TZ — Lab Sample ID: 460-154091-4

Date Collected: 04/16/18 12:15 Matrix: Water
Date Received: 04/16/18 19:30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/18/18 15:25	04/19/18 06:49	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/18/18 15:25	04/19/18 06:49	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/18/18 15:25	04/19/18 06:49	1
Isophorone	0.80	U	10	0.80	ug/L		04/18/18 15:25	04/19/18 06:49	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/18/18 15:25	04/19/18 06:49	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/18/18 15:25	04/19/18 06:49	1
Naphthalene	**7.5**	**J** J+	10	1.1	ug/L		04/18/18 15:25	04/19/18 06:49	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/18/18 15:25	04/19/18 06:49	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/18/18 15:25	04/19/18 06:49	1
2-Methylnaphthalene	**1.1**	**J** J+	10	1.1	ug/L		04/18/18 15:25	04/19/18 06:49	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/18/18 15:25	04/19/18 06:49	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/18/18 15:25	04/19/18 06:49	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/18/18 15:25	04/19/18 06:49	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/18/18 15:25	04/19/18 06:49	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/18/18 15:25	04/19/18 06:49	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/18/18 15:25	04/19/18 06:49	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/18/18 15:25	04/19/18 06:49	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/18/18 15:25	04/19/18 06:49	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/18/18 15:25	04/19/18 06:49	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/18/18 15:25	04/19/18 06:49	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/18/18 15:25	04/19/18 06:49	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/18/18 15:25	04/19/18 06:49	1
Fluorene	0.91	U	10	0.91	ug/L		04/18/18 15:25	04/19/18 06:49	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/18/18 15:25	04/19/18 06:49	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/18/18 15:25	04/19/18 06:49	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/18/18 15:25	04/19/18 06:49	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/18/18 15:25	04/19/18 06:49	1
Anthracene	0.63	U	10	0.63	ug/L		04/18/18 15:25	04/19/18 06:49	1
Carbazole	0.68	U	10	0.68	ug/L		04/18/18 15:25	04/19/18 06:49	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/18/18 15:25	04/19/18 06:49	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/18/18 15:25	04/19/18 06:49	1
Pyrene	1.6	U	10	1.6	ug/L		04/18/18 15:25	04/19/18 06:49	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/18/18 15:25	04/19/18 06:49	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/18/18 15:25	04/19/18 06:49	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/18/18 15:25	04/19/18 06:49	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/18/18 15:25	04/19/18 06:49	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/18/18 15:25	04/19/18 06:49	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/18/18 15:25	04/19/18 06:49	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/18/18 15:25	04/19/18 06:49	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/18/18 15:25	04/19/18 06:49	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/18/18 15:25	04/19/18 06:49	1
Diphenyl ether	**14**	J+	10	1.2	ug/L		04/18/18 15:25	04/19/18 06:49	1
n,n'-Dimethylaniline	**8.5**	J+	1.0	0.91	ug/L		04/18/18 15:25	04/19/18 06:49	1
Caprolactam	0.68	U	10	0.68	ug/L		04/18/18 15:25	04/19/18 06:49	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/18/18 15:25	04/19/18 06:49	1
Bisphenol-A	**32**		10	9.9	ug/L		04/18/18 15:25	04/19/18 06:49	1
N-Methylaniline	**4.4**	**J** J+	5.0	0.48	ug/L		04/18/18 15:25	04/19/18 06:49	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane	*18*	*J N*	*ug/L*		*1.60*	*123-91-1*	*04/18/18 15:25*	*04/19/18 06:49*	*1*

Client Sample ID: DDA-15-TZ

Lab Sample ID: 460-154091-4

Date Collected: 04/16/18 12:15
Date Received: 04/16/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Benzene, (1-methylethyl)-	40	J N	ug/L		3.34	98-82-8	04/18/18 15:25	04/19/18 06:49	1
Benzene, propyl-	65	J N	ug/L		3.61	103-65-1	04/18/18 15:25	04/19/18 06:49	1
Benzene, 1-ethyl-2-methyl-	100	J N	ug/L		3.67	611-14-3	04/18/18 15:25	04/19/18 06:49	1
Benzene, 1,2,3-trimethyl-	86	J N	ug/L		3.74	526-73-8	04/18/18 15:25	04/19/18 06:49	1
Benzene, 1,2,4-trimethyl-	330	J N	ug/L		3.95	95-63-6	04/18/18 15:25	04/19/18 06:49	1
Benzene, 1,3,5-trimethyl-	83	J N	ug/L		4.17	108-67-8	04/18/18 15:25	04/19/18 06:49	1
Unknown	15	J	ug/L		4.36		04/18/18 15:25	04/19/18 06:49	1
Benzene, 4-ethyl-1,2-dimethyl-	13	J N	ug/L		4.43	934-80-5	04/18/18 15:25	04/19/18 06:49	1
Phenol, 2-propoxy-	39	J N	ug/L		5.21	6280-96-2	04/18/18 15:25	04/19/18 06:49	1
1-Phenoxypropan-2-ol	20	J N	ug/L		5.67	770-35-4	04/18/18 15:25	04/19/18 06:49	1
1,4-Benzenediol, diacetate	77	J N	ug/L		5.80	1205-91-0	04/18/18 15:25	04/19/18 06:49	1
Unknown	65	J	ug/L		5.96		04/18/18 15:25	04/19/18 06:49	1
Unknown	210	J	ug/L		6.82		04/18/18 15:25	04/19/18 06:49	1
Benzenamine, 3-methyl-	24	J N	ug/L		7.11	108-44-1	04/18/18 15:25	04/19/18 06:49	1
Urea, N,N'-dimethyl-N,N'-diphenyl-	17	J N	ug/L		8.60	611-92-7	04/18/18 15:25	04/19/18 06:49	1
Unknown	14	J	ug/L		11.37		04/18/18 15:25	04/19/18 06:49	1
Unknown	33	J	ug/L		12.26		04/18/18 15:25	04/19/18 06:49	1
Unknown	15	J	ug/L		12.55		04/18/18 15:25	04/19/18 06:49	1
Unknown	16	J	ug/L		15.43		04/18/18 15:25	04/19/18 06:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	106		51 - 108	04/18/18 15:25	04/19/18 06:49	1
Phenol-d5	29		14 - 39	04/18/18 15:25	04/19/18 06:49	1
Terphenyl-d14	122		40 - 148	04/18/18 15:25	04/19/18 06:49	1
2,4,6-Tribromophenol	131		26 - 139	04/18/18 15:25	04/19/18 06:49	1
2-Fluorophenol	50		25 - 58	04/18/18 15:25	04/19/18 06:49	1
2-Fluorobiphenyl	112	X	45 - 107	04/18/18 15:25	04/19/18 06:49	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 18:27	5
Aluminum	**137**		50.0	28.5	ug/L		04/19/18 23:10	04/20/18 18:27	5
Arsenic	**13.5**		2.5	1.5	ug/L		04/19/18 23:10	04/20/18 18:27	5
Barium	**619**		5.0	3.2	ug/L		04/19/18 23:10	04/20/18 18:27	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/19/18 23:10	04/20/18 18:27	5
Calcium	**11700**		250	233	ug/L		04/19/18 23:10	04/20/18 18:27	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/19/18 23:10	04/20/18 18:27	5
Cobalt	**37.5**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:27	5
Chromium	3.1	U	5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:27	5
Copper	3.3	U	5.0	3.3	ug/L		04/19/18 23:10	04/20/18 18:27	5
Iron	**25000**		150	97.8	ug/L		04/19/18 23:10	04/20/18 18:27	5
Potassium	**2630**		250	143	ug/L		04/19/18 23:10	04/20/18 18:27	5
Magnesium	**15700**		250	155	ug/L		04/19/18 23:10	04/20/18 18:27	5
Manganese	**810**		10.0	6.1	ug/L		04/19/18 23:10	04/20/18 18:27	5
Sodium	**31400**		250	213	ug/L		04/19/18 23:10	04/20/18 18:27	5
Nickel	**10.6**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:27	5
Lead	0.93	U	1.5	0.93	ug/L		04/19/18 23:10	04/20/18 18:27	5
Antimony	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 18:27	5
Selenium	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 18:27	5

Client Sample ID: DDA-15-TZ

Lab Sample ID: 460-154091-4
Date Collected: 04/16/18 12:15
Matrix: Water
Date Received: 04/16/18 19:30

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	0.60	U	1.0	0.60	ug/L		04/19/18 23:10	04/20/18 18:27	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 18:27	5
Zinc	16.3	U	20.0	16.3	ug/L		04/19/18 23:10	04/20/18 18:27	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12	U	0.20	0.12	ug/L		04/19/18 11:35	04/19/18 13:30	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**29600**		150	92.1	ug/L		04/17/18 08:25	04/20/18 17:48	1
Manganese, Dissolved	**927**		15.0	3.1	ug/L		04/17/18 08:25	04/20/18 17:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**3.2**		0.10	0.045	mg/L		04/19/18 11:30	04/19/18 12:56	1

Client Sample ID: MHW-1D

Lab Sample ID: 460-154091-5
Date Collected: 04/16/18 14:45
Matrix: Water
Date Received: 04/16/18 19:30

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**6.2**		0.40	0.20	ug/L			04/18/18 17:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*72 - 133*		*04/18/18 17:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*71 - 144*		*04/18/18 17:43*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/21/18 14:53	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/21/18 14:53	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/21/18 14:53	1
Chloroethane	0.37	U *	1.0	0.37	ug/L			04/21/18 14:53	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/21/18 14:53	1
Acetone	1.1	U	5.0	1.1	ug/L			04/21/18 14:53	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/21/18 14:53	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/21/18 14:53	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/21/18 14:53	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/21/18 14:53	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/21/18 14:53	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/21/18 14:53	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/21/18 14:53	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/21/18 14:53	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/21/18 14:53	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/21/18 14:53	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/21/18 14:53	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/21/18 14:53	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/21/18 14:53	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/21/18 14:53	1

Client Sample ID: MHW-1D — Lab Sample ID: 460-154091-5

Date Collected: 04/16/18 14:45 Matrix: Water
Date Received: 04/16/18 19:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/21/18 14:53	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/21/18 14:53	1
Benzene	0.090	U	1.0	0.090	ug/L			04/21/18 14:53	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/21/18 14:53	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/21/18 14:53	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/21/18 14:53	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/21/18 14:53	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/21/18 14:53	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/21/18 14:53	1
Toluene	0.25	U	1.0	0.25	ug/L			04/21/18 14:53	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/21/18 14:53	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/21/18 14:53	1
Styrene	0.17	U	1.0	0.17	ug/L			04/21/18 14:53	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/21/18 14:53	1
Ethyl ether	**0.20**	**J**	1.0	0.11	ug/L			04/21/18 14:53	1
MTBE	**0.21**	**J**	1.0	0.13	ug/L			04/21/18 14:53	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/21/18 14:53	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/21/18 14:53	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/21/18 14:53	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/21/18 14:53	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/21/18 14:53	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/21/18 14:53	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/21/18 14:53	1
Indane	0.12	U	1.0	0.12	ug/L			04/21/18 14:53	1
Dichlorofluoromethane	0.21	U *	1.0	0.21	ug/L			04/21/18 14:53	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/21/18 14:53	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/21/18 14:53*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*120*		*74 - 132*		*04/21/18 14:53*	*1*
Bromofluorobenzene	*92*		*77 - 124*		*04/21/18 14:53*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*04/21/18 14:53*	*1*
Dibromofluoromethane (Surr)	*109*		*72 - 131*		*04/21/18 14:53*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/17/18 14:32	04/18/18 12:38	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/17/18 14:32	04/18/18 12:38	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/17/18 14:32	04/18/18 12:38	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/17/18 14:32	04/18/18 12:38	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/17/18 14:32	04/18/18 12:38	1
Bis(2-chloroethyl)ether	**0.12**	J+	0.030	0.026	ug/L		04/17/18 14:32	04/18/18 12:38	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/17/18 14:32	04/19/18 04:40	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/17/18 14:32	04/19/18 04:40	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/17/18 14:32	04/19/18 04:40	1

Client Sample ID: MHW-1D

Lab Sample ID: 460-154091-5

Date Collected: 04/16/18 14:45
Date Received: 04/16/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methylphenol	0.24	U	10	0.24	ug/L		04/17/18 14:32	04/19/18 04:40	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/17/18 14:32	04/19/18 04:40	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/17/18 14:32	04/19/18 04:40	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/17/18 14:32	04/19/18 04:40	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/17/18 14:32	04/19/18 04:40	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/17/18 14:32	04/19/18 04:40	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/17/18 14:32	04/19/18 04:40	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/17/18 14:32	04/19/18 04:40	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/17/18 14:32	04/19/18 04:40	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/17/18 14:32	04/19/18 04:40	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/17/18 14:32	04/19/18 04:40	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/17/18 14:32	04/19/18 04:40	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/17/18 14:32	04/19/18 04:40	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/17/18 14:32	04/19/18 04:40	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/17/18 14:32	04/19/18 04:40	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/17/18 14:32	04/19/18 04:40	1
Isophorone	0.80	U	10	0.80	ug/L		04/17/18 14:32	04/19/18 04:40	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/17/18 14:32	04/19/18 04:40	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/17/18 14:32	04/19/18 04:40	1
Naphthalene	1.1	U	10	1.1	ug/L		04/17/18 14:32	04/19/18 04:40	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/17/18 14:32	04/19/18 04:40	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/17/18 14:32	04/19/18 04:40	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/17/18 14:32	04/19/18 04:40	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/17/18 14:32	04/19/18 04:40	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/17/18 14:32	04/19/18 04:40	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/17/18 14:32	04/19/18 04:40	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/17/18 14:32	04/19/18 04:40	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/17/18 14:32	04/19/18 04:40	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/17/18 14:32	04/19/18 04:40	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/17/18 14:32	04/19/18 04:40	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/17/18 14:32	04/19/18 04:40	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/17/18 14:32	04/19/18 04:40	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/17/18 14:32	04/19/18 04:40	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/17/18 14:32	04/19/18 04:40	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/17/18 14:32	04/19/18 04:40	1
Fluorene	0.91	U	10	0.91	ug/L		04/17/18 14:32	04/19/18 04:40	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/17/18 14:32	04/19/18 04:40	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/17/18 14:32	04/19/18 04:40	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/17/18 14:32	04/19/18 04:40	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/17/18 14:32	04/19/18 04:40	1
Anthracene	0.63	U	10	0.63	ug/L		04/17/18 14:32	04/19/18 04:40	1
Carbazole	0.68	U	10	0.68	ug/L		04/17/18 14:32	04/19/18 04:40	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/17/18 14:32	04/19/18 04:40	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/17/18 14:32	04/19/18 04:40	1
Pyrene	1.6	U	10	1.6	ug/L		04/17/18 14:32	04/19/18 04:40	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/17/18 14:32	04/19/18 04:40	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/17/18 14:32	04/19/18 04:40	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/17/18 14:32	04/19/18 04:40	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/17/18 14:32	04/19/18 04:40	1

Client Sample ID: MHW-1D

Lab Sample ID: 460-154091-5

Date Collected: 04/16/18 14:45
Date Received: 04/16/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/17/18 14:32	04/19/18 04:40	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/17/18 14:32	04/19/18 04:40	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/17/18 14:32	04/19/18 04:40	1
Dibenz(a,h)anthracene	0.72	U *	1.0	0.72	ug/L		04/17/18 14:32	04/19/18 04:40	1
Benzo[g,h,i]perylene	1.4	U *	10	1.4	ug/L		04/17/18 14:32	04/19/18 04:40	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/17/18 14:32	04/19/18 04:40	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/17/18 14:32	04/19/18 04:40	1
Caprolactam	0.68	U	10	0.68	ug/L		04/17/18 14:32	04/19/18 04:40	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/17/18 14:32	04/19/18 04:40	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/17/18 14:32	04/19/18 04:40	1
N-Methylaniline	0.48	U	5.0	0.48	ug/L		04/17/18 14:32	04/19/18 04:40	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/17/18 14:32*	*04/19/18 04:40*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*107*		*51 - 108*	*04/17/18 14:32*	*04/19/18 04:40*	*1*
Phenol-d5	*25*		*14 - 39*	*04/17/18 14:32*	*04/19/18 04:40*	*1*
Terphenyl-d14	*87*		*40 - 148*	*04/17/18 14:32*	*04/19/18 04:40*	*1*
2,4,6-Tribromophenol	*96*		*26 - 139*	*04/17/18 14:32*	*04/19/18 04:40*	*1*
2-Fluorophenol	*47*		*25 - 58*	*04/17/18 14:32*	*04/19/18 04:40*	*1*
2-Fluorobiphenyl	*119*	*X*	*45 - 107*	*04/17/18 14:32*	*04/19/18 04:40*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 18:30	5
Aluminum	**39.4**	**J**	50.0	28.5	ug/L		04/19/18 23:10	04/20/18 18:30	5
Arsenic	**4.7**		2.5	1.5	ug/L		04/19/18 23:10	04/20/18 18:30	5
Barium	**249**		5.0	3.2	ug/L		04/19/18 23:10	04/20/18 18:30	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/19/18 23:10	04/20/18 18:30	5
Calcium	**13400**		250	233	ug/L		04/19/18 23:10	04/20/18 18:30	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/19/18 23:10	04/20/18 18:30	5
Cobalt	**76.5**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:30	5
Chromium	**9.4**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:30	5
Copper	3.3	U	5.0	3.3	ug/L		04/19/18 23:10	04/20/18 18:30	5
Iron	**21900**		150	97.8	ug/L		04/19/18 23:10	04/20/18 18:30	5
Potassium	**2660**		250	143	ug/L		04/19/18 23:10	04/20/18 18:30	5
Magnesium	**6420**		250	155	ug/L		04/19/18 23:10	04/20/18 18:30	5
Manganese	**3340**		10.0	6.1	ug/L		04/19/18 23:10	04/20/18 18:30	5
Sodium	**23900**		250	213	ug/L		04/19/18 23:10	04/20/18 18:30	5
Nickel	**15.3**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:30	5
Lead	0.93	U	1.5	0.93	ug/L		04/19/18 23:10	04/20/18 18:30	5
Antimony	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 18:30	5
Selenium	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 18:30	5
Thallium	0.60	U	1.0	0.60	ug/L		04/19/18 23:10	04/20/18 18:30	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 18:30	5
Zinc	**23.3**		20.0	16.3	ug/L		04/19/18 23:10	04/20/18 18:30	5

Client Sample ID: MHW-1D — Lab Sample ID: 460-154091-5

Date Collected: 04/16/18 14:45 Matrix: Water
Date Received: 04/16/18 19:30

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12	U	0.20	0.12	ug/L		04/19/18 11:35	04/19/18 13:11	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**24800**		150	92.1	ug/L		04/18/18 09:46	04/20/18 17:52	1
Manganese, Dissolved	**3640**		15.0	3.1	ug/L		04/18/18 09:46	04/20/18 17:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.30**		0.10	0.045	mg/L		04/19/18 11:30	04/19/18 13:09	1

Client Sample ID: MHW-1M — Lab Sample ID: 460-154091-6

Date Collected: 04/16/18 15:05 Matrix: Water
Date Received: 04/16/18 19:30

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**1200**		20	10	ug/L			04/18/18 18:51	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*72 - 133*		*04/18/18 18:51*	*50*
1,2-Dichloroethane-d4 (Surr)	*96*		*71 - 144*		*04/18/18 18:51*	*50*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/22/18 01:54	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/22/18 01:54	1
Vinyl chloride	**0.46**	**J**	1.0	0.060	ug/L			04/22/18 01:54	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/22/18 01:54	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/22/18 01:54	1
Acetone	1.1	U	5.0	1.1	ug/L			04/22/18 01:54	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/22/18 01:54	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/22/18 01:54	1
1,1-Dichloroethane	**0.35**	**J**	1.0	0.24	ug/L			04/22/18 01:54	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/22/18 01:54	1
cis-1,2-Dichloroethene	**0.46**	**J**	1.0	0.26	ug/L			04/22/18 01:54	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/22/18 01:54	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/22/18 01:54	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/22/18 01:54	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/22/18 01:54	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/22/18 01:54	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/22/18 01:54	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/22/18 01:54	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/22/18 01:54	1
Trichloroethene	**0.34**	**J**	1.0	0.22	ug/L			04/22/18 01:54	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/22/18 01:54	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/22/18 01:54	1
Benzene	**76**		1.0	0.090	ug/L			04/22/18 01:54	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/22/18 01:54	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/22/18 01:54	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/22/18 01:54	1

Client Sample ID: MHW-1M — Lab Sample ID: 460-154091-6

Date Collected: 04/16/18 15:05 Matrix: Water
Date Received: 04/16/18 19:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/22/18 01:54	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/22/18 01:54	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/22/18 01:54	1
Toluene	0.25	U	1.0	0.25	ug/L			04/22/18 01:54	1
Chlorobenzene	**5.0**		1.0	0.24	ug/L			04/22/18 01:54	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/22/18 01:54	1
Styrene	0.17	U	1.0	0.17	ug/L			04/22/18 01:54	1
Xylenes, Total	**0.99**	**J**	2.0	0.28	ug/L			04/22/18 01:54	1
Ethyl ether	**23**		1.0	0.11	ug/L			04/22/18 01:54	1
MTBE	0.13	U	1.0	0.13	ug/L			04/22/18 01:54	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/22/18 01:54	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/22/18 01:54	1
1,4-Dioxane	**1100**		50	8.7	ug/L			04/22/18 01:54	1
1,2,4-Trimethylbenzene	**0.38**	**J**	1.0	0.23	ug/L			04/22/18 01:54	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/22/18 01:54	1
Isopropylbenzene	**2.2**		1.0	0.32	ug/L			04/22/18 01:54	1
N-Propylbenzene	**0.43**	**J**	1.0	0.29	ug/L			04/22/18 01:54	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/22/18 01:54	1
Indane	**0.71**	**J**	1.0	0.12	ug/L			04/22/18 01:54	1
Dichlorofluoromethane	**5.1**		1.0	0.21	ug/L			04/22/18 01:54	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/22/18 01:54	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/22/18 01:54*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*117*		*74 - 132*		*04/22/18 01:54*	*1*
Bromofluorobenzene	*93*		*77 - 124*		*04/22/18 01:54*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*		*04/22/18 01:54*	*1*
Dibromofluoromethane (Surr)	*108*		*72 - 131*		*04/22/18 01:54*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/17/18 14:32	04/18/18 12:59	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/17/18 14:32	04/18/18 12:59	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/17/18 14:32	04/18/18 12:59	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/17/18 14:32	04/18/18 12:59	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/17/18 14:32	04/18/18 12:59	1
Bis(2-chloroethyl)ether	**6.9**	J+	0.030	0.026	ug/L		04/17/18 14:32	04/18/18 12:59	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/17/18 14:32	04/19/18 05:06	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/17/18 14:32	04/19/18 05:06	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/17/18 14:32	04/19/18 05:06	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/17/18 14:32	04/19/18 05:06	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/17/18 14:32	04/19/18 05:06	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/17/18 14:32	04/19/18 05:06	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/17/18 14:32	04/19/18 05:06	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/17/18 14:32	04/19/18 05:06	1

Client Sample ID: MHW-1M

Lab Sample ID: 460-154091-6

Date Collected: 04/16/18 15:05
Date Received: 04/16/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/17/18 14:32	04/19/18 05:06	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/17/18 14:32	04/19/18 05:06	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/17/18 14:32	04/19/18 05:06	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/17/18 14:32	04/19/18 05:06	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/17/18 14:32	04/19/18 05:06	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/17/18 14:32	04/19/18 05:06	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/17/18 14:32	04/19/18 05:06	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/17/18 14:32	04/19/18 05:06	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/17/18 14:32	04/19/18 05:06	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/17/18 14:32	04/19/18 05:06	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/17/18 14:32	04/19/18 05:06	1
Isophorone	0.80	U	10	0.80	ug/L		04/17/18 14:32	04/19/18 05:06	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/17/18 14:32	04/19/18 05:06	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/17/18 14:32	04/19/18 05:06	1
Naphthalene	1.1	U	10	1.1	ug/L		04/17/18 14:32	04/19/18 05:06	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/17/18 14:32	04/19/18 05:06	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/17/18 14:32	04/19/18 05:06	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/17/18 14:32	04/19/18 05:06	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/17/18 14:32	04/19/18 05:06	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/17/18 14:32	04/19/18 05:06	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/17/18 14:32	04/19/18 05:06	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/17/18 14:32	04/19/18 05:06	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/17/18 14:32	04/19/18 05:06	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/17/18 14:32	04/19/18 05:06	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/17/18 14:32	04/19/18 05:06	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/17/18 14:32	04/19/18 05:06	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/17/18 14:32	04/19/18 05:06	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/17/18 14:32	04/19/18 05:06	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/17/18 14:32	04/19/18 05:06	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/17/18 14:32	04/19/18 05:06	1
Fluorene	0.91	U	10	0.91	ug/L		04/17/18 14:32	04/19/18 05:06	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/17/18 14:32	04/19/18 05:06	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/17/18 14:32	04/19/18 05:06	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/17/18 14:32	04/19/18 05:06	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/17/18 14:32	04/19/18 05:06	1
Anthracene	0.63	U	10	0.63	ug/L		04/17/18 14:32	04/19/18 05:06	1
Carbazole	0.68	U	10	0.68	ug/L		04/17/18 14:32	04/19/18 05:06	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/17/18 14:32	04/19/18 05:06	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/17/18 14:32	04/19/18 05:06	1
Pyrene	1.6	U	10	1.6	ug/L		04/17/18 14:32	04/19/18 05:06	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/17/18 14:32	04/19/18 05:06	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/17/18 14:32	04/19/18 05:06	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/17/18 14:32	04/19/18 05:06	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/17/18 14:32	04/19/18 05:06	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/17/18 14:32	04/19/18 05:06	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/17/18 14:32	04/19/18 05:06	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/17/18 14:32	04/19/18 05:06	1
Dibenz(a,h)anthracene	0.72	U *-	1.0	0.72	ug/L		04/17/18 14:32	04/19/18 05:06	1
Benzo[g,h,i]perylene	1.4	U *-	10	1.4	ug/L		04/17/18 14:32	04/19/18 05:06	1

Client Sample ID: MHW-1M

Lab Sample ID: 460-154091-6

Date Collected: 04/16/18 15:05
Date Received: 04/16/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diphenyl ether	1.2	U	10	1.2	ug/L		04/17/18 14:32	04/19/18 05:06	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/17/18 14:32	04/19/18 05:06	1
Caprolactam	0.68	U	10	0.68	ug/L		04/17/18 14:32	04/19/18 05:06	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/17/18 14:32	04/19/18 05:06	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/17/18 14:32	04/19/18 05:06	1
N-Methylaniline	0.48	U	5.0	0.48	ug/L		04/17/18 14:32	04/19/18 05:06	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane	*120*	*J N*	*ug/L*		*1.70*	*123-91-1*	*04/17/18 14:32*	*04/19/18 05:06*	*1*
Unknown	*7.6*	*J*	*ug/L*		*6.89*		*04/17/18 14:32*	*04/19/18 05:06*	*1*
Unknown	*6.6*	*J*	*ug/L*		*8.61*		*04/17/18 14:32*	*04/19/18 05:06*	*1*
Unknown	*10*	*J*	*ug/L*		*9.50*		*04/17/18 14:32*	*04/19/18 05:06*	*1*
Unknown	*7.2*	*J*	*ug/L*		*9.61*		*04/17/18 14:32*	*04/19/18 05:06*	*1*
Unknown	*10*	*J*	*ug/L*		*10.43*		*04/17/18 14:32*	*04/19/18 05:06*	*1*
Unknown	*12*	*J*	*ug/L*		*11.39*		*04/17/18 14:32*	*04/19/18 05:06*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*105*		*51 - 108*	*04/17/18 14:32*	*04/19/18 05:06*	*1*
Phenol-d5	*26*		*14 - 39*	*04/17/18 14:32*	*04/19/18 05:06*	*1*
Terphenyl-d14	*85*		*40 - 148*	*04/17/18 14:32*	*04/19/18 05:06*	*1*
2,4,6-Tribromophenol	*104*		*26 - 139*	*04/17/18 14:32*	*04/19/18 05:06*	*1*
2-Fluorophenol	*48*		*25 - 58*	*04/17/18 14:32*	*04/19/18 05:06*	*1*
2-Fluorobiphenyl	*121*	*X*	*45 - 107*	*04/17/18 14:32*	*04/19/18 05:06*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 18:35	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/19/18 23:10	04/20/18 18:35	5
Arsenic	**5.9**		2.5	1.5	ug/L		04/19/18 23:10	04/20/18 18:35	5
Barium	**254**		5.0	3.2	ug/L		04/19/18 23:10	04/20/18 18:35	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/19/18 23:10	04/20/18 18:35	5
Calcium	**31500**		250	233	ug/L		04/19/18 23:10	04/20/18 18:35	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/19/18 23:10	04/20/18 18:35	5
Cobalt	**19.8**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:35	5
Chromium	3.1	U	5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:35	5
Copper	3.3	U	5.0	3.3	ug/L		04/19/18 23:10	04/20/18 18:35	5
Iron	**10800**		150	97.8	ug/L		04/19/18 23:10	04/20/18 18:35	5
Potassium	**6680**		250	143	ug/L		04/19/18 23:10	04/20/18 18:35	5
Magnesium	**24000**		250	155	ug/L		04/19/18 23:10	04/20/18 18:35	5
Manganese	**1910**		10.0	6.1	ug/L		04/19/18 23:10	04/20/18 18:35	5
Sodium	**70900**		250	213	ug/L		04/19/18 23:10	04/20/18 18:35	5
Nickel	**5.2**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:35	5
Lead	0.93	U	1.5	0.93	ug/L		04/19/18 23:10	04/20/18 18:35	5
Antimony	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 18:35	5
Selenium	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 18:35	5
Thallium	0.60	U	1.0	0.60	ug/L		04/19/18 23:10	04/20/18 18:35	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 18:35	5
Zinc	16.3	U	20.0	16.3	ug/L		04/19/18 23:10	04/20/18 18:35	5

Client Sample ID: MHW-1M — Lab Sample ID: 460-154091-6

Date Collected: 04/16/18 15:05
Date Received: 04/16/18 19:30
Matrix: Water

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12	U	0.20	0.12	ug/L		04/19/18 11:35	04/19/18 13:31	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**13400**		150	92.1	ug/L		04/18/18 09:46	04/20/18 18:08	1
Manganese, Dissolved	**2340**		15.0	3.1	ug/L		04/18/18 09:46	04/20/18 18:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.61**		0.10	0.045	mg/L		04/19/18 11:30	04/19/18 13:11	1

Client Sample ID: TBGW_041618 — Lab Sample ID: 460-154091-7

Date Collected: 04/16/18 00:00
Date Received: 04/16/18 19:30
Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.20	U	0.40	0.20	ug/L			04/18/18 15:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*104*		*72 - 133*		*04/18/18 15:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*71 - 144*		*04/18/18 15:04*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/20/18 21:34	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/20/18 21:34	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/20/18 21:34	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/20/18 21:34	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/20/18 21:34	1
Acetone	**30**		5.0	1.1	ug/L			04/20/18 21:34	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/20/18 21:34	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/20/18 21:34	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/20/18 21:34	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/20/18 21:34	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/20/18 21:34	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/20/18 21:34	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/20/18 21:34	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/20/18 21:34	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/20/18 21:34	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/20/18 21:34	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/20/18 21:34	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/20/18 21:34	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/20/18 21:34	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/20/18 21:34	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/20/18 21:34	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/20/18 21:34	1
Benzene	0.090	U	1.0	0.090	ug/L			04/20/18 21:34	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/20/18 21:34	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/20/18 21:34	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/20/18 21:34	1

Client Sample ID: TBGW_041618

Lab Sample ID: 460-154091-7

Date Collected: 04/16/18 00:00
Date Received: 04/16/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/20/18 21:34	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/20/18 21:34	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/20/18 21:34	1
Toluene	0.25	U	1.0	0.25	ug/L			04/20/18 21:34	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/20/18 21:34	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/20/18 21:34	1
Styrene	0.17	U	1.0	0.17	ug/L			04/20/18 21:34	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/20/18 21:34	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/20/18 21:34	1
MTBE	0.13	U	1.0	0.13	ug/L			04/20/18 21:34	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/20/18 21:34	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/20/18 21:34	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/20/18 21:34	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/20/18 21:34	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/20/18 21:34	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/20/18 21:34	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/20/18 21:34	1
Indane	0.12	U	1.0	0.12	ug/L			04/20/18 21:34	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/20/18 21:34	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/20/18 21:34	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/20/18 21:34*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*115*		*74 - 132*		*04/20/18 21:34*	*1*
Bromofluorobenzene	*93*		*77 - 124*		*04/20/18 21:34*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*		*04/20/18 21:34*	*1*
Dibromofluoromethane (Surr)	*110*		*72 - 131*		*04/20/18 21:34*	*1*

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G - PW(1) Discharge

TestAmerica Job ID: 460-153936-1

Client Sample ID: PW-1 (U) Discharge

Lab Sample ID: 460-153936-1

Date Collected: 04/12/18 14:40
Date Received: 04/12/18 20:55

Matrix: Water

Method: Trace VOA - 2.3/Trace Volatiles

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
Chloromethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
Vinyl chloride	0.50	U	0.50		ug/L			04/18/18 13:32	1
Bromomethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
Chloroethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
Trichlorofluoromethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
1,1-Dichloroethene	0.50	U	0.50		ug/L			04/18/18 13:32	1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
Acetone	**2.4**	**J**	5.0		ug/L			04/18/18 13:32	1
Carbon disulfide	**0.11**	**J B**	0.50		ug/L			04/18/18 13:32	1
Methyl acetate	0.50	U	0.50		ug/L			04/18/18 13:32	1
Methylene Chloride	0.50	U	0.50		ug/L			04/18/18 13:32	1
trans-1,2-Dichloroethene	0.50	U	0.50		ug/L			04/18/18 13:32	1
Methyl tert-butyl ether	**0.24**	**J**	0.50		ug/L			04/18/18 13:32	1
1,1-Dichloroethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
cis-1,2-Dichloroethene	**0.097**	**J**	0.50		ug/L			04/18/18 13:32	1
2-Butanone	5.0	U	5.0		ug/L			04/18/18 13:32	1
Bromochloromethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
Chloroform	0.50	U	0.50		ug/L			04/18/18 13:32	1
1,1,1-Trichloroethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
Cyclohexane	**0.58**		0.50		ug/L			04/18/18 13:32	1
Carbon tetrachloride	0.50	U	0.50		ug/L			04/18/18 13:32	1
Benzene	**10**		0.50		ug/L			04/18/18 13:32	1
1,2-Dichloroethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
Trichloroethene	0.50	U	0.50		ug/L			04/18/18 13:32	1
Methylcyclohexane	**1.6**		0.50		ug/L			04/18/18 13:32	1
1,2-Dichloropropane	0.50	U	0.50		ug/L			04/18/18 13:32	1
Bromodichloromethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
cis-1,3-Dichloropropene	0.50	U	0.50		ug/L			04/18/18 13:32	1
4-Methyl-2-pentanone	5.0	U	5.0		ug/L			04/18/18 13:32	1
Toluene	0.50	U	0.50		ug/L			04/18/18 13:32	1
trans-1,3-Dichloropropene	0.50	U	0.50		ug/L			04/18/18 13:32	1
1,1,2-Trichloroethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
Tetrachloroethene	**2.2**		0.50		ug/L			04/18/18 13:32	1
2-Hexanone	5.0	U	5.0		ug/L			04/18/18 13:32	1
Dibromochloromethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
1,2-Dibromoethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
Chlorobenzene	**1.6**		0.50		ug/L			04/18/18 13:32	1
Ethylbenzene	**2.6**		0.50		ug/L			04/18/18 13:32	1
o-Xylene	0.50	U	0.50		ug/L			04/18/18 13:32	1
m,p-Xylene	**16**		0.50		ug/L			04/18/18 13:32	1
Styrene	0.50	U	0.50		ug/L			04/18/18 13:32	1
Bromoform	0.50	U	0.50		ug/L			04/18/18 13:32	1
Isopropylbenzene	**1.4**		0.50		ug/L			04/18/18 13:32	1
1,1,2,2-Tetrachloroethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
1,3-Dichlorobenzene	0.50	U	0.50		ug/L			04/18/18 13:32	1
1,4-Dichlorobenzene	**0.12**	**J**	0.50		ug/L			04/18/18 13:32	1
1,2-Dichlorobenzene	**0.24**	**J**	0.50		ug/L			04/18/18 13:32	1
1,2-Dibromo-3-Chloropropane	0.50	U	0.50		ug/L			04/18/18 13:32	1

Client Sample ID: PW-1 (U) Discharge — Lab Sample ID: 460-153936-1

Date Collected: 04/12/18 14:40 — Matrix: Water
Date Received: 04/12/18 20:55

Method: Trace VOA - 2.3/Trace Volatiles (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	0.50	U	0.50		ug/L			04/18/18 13:32	1
1,2,3-Trichlorobenzene	0.50	U	0.50		ug/L			04/18/18 13:32	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown alkane	*0.85*	*J*	*ug/L*		*5.19*			*04/18/18 13:32*	*1*
Unknown alkane	*0.80*	*J*	*ug/L*		*5.68*			*04/18/18 13:32*	*1*
Benzene, propyl-	*3.1*	*J N*	*ug/L*		*11.02*	*103-65-1*		*04/18/18 13:32*	*1*
Benzene, 1-ethyl-2-methyl-	*6.9*	*J N*	*ug/L*		*11.13*	*611-14-3*		*04/18/18 13:32*	*1*
Benzene, 1,2,3-trimethyl-	*4.2*	*J N*	*ug/L*		*11.24*	*526-73-8*		*04/18/18 13:32*	*1*
Unknown	*4.0*	*J*	*ug/L*		*11.48*			*04/18/18 13:32*	*1*
Mesitylene	*19*	*J N*	*ug/L*		*11.69*	*108-67-8*		*04/18/18 13:32*	*1*
Unknown	*3.4*	*J*	*ug/L*		*12.20*			*04/18/18 13:32*	*1*
Unknown alkane	*4.4*	*J*	*ug/L*		*12.42*			*04/18/18 13:32*	*1*
Total Alkanes	*6.0*	*J*	*ug/L*			*STL00989*		*04/18/18 13:32*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Vinyl chloride-d3	*75*		*40 - 130*		*04/18/18 13:32*	*1*
Chloroethane-d5	*89*		*65 - 130*		*04/18/18 13:32*	*1*
1,1-Dichloroethene-d2	*68*		*60 - 125*		*04/18/18 13:32*	*1*
2-Butanone-d5	*82*		*40 - 130*		*04/18/18 13:32*	*1*
Chloroform-d	*91*		*70 - 125*		*04/18/18 13:32*	*1*
1,2-Dichloroethane-d4	*97*		*70 - 130*		*04/18/18 13:32*	*1*
Benzene-d6	*100*		*70 - 125*		*04/18/18 13:32*	*1*
1,2-Dichloropropane-d6	*87*		*60 - 140*		*04/18/18 13:32*	*1*
Toluene-d8	*95*		*70 - 130*		*04/18/18 13:32*	*1*
trans-1,3-Dichloropropene-d4	*88*		*55 - 130*		*04/18/18 13:32*	*1*
2-Hexanone-d5	*81*		*45 - 130*		*04/18/18 13:32*	*1*
1,1,2,2-Tetrachloroethane-d2	*92*		*65 - 120*		*04/18/18 13:32*	*1*
1,2-Dichlorobenzene-d4	*102*		*80 - 120*		*04/18/18 13:32*	*1*

Method: SVOA - 2.3/Semivolatiles

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**30**		2.1		ug/L		04/17/18 13:43	04/23/18 13:38	1
Benzaldehyde	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
Phenol	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
Bis(2-chloroethyl) ether	**9.0**	**J**	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
2-Chlorophenol	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
2-Methylphenol	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
2,2'-Oxybis(1-chloropropane)	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
Acetophenone	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
4-Methylphenol	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
N-Nitroso-di-n propylamine	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Hexachloroethane	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Nitrobenzene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Isophorone	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
2-Nitrophenol	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
2,4-Dimethylphenol	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Bis(2-chloroethoxy)methane	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
2,4-Dichlorophenol	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Naphthalene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1

Client Sample ID: PW-1 (U) Discharge

Lab Sample ID: 460-153936-1
Matrix: Water

Date Collected: 04/12/18 14:40
Date Received: 04/12/18 20:55

Method: SVOA - 2.3/Semivolatiles (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
Hexachlorobutadiene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Caprolactam	**0.43**	**J**	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
4-Chloro-3-methylphenol	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
2-Methylnaphthalene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Hexachlorocyclo-pentadiene	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
2,4,6-Trichlorophenol	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
2,4,5-Trichlorophenol	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
1,1'-Biphenyl	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
2-Chloronaphthalene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
2-Nitroaniline	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Dimethylphthalate	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
2,6-Dinitrotoluene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Acenaphthylene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
3-Nitroaniline	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
Acenaphthene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
2,4-Dinitrophenol	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
4-Nitrophenol	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
Dibenzofuran	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
2,4-Dinitrotoluene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Diethylphthalate	**0.39**	**J B**	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Fluorene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
4-Chlorophenyl-phenyl ether	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
4-Nitroaniline	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
4,6-Dinitro-2-methylphenol	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
N-Nitrosodiphenylamine	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
1,2,4,5-Tetrachlorobenzene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
4-Bromophenyl-phenylether	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Hexachlorobenzene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Atrazine	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
Pentachlorophenol	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
Phenanthrene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Anthracene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Carbazole	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
Di-n-butylphthalate	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Fluoranthene	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
Pyrene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Butylbenzylphthalate	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
3,3'-Dichlorobenzidine	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
Benzo(a)anthracene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Chrysene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Bis(2-ethylhexyl)phthalate	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Di-n-octylphthalate	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
Benzo(b)fluoranthene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Benzo(k)fluoranthene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Benzo(a)pyrene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Indeno(1,2,3-cd)pyrene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Dibenzo(a,h)anthracene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Benzo(g,h,i)perylene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1

Client Sample ID: PW-1 (U) Discharge — Lab Sample ID: 460-153936-1

Date Collected: 04/12/18 14:40 Matrix: Water
Date Received: 04/12/18 20:55

Method: SVOA - 2.3/Semivolatiles (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6-Tetrachlorophenol	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*2.5*	*J B*	*ug/L*		*5.64*		*04/17/18 13:43*	*04/23/18 13:38*	*1*
Benzene, 1,2,3-trimethyl-	*2.8*	*J N*	*ug/L*		*7.79*	*526-73-8*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
Indane	*2.5*	*J N*	*ug/L*		*8.37*	*496-11-7*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
Unknown	*10*	*J*	*ug/L*		*12.86*		*04/17/18 13:43*	*04/23/18 13:38*	*1*
Phenol, 4,4'-(1-methylethylidene)bis-	*2.9*	*J N*	*ug/L*		*18.39*	*80-05-7*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
Total Alkanes			*ug/L*			*STL00989*	*04/17/18 13:43*	*04/23/18 13:38*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*60*		*40 - 110*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
Phenol-d5	*64*		*10 - 130*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
Bis(2-chloroethyl)ether-d8	*66*		*25 - 120*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
2-Chlorophenol-d4	*67*		*20 - 130*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
4-Methylphenol-d8	*70*		*25 - 125*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
Nitrobenzene-d5	*64*		*20 - 125*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
2-Nitrophenol-d4	*67*		*20 - 130*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
2,4-Dichlorophenol-d3	*64*		*20 - 120*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
4-Chloroaniline-d4	*34*		*1 - 146*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
Dimethylphthalate-d6	*65*		*25 - 130*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
Acenaphthylene-d8	*68*		*10 - 130*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
4-Nitrophenol-d4	*73*		*10 - 150*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
Fluorene-d10	*64*		*25 - 125*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
4,6-Dinitro-2-methylphenol-d2	*52*		*10 - 130*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
Anthracene-d10	*70*		*25 - 130*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
Pyrene-d10	*69*		*15 - 130*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
Benzo(a)pyrene-d12	*67*		*20 - 130*	*04/17/18 13:43*	*04/23/18 13:38*	*1*

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.0	U	5.0	4.2	ug/L		04/14/18 00:05	04/14/18 15:09	1
Cadmium	5.0	U	5.0	2.1	ug/L		04/14/18 00:05	04/14/18 15:09	1
Chromium	10.0	U	10.0	5.9	ug/L		04/14/18 00:05	04/14/18 15:09	1
Copper	25.0	U	25.0	5.5	ug/L		04/14/18 00:05	04/14/18 15:09	1
Lead	5.0	U	5.0	3.8	ug/L		04/14/18 00:05	04/14/18 15:09	1
Molybdenum	20.0	U	20.0	4.7	ug/L		04/14/18 00:05	04/14/18 15:09	1
Nickel	40.0	U	40.0	6.3	ug/L		04/14/18 00:05	04/14/18 15:09	1
Selenium	5.0	U	5.0	4.2	ug/L		04/14/18 00:05	04/14/18 15:09	1
Zinc	**33.4**		30.0	5.4	ug/L		04/14/18 00:05	04/14/18 15:09	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.17	ug/L		04/20/18 11:49	04/20/18 13:29	1

Method: CVAA - 2.3/CVAA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.075	ug/L		04/23/18 09:40	04/24/18 10:13	1

Client Sample ID: PW-1 (U) Discharge — Lab Sample ID: 460-153936-1

Date Collected: 04/12/18 14:40 Matrix: Water
Date Received: 04/12/18 20:55

Method: ICP-MS - 2.3/ICP-MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	20.0	U	20.0	3.2	ug/L		04/19/18 11:52	04/23/18 13:12	1
Antimony	2.0	U	2.0	0.21	ug/L		04/19/18 11:52	04/23/18 13:12	1
Arsenic	**2.1**		1.0	0.39	ug/L		04/19/18 11:52	04/23/18 13:12	1
Barium	**361**		10.0	0.82	ug/L		04/19/18 11:52	04/23/18 13:12	1
Beryllium	1.0	U	1.0	0.095	ug/L		04/19/18 11:52	04/23/18 13:12	1
Cadmium	1.0	U	1.0	0.080	ug/L		04/19/18 11:52	04/23/18 13:12	1
Calcium	**15200**		500	123	ug/L		04/19/18 11:52	04/23/18 13:12	1
Chromium	2.0	U	2.0	0.46	ug/L		04/19/18 11:52	04/23/18 13:12	1
Cobalt	**25.7**		1.0	0.029	ug/L		04/19/18 11:52	04/23/18 13:12	1
Copper	**1.2**	J	2.0	0.33	ug/L		04/19/18 11:52	04/23/18 13:12	1
Iron	**26100**		200	28.1	ug/L		04/19/18 11:52	04/23/18 13:12	1
Lead	**0.98**	J	1.0	0.25	ug/L		04/19/18 11:52	04/23/18 13:12	1
Magnesium	**8780**		500	31.1	ug/L		04/19/18 11:52	04/23/18 13:12	1
Manganese	**2130**		1.0	0.35	ug/L		04/19/18 11:52	04/23/18 13:12	1
Nickel	**3.4**		1.0	0.17	ug/L		04/19/18 11:52	04/23/18 13:12	1
Potassium	**3040**		500	1.7	ug/L		04/19/18 11:52	04/23/18 13:12	1
Selenium	**1.8**	J	5.0	1.2	ug/L		04/19/18 11:52	04/23/18 13:12	1
Silver	1.0	U	1.0	0.031	ug/L		04/19/18 11:52	04/23/18 13:12	1
Sodium	**27300**		500	38.7	ug/L		04/19/18 11:52	04/23/18 13:12	1
Thallium	1.0	U	1.0	0.14	ug/L		04/19/18 11:52	04/23/18 13:12	1
Vanadium	5.0	U	5.0	0.16	ug/L		04/19/18 11:52	04/23/18 13:12	1
Zinc	**30.2**		2.0	0.98	ug/L		04/19/18 11:52	04/23/18 13:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.23**		0.10	0.045	mg/L		04/24/18 07:58	04/24/18 10:38	1
pH	**6.54**				SU			04/24/18 12:23	1
Corrosivity	**6.54**				SU			04/24/18 12:23	1
Total Suspended Solids	**14.0**		2.0	2.0	mg/L			04/17/18 10:30	1
Biochemical Oxygen Demand	**1.6**		1.5	1.5	mg/L			04/13/18 18:52	1
Cyanide	**4.2**	J	10.0	0.80	ug/L		04/23/18 10:30	04/23/18 15:50	1

Client Sample ID: VHBLK01 — Lab Sample ID: 460-153936-2

Date Collected: 04/12/18 00:00 Matrix: Water
Date Received: 04/12/18 20:55

Method: Trace VOA - 2.3/Trace Volatiles

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
Chloromethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
Vinyl chloride	0.50	U	0.50		ug/L			04/18/18 14:00	1
Bromomethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
Chloroethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
Trichlorofluoromethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,1-Dichloroethene	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
Acetone	5.0	U	5.0		ug/L			04/18/18 14:00	1
Carbon disulfide	0.50	U	0.50		ug/L			04/18/18 14:00	1
Methyl acetate	0.50	U	0.50		ug/L			04/18/18 14:00	1
Methylene Chloride	0.50	U	0.50		ug/L			04/18/18 14:00	1

Client Sample ID: VHBLK01 Lab Sample ID: 460-153936-2

Date Collected: 04/12/18 00:00 Matrix: Water
Date Received: 04/12/18 20:55

Method: Trace VOA - 2.3/Trace Volatiles (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	0.50	U	0.50		ug/L			04/18/18 14:00	1
Methyl tert-butyl ether	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,1-Dichloroethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
cis-1,2-Dichloroethene	0.50	U	0.50		ug/L			04/18/18 14:00	1
2-Butanone	5.0	U	5.0		ug/L			04/18/18 14:00	1
Bromochloromethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
Chloroform	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,1,1-Trichloroethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
Cyclohexane	0.50	U	0.50		ug/L			04/18/18 14:00	1
Carbon tetrachloride	0.50	U	0.50		ug/L			04/18/18 14:00	1
Benzene	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,2-Dichloroethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
Trichloroethene	0.50	U	0.50		ug/L			04/18/18 14:00	1
Methylcyclohexane	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,2-Dichloropropane	0.50	U	0.50		ug/L			04/18/18 14:00	1
Bromodichloromethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
cis-1,3-Dichloropropene	0.50	U	0.50		ug/L			04/18/18 14:00	1
4-Methyl-2-pentanone	5.0	U	5.0		ug/L			04/18/18 14:00	1
Toluene	0.50	U	0.50		ug/L			04/18/18 14:00	1
trans-1,3-Dichloropropene	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,1,2-Trichloroethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
Tetrachloroethene	0.50	U	0.50		ug/L			04/18/18 14:00	1
2-Hexanone	5.0	U	5.0		ug/L			04/18/18 14:00	1
Dibromochloromethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,2-Dibromoethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
Chlorobenzene	0.50	U	0.50		ug/L			04/18/18 14:00	1
Ethylbenzene	0.50	U	0.50		ug/L			04/18/18 14:00	1
o-Xylene	0.50	U	0.50		ug/L			04/18/18 14:00	1
m,p-Xylene	0.50	U	0.50		ug/L			04/18/18 14:00	1
Styrene	0.50	U	0.50		ug/L			04/18/18 14:00	1
Bromoform	0.50	U	0.50		ug/L			04/18/18 14:00	1
Isopropylbenzene	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,1,2,2-Tetrachloroethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,3-Dichlorobenzene	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,4-Dichlorobenzene	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,2-Dichlorobenzene	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,2-Dibromo-3-Chloropropane	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,2,4-Trichlorobenzene	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,2,3-Trichlorobenzene	0.50	U	0.50		ug/L			04/18/18 14:00	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/18/18 14:00*	*1*
Total Alkanes			*ug/L*			*STL00989*		*04/18/18 14:00*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Vinyl chloride-d3	*80*		*40 - 130*		*04/18/18 14:00*	*1*
Chloroethane-d5	*94*		*65 - 130*		*04/18/18 14:00*	*1*
1,1-Dichloroethene-d2	*69*		*60 - 125*		*04/18/18 14:00*	*1*
2-Butanone-d5	*75*		*40 - 130*		*04/18/18 14:00*	*1*
Chloroform-d	*95*		*70 - 125*		*04/18/18 14:00*	*1*

Client Sample ID: VHBLK01

Lab Sample ID: 460-153936-2

Date Collected: 04/12/18 00:00

Matrix: Water

Date Received: 04/12/18 20:55

Method: Trace VOA - 2.3/Trace Volatiles (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	100		70 - 130		04/18/18 14:00	1
Benzene-d6	103		70 - 125		04/18/18 14:00	1
1,2-Dichloropropane-d6	82		60 - 140		04/18/18 14:00	1
Toluene-d8	100		70 - 130		04/18/18 14:00	1
trans-1,3-Dichloropropene-d4	93		55 - 130		04/18/18 14:00	1
2-Hexanone-d5	81		45 - 130		04/18/18 14:00	1
1,1,2,2-Tetrachloroethane-d2	91		65 - 120		04/18/18 14:00	1
1,2-Dichlorobenzene-d4	107		80 - 120		04/18/18 14:00	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G TTO

TestAmerica Job ID: 460-153908-1
SDG: 153908

Client Sample ID: TTO_041218

Lab Sample ID: 460-153908-1

Date Collected: 04/12/18 14:20
Date Received: 04/12/18 20:55

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/18/18 11:26	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/18/18 11:26	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/18/18 11:26	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/18/18 11:26	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/18/18 11:26	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/18/18 11:26	1
1,1-Dichloroethane	**0.27**	**J**	1.0	0.24	ug/L			04/18/18 11:26	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/18/18 11:26	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/18/18 11:26	1
1,2-Dichloroethane	**0.92**	**J**	1.0	0.25	ug/L			04/18/18 11:26	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/18/18 11:26	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/18/18 11:26	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/18/18 11:26	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/18/18 11:26	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/18/18 11:26	1
Trichloroethene	**0.40**	**J**	1.0	0.22	ug/L			04/18/18 11:26	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/18/18 11:26	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/18/18 11:26	1
Benzene	**11**		1.0	0.090	ug/L			04/18/18 11:26	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/18/18 11:26	1
2-Chloroethyl vinyl ether	0.17	U	1.0	0.17	ug/L			04/18/18 11:26	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/18/18 11:26	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/18/18 11:26	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/18/18 11:26	1
Toluene	**26**		1.0	0.25	ug/L			04/18/18 11:26	1
Chlorobenzene	**59**		1.0	0.24	ug/L			04/18/18 11:26	1
Ethylbenzene	**2.0**		1.0	0.30	ug/L			04/18/18 11:26	1
Acrolein	0.88	U	4.0	0.88	ug/L			04/18/18 11:26	1
Acrylonitrile	1.0	U	2.0	1.0	ug/L			04/18/18 11:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*119*		*48 - 130*		*04/18/18 11:26*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*		*04/18/18 11:26*	*1*
Bromofluorobenzene	*91*		*71 - 131*		*04/18/18 11:26*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*04/18/18 11:26*	*1*

Method: 625 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/13/18 16:46	04/14/18 12:48	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/13/18 16:46	04/14/18 12:48	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/13/18 16:46	04/14/18 12:48	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/13/18 16:46	04/14/18 12:48	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/13/18 16:46	04/14/18 12:48	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/13/18 16:46	04/14/18 12:48	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/13/18 16:46	04/14/18 12:48	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/13/18 16:46	04/14/18 12:48	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/13/18 16:46	04/14/18 12:48	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/13/18 16:46	04/14/18 12:48	1
Pentachlorophenol	1.4	U	20	1.4	ug/L		04/13/18 16:46	04/14/18 12:48	1
N-Nitrosodimethylamine	0.45	U	10	0.45	ug/L		04/13/18 16:46	04/14/18 12:48	1

Client Sample ID: TTO_041218

Lab Sample ID: 460-153908-1

Date Collected: 04/12/18 14:20
Date Received: 04/12/18 20:55

Matrix: Water

Method: 625 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	**17**		1.0	0.30	ug/L		04/13/18 16:46	04/14/18 12:48	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/13/18 16:46	04/14/18 12:48	1
1,4-Dichlorobenzene	**3.3**	**J**	10	1.3	ug/L		04/13/18 16:46	04/14/18 12:48	1
1,2-Dichlorobenzene	**1.7**	**J**	10	1.3	ug/L		04/13/18 16:46	04/14/18 12:48	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/13/18 16:46	04/14/18 12:48	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/13/18 16:46	04/14/18 12:48	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/13/18 16:46	04/14/18 12:48	1
Isophorone	0.80	U	10	0.80	ug/L		04/13/18 16:46	04/14/18 12:48	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/13/18 16:46	04/14/18 12:48	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/13/18 16:46	04/14/18 12:48	1
Naphthalene	**4.0**	**J**	10	1.1	ug/L		04/13/18 16:46	04/14/18 12:48	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/13/18 16:46	04/14/18 12:48	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/13/18 16:46	04/14/18 12:48	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/13/18 16:46	04/14/18 12:48	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/13/18 16:46	04/14/18 12:48	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/13/18 16:46	04/14/18 12:48	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/13/18 16:46	04/14/18 12:48	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/13/18 16:46	04/14/18 12:48	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/13/18 16:46	04/14/18 12:48	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/13/18 16:46	04/14/18 12:48	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/13/18 16:46	04/14/18 12:48	1
Fluorene	0.91	U	10	0.91	ug/L		04/13/18 16:46	04/14/18 12:48	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/13/18 16:46	04/14/18 12:48	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/13/18 16:46	04/14/18 12:48	1
Hexachlorobenzene	0.40	U	1.0	0.40	ug/L		04/13/18 16:46	04/14/18 12:48	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/13/18 16:46	04/14/18 12:48	1
Anthracene	0.63	U	10	0.63	ug/L		04/13/18 16:46	04/14/18 12:48	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/13/18 16:46	04/14/18 12:48	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/13/18 16:46	04/14/18 12:48	1
Pyrene	1.6	U	10	1.6	ug/L		04/13/18 16:46	04/14/18 12:48	1
Benzidine	5.1	U	10	5.1	ug/L		04/13/18 16:46	04/14/18 12:48	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/13/18 16:46	04/14/18 12:48	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/13/18 16:46	04/14/18 12:48	1
Benzo[a]anthracene	0.59	U	1.0	0.59	ug/L		04/13/18 16:46	04/14/18 12:48	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/13/18 16:46	04/14/18 12:48	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/13/18 16:46	04/14/18 12:48	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/13/18 16:46	04/14/18 12:48	1
Benzo[b]fluoranthene	1.1	U	2.0	1.1	ug/L		04/13/18 16:46	04/14/18 12:48	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/13/18 16:46	04/14/18 12:48	1
Benzo[a]pyrene	0.41	U	1.0	0.41	ug/L		04/13/18 16:46	04/14/18 12:48	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/13/18 16:46	04/14/18 12:48	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/13/18 16:46	04/14/18 12:48	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/13/18 16:46	04/14/18 12:48	1
1,2-Diphenylhydrazine	0.37	U	10	0.37	ug/L		04/13/18 16:46	04/14/18 12:48	1
2,3,7,8-TCDD	1.0	U	1.0	1.0	ug/L		04/13/18 16:46	04/14/18 12:48	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/13/18 16:46	04/14/18 12:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*94*		*49 - 125*	*04/13/18 16:46*	*04/14/18 12:48*	*1*
Phenol-d5	*20*		*10 - 150*	*04/13/18 16:46*	*04/14/18 12:48*	*1*

Client Sample ID: TTO_041218

Lab Sample ID: 460-153908-1

Date Collected: 04/12/18 14:20
Date Received: 04/12/18 20:55

Matrix: Water

Method: 625 - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*88*		*28 - 150*	*04/13/18 16:46*	*04/14/18 12:48*	*1*
2-Fluorophenol	*40*		*10 - 76*	*04/13/18 16:46*	*04/14/18 12:48*	*1*
2,4,6-Tribromophenol	*117*		*14 - 149*	*04/13/18 16:46*	*04/14/18 12:48*	*1*
2-Fluorobiphenyl	*101*		*44 - 129*	*04/13/18 16:46*	*04/14/18 12:48*	*1*

Method: 608 - Organochlorine Pesticides/PCBs in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	0.012	U	0.020	0.012	ug/L		04/17/18 08:16	04/18/18 13:10	1
alpha-BHC	0.013	U	0.020	0.013	ug/L		04/17/18 08:16	04/18/18 13:10	1
beta-BHC	0.015	U	0.030	0.015	ug/L		04/17/18 08:16	04/18/18 13:10	1
delta-BHC	0.0090	U	0.020	0.0090	ug/L		04/17/18 08:16	04/18/18 13:10	1
gamma-BHC (Lindane)	0.013	U	0.030	0.013	ug/L		04/17/18 08:16	04/18/18 13:10	1
Chlordane	0.093	U	0.50	0.093	ug/L		04/17/18 08:16	04/18/18 13:10	1
4,4'-DDD	0.018	U	0.040	0.018	ug/L		04/17/18 08:16	04/18/18 13:10	1
4,4'-DDE	0.018	U	0.030	0.018	ug/L		04/17/18 08:16	04/18/18 13:10	1
4,4'-DDT	0.025	U	0.030	0.025	ug/L		04/17/18 08:16	04/18/18 13:10	1
Dieldrin	0.016	U	0.020	0.016	ug/L		04/17/18 08:16	04/18/18 13:10	1
Endosulfan I	0.014	U	0.030	0.014	ug/L		04/17/18 08:16	04/18/18 13:10	1
Endosulfan II	0.017	U	0.030	0.017	ug/L		04/17/18 08:16	04/18/18 13:10	1
Endosulfan sulfate	0.015	U	0.030	0.015	ug/L		04/17/18 08:16	04/18/18 13:10	1
Endrin	0.021	U	0.030	0.021	ug/L		04/17/18 08:16	04/18/18 13:10	1
Endrin aldehyde	0.024	U	0.030	0.024	ug/L		04/17/18 08:16	04/18/18 13:10	1
Heptachlor	0.014	U	0.030	0.014	ug/L		04/17/18 08:16	04/18/18 13:10	1
Heptachlor epoxide	0.014	U	0.030	0.014	ug/L		04/17/18 08:16	04/18/18 13:10	1
Toxaphene	0.20	U	0.50	0.20	ug/L		04/17/18 08:16	04/18/18 13:10	1
Aroclor 1016	0.030	U	1.0	0.030	ug/L		04/17/18 08:16	04/18/18 13:10	1
Aroclor 1221	0.030	U	1.0	0.030	ug/L		04/17/18 08:16	04/18/18 13:10	1
Aroclor 1232	0.030	U	1.0	0.030	ug/L		04/17/18 08:16	04/18/18 13:10	1
Aroclor 1242	0.030	U	1.0	0.030	ug/L		04/17/18 08:16	04/18/18 13:10	1
Aroclor 1248	0.030	U	1.0	0.030	ug/L		04/17/18 08:16	04/18/18 13:10	1
Aroclor 1254	0.037	U	1.0	0.037	ug/L		04/17/18 08:16	04/18/18 13:10	1
Aroclor 1260	0.037	U	1.0	0.037	ug/L		04/17/18 08:16	04/18/18 13:10	1
Aroclor 1262	0.037	U	1.0	0.037	ug/L		04/17/18 08:16	04/18/18 13:10	1
Aroclor 1268	0.037	U	1.0	0.037	ug/L		04/17/18 08:16	04/18/18 13:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*113*		*22 - 150*	*04/17/18 08:16*	*04/18/18 13:10*	*1*
Tetrachloro-m-xylene	*108*		*22 - 150*	*04/17/18 08:16*	*04/18/18 13:10*	*1*
DCB Decachlorobiphenyl	*125*		*10 - 150*	*04/17/18 08:16*	*04/18/18 13:10*	*1*
DCB Decachlorobiphenyl	*138*		*10 - 150*	*04/17/18 08:16*	*04/18/18 13:10*	*1*

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**6.4**		5.0	4.2	ug/L		04/14/18 00:05	04/14/18 15:05	1
Cadmium	2.1	U	5.0	2.1	ug/L		04/14/18 00:05	04/14/18 15:05	1
Chromium	5.9	U	10.0	5.9	ug/L		04/14/18 00:05	04/14/18 15:05	1
Copper	**11.8**	**J**	25.0	5.5	ug/L		04/14/18 00:05	04/14/18 15:05	1
Lead	3.8	U	5.0	3.8	ug/L		04/14/18 00:05	04/14/18 15:05	1
Molybdenum	4.7	U	20.0	4.7	ug/L		04/14/18 00:05	04/14/18 15:05	1
Nickel	**11.0**	**J**	40.0	6.3	ug/L		04/14/18 00:05	04/14/18 15:05	1

Client Sample ID: TTO_041218

Lab Sample ID: 460-153908-1

Date Collected: 04/12/18 14:20
Date Received: 04/12/18 20:55

Matrix: Water

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	4.2	U	5.0	4.2	ug/L		04/14/18 00:05	04/14/18 15:05	1
Zinc	**15.4**	**J**	30.0	5.4	ug/L		04/14/18 00:05	04/14/18 15:05	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/17/18 12:28	04/17/18 14:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.0020	U	0.010	0.0020	mg/L		04/17/18 13:08	04/17/18 18:08	1
Ammonia	**0.89**		0.10	0.045	mg/L		04/17/18 21:29	04/18/18 17:20	1
pH	**6.6**	**HF**			SU			04/18/18 17:18	1
Total Suspended Solids	**49.2**		4.0	4.0	mg/L			04/16/18 08:32	1
Biochemical Oxygen Demand	1.5	U	1.5	1.5	mg/L			04/13/18 16:13	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G

TestAmerica Job ID: 460-154202-1

Client Sample ID: C-22S

Lab Sample ID: 460-154202-1

Date Collected: 04/17/18 08:50
Date Received: 04/17/18 20:45

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**39**		0.40	0.20	ug/L			04/20/18 02:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*72 - 133*		*04/20/18 02:56*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*71 - 144*		*04/20/18 02:56*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/21/18 16:35	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/21/18 16:35	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/21/18 16:35	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/21/18 16:35	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/21/18 16:35	1
Acetone	5 **4.4**	**J** U	5.0	1.1	ug/L			04/21/18 16:35	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/21/18 16:35	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/21/18 16:35	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/21/18 16:35	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/21/18 16:35	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/21/18 16:35	1
Chloroform	**0.86**	**J**	1.0	0.22	ug/L			04/21/18 16:35	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/21/18 16:35	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/21/18 16:35	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/21/18 16:35	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/21/18 16:35	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/21/18 16:35	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/21/18 16:35	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/21/18 16:35	1
Trichloroethene	**1.5**		1.0	0.22	ug/L			04/21/18 16:35	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/21/18 16:35	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/21/18 16:35	1
Benzene	0.090	U	1.0	0.090	ug/L			04/21/18 16:35	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/21/18 16:35	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/21/18 16:35	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/21/18 16:35	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/21/18 16:35	1
Tetrachloroethene	**1.1**		1.0	0.12	ug/L			04/21/18 16:35	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/21/18 16:35	1
Toluene	0.25	U	1.0	0.25	ug/L			04/21/18 16:35	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/21/18 16:35	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/21/18 16:35	1
Styrene	0.17	U	1.0	0.17	ug/L			04/21/18 16:35	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/21/18 16:35	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/21/18 16:35	1
MTBE	0.13	U	1.0	0.13	ug/L			04/21/18 16:35	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/21/18 16:35	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/21/18 16:35	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/21/18 16:35	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/21/18 16:35	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/21/18 16:35	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/21/18 16:35	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G

TestAmerica Job ID: 460-154202-1

Client Sample ID: C-22S

Lab Sample ID: 460-154202-1

Date Collected: 04/17/18 08:50
Date Received: 04/17/18 20:45

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/21/18 16:35	1
Indane	0.12	U	1.0	0.12	ug/L			04/21/18 16:35	1
Dichlorofluoromethane	**0.54**	~~J~~ J+	1.0	0.21	ug/L			04/21/18 16:35	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/21/18 16:35	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Isopropyl Alcohol	*5.7*	*J N*	*ug/L*		*2.03*	*67-63-0*		*04/21/18 16:35*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*121*		*74 - 132*		*04/21/18 16:35*	*1*
Bromofluorobenzene	*93*		*77 - 124*		*04/21/18 16:35*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*		*04/21/18 16:35*	*1*
Dibromofluoromethane (Surr)	*110*		*72 - 131*		*04/21/18 16:35*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/19/18 00:48	04/19/18 12:46	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/19/18 00:48	04/19/18 12:46	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/19/18 00:48	04/19/18 12:46	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/19/18 00:48	04/19/18 12:46	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/19/18 00:48	04/19/18 12:46	1
Bis(2-chloroethyl)ether	**0.86**		0.030	0.026	ug/L		04/19/18 00:48	04/19/18 12:46	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/19/18 00:48	04/19/18 13:30	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/19/18 00:48	04/19/18 13:30	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/19/18 00:48	04/19/18 13:30	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/19/18 00:48	04/19/18 13:30	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/19/18 00:48	04/19/18 13:30	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/19/18 00:48	04/19/18 13:30	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/19/18 00:48	04/19/18 13:30	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/19/18 00:48	04/19/18 13:30	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/19/18 00:48	04/19/18 13:30	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/19/18 00:48	04/19/18 13:30	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/19/18 00:48	04/19/18 13:30	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/19/18 00:48	04/19/18 13:30	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/19/18 00:48	04/19/18 13:30	1
1,3-Dichlorobenzene	2.0	~~U~~ UJ	10	2.0	ug/L		04/19/18 00:48	04/19/18 13:30	1
1,4-Dichlorobenzene	1.3	~~U~~ UJ	10	1.3	ug/L		04/19/18 00:48	04/19/18 13:30	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/19/18 00:48	04/19/18 13:30	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/19/18 00:48	04/19/18 13:30	1
Hexachloroethane	1.2	~~U~~ UJ	2.0	1.2	ug/L		04/19/18 00:48	04/19/18 13:30	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/19/18 00:48	04/19/18 13:30	1
Isophorone	0.80	U	10	0.80	ug/L		04/19/18 00:48	04/19/18 13:30	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/19/18 00:48	04/19/18 13:30	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/19/18 00:48	04/19/18 13:30	1
Naphthalene	1.1	U	10	1.1	ug/L		04/19/18 00:48	04/19/18 13:30	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/19/18 00:48	04/19/18 13:30	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/19/18 00:48	04/19/18 13:30	1

Client Sample ID: C-22S

Lab Sample ID: 460-154202-1

Date Collected: 04/17/18 08:50
Date Received: 04/17/18 20:45

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/19/18 00:48	04/19/18 13:30	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/19/18 00:48	04/19/18 13:30	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/19/18 00:48	04/19/18 13:30	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/19/18 00:48	04/19/18 13:30	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/19/18 00:48	04/19/18 13:30	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/19/18 00:48	04/19/18 13:30	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/19/18 00:48	04/19/18 13:30	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/19/18 00:48	04/19/18 13:30	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/19/18 00:48	04/19/18 13:30	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/19/18 00:48	04/19/18 13:30	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/19/18 00:48	04/19/18 13:30	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/19/18 00:48	04/19/18 13:30	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/19/18 00:48	04/19/18 13:30	1
Fluorene	0.91	U	10	0.91	ug/L		04/19/18 00:48	04/19/18 13:30	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/19/18 00:48	04/19/18 13:30	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/19/18 00:48	04/19/18 13:30	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/19/18 00:48	04/19/18 13:30	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/19/18 00:48	04/19/18 13:30	1
Anthracene	0.63	U	10	0.63	ug/L		04/19/18 00:48	04/19/18 13:30	1
Carbazole	0.68	U	10	0.68	ug/L		04/19/18 00:48	04/19/18 13:30	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/19/18 00:48	04/19/18 13:30	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/19/18 00:48	04/19/18 13:30	1
Pyrene	1.6	U	10	1.6	ug/L		04/19/18 00:48	04/19/18 13:30	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/19/18 00:48	04/19/18 13:30	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/19/18 00:48	04/19/18 13:30	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/19/18 00:48	04/19/18 13:30	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/19/18 00:48	04/19/18 13:30	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/19/18 00:48	04/19/18 13:30	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/19/18 00:48	04/19/18 13:30	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/19/18 00:48	04/19/18 13:30	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/19/18 00:48	04/19/18 13:30	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/19/18 00:48	04/19/18 13:30	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/19/18 00:48	04/19/18 13:30	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/19/18 00:48	04/19/18 13:30	1
Caprolactam	0.68	U	10	0.68	ug/L		04/19/18 00:48	04/19/18 13:30	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/19/18 00:48	04/19/18 13:30	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/19/18 00:48	04/19/18 13:30	1
N-Methylaniline	0.48	~~U~~* UJ	5.0	0.48	ug/L		04/19/18 00:48	04/19/18 13:30	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*11*	*J*	*ug/L*		*6.28*		*04/19/18 00:48*	*04/19/18 13:30*	*1*
Unknown	*130*	*J*	*ug/L*		*7.13*		*04/19/18 00:48*	*04/19/18 13:30*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*91*		*51 - 108*	*04/19/18 00:48*	*04/19/18 13:30*	*1*
Phenol-d5	*20*		*14 - 39*	*04/19/18 00:48*	*04/19/18 13:30*	*1*
Terphenyl-d14	*97*		*40 - 148*	*04/19/18 00:48*	*04/19/18 13:30*	*1*
2,4,6-Tribromophenol	*102*		*26 - 139*	*04/19/18 00:48*	*04/19/18 13:30*	*1*
2-Fluorophenol	*38*		*25 - 58*	*04/19/18 00:48*	*04/19/18 13:30*	*1*
2-Fluorobiphenyl	*75*		*45 - 107*	*04/19/18 00:48*	*04/19/18 13:30*	*1*

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G

TestAmerica Job ID: 460-154202-1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 18:44	5
Aluminum	**194**		50.0	28.5	ug/L		04/19/18 23:10	04/20/18 18:44	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/19/18 23:10	04/20/18 18:44	5
Barium	**209**		5.0	3.2	ug/L		04/19/18 23:10	04/20/18 18:44	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/19/18 23:10	04/20/18 18:44	5
Calcium	**56200**		250	233	ug/L		04/19/18 23:10	04/20/18 18:44	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/19/18 23:10	04/20/18 18:44	5
Cobalt	**8.3**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:44	5
Chromium	**451**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:44	5
Copper	**21.4**		5.0	3.3	ug/L		04/19/18 23:10	04/20/18 18:44	5
Iron	**3190**		150	97.8	ug/L		04/19/18 23:10	04/20/18 18:44	5
Potassium	**5770**		250	143	ug/L		04/19/18 23:10	04/20/18 18:44	5
Magnesium	**59400**		250	155	ug/L		04/19/18 23:10	04/20/18 18:44	5
Manganese	**186**		10.0	6.1	ug/L		04/19/18 23:10	04/20/18 18:44	5
Sodium	**25300**		250	213	ug/L		04/19/18 23:10	04/20/18 18:44	5
Nickel	**448**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:44	5
Lead	**1.0**	**J**	1.5	0.93	ug/L		04/19/18 23:10	04/20/18 18:44	5
Antimony	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 18:44	5
Selenium	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 18:44	5
Thallium	0.60	U	1.0	0.60	ug/L		04/19/18 23:10	04/20/18 18:44	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 18:44	5
Zinc	**70.2**		20.0	16.3	ug/L		04/19/18 23:10	04/20/18 18:44	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12	U	0.20	0.12	ug/L		04/19/18 11:42	04/19/18 14:17	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**3850**		150	92.1	ug/L		04/20/18 08:34	04/21/18 20:53	1
Manganese, Dissolved	**231**		15.0	3.1	ug/L		04/20/18 08:34	04/21/18 20:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.13**		0.10	0.045	mg/L		04/20/18 18:37	04/23/18 10:41	1

Client Sample ID: B-3D

Lab Sample ID: 460-154202-2

Date Collected: 04/17/18 09:00

Matrix: Water

Date Received: 04/17/18 20:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/21/18 17:52	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/21/18 17:52	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/21/18 17:52	1
Chloroethane	**2.5**	~~*~~ J+	1.0	0.37	ug/L			04/21/18 17:52	1
Methylene Chloride	**0.34**	**J**	1.0	0.21	ug/L			04/21/18 17:52	1
Acetone	5 ~~**1.4**~~	~~**J**~~ U	5.0	1.1	ug/L			04/21/18 17:52	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/21/18 17:52	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/21/18 17:52	1
1,1-Dichloroethane	**0.68**	**J**	1.0	0.24	ug/L			04/21/18 17:52	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/21/18 17:52	1
cis-1,2-Dichloroethene	**1.2**		1.0	0.26	ug/L			04/21/18 17:52	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/21/18 17:52	1

Client Sample ID: B-3D

Lab Sample ID: 460-154202-2

Date Collected: 04/17/18 09:00
Date Received: 04/17/18 20:45

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	**69**		1.0	0.25	ug/L			04/21/18 17:52	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/21/18 17:52	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/21/18 17:52	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/21/18 17:52	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/21/18 17:52	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/21/18 17:52	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/21/18 17:52	1
Trichloroethene	**1.6**		1.0	0.22	ug/L			04/21/18 17:52	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/21/18 17:52	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/21/18 17:52	1
Benzene	**11**		1.0	0.090	ug/L			04/21/18 17:52	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/21/18 17:52	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/21/18 17:52	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/21/18 17:52	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/21/18 17:52	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/21/18 17:52	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/21/18 17:52	1
Toluene	0.25	U	1.0	0.25	ug/L			04/21/18 17:52	1
Chlorobenzene	**3.6**		1.0	0.24	ug/L			04/21/18 17:52	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/21/18 17:52	1
Styrene	0.17	U	1.0	0.17	ug/L			04/21/18 17:52	1
Xylenes, Total	**3.0**		2.0	0.28	ug/L			04/21/18 17:52	1
Ethyl ether	**2.3**		1.0	0.11	ug/L			04/21/18 17:52	1
MTBE	**0.18**	J	1.0	0.13	ug/L			04/21/18 17:52	1
Tetrahydrofuran	**4.8**		2.0	0.36	ug/L			04/21/18 17:52	1
Cyclohexane	**2.7**		1.0	0.26	ug/L			04/21/18 17:52	1
1,4-Dioxane	**480**		50	8.7	ug/L			04/21/18 17:52	1
1,2,4-Trimethylbenzene	**1.6**		1.0	0.23	ug/L			04/21/18 17:52	1
1,3,5-Trimethylbenzene	**0.37**	J	1.0	0.25	ug/L			04/21/18 17:52	1
Isopropylbenzene	**10**		1.0	0.32	ug/L			04/21/18 17:52	1
N-Propylbenzene	**4.5**		1.0	0.29	ug/L			04/21/18 17:52	1
Methylcyclohexane	**1.6**		1.0	0.22	ug/L			04/21/18 17:52	1
Indane	**18**		1.0	0.12	ug/L			04/21/18 17:52	1
Dichlorofluoromethane	**7.5**	* J+	1.0	0.21	ug/L			04/21/18 17:52	1
1,2,3-Trimethylbenzene	**6.7**		1.0	0.11	ug/L			04/21/18 17:52	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*11*	*J*	*ug/L*		*13.43*			*04/21/18 17:52*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*119*		*74 - 132*		*04/21/18 17:52*	*1*
Bromofluorobenzene	*95*		*77 - 124*		*04/21/18 17:52*	*1*
Toluene-d8 (Surr)	*108*		*80 - 120*		*04/21/18 17:52*	*1*
Dibromofluoromethane (Surr)	*109*		*72 - 131*		*04/21/18 17:52*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/19/18 00:48	04/19/18 13:07	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/19/18 00:48	04/19/18 13:07	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/19/18 00:48	04/19/18 13:07	1

Client Sample ID: B-3D

Lab Sample ID: 460-154202-2

Date Collected: 04/17/18 09:00
Date Received: 04/17/18 20:45

Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/19/18 00:48	04/19/18 13:07	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/19/18 00:48	04/19/18 13:07	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/19/18 00:48	04/19/18 13:51	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/19/18 00:48	04/19/18 13:51	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/19/18 00:48	04/19/18 13:51	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/19/18 00:48	04/19/18 13:51	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/19/18 00:48	04/19/18 13:51	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/19/18 00:48	04/19/18 13:51	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/19/18 00:48	04/19/18 13:51	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/19/18 00:48	04/19/18 13:51	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/19/18 00:48	04/19/18 13:51	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/19/18 00:48	04/19/18 13:51	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/19/18 00:48	04/19/18 13:51	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/19/18 00:48	04/19/18 13:51	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/19/18 00:48	04/19/18 13:51	1
Bis(2-chloroethyl)ether	**23**		1.0	0.30	ug/L		04/19/18 00:48	04/19/18 13:51	1
1,3-Dichlorobenzene	2.0	~~U~~ * UJ	10	2.0	ug/L		04/19/18 00:48	04/19/18 13:51	1
1,4-Dichlorobenzene	1.3	~~U~~ * UJ	10	1.3	ug/L		04/19/18 00:48	04/19/18 13:51	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/19/18 00:48	04/19/18 13:51	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/19/18 00:48	04/19/18 13:51	1
Hexachloroethane	1.2	~~U~~ * UJ	2.0	1.2	ug/L		04/19/18 00:48	04/19/18 13:51	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/19/18 00:48	04/19/18 13:51	1
Isophorone	0.80	U	10	0.80	ug/L		04/19/18 00:48	04/19/18 13:51	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/19/18 00:48	04/19/18 13:51	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/19/18 00:48	04/19/18 13:51	1
Naphthalene	1.1	U	10	1.1	ug/L		04/19/18 00:48	04/19/18 13:51	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/19/18 00:48	04/19/18 13:51	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/19/18 00:48	04/19/18 13:51	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/19/18 00:48	04/19/18 13:51	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/19/18 00:48	04/19/18 13:51	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/19/18 00:48	04/19/18 13:51	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/19/18 00:48	04/19/18 13:51	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/19/18 00:48	04/19/18 13:51	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/19/18 00:48	04/19/18 13:51	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/19/18 00:48	04/19/18 13:51	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/19/18 00:48	04/19/18 13:51	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/19/18 00:48	04/19/18 13:51	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/19/18 00:48	04/19/18 13:51	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/19/18 00:48	04/19/18 13:51	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/19/18 00:48	04/19/18 13:51	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/19/18 00:48	04/19/18 13:51	1
Fluorene	0.91	U	10	0.91	ug/L		04/19/18 00:48	04/19/18 13:51	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/19/18 00:48	04/19/18 13:51	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/19/18 00:48	04/19/18 13:51	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/19/18 00:48	04/19/18 13:51	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/19/18 00:48	04/19/18 13:51	1
Anthracene	0.63	U	10	0.63	ug/L		04/19/18 00:48	04/19/18 13:51	1

Client Sample ID: B-3D

Lab Sample ID: 460-154202-2

Date Collected: 04/17/18 09:00
Date Received: 04/17/18 20:45

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbazole	0.68	U	10	0.68	ug/L		04/19/18 00:48	04/19/18 13:51	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/19/18 00:48	04/19/18 13:51	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/19/18 00:48	04/19/18 13:51	1
Pyrene	1.6	U	10	1.6	ug/L		04/19/18 00:48	04/19/18 13:51	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/19/18 00:48	04/19/18 13:51	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/19/18 00:48	04/19/18 13:51	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/19/18 00:48	04/19/18 13:51	1
Bis(2-ethylhexyl) phthalate	**7.8**		2.0	1.7	ug/L		04/19/18 00:48	04/19/18 13:51	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/19/18 00:48	04/19/18 13:51	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/19/18 00:48	04/19/18 13:51	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/19/18 00:48	04/19/18 13:51	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/19/18 00:48	04/19/18 13:51	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/19/18 00:48	04/19/18 13:51	1
Diphenyl ether	**2.3**	**J**	10	1.2	ug/L		04/19/18 00:48	04/19/18 13:51	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/19/18 00:48	04/19/18 13:51	1
Caprolactam	0.68	U	10	0.68	ug/L		04/19/18 00:48	04/19/18 13:51	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/19/18 00:48	04/19/18 13:51	1
Bisphenol-A	**20**		10	9.9	ug/L		04/19/18 00:48	04/19/18 13:51	1
N-Methylaniline	0.48	~~U*~~ UJ	5.0	0.48	ug/L		04/19/18 00:48	04/19/18 13:51	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Butane, 2-methoxy-2-methyl-	*13*	*J N*	*ug/L*		*1.75*	*994-05-8*	*04/19/18 00:48*	*04/19/18 13:51*	*1*
1,4-Dioxane	*39*	*J N*	*ug/L*		*1.93*	*123-91-1*	*04/19/18 00:48*	*04/19/18 13:51*	*1*
Indane	*9.1*	*J N*	*ug/L*		*4.66*	*496-11-7*	*04/19/18 00:48*	*04/19/18 13:51*	*1*
1,4-Benzenediol, diacetate	*16*	*J N*	*ug/L*		*6.12*	*1205-91-0*	*04/19/18 00:48*	*04/19/18 13:51*	*1*
Unknown	*10*	*J*	*ug/L*		*6.28*		*04/19/18 00:48*	*04/19/18 13:51*	*1*
Unknown	*90*	*J*	*ug/L*		*7.12*		*04/19/18 00:48*	*04/19/18 13:51*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*67*		*51 - 108*	*04/19/18 00:48*	*04/19/18 13:51*	*1*
Phenol-d5	*23*		*14 - 39*	*04/19/18 00:48*	*04/19/18 13:51*	*1*
Terphenyl-d14	*64*		*40 - 148*	*04/19/18 00:48*	*04/19/18 13:51*	*1*
2,4,6-Tribromophenol	*77*		*26 - 139*	*04/19/18 00:48*	*04/19/18 13:51*	*1*
2-Fluorophenol	*39*		*25 - 58*	*04/19/18 00:48*	*04/19/18 13:51*	*1*
2-Fluorobiphenyl	*58*		*45 - 107*	*04/19/18 00:48*	*04/19/18 13:51*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 18:47	5
Aluminum	**262**		50.0	28.5	ug/L		04/19/18 23:10	04/20/18 18:47	5
Arsenic	**3.5**		2.5	1.5	ug/L		04/19/18 23:10	04/20/18 18:47	5
Barium	**345**		5.0	3.2	ug/L		04/19/18 23:10	04/20/18 18:47	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/19/18 23:10	04/20/18 18:47	5
Calcium	**23700**		250	233	ug/L		04/19/18 23:10	04/20/18 18:47	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/19/18 23:10	04/20/18 18:47	5
Cobalt	**18.9**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:47	5
Chromium	3.1	U	5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:47	5
Copper	**10**		5.0	3.3	ug/L		04/19/18 23:10	04/20/18 18:47	5
Iron	**8030**		150	97.8	ug/L		04/19/18 23:10	04/20/18 18:47	5
Potassium	**3060**		250	143	ug/L		04/19/18 23:10	04/20/18 18:47	5

Client Sample ID: B-3D

Lab Sample ID: 460-154202-2

Date Collected: 04/17/18 09:00
Date Received: 04/17/18 20:45

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	**42000**		250	155	ug/L		04/19/18 23:10	04/20/18 18:47	5
Manganese	**9640**		10.0	6.1	ug/L		04/19/18 23:10	04/20/18 18:47	5
Sodium	**37000**		250	213	ug/L		04/19/18 23:10	04/20/18 18:47	5
Nickel	**13.1**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:47	5
Lead	**2.7**		1.5	0.93	ug/L		04/19/18 23:10	04/20/18 18:47	5
Antimony	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 18:47	5
Selenium	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 18:47	5
Thallium	0.60	U	1.0	0.60	ug/L		04/19/18 23:10	04/20/18 18:47	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 18:47	5
Zinc	16.3	U	20.0	16.3	ug/L		04/19/18 23:10	04/20/18 18:47	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12	U	0.20	0.12	ug/L		04/19/18 11:42	04/19/18 14:19	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**8800**		150	92.1	ug/L		04/20/18 08:34	04/21/18 20:57	1
Manganese, Dissolved	**11200**		15.0	3.1	ug/L		04/20/18 08:34	04/21/18 20:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.79**		0.10	0.045	mg/L		04/20/18 18:37	04/23/18 10:43	1

Client Sample ID: B-2D

Lab Sample ID: 460-154202-3

Date Collected: 04/17/18 10:20
Date Received: 04/17/18 20:45

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/21/18 16:10	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/21/18 16:10	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/21/18 16:10	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/21/18 16:10	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/21/18 16:10	1
Acetone	5 ~~4.1~~	~~J~~ U	5.0	1.1	ug/L			04/21/18 16:10	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/21/18 16:10	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/21/18 16:10	1
1,1-Dichloroethane	**0.30**	**J**	1.0	0.24	ug/L			04/21/18 16:10	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/21/18 16:10	1
cis-1,2-Dichloroethene	**0.41**	**J**	1.0	0.26	ug/L			04/21/18 16:10	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/21/18 16:10	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/21/18 16:10	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/21/18 16:10	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/21/18 16:10	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/21/18 16:10	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/21/18 16:10	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/21/18 16:10	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/21/18 16:10	1
Trichloroethene	**0.39**	**J**	1.0	0.22	ug/L			04/21/18 16:10	1

Client Sample ID: B-2D

Lab Sample ID: 460-154202-3

Date Collected: 04/17/18 10:20
Date Received: 04/17/18 20:45

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/21/18 16:10	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/21/18 16:10	1
Benzene	**9.9**		1.0	0.090	ug/L			04/21/18 16:10	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/21/18 16:10	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/21/18 16:10	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/21/18 16:10	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/21/18 16:10	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/21/18 16:10	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/21/18 16:10	1
Toluene	0.25	U	1.0	0.25	ug/L			04/21/18 16:10	1
Chlorobenzene	**4.8**		1.0	0.24	ug/L			04/21/18 16:10	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/21/18 16:10	1
Styrene	0.17	U	1.0	0.17	ug/L			04/21/18 16:10	1
Xylenes, Total	**0.52**	**J**	2.0	0.28	ug/L			04/21/18 16:10	1
Ethyl ether	**2.0**		1.0	0.11	ug/L			04/21/18 16:10	1
MTBE	**0.35**	**J**	1.0	0.13	ug/L			04/21/18 16:10	1
Tetrahydrofuran	**4.1**		2.0	0.36	ug/L			04/21/18 16:10	1
Cyclohexane	**0.65**	**J**	1.0	0.26	ug/L			04/21/18 16:10	1
1,4-Dioxane	**300**		50	8.7	ug/L			04/21/18 16:10	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/21/18 16:10	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/21/18 16:10	1
Isopropylbenzene	**1.4**		1.0	0.32	ug/L			04/21/18 16:10	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/21/18 16:10	1
Methylcyclohexane	**0.83**	**J**	1.0	0.22	ug/L			04/21/18 16:10	1
Indane	**1.9**		1.0	0.12	ug/L			04/21/18 16:10	1
Dichlorofluoromethane	**2.1**	J+	1.0	0.21	ug/L			04/21/18 16:10	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/21/18 16:10	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/21/18 16:10*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*121*		*74 - 132*		*04/21/18 16:10*	*1*
Bromofluorobenzene	*93*		*77 - 124*		*04/21/18 16:10*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*		*04/21/18 16:10*	*1*
Dibromofluoromethane (Surr)	*108*		*72 - 131*		*04/21/18 16:10*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/19/18 00:48	04/19/18 13:27	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/19/18 00:48	04/19/18 13:27	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/19/18 00:48	04/19/18 13:27	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/19/18 00:48	04/19/18 13:27	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/19/18 00:48	04/19/18 13:27	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/19/18 00:48	04/19/18 14:12	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/19/18 00:48	04/19/18 14:12	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/19/18 00:48	04/19/18 14:12	1

Client Sample ID: B-2D

Lab Sample ID: 460-154202-3

Date Collected: 04/17/18 10:20
Date Received: 04/17/18 20:45

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methylphenol	0.24	U	10	0.24	ug/L		04/19/18 00:48	04/19/18 14:12	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/19/18 00:48	04/19/18 14:12	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/19/18 00:48	04/19/18 14:12	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/19/18 00:48	04/19/18 14:12	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/19/18 00:48	04/19/18 14:12	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/19/18 00:48	04/19/18 14:12	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/19/18 00:48	04/19/18 14:12	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/19/18 00:48	04/19/18 14:12	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/19/18 00:48	04/19/18 14:12	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/19/18 00:48	04/19/18 14:12	1
Bis(2-chloroethyl)ether	**26**		1.0	0.30	ug/L		04/19/18 00:48	04/19/18 14:12	1
1,3-Dichlorobenzene	2.0	~~U~~ UJ	10	2.0	ug/L		04/19/18 00:48	04/19/18 14:12	1
1,4-Dichlorobenzene	1.3	~~U~~ UJ	10	1.3	ug/L		04/19/18 00:48	04/19/18 14:12	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/19/18 00:48	04/19/18 14:12	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/19/18 00:48	04/19/18 14:12	1
Hexachloroethane	1.2	~~U~~ UJ	2.0	1.2	ug/L		04/19/18 00:48	04/19/18 14:12	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/19/18 00:48	04/19/18 14:12	1
Isophorone	0.80	U	10	0.80	ug/L		04/19/18 00:48	04/19/18 14:12	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/19/18 00:48	04/19/18 14:12	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/19/18 00:48	04/19/18 14:12	1
Naphthalene	1.1	U	10	1.1	ug/L		04/19/18 00:48	04/19/18 14:12	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/19/18 00:48	04/19/18 14:12	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/19/18 00:48	04/19/18 14:12	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/19/18 00:48	04/19/18 14:12	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/19/18 00:48	04/19/18 14:12	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/19/18 00:48	04/19/18 14:12	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/19/18 00:48	04/19/18 14:12	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/19/18 00:48	04/19/18 14:12	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/19/18 00:48	04/19/18 14:12	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/19/18 00:48	04/19/18 14:12	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/19/18 00:48	04/19/18 14:12	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/19/18 00:48	04/19/18 14:12	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/19/18 00:48	04/19/18 14:12	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/19/18 00:48	04/19/18 14:12	1
Diethyl phthalate	**1.2**	**J**	10	0.98	ug/L		04/19/18 00:48	04/19/18 14:12	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/19/18 00:48	04/19/18 14:12	1
Fluorene	0.91	U	10	0.91	ug/L		04/19/18 00:48	04/19/18 14:12	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/19/18 00:48	04/19/18 14:12	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/19/18 00:48	04/19/18 14:12	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/19/18 00:48	04/19/18 14:12	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/19/18 00:48	04/19/18 14:12	1
Anthracene	0.63	U	10	0.63	ug/L		04/19/18 00:48	04/19/18 14:12	1
Carbazole	0.68	U	10	0.68	ug/L		04/19/18 00:48	04/19/18 14:12	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/19/18 00:48	04/19/18 14:12	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/19/18 00:48	04/19/18 14:12	1
Pyrene	1.6	U	10	1.6	ug/L		04/19/18 00:48	04/19/18 14:12	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/19/18 00:48	04/19/18 14:12	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/19/18 00:48	04/19/18 14:12	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/19/18 00:48	04/19/18 14:12	1

Client Sample ID: B-2D

Lab Sample ID: 460-154202-3

Date Collected: 04/17/18 10:20
Date Received: 04/17/18 20:45

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	**1.7**	**J**	2.0	1.7	ug/L		04/19/18 00:48	04/19/18 14:12	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/19/18 00:48	04/19/18 14:12	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/19/18 00:48	04/19/18 14:12	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/19/18 00:48	04/19/18 14:12	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/19/18 00:48	04/19/18 14:12	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/19/18 00:48	04/19/18 14:12	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/19/18 00:48	04/19/18 14:12	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/19/18 00:48	04/19/18 14:12	1
Caprolactam	0.68	U	10	0.68	ug/L		04/19/18 00:48	04/19/18 14:12	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/19/18 00:48	04/19/18 14:12	1
Bisphenol-A	**70**		10	9.9	ug/L		04/19/18 00:48	04/19/18 14:12	1
N-Methylaniline	0.48	~~U~~ UJ	5.0	0.48	ug/L		04/19/18 00:48	04/19/18 14:12	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Butane, 2-methoxy-2-methyl-	*12*	*J N*	*ug/L*		*1.75*	*994-05-8*	*04/19/18 00:48*	*04/19/18 14:12*	*1*
1,4-Dioxane	*55*	*J N*	*ug/L*		*1.94*	*123-91-1*	*04/19/18 00:48*	*04/19/18 14:12*	*1*
Unknown	*15*	*J*	*ug/L*		*6.28*		*04/19/18 00:48*	*04/19/18 14:12*	*1*
Unknown	*91*	*J*	*ug/L*		*7.13*		*04/19/18 00:48*	*04/19/18 14:12*	*1*
Acetamide, N-methyl-N-phenyl-	*11*	*J N*	*ug/L*		*7.42*	*579-10-2*	*04/19/18 00:48*	*04/19/18 14:12*	*1*
Unknown	*7.8*	*J*	*ug/L*		*8.33*		*04/19/18 00:48*	*04/19/18 14:12*	*1*
Unknown	*6.5*	*J*	*ug/L*		*10.69*		*04/19/18 00:48*	*04/19/18 14:12*	*1*
Unknown	*6.9*	*J*	*ug/L*		*11.72*		*04/19/18 00:48*	*04/19/18 14:12*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*86*		*51 - 108*	*04/19/18 00:48*	*04/19/18 14:12*	*1*
Phenol-d5	*19*		*14 - 39*	*04/19/18 00:48*	*04/19/18 14:12*	*1*
Terphenyl-d14	*94*		*40 - 148*	*04/19/18 00:48*	*04/19/18 14:12*	*1*
2,4,6-Tribromophenol	*105*		*26 - 139*	*04/19/18 00:48*	*04/19/18 14:12*	*1*
2-Fluorophenol	*36*		*25 - 58*	*04/19/18 00:48*	*04/19/18 14:12*	*1*
2-Fluorobiphenyl	*70*		*45 - 107*	*04/19/18 00:48*	*04/19/18 14:12*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 18:49	5
Aluminum	**205**		50.0	28.5	ug/L		04/19/18 23:10	04/20/18 18:49	5
Arsenic	**3.6**		2.5	1.5	ug/L		04/19/18 23:10	04/20/18 18:49	5
Barium	**260**		5.0	3.2	ug/L		04/19/18 23:10	04/20/18 18:49	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/19/18 23:10	04/20/18 18:49	5
Calcium	**22000**		250	233	ug/L		04/19/18 23:10	04/20/18 18:49	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/19/18 23:10	04/20/18 18:49	5
Cobalt	**23.6**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:49	5
Chromium	3.1	U	5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:49	5
Copper	**5.6**		5.0	3.3	ug/L		04/19/18 23:10	04/20/18 18:49	5
Iron	**22700**		150	97.8	ug/L		04/19/18 23:10	04/20/18 18:49	5
Potassium	**2680**		250	143	ug/L		04/19/18 23:10	04/20/18 18:49	5
Magnesium	**25200**		250	155	ug/L		04/19/18 23:10	04/20/18 18:49	5
Manganese	**4420**		10.0	6.1	ug/L		04/19/18 23:10	04/20/18 18:49	5
Sodium	**31900**		250	213	ug/L		04/19/18 23:10	04/20/18 18:49	5
Nickel	**11.6**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:49	5
Lead	0.93	U	1.5	0.93	ug/L		04/19/18 23:10	04/20/18 18:49	5

Client Sample ID: B-2D

Lab Sample ID: 460-154202-3

Date Collected: 04/17/18 10:20
Date Received: 04/17/18 20:45

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 18:49	5
Selenium	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 18:49	5
Thallium	0.60	U	1.0	0.60	ug/L		04/19/18 23:10	04/20/18 18:49	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 18:49	5
Zinc	16.3	U	20.0	16.3	ug/L		04/19/18 23:10	04/20/18 18:49	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12	U	0.20	0.12	ug/L		04/19/18 11:42	04/19/18 14:21	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**26600**		150	92.1	ug/L		04/20/18 08:34	04/21/18 21:01	1
Manganese, Dissolved	**4940**		15.0	3.1	ug/L		04/20/18 08:34	04/21/18 21:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.42**		0.10	0.045	mg/L		04/20/18 18:37	04/23/18 10:44	1

Client Sample ID: C-3D

Lab Sample ID: 460-154202-4

Date Collected: 04/17/18 11:40
Date Received: 04/17/18 20:45

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**7.3**		0.40	0.20	ug/L			04/20/18 12:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*105*		*72 - 133*		*04/20/18 12:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*81*		*71 - 144*		*04/20/18 12:42*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/21/18 15:44	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/21/18 15:44	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/21/18 15:44	1
Chloroethane	0.37	U *	1.0	0.37	ug/L			04/21/18 15:44	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/21/18 15:44	1
Acetone	1.1	U	5.0	1.1	ug/L			04/21/18 15:44	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/21/18 15:44	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/21/18 15:44	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/21/18 15:44	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/21/18 15:44	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/21/18 15:44	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/21/18 15:44	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/21/18 15:44	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/21/18 15:44	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/21/18 15:44	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/21/18 15:44	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/21/18 15:44	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/21/18 15:44	1

Client Sample ID: C-3D

Lab Sample ID: 460-154202-4

Date Collected: 04/17/18 11:40
Date Received: 04/17/18 20:45

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/21/18 15:44	1
Trichloroethene	**0.87**	**J**	1.0	0.22	ug/L			04/21/18 15:44	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/21/18 15:44	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/21/18 15:44	1
Benzene	**0.21**	**J**	1.0	0.090	ug/L			04/21/18 15:44	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/21/18 15:44	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/21/18 15:44	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/21/18 15:44	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/21/18 15:44	1
Tetrachloroethene	**0.16**	**J**	1.0	0.12	ug/L			04/21/18 15:44	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/21/18 15:44	1
Toluene	0.25	U	1.0	0.25	ug/L			04/21/18 15:44	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/21/18 15:44	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/21/18 15:44	1
Styrene	0.17	U	1.0	0.17	ug/L			04/21/18 15:44	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/21/18 15:44	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/21/18 15:44	1
MTBE	**0.47**	**J**	1.0	0.13	ug/L			04/21/18 15:44	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/21/18 15:44	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/21/18 15:44	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/21/18 15:44	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/21/18 15:44	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/21/18 15:44	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/21/18 15:44	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/21/18 15:44	1
Indane	0.12	U	1.0	0.12	ug/L			04/21/18 15:44	1
Dichlorofluoromethane	0.21	U *-	1.0	0.21	ug/L			04/21/18 15:44	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/21/18 15:44	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/21/18 15:44*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*119*		*74 - 132*		*04/21/18 15:44*	*1*
Bromofluorobenzene	*92*		*77 - 124*		*04/21/18 15:44*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*		*04/21/18 15:44*	*1*
Dibromofluoromethane (Surr)	*110*		*72 - 131*		*04/21/18 15:44*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/19/18 00:48	04/19/18 13:48	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/19/18 00:48	04/19/18 13:48	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/19/18 00:48	04/19/18 13:48	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/19/18 00:48	04/19/18 13:48	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/19/18 00:48	04/19/18 13:48	1
Bis(2-chloroethyl)ether	**0.37**		0.030	0.026	ug/L		04/19/18 00:48	04/19/18 13:48	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/19/18 00:48	04/19/18 14:32	1

Client Sample ID: C-3D

Lab Sample ID: 460-154202-4

Date Collected: 04/17/18 11:40
Date Received: 04/17/18 20:45

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/19/18 00:48	04/19/18 14:32	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/19/18 00:48	04/19/18 14:32	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/19/18 00:48	04/19/18 14:32	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/19/18 00:48	04/19/18 14:32	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/19/18 00:48	04/19/18 14:32	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/19/18 00:48	04/19/18 14:32	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/19/18 00:48	04/19/18 14:32	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/19/18 00:48	04/19/18 14:32	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/19/18 00:48	04/19/18 14:32	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/19/18 00:48	04/19/18 14:32	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/19/18 00:48	04/19/18 14:32	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/19/18 00:48	04/19/18 14:32	1
1,3-Dichlorobenzene	~~2.0~~	U ~~*~~ UJ	10	2.0	ug/L		04/19/18 00:48	04/19/18 14:32	1
1,4-Dichlorobenzene	~~1.3~~	U ~~*~~ UJ	10	1.3	ug/L		04/19/18 00:48	04/19/18 14:32	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/19/18 00:48	04/19/18 14:32	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/19/18 00:48	04/19/18 14:32	1
Hexachloroethane	1.2	~~U~~ ~~*~~ UJ	2.0	1.2	ug/L		04/19/18 00:48	04/19/18 14:32	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/19/18 00:48	04/19/18 14:32	1
Isophorone	0.80	U	10	0.80	ug/L		04/19/18 00:48	04/19/18 14:32	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/19/18 00:48	04/19/18 14:32	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/19/18 00:48	04/19/18 14:32	1
Naphthalene	1.1	U	10	1.1	ug/L		04/19/18 00:48	04/19/18 14:32	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/19/18 00:48	04/19/18 14:32	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/19/18 00:48	04/19/18 14:32	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/19/18 00:48	04/19/18 14:32	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/19/18 00:48	04/19/18 14:32	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/19/18 00:48	04/19/18 14:32	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/19/18 00:48	04/19/18 14:32	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/19/18 00:48	04/19/18 14:32	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/19/18 00:48	04/19/18 14:32	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/19/18 00:48	04/19/18 14:32	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/19/18 00:48	04/19/18 14:32	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/19/18 00:48	04/19/18 14:32	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/19/18 00:48	04/19/18 14:32	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/19/18 00:48	04/19/18 14:32	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/19/18 00:48	04/19/18 14:32	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/19/18 00:48	04/19/18 14:32	1
Fluorene	0.91	U	10	0.91	ug/L		04/19/18 00:48	04/19/18 14:32	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/19/18 00:48	04/19/18 14:32	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/19/18 00:48	04/19/18 14:32	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/19/18 00:48	04/19/18 14:32	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/19/18 00:48	04/19/18 14:32	1
Anthracene	0.63	U	10	0.63	ug/L		04/19/18 00:48	04/19/18 14:32	1
Carbazole	0.68	U	10	0.68	ug/L		04/19/18 00:48	04/19/18 14:32	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/19/18 00:48	04/19/18 14:32	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/19/18 00:48	04/19/18 14:32	1
Pyrene	1.6	U	10	1.6	ug/L		04/19/18 00:48	04/19/18 14:32	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/19/18 00:48	04/19/18 14:32	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/19/18 00:48	04/19/18 14:32	1

Client Sample ID: C-3D

Lab Sample ID: 460-154202-4

Date Collected: 04/17/18 11:40
Date Received: 04/17/18 20:45

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	0.91	U	2.0	0.91	ug/L		04/19/18 00:48	04/19/18 14:32	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/19/18 00:48	04/19/18 14:32	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/19/18 00:48	04/19/18 14:32	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/19/18 00:48	04/19/18 14:32	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/19/18 00:48	04/19/18 14:32	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/19/18 00:48	04/19/18 14:32	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/19/18 00:48	04/19/18 14:32	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/19/18 00:48	04/19/18 14:32	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/19/18 00:48	04/19/18 14:32	1
Caprolactam	0.68	U	10	0.68	ug/L		04/19/18 00:48	04/19/18 14:32	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/19/18 00:48	04/19/18 14:32	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/19/18 00:48	04/19/18 14:32	1
N-Methylaniline	0.48	~~U~~ UJ	5.0	0.48	ug/L		04/19/18 00:48	04/19/18 14:32	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/19/18 00:48*	*04/19/18 14:32*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*90*		*51 - 108*	*04/19/18 00:48*	*04/19/18 14:32*	*1*
Phenol-d5	*20*		*14 - 39*	*04/19/18 00:48*	*04/19/18 14:32*	*1*
Terphenyl-d14	*95*		*40 - 148*	*04/19/18 00:48*	*04/19/18 14:32*	*1*
2,4,6-Tribromophenol	*96*		*26 - 139*	*04/19/18 00:48*	*04/19/18 14:32*	*1*
2-Fluorophenol	*38*		*25 - 58*	*04/19/18 00:48*	*04/19/18 14:32*	*1*
2-Fluorobiphenyl	*73*		*45 - 107*	*04/19/18 00:48*	*04/19/18 14:32*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 18:52	5
Aluminum	**445**		50.0	28.5	ug/L		04/19/18 23:10	04/20/18 18:52	5
Arsenic	**8.1**		2.5	1.5	ug/L		04/19/18 23:10	04/20/18 18:52	5
Barium	**385**		5.0	3.2	ug/L		04/19/18 23:10	04/20/18 18:52	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/19/18 23:10	04/20/18 18:52	5
Calcium	**18100**		250	233	ug/L		04/19/18 23:10	04/20/18 18:52	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/19/18 23:10	04/20/18 18:52	5
Cobalt	**9.7**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:52	5
Chromium	**6.5**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:52	5
Copper	**4.0**	J	5.0	3.3	ug/L		04/19/18 23:10	04/20/18 18:52	5
Iron	**46000**		150	97.8	ug/L		04/19/18 23:10	04/20/18 18:52	5
Potassium	**3290**		250	143	ug/L		04/19/18 23:10	04/20/18 18:52	5
Magnesium	**12900**		250	155	ug/L		04/19/18 23:10	04/20/18 18:52	5
Manganese	**5030**		10.0	6.1	ug/L		04/19/18 23:10	04/20/18 18:52	5
Sodium	**40600**		250	213	ug/L		04/19/18 23:10	04/20/18 18:52	5
Nickel	**5.5**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:52	5
Lead	0.93	U	1.5	0.93	ug/L		04/19/18 23:10	04/20/18 18:52	5
Antimony	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 18:52	5
Selenium	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 18:52	5
Thallium	0.60	U	1.0	0.60	ug/L		04/19/18 23:10	04/20/18 18:52	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 18:52	5
Zinc	16.3	U	20.0	16.3	ug/L		04/19/18 23:10	04/20/18 18:52	5

Client Sample ID: C-3D

Lab Sample ID: 460-154202-4

Date Collected: 04/17/18 11:40
Date Received: 04/17/18 20:45

Matrix: Water

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12	U	0.20	0.12	ug/L		04/19/18 11:42	04/19/18 14:23	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**49900**		150	92.1	ug/L		04/20/18 08:34	04/21/18 21:05	1
Manganese, Dissolved	**5630**		15.0	3.1	ug/L		04/20/18 08:34	04/21/18 21:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.26**		0.10	0.045	mg/L		04/20/18 18:37	04/23/18 10:46	1

Client Sample ID: PZ-11-EXT

Lab Sample ID: 460-154202-5

Date Collected: 04/17/18 14:25
Date Received: 04/17/18 20:45

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**41**	J-	0.40	0.20	ug/L			04/20/18 04:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*39*	*X	*72 - 133*		*04/20/18 04:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*71 - 144*		*04/20/18 04:29*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	2.2	U	10	2.2	ug/L			04/22/18 07:01	10
Bromomethane	1.8	U	10	1.8	ug/L			04/22/18 07:01	10
Vinyl chloride	0.60	U	10	0.60	ug/L			04/22/18 07:01	10
Chloroethane	3.7	U	10	3.7	ug/L			04/22/18 07:01	10
Methylene Chloride	2.1	U	10	2.1	ug/L			04/22/18 07:01	10
Acetone	11	U	50	11	ug/L			04/22/18 07:01	10
Carbon disulfide	2.2	U	10	2.2	ug/L			04/22/18 07:01	10
1,1-Dichloroethene	3.4	U	10	3.4	ug/L			04/22/18 07:01	10
1,1-Dichloroethane	2.4	U	10	2.4	ug/L			04/22/18 07:01	10
trans-1,2-Dichloroethene	1.8	U	10	1.8	ug/L			04/22/18 07:01	10
cis-1,2-Dichloroethene	2.6	U	10	2.6	ug/L			04/22/18 07:01	10
Chloroform	2.2	U	10	2.2	ug/L			04/22/18 07:01	10
1,2-Dichloroethane	2.5	U	10	2.5	ug/L			04/22/18 07:01	10
2-Butanone	22	U	50	22	ug/L			04/22/18 07:01	10
1,1,1-Trichloroethane	2.8	U	10	2.8	ug/L			04/22/18 07:01	10
Carbon tetrachloride	3.3	U	10	3.3	ug/L			04/22/18 07:01	10
Bromodichloromethane	1.5	U	10	1.5	ug/L			04/22/18 07:01	10
1,2-Dichloropropane	1.8	U	10	1.8	ug/L			04/22/18 07:01	10
cis-1,3-Dichloropropene	1.6	U	10	1.6	ug/L			04/22/18 07:01	10
Trichloroethene	2.2	U	10	2.2	ug/L			04/22/18 07:01	10
Dibromochloromethane	2.2	U	10	2.2	ug/L			04/22/18 07:01	10
1,1,2-Trichloroethane	0.80	U	10	0.80	ug/L			04/22/18 07:01	10
Benzene	**240**		10	0.90	ug/L			04/22/18 07:01	10
trans-1,3-Dichloropropene	1.9	U	10	1.9	ug/L			04/22/18 07:01	10
Bromoform	1.8	U	10	1.8	ug/L			04/22/18 07:01	10
4-Methyl-2-pentanone	6.3	U	50	6.3	ug/L			04/22/18 07:01	10

Client Sample ID: PZ-11-EXT

Lab Sample ID: 460-154202-5

Date Collected: 04/17/18 14:25
Date Received: 04/17/18 20:45

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	7.2	U	50	7.2	ug/L			04/22/18 07:01	10
Tetrachloroethene	1.2	U	10	1.2	ug/L			04/22/18 07:01	10
1,1,2,2-Tetrachloroethane	1.9	U	10	1.9	ug/L			04/22/18 07:01	10
Toluene	**9.9**	**J**	10	2.5	ug/L			04/22/18 07:01	10
Chlorobenzene	**63**		10	2.4	ug/L			04/22/18 07:01	10
Ethylbenzene	**24**		10	3.0	ug/L			04/22/18 07:01	10
Styrene	1.7	U	10	1.7	ug/L			04/22/18 07:01	10
Xylenes, Total	**3100**		20	2.8	ug/L			04/22/18 07:01	10
Ethyl ether	**1.3**	**J**	10	1.1	ug/L			04/22/18 07:01	10
MTBE	1.3	U	10	1.3	ug/L			04/22/18 07:01	10
Tetrahydrofuran	3.6	U	20	3.6	ug/L			04/22/18 07:01	10
Cyclohexane	**20**		10	2.6	ug/L			04/22/18 07:01	10
1,2,4-Trimethylbenzene	**1600**		10	2.3	ug/L			04/22/18 07:01	10
1,3,5-Trimethylbenzene	**420**		10	2.5	ug/L			04/22/18 07:01	10
Isopropylbenzene	**90**		10	3.2	ug/L			04/22/18 07:01	10
N-Propylbenzene	**230**		10	2.9	ug/L			04/22/18 07:01	10
Methylcyclohexane	**39**		10	2.2	ug/L			04/22/18 07:01	10
Indane	**250**		10	1.2	ug/L			04/22/18 07:01	10
Dichlorofluoromethane	2.1	U	10	2.1	ug/L			04/22/18 07:01	10
1,2,3-Trimethylbenzene	**480**		10	1.1	ug/L			04/22/18 07:01	10

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Benzene, 1-ethyl-3-methyl-	*310*	*J N*	*ug/L*		*9.74*	*620-14-4*		*04/22/18 07:01*	*10*
Naphthalene	*56*	*J N*	*ug/L*		*13.10*	*91-20-3*		*04/22/18 07:01*	*10*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*115*		*74 - 132*		*04/22/18 07:01*	*10*
Bromofluorobenzene	*98*		*77 - 124*		*04/22/18 07:01*	*10*
Toluene-d8 (Surr)	*106*		*80 - 120*		*04/22/18 07:01*	*10*
Dibromofluoromethane (Surr)	*108*		*72 - 131*		*04/22/18 07:01*	*10*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/19/18 00:48	04/19/18 14:09	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/19/18 00:48	04/19/18 14:09	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/19/18 00:48	04/19/18 14:09	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/19/18 00:48	04/19/18 14:09	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/19/18 00:48	04/19/18 14:09	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/19/18 00:48	04/19/18 14:53	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/19/18 00:48	04/19/18 14:53	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/19/18 00:48	04/19/18 14:53	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/19/18 00:48	04/19/18 14:53	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/19/18 00:48	04/19/18 14:53	1
2,4-Dimethylphenol	**8.1**	**J**	10	0.24	ug/L		04/19/18 00:48	04/19/18 14:53	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/19/18 00:48	04/19/18 14:53	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/19/18 00:48	04/19/18 14:53	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/19/18 00:48	04/19/18 14:53	1

Client Sample ID: PZ-11-EXT

Lab Sample ID: 460-154202-5

Date Collected: 04/17/18 14:25
Date Received: 04/17/18 20:45

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/19/18 00:48	04/19/18 14:53	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/19/18 00:48	04/19/18 14:53	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/19/18 00:48	04/19/18 14:53	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/19/18 00:48	04/19/18 14:53	1
Bis(2-chloroethyl)ether	**9.6**		1.0	0.30	ug/L		04/19/18 00:48	04/19/18 14:53	1
1,3-Dichlorobenzene	2.0	~~U~~ * UJ	10	2.0	ug/L		04/19/18 00:48	04/19/18 14:53	1
1,4-Dichlorobenzene	**2.3**	~~J~~ * J-	10	1.3	ug/L		04/19/18 00:48	04/19/18 14:53	1
1,2-Dichlorobenzene	**3.3**	**J**	10	1.3	ug/L		04/19/18 00:48	04/19/18 14:53	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/19/18 00:48	04/19/18 14:53	1
Hexachloroethane	1.2	~~U~~ * UJ	2.0	1.2	ug/L		04/19/18 00:48	04/19/18 14:53	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/19/18 00:48	04/19/18 14:53	1
Isophorone	0.80	U	10	0.80	ug/L		04/19/18 00:48	04/19/18 14:53	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/19/18 00:48	04/19/18 14:53	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/19/18 00:48	04/19/18 14:53	1
Naphthalene	**55**		10	1.1	ug/L		04/19/18 00:48	04/19/18 14:53	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/19/18 00:48	04/19/18 14:53	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/19/18 00:48	04/19/18 14:53	1
2-Methylnaphthalene	**4.0**	**J**	10	1.1	ug/L		04/19/18 00:48	04/19/18 14:53	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/19/18 00:48	04/19/18 14:53	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/19/18 00:48	04/19/18 14:53	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/19/18 00:48	04/19/18 14:53	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/19/18 00:48	04/19/18 14:53	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/19/18 00:48	04/19/18 14:53	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/19/18 00:48	04/19/18 14:53	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/19/18 00:48	04/19/18 14:53	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/19/18 00:48	04/19/18 14:53	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/19/18 00:48	04/19/18 14:53	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/19/18 00:48	04/19/18 14:53	1
Diethyl phthalate	**9.1**	**J**	10	0.98	ug/L		04/19/18 00:48	04/19/18 14:53	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/19/18 00:48	04/19/18 14:53	1
Fluorene	0.91	U	10	0.91	ug/L		04/19/18 00:48	04/19/18 14:53	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/19/18 00:48	04/19/18 14:53	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/19/18 00:48	04/19/18 14:53	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/19/18 00:48	04/19/18 14:53	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/19/18 00:48	04/19/18 14:53	1
Anthracene	0.63	U	10	0.63	ug/L		04/19/18 00:48	04/19/18 14:53	1
Carbazole	0.68	U	10	0.68	ug/L		04/19/18 00:48	04/19/18 14:53	1
Di-n-butyl phthalate	10 **~~3.5~~**	**~~J B~~** U	10	0.84	ug/L		04/19/18 00:48	04/19/18 14:53	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/19/18 00:48	04/19/18 14:53	1
Pyrene	1.6	U	10	1.6	ug/L		04/19/18 00:48	04/19/18 14:53	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/19/18 00:48	04/19/18 14:53	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/19/18 00:48	04/19/18 14:53	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/19/18 00:48	04/19/18 14:53	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/19/18 00:48	04/19/18 14:53	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/19/18 00:48	04/19/18 14:53	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/19/18 00:48	04/19/18 14:53	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/19/18 00:48	04/19/18 14:53	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/19/18 00:48	04/19/18 14:53	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/19/18 00:48	04/19/18 14:53	1

Client Sample ID: PZ-11-EXT

Lab Sample ID: 460-154202-5

Date Collected: 04/17/18 14:25
Date Received: 04/17/18 20:45

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diphenyl ether	**52**		10	1.2	ug/L		04/19/18 00:48	04/19/18 14:53	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/19/18 00:48	04/19/18 14:53	1
Caprolactam	0.68	U	10	0.68	ug/L		04/19/18 00:48	04/19/18 14:53	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/19/18 00:48	04/19/18 14:53	1
Bisphenol-A	**100**		10	9.9	ug/L		04/19/18 00:48	04/19/18 14:53	1
N-Methylaniline	**2.3**	J	5.0	0.48	ug/L		04/19/18 00:48	04/19/18 14:53	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Benzene, (1-methylethyl)-	*86*	*J N*	*ug/L*		*3.75*	*98-82-8*	*04/19/18 00:48*	*04/19/18 14:53*	*1*
Benzene, propyl-	*200*	*J N*	*ug/L*		*4.00*	*103-65-1*	*04/19/18 00:48*	*04/19/18 14:53*	*1*
Benzene, 1-ethyl-2-methyl-	*250*	*J N*	*ug/L*		*4.06*	*611-14-3*	*04/19/18 00:48*	*04/19/18 14:53*	*1*
Benzene, 1,2,4-trimethyl-	*350*	*J N*	*ug/L*		*4.13*	*95-63-6*	*04/19/18 00:48*	*04/19/18 14:53*	*1*
Unknown	*60*	*J*	*ug/L*		*4.24*		*04/19/18 00:48*	*04/19/18 14:53*	*1*
Benzene, 1,2,3-trimethyl-	*940*	*J N*	*ug/L*		*4.34*	*526-73-8*	*04/19/18 00:48*	*04/19/18 14:53*	*1*
Benzene, 1,3,5-trimethyl-	*350*	*J N*	*ug/L*		*4.55*	*108-67-8*	*04/19/18 00:48*	*04/19/18 14:53*	*1*
Indane	*210*	*J N*	*ug/L*		*4.66*	*496-11-7*	*04/19/18 00:48*	*04/19/18 14:53*	*1*
Benzene, 2-ethyl-1,4-dimethyl-	*63*	*J N*	*ug/L*		*4.79*	*1758-88-9*	*04/19/18 00:48*	*04/19/18 14:53*	*1*
Benzene, 4-ethyl-1,2-dimethyl-	*44*	*J N*	*ug/L*		*4.93*	*934-80-5*	*04/19/18 00:48*	*04/19/18 14:53*	*1*
Benzene, 1,2,3,5-tetramethyl-	*26*	*J N*	*ug/L*		*5.24*	*527-53-7*	*04/19/18 00:48*	*04/19/18 14:53*	*1*
Unknown	*19*	*J*	*ug/L*		*5.45*		*04/19/18 00:48*	*04/19/18 14:53*	*1*
Biphenyl	*22*	*J N*	*ug/L*		*6.82*	*92-52-4*	*04/19/18 00:48*	*04/19/18 14:53*	*1*
Unknown	*43*	*J*	*ug/L*		*7.12*		*04/19/18 00:48*	*04/19/18 14:53*	*1*
Unknown	*17*	*J*	*ug/L*		*7.42*		*04/19/18 00:48*	*04/19/18 14:53*	*1*
Unknown	*32*	*J*	*ug/L*		*8.33*		*04/19/18 00:48*	*04/19/18 14:53*	*1*
Unknown	*26*	*J*	*ug/L*		*8.36*		*04/19/18 00:48*	*04/19/18 14:53*	*1*
Unknown	*18*	*J*	*ug/L*		*8.42*		*04/19/18 00:48*	*04/19/18 14:53*	*1*
Unknown	*35*	*J*	*ug/L*		*8.50*		*04/19/18 00:48*	*04/19/18 14:53*	*1*
Unknown	*110*	*J*	*ug/L*		*12.57*		*04/19/18 00:48*	*04/19/18 14:53*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*89*		*51 - 108*	*04/19/18 00:48*	*04/19/18 14:53*	*1*
Phenol-d5	*19*		*14 - 39*	*04/19/18 00:48*	*04/19/18 14:53*	*1*
Terphenyl-d14	*94*		*40 - 148*	*04/19/18 00:48*	*04/19/18 14:53*	*1*
2,4,6-Tribromophenol	*106*		*26 - 139*	*04/19/18 00:48*	*04/19/18 14:53*	*1*
2-Fluorophenol	*33*		*25 - 58*	*04/19/18 00:48*	*04/19/18 14:53*	*1*
2-Fluorobiphenyl	*69*		*45 - 107*	*04/19/18 00:48*	*04/19/18 14:53*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 18:54	5
Aluminum	**44.3**	**J**	50.0	28.5	ug/L		04/19/18 23:10	04/20/18 18:54	5
Arsenic	**8.4**		2.5	1.5	ug/L		04/19/18 23:10	04/20/18 18:54	5
Barium	**168**		5.0	3.2	ug/L		04/19/18 23:10	04/20/18 18:54	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/19/18 23:10	04/20/18 18:54	5
Calcium	**14900**		250	233	ug/L		04/19/18 23:10	04/20/18 18:54	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/19/18 23:10	04/20/18 18:54	5
Cobalt	**20.5**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:54	5
Chromium	3.1	U	5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:54	5
Copper	3.3	U	5.0	3.3	ug/L		04/19/18 23:10	04/20/18 18:54	5
Iron	**32700**		150	97.8	ug/L		04/19/18 23:10	04/20/18 18:54	5

Client Sample ID: PZ-11-EXT

Lab Sample ID: 460-154202-5
Date Collected: 04/17/18 14:25
Matrix: Water
Date Received: 04/17/18 20:45

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	**2240**		250	143	ug/L		04/19/18 23:10	04/20/18 18:54	5
Magnesium	**10200**		250	155	ug/L		04/19/18 23:10	04/20/18 18:54	5
Manganese	**120**		10.0	6.1	ug/L		04/19/18 23:10	04/20/18 18:54	5
Sodium	**14800**		250	213	ug/L		04/19/18 23:10	04/20/18 18:54	5
Nickel	**6.8**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:54	5
Lead	0.93	U	1.5	0.93	ug/L		04/19/18 23:10	04/20/18 18:54	5
Antimony	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 18:54	5
Selenium	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 18:54	5
Thallium	0.60	U	1.0	0.60	ug/L		04/19/18 23:10	04/20/18 18:54	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 18:54	5
Zinc	16.3	U	20.0	16.3	ug/L		04/19/18 23:10	04/20/18 18:54	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12	U	0.20	0.12	ug/L		04/19/18 11:42	04/19/18 14:24	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**39700**		150	92.1	ug/L		04/20/18 08:34	04/21/18 21:09	1
Manganese, Dissolved	**145**		15.0	3.1	ug/L		04/20/18 08:34	04/21/18 21:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**1.5**		0.10	0.045	mg/L		04/20/18 18:37	04/23/18 10:47	1

Client Sample ID: GA-101

Lab Sample ID: 460-154202-6
Date Collected: 04/17/18 14:45
Matrix: Water
Date Received: 04/17/18 20:45

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**3.5**	J-	0.40	0.20	ug/L			04/20/18 04:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*36*	*X	*72 - 133*		*04/20/18 04:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*71 - 144*		*04/20/18 04:52*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.1	U	5.0	1.1	ug/L			04/22/18 06:36	5
Bromomethane	0.90	U	5.0	0.90	ug/L			04/22/18 06:36	5
Vinyl chloride	0.30	U	5.0	0.30	ug/L			04/22/18 06:36	5
Chloroethane	1.9	U	5.0	1.9	ug/L			04/22/18 06:36	5
Methylene Chloride	1.1	U	5.0	1.1	ug/L			04/22/18 06:36	5
Acetone	5.4	U	25	5.4	ug/L			04/22/18 06:36	5
Carbon disulfide	1.1	U	5.0	1.1	ug/L			04/22/18 06:36	5
1,1-Dichloroethene	1.7	U	5.0	1.7	ug/L			04/22/18 06:36	5
1,1-Dichloroethane	1.2	U	5.0	1.2	ug/L			04/22/18 06:36	5
trans-1,2-Dichloroethene	0.90	U	5.0	0.90	ug/L			04/22/18 06:36	5
cis-1,2-Dichloroethene	**5.2**		5.0	1.3	ug/L			04/22/18 06:36	5
Chloroform	1.1	U	5.0	1.1	ug/L			04/22/18 06:36	5

Client Sample ID: GA-101

Lab Sample ID: 460-154202-6

Date Collected: 04/17/18 14:45
Date Received: 04/17/18 20:45

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	1.3	U	5.0	1.3	ug/L			04/22/18 06:36	5
2-Butanone	11	U	25	11	ug/L			04/22/18 06:36	5
1,1,1-Trichloroethane	1.4	U	5.0	1.4	ug/L			04/22/18 06:36	5
Carbon tetrachloride	1.7	U	5.0	1.7	ug/L			04/22/18 06:36	5
Bromodichloromethane	0.75	U	5.0	0.75	ug/L			04/22/18 06:36	5
1,2-Dichloropropane	0.90	U	5.0	0.90	ug/L			04/22/18 06:36	5
cis-1,3-Dichloropropene	0.80	U	5.0	0.80	ug/L			04/22/18 06:36	5
Trichloroethene	**2.1**	**J**	5.0	1.1	ug/L			04/22/18 06:36	5
Dibromochloromethane	1.1	U	5.0	1.1	ug/L			04/22/18 06:36	5
1,1,2-Trichloroethane	0.40	U	5.0	0.40	ug/L			04/22/18 06:36	5
Benzene	**4.8**	**J**	5.0	0.45	ug/L			04/22/18 06:36	5
trans-1,3-Dichloropropene	0.95	U	5.0	0.95	ug/L			04/22/18 06:36	5
Bromoform	0.90	U	5.0	0.90	ug/L			04/22/18 06:36	5
4-Methyl-2-pentanone	3.2	U	25	3.2	ug/L			04/22/18 06:36	5
2-Hexanone	3.6	U	25	3.6	ug/L			04/22/18 06:36	5
Tetrachloroethene	**3.5**	**J**	5.0	0.60	ug/L			04/22/18 06:36	5
1,1,2,2-Tetrachloroethane	0.95	U	5.0	0.95	ug/L			04/22/18 06:36	5
Toluene	**450**		5.0	1.3	ug/L			04/22/18 06:36	5
Chlorobenzene	**7.2**		5.0	1.2	ug/L			04/22/18 06:36	5
Ethylbenzene	**560**		5.0	1.5	ug/L			04/22/18 06:36	5
Styrene	0.85	U	5.0	0.85	ug/L			04/22/18 06:36	5
Xylenes, Total	**1700**		10	1.4	ug/L			04/22/18 06:36	5
Ethyl ether	0.55	U	5.0	0.55	ug/L			04/22/18 06:36	5
MTBE	0.65	U	5.0	0.65	ug/L			04/22/18 06:36	5
Tetrahydrofuran	1.8	U	10	1.8	ug/L			04/22/18 06:36	5
Cyclohexane	**7.8**		5.0	1.3	ug/L			04/22/18 06:36	5
1,2,4-Trimethylbenzene	**910**		5.0	1.2	ug/L			04/22/18 06:36	5
1,3,5-Trimethylbenzene	**240**		5.0	1.3	ug/L			04/22/18 06:36	5
Isopropylbenzene	**63**		5.0	1.6	ug/L			04/22/18 06:36	5
N-Propylbenzene	**150**		5.0	1.5	ug/L			04/22/18 06:36	5
Methylcyclohexane	**30**		5.0	1.1	ug/L			04/22/18 06:36	5
Indane	**100**		5.0	0.60	ug/L			04/22/18 06:36	5
Dichlorofluoromethane	1.1	U	5.0	1.1	ug/L			04/22/18 06:36	5
1,2,3-Trimethylbenzene	**300**		5.0	0.55	ug/L			04/22/18 06:36	5

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Benzene, 1-ethyl-3-methyl-	*760*	*J N*	*ug/L*		*9.75*	*620-14-4*		*04/22/18 06:36*	*5*
Benzene, 1-ethyl-2-methyl-	*310*	*J N*	*ug/L*		*10.22*	*611-14-3*		*04/22/18 06:36*	*5*
4-Heptanone, 2,6-dimethyl-	*33*	*J N*	*ug/L*		*10.81*	*108-83-8*		*04/22/18 06:36*	*5*
Benzene, 2-ethyl-1,4-dimethyl-	*38*	*J N*	*ug/L*		*11.55*	*1758-88-9*		*04/22/18 06:36*	*5*
Benzene, 1-ethyl-2,3-dimethyl-	*38*	*J N*	*ug/L*		*11.85*	*933-98-2*		*04/22/18 06:36*	*5*
Benzene, 1-methyl-3-(1-methylethyl)-	*31*	*J N*	*ug/L*		*11.86*	*535-77-3*		*04/22/18 06:36*	*5*
Benzene, 1-methyl-2-(1-methylethyl)-	*56*	*J N*	*ug/L*		*11.93*	*527-84-4*		*04/22/18 06:36*	*5*
Benzene, 1,2,3,5-tetramethyl-	*45*	*J N*	*ug/L*		*12.32*	*527-53-7*		*04/22/18 06:36*	*5*
Benzene, 2-ethenyl-1,4-dimethyl-	*33*	*J N*	*ug/L*		*12.60*	*2039-89-6*		*04/22/18 06:36*	*5*
Naphthalene	*38*	*J N*	*ug/L*		*13.10*	*91-20-3*		*04/22/18 06:36*	*5*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*120*		*74 - 132*		*04/22/18 06:36*	*5*
Bromofluorobenzene	*103*		*77 - 124*		*04/22/18 06:36*	*5*

Client Sample ID: GA-101

Date Collected: 04/17/18 14:45
Date Received: 04/17/18 20:45

Lab Sample ID: 460-154202-6

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*108*		*80 - 120*		*04/22/18 06:36*	*5*
Dibromofluoromethane (Surr)	*110*		*72 - 131*		*04/22/18 06:36*	*5*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/19/18 00:48	04/19/18 14:30	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/19/18 00:48	04/19/18 14:30	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/19/18 00:48	04/19/18 14:30	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/19/18 00:48	04/19/18 14:30	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/19/18 00:48	04/19/18 14:30	1
Bis(2-chloroethyl)ether	0.026	U	0.030	0.026	ug/L		04/19/18 00:48	04/19/18 14:30	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/19/18 00:48	04/19/18 15:14	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/19/18 00:48	04/19/18 15:14	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/19/18 00:48	04/19/18 15:14	1
4-Methylphenol	**3.3**	**J**	10	0.24	ug/L		04/19/18 00:48	04/19/18 15:14	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/19/18 00:48	04/19/18 15:14	1
2,4-Dimethylphenol	**3.6**	**J**	10	0.24	ug/L		04/19/18 00:48	04/19/18 15:14	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/19/18 00:48	04/19/18 15:14	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/19/18 00:48	04/19/18 15:14	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/19/18 00:48	04/19/18 15:14	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/19/18 00:48	04/19/18 15:14	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/19/18 00:48	04/19/18 15:14	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/19/18 00:48	04/19/18 15:14	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/19/18 00:48	04/19/18 15:14	1
1,3-Dichlorobenzene	2.0	~~U~~ ← UJ	10	2.0	ug/L		04/19/18 00:48	04/19/18 15:14	1
1,4-Dichlorobenzene	1.3	~~U~~ ← UJ	10	1.3	ug/L		04/19/18 00:48	04/19/18 15:14	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/19/18 00:48	04/19/18 15:14	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/19/18 00:48	04/19/18 15:14	1
Hexachloroethane	1.2	~~U~~ ← UJ	2.0	1.2	ug/L		04/19/18 00:48	04/19/18 15:14	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/19/18 00:48	04/19/18 15:14	1
Isophorone	0.80	U	10	0.80	ug/L		04/19/18 00:48	04/19/18 15:14	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/19/18 00:48	04/19/18 15:14	1
1,2,4-Trichlorobenzene	**5.9**		2.0	1.3	ug/L		04/19/18 00:48	04/19/18 15:14	1
Naphthalene	**34**		10	1.1	ug/L		04/19/18 00:48	04/19/18 15:14	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/19/18 00:48	04/19/18 15:14	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/19/18 00:48	04/19/18 15:14	1
2-Methylnaphthalene	**3.5**	**J**	10	1.1	ug/L		04/19/18 00:48	04/19/18 15:14	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/19/18 00:48	04/19/18 15:14	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/19/18 00:48	04/19/18 15:14	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/19/18 00:48	04/19/18 15:14	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/19/18 00:48	04/19/18 15:14	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/19/18 00:48	04/19/18 15:14	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/19/18 00:48	04/19/18 15:14	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/19/18 00:48	04/19/18 15:14	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/19/18 00:48	04/19/18 15:14	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/19/18 00:48	04/19/18 15:14	1

Client Sample ID: GA-101

Date Collected: 04/17/18 14:45
Date Received: 04/17/18 20:45

Lab Sample ID: 460-154202-6
Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/19/18 00:48	04/19/18 15:14	1
Diethyl phthalate	**1.1**	**J**	10	0.98	ug/L		04/19/18 00:48	04/19/18 15:14	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/19/18 00:48	04/19/18 15:14	1
Fluorene	0.91	U	10	0.91	ug/L		04/19/18 00:48	04/19/18 15:14	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/19/18 00:48	04/19/18 15:14	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/19/18 00:48	04/19/18 15:14	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/19/18 00:48	04/19/18 15:14	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/19/18 00:48	04/19/18 15:14	1
Anthracene	0.63	U	10	0.63	ug/L		04/19/18 00:48	04/19/18 15:14	1
Carbazole	0.68	U	10	0.68	ug/L		04/19/18 00:48	04/19/18 15:14	1
Di-n-butyl phthalate	10 **9.4**	~~**J B**~~ U	10	0.84	ug/L		04/19/18 00:48	04/19/18 15:14	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/19/18 00:48	04/19/18 15:14	1
Pyrene	1.6	U	10	1.6	ug/L		04/19/18 00:48	04/19/18 15:14	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/19/18 00:48	04/19/18 15:14	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/19/18 00:48	04/19/18 15:14	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/19/18 00:48	04/19/18 15:14	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/19/18 00:48	04/19/18 15:14	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/19/18 00:48	04/19/18 15:14	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/19/18 00:48	04/19/18 15:14	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/19/18 00:48	04/19/18 15:14	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/19/18 00:48	04/19/18 15:14	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/19/18 00:48	04/19/18 15:14	1
Diphenyl ether	**64**		10	1.2	ug/L		04/19/18 00:48	04/19/18 15:14	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/19/18 00:48	04/19/18 15:14	1
Caprolactam	0.68	U	10	0.68	ug/L		04/19/18 00:48	04/19/18 15:14	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/19/18 00:48	04/19/18 15:14	1
Bisphenol-A	**22**		10	9.9	ug/L		04/19/18 00:48	04/19/18 15:14	1
N-Methylaniline	**2.0**	~~**J**~~ * J-	5.0	0.48	ug/L		04/19/18 00:48	04/19/18 15:14	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane	*79*	*J N*	*ug/L*		*1.68*	*110-82-7*	*04/19/18 00:48*	*04/19/18 15:14*	*1*
Benzene, 1,3-dimethyl-	*270*	*J N*	*ug/L*		*3.49*	*108-38-3*	*04/19/18 00:48*	*04/19/18 15:14*	*1*
Benzene, (1-methylethyl)-	*50*	*J N*	*ug/L*		*3.75*	*98-82-8*	*04/19/18 00:48*	*04/19/18 15:14*	*1*
Benzene, propyl-	*110*	*J N*	*ug/L*		*4.00*	*103-65-1*	*04/19/18 00:48*	*04/19/18 15:14*	*1*
Benzene, 1-ethyl-2-methyl-	*460*	*J N*	*ug/L*		*4.06*	*611-14-3*	*04/19/18 00:48*	*04/19/18 15:14*	*1*
Benzene, 1,2,4-trimethyl-	*190*	*J N*	*ug/L*		*4.13*	*95-63-6*	*04/19/18 00:48*	*04/19/18 15:14*	*1*
Benzene, 1-ethyl-4-methyl-	*170*	*J N*	*ug/L*		*4.20*	*622-96-8*	*04/19/18 00:48*	*04/19/18 15:14*	*1*
Benzene, 1,2,3-trimethyl-	*530*	*J N*	*ug/L*		*4.33*	*526-73-8*	*04/19/18 00:48*	*04/19/18 15:14*	*1*
Benzene, 1,3,5-trimethyl-	*220*	*J N*	*ug/L*		*4.55*	*108-67-8*	*04/19/18 00:48*	*04/19/18 15:14*	*1*
Indane	*75*	*J N*	*ug/L*		*4.66*	*496-11-7*	*04/19/18 00:48*	*04/19/18 15:14*	*1*
Benzene, 1-methyl-3-propyl-	*31*	*J N*	*ug/L*		*4.75*	*1074-43-7*	*04/19/18 00:48*	*04/19/18 15:14*	*1*
Benzene, 1,4-diethyl-	*45*	*J N*	*ug/L*		*4.79*	*105-05-5*	*04/19/18 00:48*	*04/19/18 15:14*	*1*
Benzene, 2-ethyl-1,3-dimethyl-	*71*	*J N*	*ug/L*		*4.95*	*2870-04-4*	*04/19/18 00:48*	*04/19/18 15:14*	*1*
Benzene, 1,2,4,5-tetramethyl-	*130*	*J N*	*ug/L*		*5.21*	*95-93-2*	*04/19/18 00:48*	*04/19/18 15:14*	*1*
Unknown	*28*	*J*	*ug/L*		*5.56*		*04/19/18 00:48*	*04/19/18 15:14*	*1*
Unknown	*43*	*J*	*ug/L*		*7.12*		*04/19/18 00:48*	*04/19/18 15:14*	*1*
Unknown	*49*	*J*	*ug/L*		*8.33*		*04/19/18 00:48*	*04/19/18 15:14*	*1*
Unknown	*40*	*J*	*ug/L*		*8.36*		*04/19/18 00:48*	*04/19/18 15:14*	*1*
Unknown	*41*	*J*	*ug/L*		*8.50*		*04/19/18 00:48*	*04/19/18 15:14*	*1*
Unknown	*44*	*J*	*ug/L*		*12.57*		*04/19/18 00:48*	*04/19/18 15:14*	*1*

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	*88*		*51 - 108*	*04/19/18 00:48*	*04/19/18 15:14*	*1*
Phenol-d5	*18*		*14 - 39*	*04/19/18 00:48*	*04/19/18 15:14*	*1*
Terphenyl-d14	*94*		*40 - 148*	*04/19/18 00:48*	*04/19/18 15:14*	*1*
2,4,6-Tribromophenol	*102*		*26 - 139*	*04/19/18 00:48*	*04/19/18 15:14*	*1*
2-Fluorophenol	*36*		*25 - 58*	*04/19/18 00:48*	*04/19/18 15:14*	*1*
2-Fluorobiphenyl	*77*		*45 - 107*	*04/19/18 00:48*	*04/19/18 15:14*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 18:56	5
Aluminum	**54.6**		50.0	28.5	ug/L		04/19/18 23:10	04/20/18 18:56	5
Arsenic	**2.9**		2.5	1.5	ug/L		04/19/18 23:10	04/20/18 18:56	5
Barium	**66.7**		5.0	3.2	ug/L		04/19/18 23:10	04/20/18 18:56	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/19/18 23:10	04/20/18 18:56	5
Calcium	**24100**		250	233	ug/L		04/19/18 23:10	04/20/18 18:56	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/19/18 23:10	04/20/18 18:56	5
Cobalt	3.1	U	5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:56	5
Chromium	3.1	U	5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:56	5
Copper	3.3	U	5.0	3.3	ug/L		04/19/18 23:10	04/20/18 18:56	5
Iron	**5390**		150	97.8	ug/L		04/19/18 23:10	04/20/18 18:56	5
Potassium	**4390**		250	143	ug/L		04/19/18 23:10	04/20/18 18:56	5
Magnesium	**66400**		250	155	ug/L		04/19/18 23:10	04/20/18 18:56	5
Manganese	**255**		10.0	6.1	ug/L		04/19/18 23:10	04/20/18 18:56	5
Sodium	**10800**		250	213	ug/L		04/19/18 23:10	04/20/18 18:56	5
Nickel	3.1	U	5.0	3.1	ug/L		04/19/18 23:10	04/20/18 18:56	5
Lead	0.93	U	1.5	0.93	ug/L		04/19/18 23:10	04/20/18 18:56	5
Antimony	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 18:56	5
Selenium	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 18:56	5
Thallium	0.60	U	1.0	0.60	ug/L		04/19/18 23:10	04/20/18 18:56	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 18:56	5
Zinc	16.3	U	20.0	16.3	ug/L		04/19/18 23:10	04/20/18 18:56	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12	U	0.20	0.12	ug/L		04/19/18 11:42	04/19/18 14:30	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**6170**		150	92.1	ug/L		04/20/18 08:34	04/21/18 21:13	1
Manganese, Dissolved	**305**		15.0	3.1	ug/L		04/20/18 08:34	04/21/18 21:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.11**		0.10	0.045	mg/L		04/20/18 18:37	04/23/18 10:49	1

Client Sample ID: PZ-4-INTR — Lab Sample ID: 460-154202-7

Date Collected: 04/17/18 15:05 — Matrix: Water
Date Received: 04/17/18 20:45

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**2.7**		0.40	0.20	ug/L			04/20/18 05:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	*99*		*72 - 133*		*04/20/18 05:15*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*71 - 144*		*04/20/18 05:15*	*1*

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G

TestAmerica Job ID: 460-154202-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/21/18 17:27	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/21/18 17:27	1
Vinyl chloride	**0.10**	**J**	1.0	0.060	ug/L			04/21/18 17:27	1
Chloroethane	0.37	U *	1.0	0.37	ug/L			04/21/18 17:27	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/21/18 17:27	1
Acetone	5 ~~1.3~~	~~J~~ U	5.0	1.1	ug/L			04/21/18 17:27	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/21/18 17:27	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/21/18 17:27	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/21/18 17:27	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/21/18 17:27	1
cis-1,2-Dichloroethene	**0.36**	**J**	1.0	0.26	ug/L			04/21/18 17:27	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/21/18 17:27	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/21/18 17:27	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/21/18 17:27	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/21/18 17:27	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/21/18 17:27	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/21/18 17:27	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/21/18 17:27	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/21/18 17:27	1
Trichloroethene	**0.34**	**J**	1.0	0.22	ug/L			04/21/18 17:27	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/21/18 17:27	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/21/18 17:27	1
Benzene	**6.2**		1.0	0.090	ug/L			04/21/18 17:27	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/21/18 17:27	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/21/18 17:27	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/21/18 17:27	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/21/18 17:27	1
Tetrachloroethene	**0.16**	**J**	1.0	0.12	ug/L			04/21/18 17:27	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/21/18 17:27	1
Toluene	**1.9**		1.0	0.25	ug/L			04/21/18 17:27	1
Chlorobenzene	**1.6**		1.0	0.24	ug/L			04/21/18 17:27	1
Ethylbenzene	**5.6**		1.0	0.30	ug/L			04/21/18 17:27	1
Styrene	0.17	U	1.0	0.17	ug/L			04/21/18 17:27	1
Xylenes, Total	**8.9**		2.0	0.28	ug/L			04/21/18 17:27	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/21/18 17:27	1
MTBE	0.13	U	1.0	0.13	ug/L			04/21/18 17:27	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/21/18 17:27	1
Cyclohexane	**0.28**	**J**	1.0	0.26	ug/L			04/21/18 17:27	1
1,2,4-Trimethylbenzene	**1.3**		1.0	0.23	ug/L			04/21/18 17:27	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/21/18 17:27	1
Isopropylbenzene	**0.54**	**J**	1.0	0.32	ug/L			04/21/18 17:27	1
N-Propylbenzene	**0.44**	**J**	1.0	0.29	ug/L			04/21/18 17:27	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/21/18 17:27	1
Indane	**2.4**		1.0	0.12	ug/L			04/21/18 17:27	1
Dichlorofluoromethane	0.21	U *	1.0	0.21	ug/L			04/21/18 17:27	1
1,2,3-Trimethylbenzene	**0.76**	**J**	1.0	0.11	ug/L			04/21/18 17:27	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/21/18 17:27*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*120*		*74 - 132*		*04/21/18 17:27*	*1*
Bromofluorobenzene	*92*		*77 - 124*		*04/21/18 17:27*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*		*04/21/18 17:27*	*1*

Client Sample ID: PZ-4-INTR

Lab Sample ID: 460-154202-7

Date Collected: 04/17/18 15:05
Date Received: 04/17/18 20:45

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*113*		*72 - 131*		*04/21/18 17:27*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/19/18 00:48	04/19/18 14:50	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/19/18 00:48	04/19/18 14:50	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/19/18 00:48	04/19/18 14:50	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/19/18 00:48	04/19/18 14:50	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/19/18 00:48	04/19/18 14:50	1
Bis(2-chloroethyl)ether	**0.11**		0.030	0.026	ug/L		04/19/18 00:48	04/19/18 14:50	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/19/18 00:48	04/19/18 16:17	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/19/18 00:48	04/19/18 16:17	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/19/18 00:48	04/19/18 16:17	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/19/18 00:48	04/19/18 16:17	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/19/18 00:48	04/19/18 16:17	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/19/18 00:48	04/19/18 16:17	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/19/18 00:48	04/19/18 16:17	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/19/18 00:48	04/19/18 16:17	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/19/18 00:48	04/19/18 16:17	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/19/18 00:48	04/19/18 16:17	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/19/18 00:48	04/19/18 16:17	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/19/18 00:48	04/19/18 16:17	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/19/18 00:48	04/19/18 16:17	1
1,3-Dichlorobenzene	2.0	~~U~~ * UJ	10	2.0	ug/L		04/19/18 00:48	04/19/18 16:17	1
1,4-Dichlorobenzene	1.3	~~U~~ * UJ	10	1.3	ug/L		04/19/18 00:48	04/19/18 16:17	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/19/18 00:48	04/19/18 16:17	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/19/18 00:48	04/19/18 16:17	1
Hexachloroethane	1.2	~~U~~ * UJ	2.0	1.2	ug/L		04/19/18 00:48	04/19/18 16:17	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/19/18 00:48	04/19/18 16:17	1
Isophorone	0.80	U	10	0.80	ug/L		04/19/18 00:48	04/19/18 16:17	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/19/18 00:48	04/19/18 16:17	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/19/18 00:48	04/19/18 16:17	1
Naphthalene	1.1	U	10	1.1	ug/L		04/19/18 00:48	04/19/18 16:17	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/19/18 00:48	04/19/18 16:17	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/19/18 00:48	04/19/18 16:17	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/19/18 00:48	04/19/18 16:17	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/19/18 00:48	04/19/18 16:17	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/19/18 00:48	04/19/18 16:17	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/19/18 00:48	04/19/18 16:17	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/19/18 00:48	04/19/18 16:17	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/19/18 00:48	04/19/18 16:17	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/19/18 00:48	04/19/18 16:17	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/19/18 00:48	04/19/18 16:17	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/19/18 00:48	04/19/18 16:17	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/19/18 00:48	04/19/18 16:17	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/19/18 00:48	04/19/18 16:17	1

Client Sample ID: PZ-4-INTR — Lab Sample ID: 460-154202-7

Date Collected: 04/17/18 15:05 Matrix: Water
Date Received: 04/17/18 20:45

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/19/18 00:48	04/19/18 16:17	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/19/18 00:48	04/19/18 16:17	1
Fluorene	0.91	U	10	0.91	ug/L		04/19/18 00:48	04/19/18 16:17	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/19/18 00:48	04/19/18 16:17	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/19/18 00:48	04/19/18 16:17	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/19/18 00:48	04/19/18 16:17	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/19/18 00:48	04/19/18 16:17	1
Anthracene	0.63	U	10	0.63	ug/L		04/19/18 00:48	04/19/18 16:17	1
Carbazole	0.68	U	10	0.68	ug/L		04/19/18 00:48	04/19/18 16:17	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/19/18 00:48	04/19/18 16:17	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/19/18 00:48	04/19/18 16:17	1
Pyrene	1.6	U	10	1.6	ug/L		04/19/18 00:48	04/19/18 16:17	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/19/18 00:48	04/19/18 16:17	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/19/18 00:48	04/19/18 16:17	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/19/18 00:48	04/19/18 16:17	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/19/18 00:48	04/19/18 16:17	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/19/18 00:48	04/19/18 16:17	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/19/18 00:48	04/19/18 16:17	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/19/18 00:48	04/19/18 16:17	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/19/18 00:48	04/19/18 16:17	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/19/18 00:48	04/19/18 16:17	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/19/18 00:48	04/19/18 16:17	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/19/18 00:48	04/19/18 16:17	1
Caprolactam	0.68	U	10	0.68	ug/L		04/19/18 00:48	04/19/18 16:17	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/19/18 00:48	04/19/18 16:17	1
Bisphenol-A	**14**		10	9.9	ug/L		04/19/18 00:48	04/19/18 16:17	1
N-Methylaniline	0.48	~~U~~ UJ	5.0	0.48	ug/L		04/19/18 00:48	04/19/18 16:17	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/19/18 00:48*	*04/19/18 16:17*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*88*		*51 - 108*	*04/19/18 00:48*	*04/19/18 16:17*	*1*
Phenol-d5	*20*		*14 - 39*	*04/19/18 00:48*	*04/19/18 16:17*	*1*
Terphenyl-d14	*97*		*40 - 148*	*04/19/18 00:48*	*04/19/18 16:17*	*1*
2,4,6-Tribromophenol	*97*		*26 - 139*	*04/19/18 00:48*	*04/19/18 16:17*	*1*
2-Fluorophenol	*38*		*25 - 58*	*04/19/18 00:48*	*04/19/18 16:17*	*1*
2-Fluorobiphenyl	*73*		*45 - 107*	*04/19/18 00:48*	*04/19/18 16:17*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 19:04	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/19/18 23:10	04/20/18 19:04	5
Arsenic	**1.5**	**J**	2.5	1.5	ug/L		04/19/18 23:10	04/20/18 19:04	5
Barium	**85.2**		5.0	3.2	ug/L		04/19/18 23:10	04/20/18 19:04	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/19/18 23:10	04/20/18 19:04	5
Calcium	**30100**		250	233	ug/L		04/19/18 23:10	04/20/18 19:04	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/19/18 23:10	04/20/18 19:04	5
Cobalt	**6.4**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 19:04	5
Chromium	3.1	U	5.0	3.1	ug/L		04/19/18 23:10	04/20/18 19:04	5

Client Sample ID: PZ-4-INTR

Lab Sample ID: 460-154202-7
Date Collected: 04/17/18 15:05
Matrix: Water
Date Received: 04/17/18 20:45

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	3.3	U	5.0	3.3	ug/L		04/19/18 23:10	04/20/18 19:04	5
Iron	**17800**		150	97.8	ug/L		04/19/18 23:10	04/20/18 19:04	5
Potassium	**1970**		250	143	ug/L		04/19/18 23:10	04/20/18 19:04	5
Magnesium	**20500**		250	155	ug/L		04/19/18 23:10	04/20/18 19:04	5
Manganese	**1780**		10.0	6.1	ug/L		04/19/18 23:10	04/20/18 19:04	5
Sodium	**8300**		250	213	ug/L		04/19/18 23:10	04/20/18 19:04	5
Nickel	3.1	U	5.0	3.1	ug/L		04/19/18 23:10	04/20/18 19:04	5
Lead	0.93	U	1.5	0.93	ug/L		04/19/18 23:10	04/20/18 19:04	5
Antimony	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 19:04	5
Selenium	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 19:04	5
Thallium	0.60	U	1.0	0.60	ug/L		04/19/18 23:10	04/20/18 19:04	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 19:04	5
Zinc	16.3	U	20.0	16.3	ug/L		04/19/18 23:10	04/20/18 19:04	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12	U	0.20	0.12	ug/L		04/20/18 11:49	04/20/18 13:24	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**21800**		150	92.1	ug/L		04/20/18 08:34	04/21/18 21:17	1
Manganese, Dissolved	**2190**		15.0	3.1	ug/L		04/20/18 08:34	04/21/18 21:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.30**		0.10	0.045	mg/L		04/20/18 18:37	04/23/18 10:50	1

Client Sample ID: P-4D

Lab Sample ID: 460-154202-8
Date Collected: 04/17/18 15:25
Matrix: Water
Date Received: 04/17/18 20:45

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**16**		0.40	0.20	ug/L			04/20/18 05:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*72 - 133*		*04/20/18 05:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*81*		*71 - 144*		*04/20/18 05:38*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/21/18 17:01	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/21/18 17:01	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/21/18 17:01	1
Chloroethane	0.37	U *	1.0	0.37	ug/L			04/21/18 17:01	1
Methylene Chloride	**0.24**	**J**	1.0	0.21	ug/L			04/21/18 17:01	1
Acetone	1.1	U	5.0	1.1	ug/L			04/21/18 17:01	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/21/18 17:01	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/21/18 17:01	1
1,1-Dichloroethane	**0.42**	**J**	1.0	0.24	ug/L			04/21/18 17:01	1
trans-1,2-Dichloroethene	**0.35**	**J**	1.0	0.18	ug/L			04/21/18 17:01	1

Client Sample ID: P-4D

Lab Sample ID: 460-154202-8

Date Collected: 04/17/18 15:25
Date Received: 04/17/18 20:45

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**0.87**	**J**	1.0	0.26	ug/L			04/21/18 17:01	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/21/18 17:01	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/21/18 17:01	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/21/18 17:01	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/21/18 17:01	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/21/18 17:01	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/21/18 17:01	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/21/18 17:01	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/21/18 17:01	1
Trichloroethene	**1.0**		1.0	0.22	ug/L			04/21/18 17:01	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/21/18 17:01	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/21/18 17:01	1
Benzene	**62**		1.0	0.090	ug/L			04/21/18 17:01	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/21/18 17:01	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/21/18 17:01	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/21/18 17:01	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/21/18 17:01	1
Tetrachloroethene	**0.27**	**J**	1.0	0.12	ug/L			04/21/18 17:01	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/21/18 17:01	1
Toluene	**29**		1.0	0.25	ug/L			04/21/18 17:01	1
Chlorobenzene	**7.5**		1.0	0.24	ug/L			04/21/18 17:01	1
Ethylbenzene	**5.9**		1.0	0.30	ug/L			04/21/18 17:01	1
Styrene	0.17	U	1.0	0.17	ug/L			04/21/18 17:01	1
Xylenes, Total	**34**		2.0	0.28	ug/L			04/21/18 17:01	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/21/18 17:01	1
MTBE	0.13	U	1.0	0.13	ug/L			04/21/18 17:01	1
Tetrahydrofuran	**3.4**		2.0	0.36	ug/L			04/21/18 17:01	1
Cyclohexane	**0.34**	**J**	1.0	0.26	ug/L			04/21/18 17:01	1
1,2,4-Trimethylbenzene	**3.0**		1.0	0.23	ug/L			04/21/18 17:01	1
1,3,5-Trimethylbenzene	**0.97**	**J**	1.0	0.25	ug/L			04/21/18 17:01	1
Isopropylbenzene	**0.42**	**J**	1.0	0.32	ug/L			04/21/18 17:01	1
N-Propylbenzene	**0.62**	**J**	1.0	0.29	ug/L			04/21/18 17:01	1
Methylcyclohexane	**0.37**	**J**	1.0	0.22	ug/L			04/21/18 17:01	1
Indane	0.12	U	1.0	0.12	ug/L			04/21/18 17:01	1
Dichlorofluoromethane	0.21	U *	1.0	0.21	ug/L			04/21/18 17:01	1
1,2,3-Trimethylbenzene	**2.2**		1.0	0.11	ug/L			04/21/18 17:01	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*18*	*J*	*ug/L*		*11.39*			*04/21/18 17:01*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*122*		*74 - 132*		*04/21/18 17:01*	*1*
Bromofluorobenzene	*93*		*77 - 124*		*04/21/18 17:01*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*		*04/21/18 17:01*	*1*
Dibromofluoromethane (Surr)	*109*		*72 - 131*		*04/21/18 17:01*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/19/18 00:48	04/19/18 15:11	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/19/18 00:48	04/19/18 15:11	1

Client Sample ID: P-4D

Lab Sample ID: 460-154202-8

Date Collected: 04/17/18 15:25
Date Received: 04/17/18 20:45

Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/19/18 00:48	04/19/18 15:11	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/19/18 00:48	04/19/18 15:11	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/19/18 00:48	04/19/18 15:11	1
Bis(2-chloroethyl)ether	**2.8**		0.030	0.026	ug/L		04/19/18 00:48	04/19/18 15:11	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.58	U	20	0.58	ug/L		04/19/18 00:48	04/20/18 11:14	2
2-Chlorophenol	0.75	U	20	0.75	ug/L		04/19/18 00:48	04/20/18 11:14	2
2-Methylphenol	0.52	U	20	0.52	ug/L		04/19/18 00:48	04/20/18 11:14	2
4-Methylphenol	0.47	U	20	0.47	ug/L		04/19/18 00:48	04/20/18 11:14	2
2-Nitrophenol	1.5	U	20	1.5	ug/L		04/19/18 00:48	04/20/18 11:14	2
2,4-Dimethylphenol	0.48	U	20	0.48	ug/L		04/19/18 00:48	04/20/18 11:14	2
2,4-Dichlorophenol	0.84	U	20	0.84	ug/L		04/19/18 00:48	04/20/18 11:14	2
4-Chloro-3-methylphenol	1.2	U	20	1.2	ug/L		04/19/18 00:48	04/20/18 11:14	2
2,4,6-Trichlorophenol	0.60	U	20	0.60	ug/L		04/19/18 00:48	04/20/18 11:14	2
2,4,5-Trichlorophenol	0.56	U	20	0.56	ug/L		04/19/18 00:48	04/20/18 11:14	2
2,4-Dinitrophenol	29	U	40	29	ug/L		04/19/18 00:48	04/20/18 11:14	2
4-Nitrophenol	1.4	U	40	1.4	ug/L		04/19/18 00:48	04/20/18 11:14	2
4,6-Dinitro-2-methylphenol	27	U	40	27	ug/L		04/19/18 00:48	04/20/18 11:14	2
1,3-Dichlorobenzene	4.1	~~U~~ ← UJ	20	4.1	ug/L		04/19/18 00:48	04/20/18 11:14	2
1,4-Dichlorobenzene	2.5	~~U~~ ← UJ	20	2.5	ug/L		04/19/18 00:48	04/20/18 11:14	2
1,2-Dichlorobenzene	2.7	U	20	2.7	ug/L		04/19/18 00:48	04/20/18 11:14	2
N-Nitrosodi-n-propylamine	0.86	U	2.0	0.86	ug/L		04/19/18 00:48	04/20/18 11:14	2
Hexachloroethane	2.4	~~U~~ ← UJ	4.0	2.4	ug/L		04/19/18 00:48	04/20/18 11:14	2
Nitrobenzene	1.1	U	2.0	1.1	ug/L		04/19/18 00:48	04/20/18 11:14	2
Isophorone	1.6	U	20	1.6	ug/L		04/19/18 00:48	04/20/18 11:14	2
Bis(2-chloroethoxy)methane	0.48	U	20	0.48	ug/L		04/19/18 00:48	04/20/18 11:14	2
1,2,4-Trichlorobenzene	2.5	U	4.0	2.5	ug/L		04/19/18 00:48	04/20/18 11:14	2
Naphthalene	2.3	U	20	2.3	ug/L		04/19/18 00:48	04/20/18 11:14	2
4-Chloroaniline	3.8	U	20	3.8	ug/L		04/19/18 00:48	04/20/18 11:14	2
Hexachlorobutadiene	1.6	U	2.0	1.6	ug/L		04/19/18 00:48	04/20/18 11:14	2
2-Methylnaphthalene	2.2	U	20	2.2	ug/L		04/19/18 00:48	04/20/18 11:14	2
Hexachlorocyclopentadiene	3.4	U	20	3.4	ug/L		04/19/18 00:48	04/20/18 11:14	2
2-Chloronaphthalene	2.4	U	20	2.4	ug/L		04/19/18 00:48	04/20/18 11:14	2
2-Nitroaniline	0.95	U	20	0.95	ug/L		04/19/18 00:48	04/20/18 11:14	2
Dimethyl phthalate	1.5	U	20	1.5	ug/L		04/19/18 00:48	04/20/18 11:14	2
Acenaphthylene	1.6	U	20	1.6	ug/L		04/19/18 00:48	04/20/18 11:14	2
2,6-Dinitrotoluene	0.78	U	4.0	0.78	ug/L		04/19/18 00:48	04/20/18 11:14	2
3-Nitroaniline	1.9	U	20	1.9	ug/L		04/19/18 00:48	04/20/18 11:14	2
Acenaphthene	2.2	U	20	2.2	ug/L		04/19/18 00:48	04/20/18 11:14	2
Dibenzofuran	2.2	U	20	2.2	ug/L		04/19/18 00:48	04/20/18 11:14	2
2,4-Dinitrotoluene	2.0	U	4.0	2.0	ug/L		04/19/18 00:48	04/20/18 11:14	2
Diethyl phthalate	**19**	**J**	20	2.0	ug/L		04/19/18 00:48	04/20/18 11:14	2
4-Chlorophenyl phenyl ether	2.6	U	20	2.6	ug/L		04/19/18 00:48	04/20/18 11:14	2
Fluorene	1.8	U	20	1.8	ug/L		04/19/18 00:48	04/20/18 11:14	2
4-Nitroaniline	1.1	U	20	1.1	ug/L		04/19/18 00:48	04/20/18 11:14	2
N-Nitrosodiphenylamine	1.8	U	20	1.8	ug/L		04/19/18 00:48	04/20/18 11:14	2
4-Bromophenyl phenyl ether	1.5	U	20	1.5	ug/L		04/19/18 00:48	04/20/18 11:14	2
Phenanthrene	1.2	U	20	1.2	ug/L		04/19/18 00:48	04/20/18 11:14	2

Client Sample ID: P-4D

Lab Sample ID: 460-154202-8

Date Collected: 04/17/18 15:25
Date Received: 04/17/18 20:45

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	1.3	U	20	1.3	ug/L		04/19/18 00:48	04/20/18 11:14	2
Carbazole	1.4	U	20	1.4	ug/L		04/19/18 00:48	04/20/18 11:14	2
Di-n-butyl phthalate	1.7	U	20	1.7	ug/L		04/19/18 00:48	04/20/18 11:14	2
Fluoranthene	1.7	U	20	1.7	ug/L		04/19/18 00:48	04/20/18 11:14	2
Pyrene	3.3	U	20	3.3	ug/L		04/19/18 00:48	04/20/18 11:14	2
Butyl benzyl phthalate	1.7	U	20	1.7	ug/L		04/19/18 00:48	04/20/18 11:14	2
3,3'-Dichlorobenzidine	2.9	U	20	2.9	ug/L		04/19/18 00:48	04/20/18 11:14	2
Chrysene	1.8	U	4.0	1.8	ug/L		04/19/18 00:48	04/20/18 11:14	2
Bis(2-ethylhexyl) phthalate	3.4	U	4.0	3.4	ug/L		04/19/18 00:48	04/20/18 11:14	2
Di-n-octyl phthalate	9.5	U	20	9.5	ug/L		04/19/18 00:48	04/20/18 11:14	2
Benzo[k]fluoranthene	1.3	U	2.0	1.3	ug/L		04/19/18 00:48	04/20/18 11:14	2
Indeno[1,2,3-cd]pyrene	2.6	U	4.0	2.6	ug/L		04/19/18 00:48	04/20/18 11:14	2
Dibenz(a,h)anthracene	1.4	U	2.0	1.4	ug/L		04/19/18 00:48	04/20/18 11:14	2
Benzo[g,h,i]perylene	2.9	U	20	2.9	ug/L		04/19/18 00:48	04/20/18 11:14	2
Diphenyl ether	2.4	U	20	2.4	ug/L		04/19/18 00:48	04/20/18 11:14	2
n,n'-Dimethylaniline	1.8	U	2.0	1.8	ug/L		04/19/18 00:48	04/20/18 11:14	2
Caprolactam	1.4	U	20	1.4	ug/L		04/19/18 00:48	04/20/18 11:14	2
bis (2-chloroisopropyl) ether	1.3	U	20	1.3	ug/L		04/19/18 00:48	04/20/18 11:14	2
Bisphenol-A	**210**		20	20	ug/L		04/19/18 00:48	04/20/18 11:14	2
N-Methylaniline	0.96	~~U~~ * UJ	10	0.96	ug/L		04/19/18 00:48	04/20/18 11:14	2

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Benzenemethanamine, N,N-dimethyl-	*13*	*J N*	*ug/L*		*4.68*	*103-83-3*	*04/19/18 00:48*	*04/20/18 11:14*	*2*
Unknown	*30*	*J*	*ug/L*		*5.19*		*04/19/18 00:48*	*04/20/18 11:14*	*2*
Unknown	*15*	*J*	*ug/L*		*5.81*		*04/19/18 00:48*	*04/20/18 11:14*	*2*
Unknown	*18*	*J*	*ug/L*		*5.88*		*04/19/18 00:48*	*04/20/18 11:14*	*2*
Unknown	*32*	*J*	*ug/L*		*5.95*		*04/19/18 00:48*	*04/20/18 11:14*	*2*
Unknown	*16*	*J*	*ug/L*		*6.03*		*04/19/18 00:48*	*04/20/18 11:14*	*2*
Unknown	*17*	*J*	*ug/L*		*6.10*		*04/19/18 00:48*	*04/20/18 11:14*	*2*
Phenol, p-tert-butyl-	*28*	*J N*	*ug/L*		*6.23*	*98-54-4*	*04/19/18 00:48*	*04/20/18 11:14*	*2*
Unknown	*39*	*J*	*ug/L*		*7.12*		*04/19/18 00:48*	*04/20/18 11:14*	*2*
Unknown	*17*	*J*	*ug/L*		*7.21*		*04/19/18 00:48*	*04/20/18 11:14*	*2*
Unknown	*13*	*J*	*ug/L*		*7.39*		*04/19/18 00:48*	*04/20/18 11:14*	*2*
Unknown	*18*	*J*	*ug/L*		*8.32*		*04/19/18 00:48*	*04/20/18 11:14*	*2*
Unknown	*40*	*J*	*ug/L*		*11.28*		*04/19/18 00:48*	*04/20/18 11:14*	*2*
Unknown	*26*	*J*	*ug/L*		*12.21*		*04/19/18 00:48*	*04/20/18 11:14*	*2*
Unknown	*94*	*J*	*ug/L*		*12.38*		*04/19/18 00:48*	*04/20/18 11:14*	*2*
Unknown	*210*	*J*	*ug/L*		*12.56*		*04/19/18 00:48*	*04/20/18 11:14*	*2*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*78*		*51 - 108*	*04/19/18 00:48*	*04/20/18 11:14*	*2*
Phenol-d5	*17*		*14 - 39*	*04/19/18 00:48*	*04/20/18 11:14*	*2*
Terphenyl-d14	*79*		*40 - 148*	*04/19/18 00:48*	*04/20/18 11:14*	*2*
2,4,6-Tribromophenol	*92*		*26 - 139*	*04/19/18 00:48*	*04/20/18 11:14*	*2*
2-Fluorophenol	*32*		*25 - 58*	*04/19/18 00:48*	*04/20/18 11:14*	*2*
2-Fluorobiphenyl	*64*		*45 - 107*	*04/19/18 00:48*	*04/20/18 11:14*	*2*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 19:21	5

Client Sample ID: P-4D

Lab Sample ID: 460-154202-8

Date Collected: 04/17/18 15:25
Date Received: 04/17/18 20:45

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	28.5	U	50.0	28.5	ug/L		04/19/18 23:10	04/20/18 19:21	5
Arsenic	**7.9**		2.5	1.5	ug/L		04/19/18 23:10	04/20/18 19:21	5
Barium	**104**		5.0	3.2	ug/L		04/19/18 23:10	04/20/18 19:21	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/19/18 23:10	04/20/18 19:21	5
Calcium	**44500**		250	233	ug/L		04/19/18 23:10	04/20/18 19:21	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/19/18 23:10	04/20/18 19:21	5
Cobalt	**23.0**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 19:21	5
Chromium	3.1	U	5.0	3.1	ug/L		04/19/18 23:10	04/20/18 19:21	5
Copper	3.3	U	5.0	3.3	ug/L		04/19/18 23:10	04/20/18 19:21	5
Iron	**21700**		150	97.8	ug/L		04/19/18 23:10	04/20/18 19:21	5
Potassium	**1920**		250	143	ug/L		04/19/18 23:10	04/20/18 19:21	5
Magnesium	**25000**		250	155	ug/L		04/19/18 23:10	04/20/18 19:21	5
Manganese	**1830**		10.0	6.1	ug/L		04/19/18 23:10	04/20/18 19:21	5
Sodium	**15000**		250	213	ug/L		04/19/18 23:10	04/20/18 19:21	5
Nickel	**8.1**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 19:21	5
Lead	0.93	U	1.5	0.93	ug/L		04/19/18 23:10	04/20/18 19:21	5
Antimony	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 19:21	5
Selenium	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 19:21	5
Thallium	0.60	U	1.0	0.60	ug/L		04/19/18 23:10	04/20/18 19:21	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 19:21	5
Zinc	16.3	U	20.0	16.3	ug/L		04/19/18 23:10	04/20/18 19:21	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12	U	0.20	0.12	ug/L		04/20/18 11:49	04/20/18 13:26	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**25900**		150	92.1	ug/L		04/20/18 08:34	04/21/18 21:21	1
Manganese, Dissolved	**2150**		15.0	3.1	ug/L		04/20/18 08:34	04/21/18 21:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.88**		0.10	0.045	mg/L		04/20/18 18:37	04/23/18 10:51	1

Client Sample ID: TBGW_041718

Lab Sample ID: 460-154202-9

Date Collected: 04/17/18 00:00
Date Received: 04/17/18 20:45

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.20	U	0.40	0.20	ug/L			04/20/18 00:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*72 - 133*		*04/20/18 00:14*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*71 - 144*		*04/20/18 00:14*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/21/18 12:45	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/21/18 12:45	1

Client Sample ID: TBGW_041718

Lab Sample ID: 460-154202-9

Date Collected: 04/17/18 00:00
Date Received: 04/17/18 20:45

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/21/18 12:45	1
Chloroethane	0.37	U *-	1.0	0.37	ug/L			04/21/18 12:45	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/21/18 12:45	1
Acetone	**28**		5.0	1.1	ug/L			04/21/18 12:45	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/21/18 12:45	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/21/18 12:45	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/21/18 12:45	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/21/18 12:45	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/21/18 12:45	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/21/18 12:45	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/21/18 12:45	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/21/18 12:45	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/21/18 12:45	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/21/18 12:45	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/21/18 12:45	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/21/18 12:45	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/21/18 12:45	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/21/18 12:45	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/21/18 12:45	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/21/18 12:45	1
Benzene	0.090	U	1.0	0.090	ug/L			04/21/18 12:45	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/21/18 12:45	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/21/18 12:45	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/21/18 12:45	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/21/18 12:45	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/21/18 12:45	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/21/18 12:45	1
Toluene	0.25	U	1.0	0.25	ug/L			04/21/18 12:45	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/21/18 12:45	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/21/18 12:45	1
Styrene	0.17	U	1.0	0.17	ug/L			04/21/18 12:45	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/21/18 12:45	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/21/18 12:45	1
MTBE	0.13	U	1.0	0.13	ug/L			04/21/18 12:45	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/21/18 12:45	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/21/18 12:45	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/21/18 12:45	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/21/18 12:45	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/21/18 12:45	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/21/18 12:45	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/21/18 12:45	1
Indane	0.12	U	1.0	0.12	ug/L			04/21/18 12:45	1
Dichlorofluoromethane	0.21	U *-	1.0	0.21	ug/L			04/21/18 12:45	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/21/18 12:45	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/21/18 12:45*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*119*		*74 - 132*		*04/21/18 12:45*	*1*

Client Sample ID: TBGW_041718 Lab Sample ID: 460-154202-9

Date Collected: 04/17/18 00:00 Matrix: Water
Date Received: 04/17/18 20:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Bromofluorobenzene	*94*		*77 - 124*		*04/21/18 12:45*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*		*04/21/18 12:45*	*1*
Dibromofluoromethane (Surr)	*110*		*72 - 131*		*04/21/18 12:45*	*1*

Client Sample ID: RBGW_041818 Lab Sample ID: 460-154284-1

Date Collected: 04/18/18 08:10 Matrix: Water
Date Received: 04/18/18 19:30

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.20	U	0.40	0.20	ug/L			04/20/18 12:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*103*		*72 - 133*		*04/20/18 12:19*	*1*
1,2-Dichloroethane-d4 (Surr)	*80*		*71 - 144*		*04/20/18 12:19*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/22/18 01:03	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/22/18 01:03	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/22/18 01:03	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/22/18 01:03	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/22/18 01:03	1
Acetone	**3.8**	**J**	5.0	1.1	ug/L			04/22/18 01:03	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/22/18 01:03	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/22/18 01:03	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/22/18 01:03	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/22/18 01:03	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/22/18 01:03	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/22/18 01:03	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/22/18 01:03	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/22/18 01:03	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/22/18 01:03	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/22/18 01:03	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/22/18 01:03	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/22/18 01:03	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/22/18 01:03	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/22/18 01:03	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/22/18 01:03	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/22/18 01:03	1
Benzene	0.090	U	1.0	0.090	ug/L			04/22/18 01:03	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/22/18 01:03	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/22/18 01:03	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/22/18 01:03	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/22/18 01:03	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/22/18 01:03	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/22/18 01:03	1
Toluene	0.25	U	1.0	0.25	ug/L			04/22/18 01:03	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/22/18 01:03	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/22/18 01:03	1

Client Sample ID: RBGW_041818

Lab Sample ID: 460-154284-1

Date Collected: 04/18/18 08:10
Date Received: 04/18/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	0.17	U	1.0	0.17	ug/L			04/22/18 01:03	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/22/18 01:03	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/22/18 01:03	1
MTBE	0.13	U	1.0	0.13	ug/L			04/22/18 01:03	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/22/18 01:03	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/22/18 01:03	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/22/18 01:03	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/22/18 01:03	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/22/18 01:03	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/22/18 01:03	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/22/18 01:03	1
Indane	0.12	U	1.0	0.12	ug/L			04/22/18 01:03	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/22/18 01:03	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/22/18 01:03	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Isopropyl Alcohol	*12*	*J N*	*ug/L*		*2.03*	*67-63-0*		*04/22/18 01:03*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*118*		*74 - 132*		*04/22/18 01:03*	*1*
Bromofluorobenzene	*89*		*77 - 124*		*04/22/18 01:03*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*		*04/22/18 01:03*	*1*
Dibromofluoromethane (Surr)	*109*		*72 - 131*		*04/22/18 01:03*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/20/18 08:43	04/20/18 18:46	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/20/18 08:43	04/20/18 18:46	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/20/18 08:43	04/20/18 18:46	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/20/18 08:43	04/20/18 18:46	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/20/18 08:43	04/20/18 18:46	1
Bis(2-chloroethyl)ether	0.026	U	0.030	0.026	ug/L		04/20/18 08:43	04/20/18 18:46	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/20/18 08:43	04/20/18 18:45	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/20/18 08:43	04/20/18 18:45	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/20/18 08:43	04/20/18 18:45	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/20/18 08:43	04/20/18 18:45	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/20/18 08:43	04/20/18 18:45	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/20/18 08:43	04/20/18 18:45	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/20/18 08:43	04/20/18 18:45	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/20/18 08:43	04/20/18 18:45	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/20/18 08:43	04/20/18 18:45	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/20/18 08:43	04/20/18 18:45	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/20/18 08:43	04/20/18 18:45	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/20/18 08:43	04/20/18 18:45	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/20/18 08:43	04/20/18 18:45	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/20/18 08:43	04/20/18 18:45	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/20/18 08:43	04/20/18 18:45	1

Client Sample ID: RBGW_041818

Lab Sample ID: 460-154284-1

Date Collected: 04/18/18 08:10
Date Received: 04/18/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/20/18 08:43	04/20/18 18:45	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/20/18 08:43	04/20/18 18:45	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/20/18 08:43	04/20/18 18:45	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/20/18 08:43	04/20/18 18:45	1
Isophorone	0.80	U	10	0.80	ug/L		04/20/18 08:43	04/20/18 18:45	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/20/18 08:43	04/20/18 18:45	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/20/18 08:43	04/20/18 18:45	1
Naphthalene	1.1	U	10	1.1	ug/L		04/20/18 08:43	04/20/18 18:45	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/20/18 08:43	04/20/18 18:45	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/20/18 08:43	04/20/18 18:45	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/20/18 08:43	04/20/18 18:45	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/20/18 08:43	04/20/18 18:45	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/20/18 08:43	04/20/18 18:45	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/20/18 08:43	04/20/18 18:45	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/20/18 08:43	04/20/18 18:45	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/20/18 08:43	04/20/18 18:45	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/20/18 08:43	04/20/18 18:45	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/20/18 08:43	04/20/18 18:45	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/20/18 08:43	04/20/18 18:45	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/20/18 08:43	04/20/18 18:45	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/20/18 08:43	04/20/18 18:45	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/20/18 08:43	04/20/18 18:45	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/20/18 08:43	04/20/18 18:45	1
Fluorene	0.91	U	10	0.91	ug/L		04/20/18 08:43	04/20/18 18:45	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/20/18 08:43	04/20/18 18:45	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/20/18 08:43	04/20/18 18:45	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/20/18 08:43	04/20/18 18:45	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/20/18 08:43	04/20/18 18:45	1
Anthracene	0.63	U	10	0.63	ug/L		04/20/18 08:43	04/20/18 18:45	1
Carbazole	0.68	U	10	0.68	ug/L		04/20/18 08:43	04/20/18 18:45	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/20/18 08:43	04/20/18 18:45	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/20/18 08:43	04/20/18 18:45	1
Pyrene	1.6	U	10	1.6	ug/L		04/20/18 08:43	04/20/18 18:45	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/20/18 08:43	04/20/18 18:45	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/20/18 08:43	04/20/18 18:45	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/20/18 08:43	04/20/18 18:45	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/20/18 08:43	04/20/18 18:45	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/20/18 08:43	04/20/18 18:45	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/20/18 08:43	04/20/18 18:45	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/20/18 08:43	04/20/18 18:45	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/20/18 08:43	04/20/18 18:45	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/20/18 08:43	04/20/18 18:45	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/20/18 08:43	04/20/18 18:45	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/20/18 08:43	04/20/18 18:45	1
Caprolactam	0.68	U	10	0.68	ug/L		04/20/18 08:43	04/20/18 18:45	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/20/18 08:43	04/20/18 18:45	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/20/18 08:43	04/20/18 18:45	1
N-Methylaniline	0.48	U	5.0	0.48	ug/L		04/20/18 08:43	04/20/18 18:45	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G

TestAmerica Job ID: 460-154202-1

Client Sample ID: RBGW_041818

Lab Sample ID: 460-154284-1

Date Collected: 04/18/18 08:10
Date Received: 04/18/18 19:30

Matrix: Water

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L				04/20/18 08:43	04/20/18 18:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	76		51 - 108	04/20/18 08:43	04/20/18 18:45	1
Phenol-d5	24		14 - 39	04/20/18 08:43	04/20/18 18:45	1
Terphenyl-d14	67		40 - 148	04/20/18 08:43	04/20/18 18:45	1
2,4,6-Tribromophenol	73		26 - 139	04/20/18 08:43	04/20/18 18:45	1
2-Fluorophenol	38		25 - 58	04/20/18 08:43	04/20/18 18:45	1
2-Fluorobiphenyl	71		45 - 107	04/20/18 08:43	04/20/18 18:45	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 19:18	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/19/18 23:10	04/20/18 19:18	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/19/18 23:10	04/20/18 19:18	5
Barium	3.2	U	5.0	3.2	ug/L		04/19/18 23:10	04/20/18 19:18	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/19/18 23:10	04/20/18 19:18	5
Calcium	233	U	250	233	ug/L		04/19/18 23:10	04/20/18 19:18	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/19/18 23:10	04/20/18 19:18	5
Cobalt	3.1	U	5.0	3.1	ug/L		04/19/18 23:10	04/20/18 19:18	5
Chromium	3.1	U	5.0	3.1	ug/L		04/19/18 23:10	04/20/18 19:18	5
Copper	3.3	U	5.0	3.3	ug/L		04/19/18 23:10	04/20/18 19:18	5
Iron	97.8	U	150	97.8	ug/L		04/19/18 23:10	04/20/18 19:18	5
Potassium	143	U	250	143	ug/L		04/19/18 23:10	04/20/18 19:18	5
Magnesium	155	U	250	155	ug/L		04/19/18 23:10	04/20/18 19:18	5
Manganese	6.1	U	10.0	6.1	ug/L		04/19/18 23:10	04/20/18 19:18	5
Sodium	213	U	250	213	ug/L		04/19/18 23:10	04/20/18 19:18	5
Nickel	3.1	U	5.0	3.1	ug/L		04/19/18 23:10	04/20/18 19:18	5
Lead	0.93	U	1.5	0.93	ug/L		04/19/18 23:10	04/20/18 19:18	5
Antimony	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 19:18	5
Selenium	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 19:18	5
Thallium	0.60	U	1.0	0.60	ug/L		04/19/18 23:10	04/20/18 19:18	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 19:18	5
Zinc	16.3	U	20.0	16.3	ug/L		04/19/18 23:10	04/20/18 19:18	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12	U	0.20	0.12	ug/L		04/20/18 11:49	04/20/18 13:36	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	92.1	U	150	92.1	ug/L		04/20/18 08:34	04/21/18 21:36	1
Manganese, Dissolved	3.1	U	15.0	3.1	ug/L		04/20/18 08:34	04/21/18 21:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	0.045	U	0.10	0.045	mg/L		04/20/18 18:37	04/23/18 10:30	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G

TestAmerica Job ID: 460-154202-1

Client Sample ID: DGC-8C

Lab Sample ID: 460-154284-2

Date Collected: 04/18/18 09:50
Date Received: 04/18/18 19:30

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.42**		0.40	0.20	ug/L			04/20/18 00:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*72 - 133*		*04/20/18 00:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*71 - 144*		*04/20/18 00:38*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/22/18 05:45	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/22/18 05:45	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/22/18 05:45	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/22/18 05:45	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/22/18 05:45	1
Acetone	5 ~~1.5~~	~~J~~ U	5.0	1.1	ug/L			04/22/18 05:45	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/22/18 05:45	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/22/18 05:45	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/22/18 05:45	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/22/18 05:45	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/22/18 05:45	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/22/18 05:45	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/22/18 05:45	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/22/18 05:45	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/22/18 05:45	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/22/18 05:45	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/22/18 05:45	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/22/18 05:45	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/22/18 05:45	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/22/18 05:45	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/22/18 05:45	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/22/18 05:45	1
Benzene	0.090	U	1.0	0.090	ug/L			04/22/18 05:45	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/22/18 05:45	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/22/18 05:45	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/22/18 05:45	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/22/18 05:45	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/22/18 05:45	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/22/18 05:45	1
Toluene	0.25	U	1.0	0.25	ug/L			04/22/18 05:45	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/22/18 05:45	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/22/18 05:45	1
Styrene	0.17	U	1.0	0.17	ug/L			04/22/18 05:45	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/22/18 05:45	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/22/18 05:45	1
MTBE	0.13	U	1.0	0.13	ug/L			04/22/18 05:45	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/22/18 05:45	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/22/18 05:45	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/22/18 05:45	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/22/18 05:45	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/22/18 05:45	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/22/18 05:45	1

Client Sample ID: DGC-8C

Lab Sample ID: 460-154284-2

Date Collected: 04/18/18 09:50
Date Received: 04/18/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/22/18 05:45	1
Indane	0.12	U	1.0	0.12	ug/L			04/22/18 05:45	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/22/18 05:45	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/22/18 05:45	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/22/18 05:45*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*115*		*74 - 132*		*04/22/18 05:45*	*1*
Bromofluorobenzene	*91*		*77 - 124*		*04/22/18 05:45*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*		*04/22/18 05:45*	*1*
Dibromofluoromethane (Surr)	*108*		*72 - 131*		*04/22/18 05:45*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/20/18 08:43	04/20/18 18:25	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/20/18 08:43	04/20/18 18:25	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/20/18 08:43	04/20/18 18:25	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/20/18 08:43	04/20/18 18:25	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/20/18 08:43	04/20/18 18:25	1
Bis(2-chloroethyl)ether	0.026	U	0.030	0.026	ug/L		04/20/18 08:43	04/20/18 18:25	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/20/18 08:43	04/20/18 17:42	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/20/18 08:43	04/20/18 17:42	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/20/18 08:43	04/20/18 17:42	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/20/18 08:43	04/20/18 17:42	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/20/18 08:43	04/20/18 17:42	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/20/18 08:43	04/20/18 17:42	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/20/18 08:43	04/20/18 17:42	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/20/18 08:43	04/20/18 17:42	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/20/18 08:43	04/20/18 17:42	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/20/18 08:43	04/20/18 17:42	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/20/18 08:43	04/20/18 17:42	1
4-Nitrophenol	0.69	~~U F1 F2~~ R	20	0.69	ug/L		04/20/18 08:43	04/20/18 17:42	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/20/18 08:43	04/20/18 17:42	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/20/18 08:43	04/20/18 17:42	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/20/18 08:43	04/20/18 17:42	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/20/18 08:43	04/20/18 17:42	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/20/18 08:43	04/20/18 17:42	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/20/18 08:43	04/20/18 17:42	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/20/18 08:43	04/20/18 17:42	1
Isophorone	0.80	U	10	0.80	ug/L		04/20/18 08:43	04/20/18 17:42	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/20/18 08:43	04/20/18 17:42	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/20/18 08:43	04/20/18 17:42	1
Naphthalene	1.1	U	10	1.1	ug/L		04/20/18 08:43	04/20/18 17:42	1
4-Chloroaniline	1.9	~~U F1~~ UJ	10	1.9	ug/L		04/20/18 08:43	04/20/18 17:42	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/20/18 08:43	04/20/18 17:42	1

Client Sample ID: DGC-8C

Lab Sample ID: 460-154284-2

Date Collected: 04/18/18 09:50
Date Received: 04/18/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/20/18 08:43	04/20/18 17:42	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/20/18 08:43	04/20/18 17:42	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/20/18 08:43	04/20/18 17:42	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/20/18 08:43	04/20/18 17:42	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/20/18 08:43	04/20/18 17:42	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/20/18 08:43	04/20/18 17:42	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/20/18 08:43	04/20/18 17:42	1
3-Nitroaniline	0.96	~~U F1~~ UJ	10	0.96	ug/L		04/20/18 08:43	04/20/18 17:42	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/20/18 08:43	04/20/18 17:42	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/20/18 08:43	04/20/18 17:42	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/20/18 08:43	04/20/18 17:42	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/20/18 08:43	04/20/18 17:42	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/20/18 08:43	04/20/18 17:42	1
Fluorene	0.91	U	10	0.91	ug/L		04/20/18 08:43	04/20/18 17:42	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/20/18 08:43	04/20/18 17:42	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/20/18 08:43	04/20/18 17:42	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/20/18 08:43	04/20/18 17:42	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/20/18 08:43	04/20/18 17:42	1
Anthracene	0.63	U	10	0.63	ug/L		04/20/18 08:43	04/20/18 17:42	1
Carbazole	0.68	U	10	0.68	ug/L		04/20/18 08:43	04/20/18 17:42	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/20/18 08:43	04/20/18 17:42	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/20/18 08:43	04/20/18 17:42	1
Pyrene	1.6	U	10	1.6	ug/L		04/20/18 08:43	04/20/18 17:42	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/20/18 08:43	04/20/18 17:42	1
3,3'-Dichlorobenzidine	1.4	~~U F1~~ UJ	10	1.4	ug/L		04/20/18 08:43	04/20/18 17:42	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/20/18 08:43	04/20/18 17:42	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/20/18 08:43	04/20/18 17:42	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/20/18 08:43	04/20/18 17:42	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/20/18 08:43	04/20/18 17:42	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/20/18 08:43	04/20/18 17:42	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/20/18 08:43	04/20/18 17:42	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/20/18 08:43	04/20/18 17:42	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/20/18 08:43	04/20/18 17:42	1
n,n'-Dimethylaniline	0.91	~~U F1~~ UJ	1.0	0.91	ug/L		04/20/18 08:43	04/20/18 17:42	1
Caprolactam	0.68	U	10	0.68	ug/L		04/20/18 08:43	04/20/18 17:42	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/20/18 08:43	04/20/18 17:42	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/20/18 08:43	04/20/18 17:42	1
N-Methylaniline	0.48	~~U F1~~ UJ	5.0	0.48	ug/L		04/20/18 08:43	04/20/18 17:42	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/20/18 08:43*	*04/20/18 17:42*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*74*		*51 - 108*	*04/20/18 08:43*	*04/20/18 17:42*	*1*
Phenol-d5	*22*		*14 - 39*	*04/20/18 08:43*	*04/20/18 17:42*	*1*
Terphenyl-d14	*48*		*40 - 148*	*04/20/18 08:43*	*04/20/18 17:42*	*1*
2,4,6-Tribromophenol	*74*		*26 - 139*	*04/20/18 08:43*	*04/20/18 17:42*	*1*
2-Fluorophenol	*35*		*25 - 58*	*04/20/18 08:43*	*04/20/18 17:42*	*1*
2-Fluorobiphenyl	*70*		*45 - 107*	*04/20/18 08:43*	*04/20/18 17:42*	*1*

Client Sample ID: DGC-8C

Lab Sample ID: 460-154284-2

Date Collected: 04/18/18 09:50
Date Received: 04/18/18 19:30

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 17:58	5
Aluminum	**91.4**		50.0	28.5	ug/L		04/19/18 23:10	04/20/18 17:58	5
Arsenic	**12.2**		2.5	1.5	ug/L		04/19/18 23:10	04/20/18 17:58	5
Barium	**107**		5.0	3.2	ug/L		04/19/18 23:10	04/20/18 17:58	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/19/18 23:10	04/20/18 17:58	5
Calcium	**44800**		250	233	ug/L		04/19/18 23:10	04/20/18 17:58	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/19/18 23:10	04/20/18 17:58	5
Cobalt	**13.7**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 17:58	5
Chromium	**3.5**	**J**	5.0	3.1	ug/L		04/19/18 23:10	04/20/18 17:58	5
Copper	**4.0**	**J**	5.0	3.3	ug/L		04/19/18 23:10	04/20/18 17:58	5
Iron	**3300**		150	97.8	ug/L		04/19/18 23:10	04/20/18 17:58	5
Potassium	**6370**		250	143	ug/L		04/19/18 23:10	04/20/18 17:58	5
Magnesium	**79300**		250	155	ug/L		04/19/18 23:10	04/20/18 17:58	5
Manganese	**287**		10.0	6.1	ug/L		04/19/18 23:10	04/20/18 17:58	5
Sodium	**4380**		250	213	ug/L		04/19/18 23:10	04/20/18 17:58	5
Nickel	**6.6**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 17:58	5
Lead	**1.5**		1.5	0.93	ug/L		04/19/18 23:10	04/20/18 17:58	5
Antimony	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 17:58	5
Selenium	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 17:58	5
Thallium	0.60	U	1.0	0.60	ug/L		04/19/18 23:10	04/20/18 17:58	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 17:58	5
Zinc	16.3	U	20.0	16.3	ug/L		04/19/18 23:10	04/20/18 17:58	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12	U	0.20	0.12	ug/L		04/20/18 11:49	04/20/18 13:17	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**3340**		150	92.1	ug/L		04/20/18 08:34	04/21/18 20:26	1
Manganese, Dissolved	**343**		15.0	3.1	ug/L		04/20/18 08:34	04/21/18 20:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.44**		0.10	0.045	mg/L		04/20/18 18:37	04/23/18 10:25	1

Client Sample ID: MHW-1S

Lab Sample ID: 460-154284-3

Date Collected: 04/18/18 11:45
Date Received: 04/18/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	**0.34**	**J**	1.0	0.22	ug/L			04/22/18 04:02	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/22/18 04:02	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/22/18 04:02	1
Chloroethane	**0.64**	**J**	1.0	0.37	ug/L			04/22/18 04:02	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/22/18 04:02	1
Acetone	5 ~~**3.0**~~	~~**J**~~ U	5.0	1.1	ug/L			04/22/18 04:02	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/22/18 04:02	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/22/18 04:02	1

Client Sample ID: MHW-1S

Lab Sample ID: 460-154284-3

Date Collected: 04/18/18 11:45
Date Received: 04/18/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	**0.71**	**J**	1.0	0.24	ug/L			04/22/18 04:02	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/22/18 04:02	1
cis-1,2-Dichloroethene	**0.29**	**J**	1.0	0.26	ug/L			04/22/18 04:02	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/22/18 04:02	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/22/18 04:02	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/22/18 04:02	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/22/18 04:02	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/22/18 04:02	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/22/18 04:02	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/22/18 04:02	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/22/18 04:02	1
Trichloroethene	**0.54**	**J**	1.0	0.22	ug/L			04/22/18 04:02	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/22/18 04:02	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/22/18 04:02	1
Benzene	**15**		1.0	0.090	ug/L			04/22/18 04:02	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/22/18 04:02	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/22/18 04:02	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/22/18 04:02	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/22/18 04:02	1
Tetrachloroethene	**0.39**	**J**	1.0	0.12	ug/L			04/22/18 04:02	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/22/18 04:02	1
Toluene	0.25	U	1.0	0.25	ug/L			04/22/18 04:02	1
Chlorobenzene	**12**		1.0	0.24	ug/L			04/22/18 04:02	1
Ethylbenzene	**0.55**	**J**	1.0	0.30	ug/L			04/22/18 04:02	1
Styrene	0.17	U	1.0	0.17	ug/L			04/22/18 04:02	1
Xylenes, Total	**2.0**		2.0	0.28	ug/L			04/22/18 04:02	1
Ethyl ether	**11**		1.0	0.11	ug/L			04/22/18 04:02	1
MTBE	0.13	U	1.0	0.13	ug/L			04/22/18 04:02	1
Tetrahydrofuran	**17**		2.0	0.36	ug/L			04/22/18 04:02	1
Cyclohexane	**0.31**	**J**	1.0	0.26	ug/L			04/22/18 04:02	1
1,4-Dioxane	**1200**		50	8.7	ug/L			04/22/18 04:02	1
1,2,4-Trimethylbenzene	**0.36**	**J**	1.0	0.23	ug/L			04/22/18 04:02	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/22/18 04:02	1
Isopropylbenzene	**1.9**		1.0	0.32	ug/L			04/22/18 04:02	1
N-Propylbenzene	**0.96**	**J**	1.0	0.29	ug/L			04/22/18 04:02	1
Methylcyclohexane	**0.31**	**J**	1.0	0.22	ug/L			04/22/18 04:02	1
Indane	**5.5**		1.0	0.12	ug/L			04/22/18 04:02	1
Dichlorofluoromethane	**0.73**	**J**	1.0	0.21	ug/L			04/22/18 04:02	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/22/18 04:02	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Propane	*8.9*	*J N*	*ug/L*		*0.90*	*74-98-6*		*04/22/18 04:02*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*118*		*74 - 132*		*04/22/18 04:02*	*1*
Bromofluorobenzene	*92*		*77 - 124*		*04/22/18 04:02*	*1*
Toluene-d8 (Surr)	*108*		*80 - 120*		*04/22/18 04:02*	*1*
Dibromofluoromethane (Surr)	*112*		*72 - 131*		*04/22/18 04:02*	*1*

Client Sample ID: MHW-1S

Lab Sample ID: 460-154284-3

Date Collected: 04/18/18 11:45
Date Received: 04/18/18 19:30

Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/20/18 08:43	04/20/18 19:06	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/20/18 08:43	04/20/18 19:06	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/20/18 08:43	04/20/18 19:06	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/20/18 08:43	04/20/18 19:06	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/20/18 08:43	04/20/18 19:06	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/20/18 08:43	04/20/18 19:06	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/20/18 08:43	04/20/18 19:06	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/20/18 08:43	04/20/18 19:06	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/20/18 08:43	04/20/18 19:06	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/20/18 08:43	04/20/18 19:06	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/20/18 08:43	04/20/18 19:06	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/20/18 08:43	04/20/18 19:06	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/20/18 08:43	04/20/18 19:06	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/20/18 08:43	04/20/18 19:06	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/20/18 08:43	04/20/18 19:06	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/20/18 08:43	04/20/18 19:06	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/20/18 08:43	04/20/18 19:06	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/20/18 08:43	04/20/18 19:06	1
Bis(2-chloroethyl)ether	**31**		1.0	0.30	ug/L		04/20/18 08:43	04/20/18 19:06	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/20/18 08:43	04/20/18 19:06	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/20/18 08:43	04/20/18 19:06	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/20/18 08:43	04/20/18 19:06	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/20/18 08:43	04/20/18 19:06	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/20/18 08:43	04/20/18 19:06	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/20/18 08:43	04/20/18 19:06	1
Isophorone	0.80	U	10	0.80	ug/L		04/20/18 08:43	04/20/18 19:06	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/20/18 08:43	04/20/18 19:06	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/20/18 08:43	04/20/18 19:06	1
Naphthalene	1.1	U	10	1.1	ug/L		04/20/18 08:43	04/20/18 19:06	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/20/18 08:43	04/20/18 19:06	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/20/18 08:43	04/20/18 19:06	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/20/18 08:43	04/20/18 19:06	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/20/18 08:43	04/20/18 19:06	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/20/18 08:43	04/20/18 19:06	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/20/18 08:43	04/20/18 19:06	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/20/18 08:43	04/20/18 19:06	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/20/18 08:43	04/20/18 19:06	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/20/18 08:43	04/20/18 19:06	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/20/18 08:43	04/20/18 19:06	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/20/18 08:43	04/20/18 19:06	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/20/18 08:43	04/20/18 19:06	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/20/18 08:43	04/20/18 19:06	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/20/18 08:43	04/20/18 19:06	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/20/18 08:43	04/20/18 19:06	1
Fluorene	0.91	U	10	0.91	ug/L		04/20/18 08:43	04/20/18 19:06	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/20/18 08:43	04/20/18 19:06	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/20/18 08:43	04/20/18 19:06	1

Client Sample ID: MHW-1S

Lab Sample ID: 460-154284-3

Date Collected: 04/18/18 11:45
Date Received: 04/18/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/20/18 08:43	04/20/18 19:06	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/20/18 08:43	04/20/18 19:06	1
Anthracene	0.63	U	10	0.63	ug/L		04/20/18 08:43	04/20/18 19:06	1
Carbazole	0.68	U	10	0.68	ug/L		04/20/18 08:43	04/20/18 19:06	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/20/18 08:43	04/20/18 19:06	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/20/18 08:43	04/20/18 19:06	1
Pyrene	1.6	U	10	1.6	ug/L		04/20/18 08:43	04/20/18 19:06	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/20/18 08:43	04/20/18 19:06	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/20/18 08:43	04/20/18 19:06	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/20/18 08:43	04/20/18 19:06	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/20/18 08:43	04/20/18 19:06	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/20/18 08:43	04/20/18 19:06	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/20/18 08:43	04/20/18 19:06	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/20/18 08:43	04/20/18 19:06	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/20/18 08:43	04/20/18 19:06	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/20/18 08:43	04/20/18 19:06	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/20/18 08:43	04/20/18 19:06	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/20/18 08:43	04/20/18 19:06	1
Caprolactam	0.68	U	10	0.68	ug/L		04/20/18 08:43	04/20/18 19:06	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/20/18 08:43	04/20/18 19:06	1
Bisphenol-A	**35**		10	9.9	ug/L		04/20/18 08:43	04/20/18 19:06	1
N-Methylaniline	**0.92**	**J**	5.0	0.48	ug/L		04/20/18 08:43	04/20/18 19:06	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*16*	*J*	*ug/L*		*1.85*		*04/20/18 08:43*	*04/20/18 19:06*	*1*
1,4-Dioxane	*93*	*J N*	*ug/L*		*2.05*	*123-91-1*	*04/20/18 08:43*	*04/20/18 19:06*	*1*
Benzene, chloro-	*7.6*	*J N*	*ug/L*		*3.09*	*108-90-7*	*04/20/18 08:43*	*04/20/18 19:06*	*1*
1,4-Oxathiane	*25*	*J N*	*ug/L*		*3.48*	*15980-15-1*	*04/20/18 08:43*	*04/20/18 19:06*	*1*
Urea, tetramethyl-	*23*	*J N*	*ug/L*		*4.42*	*632-22-4*	*04/20/18 08:43*	*04/20/18 19:06*	*1*
Phenol, p-tert-butyl-	*11*	*J N*	*ug/L*		*6.28*	*98-54-4*	*04/20/18 08:43*	*04/20/18 19:06*	*1*
Unknown	*24*	*J*	*ug/L*		*6.33*		*04/20/18 08:43*	*04/20/18 19:06*	*1*
Unknown	*12*	*J*	*ug/L*		*6.56*		*04/20/18 08:43*	*04/20/18 19:06*	*1*
Propanoic acid, 2-phenoxy-	*6.6*	*J N*	*ug/L*		*6.83*	*940-31-8*	*04/20/18 08:43*	*04/20/18 19:06*	*1*
Unknown	*320*	*J*	*ug/L*		*7.17*		*04/20/18 08:43*	*04/20/18 19:06*	*1*
Unknown	*16*	*J*	*ug/L*		*7.29*		*04/20/18 08:43*	*04/20/18 19:06*	*1*
Unknown	*9.4*	*J*	*ug/L*		*7.50*		*04/20/18 08:43*	*04/20/18 19:06*	*1*
Unknown	*10*	*J*	*ug/L*		*7.98*		*04/20/18 08:43*	*04/20/18 19:06*	*1*
Unknown	*6.6*	*J*	*ug/L*		*8.29*		*04/20/18 08:43*	*04/20/18 19:06*	*1*
Unknown	*7.4*	*J*	*ug/L*		*8.64*		*04/20/18 08:43*	*04/20/18 19:06*	*1*
Unknown	*8.3*	*J*	*ug/L*		*8.75*		*04/20/18 08:43*	*04/20/18 19:06*	*1*
Unknown	*11*	*J*	*ug/L*		*8.90*		*04/20/18 08:43*	*04/20/18 19:06*	*1*
Unknown	*9.1*	*J*	*ug/L*		*9.29*		*04/20/18 08:43*	*04/20/18 19:06*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*74*		*51 - 108*	*04/20/18 08:43*	*04/20/18 19:06*	*1*
Phenol-d5	*24*		*14 - 39*	*04/20/18 08:43*	*04/20/18 19:06*	*1*
Terphenyl-d14	*62*		*40 - 148*	*04/20/18 08:43*	*04/20/18 19:06*	*1*
2,4,6-Tribromophenol	*82*		*26 - 139*	*04/20/18 08:43*	*04/20/18 19:06*	*1*
2-Fluorophenol	*38*		*25 - 58*	*04/20/18 08:43*	*04/20/18 19:06*	*1*
2-Fluorobiphenyl	*70*		*45 - 107*	*04/20/18 08:43*	*04/20/18 19:06*	*1*

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G

TestAmerica Job ID: 460-154202-1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 19:23	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/19/18 23:10	04/20/18 19:23	5
Arsenic	**1.7**	**J**	2.5	1.5	ug/L		04/19/18 23:10	04/20/18 19:23	5
Barium	**210**		5.0	3.2	ug/L		04/19/18 23:10	04/20/18 19:23	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/19/18 23:10	04/20/18 19:23	5
Calcium	**11200**		250	233	ug/L		04/19/18 23:10	04/20/18 19:23	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/19/18 23:10	04/20/18 19:23	5
Cobalt	**144**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 19:23	5
Chromium	**77.9**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 19:23	5
Copper	**4.1**	**J**	5.0	3.3	ug/L		04/19/18 23:10	04/20/18 19:23	5
Iron	**24900**		150	97.8	ug/L		04/19/18 23:10	04/20/18 19:23	5
Potassium	**3150**		250	143	ug/L		04/19/18 23:10	04/20/18 19:23	5
Magnesium	**27300**		250	155	ug/L		04/19/18 23:10	04/20/18 19:23	5
Manganese	**23300**		10.0	6.1	ug/L		04/19/18 23:10	04/20/18 19:23	5
Sodium	**54000**		250	213	ug/L		04/19/18 23:10	04/20/18 19:23	5
Nickel	**110**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 19:23	5
Lead	0.93	U	1.5	0.93	ug/L		04/19/18 23:10	04/20/18 19:23	5
Antimony	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 19:23	5
Selenium	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 19:23	5
Thallium	0.60	U	1.0	0.60	ug/L		04/19/18 23:10	04/20/18 19:23	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 19:23	5
Zinc	**53.4**		20.0	16.3	ug/L		04/19/18 23:10	04/20/18 19:23	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12	U	0.20	0.12	ug/L		04/20/18 11:49	04/20/18 13:38	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**25200**		150	92.1	ug/L		04/20/18 08:34	04/21/18 21:40	1
Manganese, Dissolved	**27000**		75.0	15.6	ug/L		04/20/18 08:34	04/22/18 12:11	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**1.2**		0.10	0.045	mg/L		04/20/18 18:37	04/23/18 10:31	1

Client Sample ID: C-1D

Lab Sample ID: 460-154284-4

Date Collected: 04/18/18 11:50

Matrix: Water

Date Received: 04/18/18 19:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/22/18 04:28	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/22/18 04:28	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/22/18 04:28	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/22/18 04:28	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/22/18 04:28	1
Acetone	5 ~~**2.6**~~	~~**J**~~ U	5.0	1.1	ug/L			04/22/18 04:28	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/22/18 04:28	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/22/18 04:28	1
1,1-Dichloroethane	**0.54**	**J**	1.0	0.24	ug/L			04/22/18 04:28	1
trans-1,2-Dichloroethene	**0.21**	**J**	1.0	0.18	ug/L			04/22/18 04:28	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/22/18 04:28	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/22/18 04:28	1

Client Sample ID: C-1D

Lab Sample ID: 460-154284-4

Date Collected: 04/18/18 11:50
Date Received: 04/18/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/22/18 04:28	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/22/18 04:28	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/22/18 04:28	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/22/18 04:28	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/22/18 04:28	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/22/18 04:28	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/22/18 04:28	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/22/18 04:28	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/22/18 04:28	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/22/18 04:28	1
Benzene	**160**		1.0	0.090	ug/L			04/22/18 04:28	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/22/18 04:28	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/22/18 04:28	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/22/18 04:28	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/22/18 04:28	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/22/18 04:28	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/22/18 04:28	1
Toluene	**0.39**	**J**	1.0	0.25	ug/L			04/22/18 04:28	1
Chlorobenzene	**45**		1.0	0.24	ug/L			04/22/18 04:28	1
Ethylbenzene	**1.2**		1.0	0.30	ug/L			04/22/18 04:28	1
Styrene	0.17	U	1.0	0.17	ug/L			04/22/18 04:28	1
Xylenes, Total	**30**		2.0	0.28	ug/L			04/22/18 04:28	1
Ethyl ether	**1.1**		1.0	0.11	ug/L			04/22/18 04:28	1
MTBE	0.13	U	1.0	0.13	ug/L			04/22/18 04:28	1
Tetrahydrofuran	**29**		2.0	0.36	ug/L			04/22/18 04:28	1
Cyclohexane	**7.0**		1.0	0.26	ug/L			04/22/18 04:28	1
1,4-Dioxane	**130**		50	8.7	ug/L			04/22/18 04:28	1
1,2,4-Trimethylbenzene	**20**		1.0	0.23	ug/L			04/22/18 04:28	1
1,3,5-Trimethylbenzene	**3.3**		1.0	0.25	ug/L			04/22/18 04:28	1
Isopropylbenzene	**23**		1.0	0.32	ug/L			04/22/18 04:28	1
N-Propylbenzene	**40**		1.0	0.29	ug/L			04/22/18 04:28	1
Methylcyclohexane	**12**		1.0	0.22	ug/L			04/22/18 04:28	1
Indane	**130**		1.0	0.12	ug/L			04/22/18 04:28	1
Dichlorofluoromethane	**0.56**	**J**	1.0	0.21	ug/L			04/22/18 04:28	1
1,2,3-Trimethylbenzene	**4.4**		1.0	0.11	ug/L			04/22/18 04:28	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Benzene, 1-ethyl-2-methyl-	*5.6*	*J N*	*ug/L*		*10.22*	*611-14-3*		*04/22/18 04:28*	*1*
2-Heptanone, 4,6-dimethyl-	*14*	*J N*	*ug/L*		*11.39*	*19549-80-5*		*04/22/18 04:28*	*1*
Benzene, 1-methyl-2-(1-methylethyl)-	*7.7*	*J N*	*ug/L*		*11.93*	*527-84-4*		*04/22/18 04:28*	*1*
Phenol, 2-propoxy-	*5.9*	*J N*	*ug/L*		*13.43*	*6280-96-2*		*04/22/18 04:28*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*117*		*74 - 132*		*04/22/18 04:28*	*1*
Bromofluorobenzene	*94*		*77 - 124*		*04/22/18 04:28*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*		*04/22/18 04:28*	*1*
Dibromofluoromethane (Surr)	*108*		*72 - 131*		*04/22/18 04:28*	*1*

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G

TestAmerica Job ID: 460-154202-1

Client Sample ID: C-1D

Lab Sample ID: 460-154284-4

Date Collected: 04/18/18 11:50
Date Received: 04/18/18 19:30

Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/20/18 08:43	04/20/18 19:27	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/20/18 08:43	04/20/18 19:27	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/20/18 08:43	04/20/18 19:27	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/20/18 08:43	04/20/18 19:27	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/20/18 08:43	04/20/18 19:27	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	**1.0**	**J**	10	0.29	ug/L		04/20/18 08:43	04/20/18 19:27	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/20/18 08:43	04/20/18 19:27	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/20/18 08:43	04/20/18 19:27	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/20/18 08:43	04/20/18 19:27	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/20/18 08:43	04/20/18 19:27	1
2,4-Dimethylphenol	**0.93**	**J**	10	0.24	ug/L		04/20/18 08:43	04/20/18 19:27	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/20/18 08:43	04/20/18 19:27	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/20/18 08:43	04/20/18 19:27	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/20/18 08:43	04/20/18 19:27	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/20/18 08:43	04/20/18 19:27	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/20/18 08:43	04/20/18 19:27	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/20/18 08:43	04/20/18 19:27	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/20/18 08:43	04/20/18 19:27	1
Bis(2-chloroethyl)ether	**9.2**		1.0	0.30	ug/L		04/20/18 08:43	04/20/18 19:27	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/20/18 08:43	04/20/18 19:27	1
1,4-Dichlorobenzene	**1.8**	**J**	10	1.3	ug/L		04/20/18 08:43	04/20/18 19:27	1
1,2-Dichlorobenzene	**1.3**	**J**	10	1.3	ug/L		04/20/18 08:43	04/20/18 19:27	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/20/18 08:43	04/20/18 19:27	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/20/18 08:43	04/20/18 19:27	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/20/18 08:43	04/20/18 19:27	1
Isophorone	0.80	U	10	0.80	ug/L		04/20/18 08:43	04/20/18 19:27	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/20/18 08:43	04/20/18 19:27	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/20/18 08:43	04/20/18 19:27	1
Naphthalene	**5.9**	**J**	10	1.1	ug/L		04/20/18 08:43	04/20/18 19:27	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/20/18 08:43	04/20/18 19:27	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/20/18 08:43	04/20/18 19:27	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/20/18 08:43	04/20/18 19:27	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/20/18 08:43	04/20/18 19:27	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/20/18 08:43	04/20/18 19:27	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/20/18 08:43	04/20/18 19:27	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/20/18 08:43	04/20/18 19:27	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/20/18 08:43	04/20/18 19:27	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/20/18 08:43	04/20/18 19:27	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/20/18 08:43	04/20/18 19:27	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/20/18 08:43	04/20/18 19:27	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/20/18 08:43	04/20/18 19:27	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/20/18 08:43	04/20/18 19:27	1
Diethyl phthalate	**3.8**	**J**	10	0.98	ug/L		04/20/18 08:43	04/20/18 19:27	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/20/18 08:43	04/20/18 19:27	1
Fluorene	0.91	U	10	0.91	ug/L		04/20/18 08:43	04/20/18 19:27	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/20/18 08:43	04/20/18 19:27	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/20/18 08:43	04/20/18 19:27	1

Client Sample ID: C-1D

Date Collected: 04/18/18 11:50
Date Received: 04/18/18 19:30

Lab Sample ID: 460-154284-4

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/20/18 08:43	04/20/18 19:27	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/20/18 08:43	04/20/18 19:27	1
Anthracene	0.63	U	10	0.63	ug/L		04/20/18 08:43	04/20/18 19:27	1
Carbazole	0.68	U	10	0.68	ug/L		04/20/18 08:43	04/20/18 19:27	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/20/18 08:43	04/20/18 19:27	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/20/18 08:43	04/20/18 19:27	1
Pyrene	1.6	U	10	1.6	ug/L		04/20/18 08:43	04/20/18 19:27	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/20/18 08:43	04/20/18 19:27	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/20/18 08:43	04/20/18 19:27	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/20/18 08:43	04/20/18 19:27	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/20/18 08:43	04/20/18 19:27	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/20/18 08:43	04/20/18 19:27	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/20/18 08:43	04/20/18 19:27	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/20/18 08:43	04/20/18 19:27	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/20/18 08:43	04/20/18 19:27	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/20/18 08:43	04/20/18 19:27	1
Diphenyl ether	**19**		10	1.2	ug/L		04/20/18 08:43	04/20/18 19:27	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/20/18 08:43	04/20/18 19:27	1
Caprolactam	0.68	U	10	0.68	ug/L		04/20/18 08:43	04/20/18 19:27	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/20/18 08:43	04/20/18 19:27	1
Bisphenol-A	**100**		10	9.9	ug/L		04/20/18 08:43	04/20/18 19:27	1
N-Methylaniline	**1.3**	**J**	5.0	0.48	ug/L		04/20/18 08:43	04/20/18 19:27	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Butane, 2-methoxy-2-methyl-	*10*	*J N*	*ug/L*		*1.85*	*994-05-8*	*04/20/18 08:43*	*04/20/18 19:27*	*1*
Benzene, chloro-	*17*	*J N*	*ug/L*		*3.09*	*108-90-7*	*04/20/18 08:43*	*04/20/18 19:27*	*1*
Benzene, (1-methylethyl)-	*12*	*J N*	*ug/L*		*3.75*	*98-82-8*	*04/20/18 08:43*	*04/20/18 19:27*	*1*
Benzene, propyl-	*16*	*J N*	*ug/L*		*4.00*	*103-65-1*	*04/20/18 08:43*	*04/20/18 19:27*	*1*
Unknown	*17*	*J*	*ug/L*		*4.26*		*04/20/18 08:43*	*04/20/18 19:27*	*1*
Benzene, 1,2,3-trimethyl-	*15*	*J N*	*ug/L*		*4.33*	*526-73-8*	*04/20/18 08:43*	*04/20/18 19:27*	*1*
Indane	*77*	*J N*	*ug/L*		*4.66*	*496-11-7*	*04/20/18 08:43*	*04/20/18 19:27*	*1*
Unknown	*16*	*J*	*ug/L*		*4.79*		*04/20/18 08:43*	*04/20/18 19:27*	*1*
Benzene, 1,2-dipropoxy-	*20*	*J N*	*ug/L*		*6.13*	*6280-98-4*	*04/20/18 08:43*	*04/20/18 19:27*	*1*
Unknown	*50*	*J*	*ug/L*		*7.16*		*04/20/18 08:43*	*04/20/18 19:27*	*1*
5-Methyl-2,4-diisopropylphenol	*11*	*J N*	*ug/L*		*7.29*	*40625-96-5*	*04/20/18 08:43*	*04/20/18 19:27*	*1*
Unknown	*12*	*J*	*ug/L*		*8.35*		*04/20/18 08:43*	*04/20/18 19:27*	*1*
Unknown	*13*	*J*	*ug/L*		*8.38*		*04/20/18 08:43*	*04/20/18 19:27*	*1*
Unknown	*11*	*J*	*ug/L*		*8.61*		*04/20/18 08:43*	*04/20/18 19:27*	*1*
Unknown	*11*	*J*	*ug/L*		*9.72*		*04/20/18 08:43*	*04/20/18 19:27*	*1*
Unknown	*12*	*J*	*ug/L*		*10.69*		*04/20/18 08:43*	*04/20/18 19:27*	*1*
Unknown	*20*	*J*	*ug/L*		*11.35*		*04/20/18 08:43*	*04/20/18 19:27*	*1*
Unknown	*14*	*J*	*ug/L*		*12.48*		*04/20/18 08:43*	*04/20/18 19:27*	*1*
Unknown	*100*	*J*	*ug/L*		*12.67*		*04/20/18 08:43*	*04/20/18 19:27*	*1*
Unknown	*23*	*J*	*ug/L*		*12.98*		*04/20/18 08:43*	*04/20/18 19:27*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*73*		*51 - 108*	*04/20/18 08:43*	*04/20/18 19:27*	*1*
Phenol-d5	*23*		*14 - 39*	*04/20/18 08:43*	*04/20/18 19:27*	*1*
Terphenyl-d14	*57*		*40 - 148*	*04/20/18 08:43*	*04/20/18 19:27*	*1*
2,4,6-Tribromophenol	*81*		*26 - 139*	*04/20/18 08:43*	*04/20/18 19:27*	*1*

Client Sample ID: C-1D

Lab Sample ID: 460-154284-4

Date Collected: 04/18/18 11:50
Date Received: 04/18/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*36*		*25 - 58*	*04/20/18 08:43*	*04/20/18 19:27*	*1*
2-Fluorobiphenyl	*68*		*45 - 107*	*04/20/18 08:43*	*04/20/18 19:27*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 19:26	5
Aluminum	**367**		50.0	28.5	ug/L		04/19/18 23:10	04/20/18 19:26	5
Arsenic	**14.3**		2.5	1.5	ug/L		04/19/18 23:10	04/20/18 19:26	5
Barium	**80.9**		5.0	3.2	ug/L		04/19/18 23:10	04/20/18 19:26	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/19/18 23:10	04/20/18 19:26	5
Calcium	**15300**		250	233	ug/L		04/19/18 23:10	04/20/18 19:26	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/19/18 23:10	04/20/18 19:26	5
Cobalt	**7.0**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 19:26	5
Chromium	**3.3**	J	5.0	3.1	ug/L		04/19/18 23:10	04/20/18 19:26	5
Copper	**4.6**	J	5.0	3.3	ug/L		04/19/18 23:10	04/20/18 19:26	5
Iron	**23800**		150	97.8	ug/L		04/19/18 23:10	04/20/18 19:26	5
Potassium	**2230**		250	143	ug/L		04/19/18 23:10	04/20/18 19:26	5
Magnesium	**15200**		250	155	ug/L		04/19/18 23:10	04/20/18 19:26	5
Manganese	**2390**		10.0	6.1	ug/L		04/19/18 23:10	04/20/18 19:26	5
Sodium	**13900**		250	213	ug/L		04/19/18 23:10	04/20/18 19:26	5
Nickel	**5.6**		5.0	3.1	ug/L		04/19/18 23:10	04/20/18 19:26	5
Lead	**1.1**	J	1.5	0.93	ug/L		04/19/18 23:10	04/20/18 19:26	5
Antimony	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 19:26	5
Selenium	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 19:26	5
Thallium	0.60	U	1.0	0.60	ug/L		04/19/18 23:10	04/20/18 19:26	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 19:26	5
Zinc	16.3	U	20.0	16.3	ug/L		04/19/18 23:10	04/20/18 19:26	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12	U	0.20	0.12	ug/L		04/20/18 11:49	04/20/18 13:40	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**28200**		150	92.1	ug/L		04/20/18 08:34	04/21/18 21:45	1
Manganese, Dissolved	**2730**		15.0	3.1	ug/L		04/20/18 08:34	04/21/18 21:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**1.9**		0.10	0.045	mg/L		04/20/18 18:37	04/23/18 10:32	1

Client Sample ID: DDA-14-TZ

Lab Sample ID: 460-154284-5

Date Collected: 04/18/18 13:10
Date Received: 04/18/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/22/18 04:53	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/22/18 04:53	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/22/18 04:53	1

Client Sample ID: DDA-14-TZ

Lab Sample ID: 460-154284-5

Date Collected: 04/18/18 13:10
Date Received: 04/18/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	0.37	U	1.0	0.37	ug/L			04/22/18 04:53	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/22/18 04:53	1
Acetone	1.1	U	5.0	1.1	ug/L			04/22/18 04:53	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/22/18 04:53	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/22/18 04:53	1
1,1-Dichloroethane	**0.31**	**J**	1.0	0.24	ug/L			04/22/18 04:53	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/22/18 04:53	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/22/18 04:53	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/22/18 04:53	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/22/18 04:53	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/22/18 04:53	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/22/18 04:53	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/22/18 04:53	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/22/18 04:53	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/22/18 04:53	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/22/18 04:53	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/22/18 04:53	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/22/18 04:53	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/22/18 04:53	1
Benzene	**180**		1.0	0.090	ug/L			04/22/18 04:53	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/22/18 04:53	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/22/18 04:53	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/22/18 04:53	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/22/18 04:53	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/22/18 04:53	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/22/18 04:53	1
Toluene	**0.36**	**J**	1.0	0.25	ug/L			04/22/18 04:53	1
Chlorobenzene	**2.0**		1.0	0.24	ug/L			04/22/18 04:53	1
Ethylbenzene	**14**		1.0	0.30	ug/L			04/22/18 04:53	1
Styrene	0.17	U	1.0	0.17	ug/L			04/22/18 04:53	1
Xylenes, Total	**17**		2.0	0.28	ug/L			04/22/18 04:53	1
Ethyl ether	**2.2**		1.0	0.11	ug/L			04/22/18 04:53	1
MTBE	**0.41**	**J**	1.0	0.13	ug/L			04/22/18 04:53	1
Tetrahydrofuran	**27**		2.0	0.36	ug/L			04/22/18 04:53	1
Cyclohexane	**0.29**	**J**	1.0	0.26	ug/L			04/22/18 04:53	1
1,4-Dioxane	**170**		50	8.7	ug/L			04/22/18 04:53	1
1,2,4-Trimethylbenzene	**13**		1.0	0.23	ug/L			04/22/18 04:53	1
1,3,5-Trimethylbenzene	**2.3**		1.0	0.25	ug/L			04/22/18 04:53	1
Isopropylbenzene	**1.5**		1.0	0.32	ug/L			04/22/18 04:53	1
N-Propylbenzene	**3.7**		1.0	0.29	ug/L			04/22/18 04:53	1
Methylcyclohexane	**0.61**	**J**	1.0	0.22	ug/L			04/22/18 04:53	1
Indane	**3.4**		1.0	0.12	ug/L			04/22/18 04:53	1
Dichlorofluoromethane	**1.2**		1.0	0.21	ug/L			04/22/18 04:53	1
1,2,3-Trimethylbenzene	**2.9**		1.0	0.11	ug/L			04/22/18 04:53	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/22/18 04:53*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*115*		*74 - 132*		*04/22/18 04:53*	*1*

Client Sample ID: DDA-14-TZ

Lab Sample ID: 460-154284-5

Date Collected: 04/18/18 13:10
Date Received: 04/18/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Bromofluorobenzene	*93*		*77 - 124*		*04/22/18 04:53*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*04/22/18 04:53*	*1*
Dibromofluoromethane (Surr)	*105*		*72 - 131*		*04/22/18 04:53*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/20/18 08:43	04/20/18 19:48	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/20/18 08:43	04/20/18 19:48	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/20/18 08:43	04/20/18 19:48	1
Hexachlorobenzene	**0.018**	**J**	0.020	0.013	ug/L		04/20/18 08:43	04/20/18 19:48	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/20/18 08:43	04/20/18 19:48	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/20/18 08:43	04/20/18 19:48	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/20/18 08:43	04/20/18 19:48	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/20/18 08:43	04/20/18 19:48	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/20/18 08:43	04/20/18 19:48	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/20/18 08:43	04/20/18 19:48	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/20/18 08:43	04/20/18 19:48	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/20/18 08:43	04/20/18 19:48	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/20/18 08:43	04/20/18 19:48	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/20/18 08:43	04/20/18 19:48	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/20/18 08:43	04/20/18 19:48	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/20/18 08:43	04/20/18 19:48	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/20/18 08:43	04/20/18 19:48	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/20/18 08:43	04/20/18 19:48	1
Bis(2-chloroethyl)ether	**17**		1.0	0.30	ug/L		04/20/18 08:43	04/20/18 19:48	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/20/18 08:43	04/20/18 19:48	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/20/18 08:43	04/20/18 19:48	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/20/18 08:43	04/20/18 19:48	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/20/18 08:43	04/20/18 19:48	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/20/18 08:43	04/20/18 19:48	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/20/18 08:43	04/20/18 19:48	1
Isophorone	0.80	U	10	0.80	ug/L		04/20/18 08:43	04/20/18 19:48	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/20/18 08:43	04/20/18 19:48	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/20/18 08:43	04/20/18 19:48	1
Naphthalene	1.1	U	10	1.1	ug/L		04/20/18 08:43	04/20/18 19:48	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/20/18 08:43	04/20/18 19:48	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/20/18 08:43	04/20/18 19:48	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/20/18 08:43	04/20/18 19:48	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/20/18 08:43	04/20/18 19:48	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/20/18 08:43	04/20/18 19:48	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/20/18 08:43	04/20/18 19:48	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/20/18 08:43	04/20/18 19:48	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/20/18 08:43	04/20/18 19:48	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/20/18 08:43	04/20/18 19:48	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/20/18 08:43	04/20/18 19:48	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/20/18 08:43	04/20/18 19:48	1

Client Sample ID: DDA-14-TZ

Lab Sample ID: 460-154284-5

Date Collected: 04/18/18 13:10
Date Received: 04/18/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenzofuran	1.1	U	10	1.1	ug/L		04/20/18 08:43	04/20/18 19:48	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/20/18 08:43	04/20/18 19:48	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/20/18 08:43	04/20/18 19:48	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/20/18 08:43	04/20/18 19:48	1
Fluorene	0.91	U	10	0.91	ug/L		04/20/18 08:43	04/20/18 19:48	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/20/18 08:43	04/20/18 19:48	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/20/18 08:43	04/20/18 19:48	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/20/18 08:43	04/20/18 19:48	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/20/18 08:43	04/20/18 19:48	1
Anthracene	0.63	U	10	0.63	ug/L		04/20/18 08:43	04/20/18 19:48	1
Carbazole	0.68	U	10	0.68	ug/L		04/20/18 08:43	04/20/18 19:48	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/20/18 08:43	04/20/18 19:48	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/20/18 08:43	04/20/18 19:48	1
Pyrene	1.6	U	10	1.6	ug/L		04/20/18 08:43	04/20/18 19:48	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/20/18 08:43	04/20/18 19:48	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/20/18 08:43	04/20/18 19:48	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/20/18 08:43	04/20/18 19:48	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/20/18 08:43	04/20/18 19:48	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/20/18 08:43	04/20/18 19:48	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/20/18 08:43	04/20/18 19:48	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/20/18 08:43	04/20/18 19:48	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/20/18 08:43	04/20/18 19:48	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/20/18 08:43	04/20/18 19:48	1
Diphenyl ether	**1.2**	**J**	10	1.2	ug/L		04/20/18 08:43	04/20/18 19:48	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/20/18 08:43	04/20/18 19:48	1
Caprolactam	0.68	U	10	0.68	ug/L		04/20/18 08:43	04/20/18 19:48	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/20/18 08:43	04/20/18 19:48	1
Bisphenol-A	**11**		10	9.9	ug/L		04/20/18 08:43	04/20/18 19:48	1
N-Methylaniline	**0.50**	**J**	5.0	0.48	ug/L		04/20/18 08:43	04/20/18 19:48	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane	*14*	*J N*	*ug/L*		*2.03*	*123-91-1*	*04/20/18 08:43*	*04/20/18 19:48*	*1*
Ethylbenzene	*10*	*J N*	*ug/L*		*3.20*	*100-41-4*	*04/20/18 08:43*	*04/20/18 19:48*	*1*
Benzene, 1,2,3-trimethyl-	*11*	*J N*	*ug/L*		*4.33*	*526-73-8*	*04/20/18 08:43*	*04/20/18 19:48*	*1*
Unknown	*16*	*J*	*ug/L*		*7.15*		*04/20/18 08:43*	*04/20/18 19:48*	*1*
Unknown	*7.9*	*J*	*ug/L*		*12.96*		*04/20/18 08:43*	*04/20/18 19:48*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*81*		*51 - 108*	*04/20/18 08:43*	*04/20/18 19:48*	*1*
Phenol-d5	*25*		*14 - 39*	*04/20/18 08:43*	*04/20/18 19:48*	*1*
Terphenyl-d14	*62*		*40 - 148*	*04/20/18 08:43*	*04/20/18 19:48*	*1*
2,4,6-Tribromophenol	*80*		*26 - 139*	*04/20/18 08:43*	*04/20/18 19:48*	*1*
2-Fluorophenol	*39*		*25 - 58*	*04/20/18 08:43*	*04/20/18 19:48*	*1*
2-Fluorobiphenyl	*72*		*45 - 107*	*04/20/18 08:43*	*04/20/18 19:48*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 19:33	5
Aluminum	**56.7**		50.0	28.5	ug/L		04/19/18 23:10	04/20/18 19:33	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/19/18 23:10	04/20/18 19:33	5

Client Sample ID: DDA-14-TZ

Lab Sample ID: 460-154284-5

Date Collected: 04/18/18 13:10
Date Received: 04/18/18 19:30

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**102**		5.0	3.2	ug/L		04/19/18 23:10	04/20/18 19:33	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/19/18 23:10	04/20/18 19:33	5
Calcium	**20200**		250	233	ug/L		04/19/18 23:10	04/20/18 19:33	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/19/18 23:10	04/20/18 19:33	5
Cobalt	3.1	U	5.0	3.1	ug/L		04/19/18 23:10	04/20/18 19:33	5
Chromium	3.1	U	5.0	3.1	ug/L		04/19/18 23:10	04/20/18 19:33	5
Copper	3.3	U	5.0	3.3	ug/L		04/19/18 23:10	04/20/18 19:33	5
Iron	**2600**		150	97.8	ug/L		04/19/18 23:10	04/20/18 19:33	5
Potassium	**920**		250	143	ug/L		04/19/18 23:10	04/20/18 19:33	5
Magnesium	**8820**		250	155	ug/L		04/19/18 23:10	04/20/18 19:33	5
Manganese	**83.2**		10.0	6.1	ug/L		04/19/18 23:10	04/20/18 19:33	5
Sodium	**24000**		250	213	ug/L		04/19/18 23:10	04/20/18 19:33	5
Nickel	3.1	U	5.0	3.1	ug/L		04/19/18 23:10	04/20/18 19:33	5
Lead	0.93	U	1.5	0.93	ug/L		04/19/18 23:10	04/20/18 19:33	5
Antimony	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 19:33	5
Selenium	1.4	U	2.5	1.4	ug/L		04/19/18 23:10	04/20/18 19:33	5
Thallium	0.60	U	1.0	0.60	ug/L		04/19/18 23:10	04/20/18 19:33	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/19/18 23:10	04/20/18 19:33	5
Zinc	16.3	U	20.0	16.3	ug/L		04/19/18 23:10	04/20/18 19:33	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12	U	0.20	0.12	ug/L		04/20/18 11:49	04/20/18 13:41	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**2340**		150	92.1	ug/L		04/20/18 08:34	04/21/18 21:48	1
Manganese, Dissolved	**96.1**		15.0	3.1	ug/L		04/20/18 08:34	04/21/18 21:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.62**		0.17	0.075	mg/L		04/20/18 18:37	04/23/18 10:38	1

Client Sample ID: PZ-6S

Lab Sample ID: 460-154284-6

Date Collected: 04/18/18 15:07
Date Received: 04/18/18 19:30

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**2.5**	J	0.40	0.20	ug/L			04/20/18 13:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*66*	*X	*72 - 133*		*04/20/18 13:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*196*	*X*	*71 - 144*		*04/20/18 13:52*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	11	U	50	11	ug/L			04/22/18 06:10	50
Bromomethane	9.0	U	50	9.0	ug/L			04/22/18 06:10	50
Vinyl chloride	**6.6**	**J**	50	3.0	ug/L			04/22/18 06:10	50
Chloroethane	19	U	50	19	ug/L			04/22/18 06:10	50

Client Sample ID: PZ-6S

Lab Sample ID: 460-154284-6

Date Collected: 04/18/18 15:07
Date Received: 04/18/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	11	U	50	11	ug/L			04/22/18 06:10	50
Acetone	54	U	250	54	ug/L			04/22/18 06:10	50
Carbon disulfide	11	U	50	11	ug/L			04/22/18 06:10	50
1,1-Dichloroethene	17	U	50	17	ug/L			04/22/18 06:10	50
1,1-Dichloroethane	**14**	**J**	50	12	ug/L			04/22/18 06:10	50
trans-1,2-Dichloroethene	9.0	U	50	9.0	ug/L			04/22/18 06:10	50
cis-1,2-Dichloroethene	**1200**		50	13	ug/L			04/22/18 06:10	50
Chloroform	11	U	50	11	ug/L			04/22/18 06:10	50
1,2-Dichloroethane	13	U	50	13	ug/L			04/22/18 06:10	50
2-Butanone	110	U	250	110	ug/L			04/22/18 06:10	50
1,1,1-Trichloroethane	14	U	50	14	ug/L			04/22/18 06:10	50
Carbon tetrachloride	17	U	50	17	ug/L			04/22/18 06:10	50
Bromodichloromethane	7.5	U	50	7.5	ug/L			04/22/18 06:10	50
1,2-Dichloropropane	9.0	U	50	9.0	ug/L			04/22/18 06:10	50
cis-1,3-Dichloropropene	8.0	U	50	8.0	ug/L			04/22/18 06:10	50
Trichloroethene	11	U	50	11	ug/L			04/22/18 06:10	50
Dibromochloromethane	11	U	50	11	ug/L			04/22/18 06:10	50
1,1,2-Trichloroethane	4.0	U	50	4.0	ug/L			04/22/18 06:10	50
Benzene	**2900**		50	4.5	ug/L			04/22/18 06:10	50
trans-1,3-Dichloropropene	9.5	U	50	9.5	ug/L			04/22/18 06:10	50
Bromoform	9.0	U	50	9.0	ug/L			04/22/18 06:10	50
4-Methyl-2-pentanone	32	U	250	32	ug/L			04/22/18 06:10	50
2-Hexanone	36	U	250	36	ug/L			04/22/18 06:10	50
Tetrachloroethene	6.0	U	50	6.0	ug/L			04/22/18 06:10	50
1,1,2,2-Tetrachloroethane	9.5	U	50	9.5	ug/L			04/22/18 06:10	50
Toluene	**23000**		50	13	ug/L			04/22/18 06:10	50
Chlorobenzene	**220**		50	12	ug/L			04/22/18 06:10	50
Ethylbenzene	**890**		50	15	ug/L			04/22/18 06:10	50
Styrene	8.5	U	50	8.5	ug/L			04/22/18 06:10	50
Xylenes, Total	**3700**		100	14	ug/L			04/22/18 06:10	50
Ethyl ether	5.5	U	50	5.5	ug/L			04/22/18 06:10	50
MTBE	6.5	U	50	6.5	ug/L			04/22/18 06:10	50
Tetrahydrofuran	18	U	100	18	ug/L			04/22/18 06:10	50
Cyclohexane	**30**	**J**	50	13	ug/L			04/22/18 06:10	50
1,2,4-Trimethylbenzene	**430**		50	12	ug/L			04/22/18 06:10	50
1,3,5-Trimethylbenzene	**150**		50	13	ug/L			04/22/18 06:10	50
Isopropylbenzene	**23**	**J**	50	16	ug/L			04/22/18 06:10	50
N-Propylbenzene	**64**		50	15	ug/L			04/22/18 06:10	50
Methylcyclohexane	**39**	**J**	50	11	ug/L			04/22/18 06:10	50
Indane	**72**		50	6.0	ug/L			04/22/18 06:10	50
Dichlorofluoromethane	11	U	50	11	ug/L			04/22/18 06:10	50
1,2,3-Trimethylbenzene	**170**		50	5.5	ug/L			04/22/18 06:10	50

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Benzene, 1-ethyl-2-methyl-	*410*	*J N*	*ug/L*		*9.75*	*611-14-3*		*04/22/18 06:10*	*50*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*119*		*74 - 132*		*04/22/18 06:10*	*50*
Bromofluorobenzene	*96*		*77 - 124*		*04/22/18 06:10*	*50*
Toluene-d8 (Surr)	*105*		*80 - 120*		*04/22/18 06:10*	*50*

Client Sample ID: PZ-6S

Lab Sample ID: 460-154284-6

Date Collected: 04/18/18 15:07
Date Received: 04/18/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	109		72 - 131		04/22/18 06:10	50

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/20/18 08:43	04/20/18 20:09	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/20/18 08:43	04/20/18 20:09	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/20/18 08:43	04/20/18 20:09	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/20/18 08:43	04/20/18 20:09	1
Pentachlorophenol	0.15	~~U~~ UJ	0.20	0.15	ug/L		04/20/18 08:43	04/20/18 20:09	1
Bis(2-chloroethyl)ether	0.026	U	0.030	0.026	ug/L		04/20/18 08:43	04/20/18 20:09	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	~~U~~ UJ	10	0.29	ug/L		04/20/18 08:43	04/20/18 20:09	1
2-Chlorophenol	0.38	~~U~~ UJ	10	0.38	ug/L		04/20/18 08:43	04/20/18 20:09	1
2-Methylphenol	**24**	J-	10	0.26	ug/L		04/20/18 08:43	04/20/18 20:09	1
4-Methylphenol	**31**	J-	10	0.24	ug/L		04/20/18 08:43	04/20/18 20:09	1
2-Nitrophenol	0.75	U UJ	10	0.75	ug/L		04/20/18 08:43	04/20/18 20:09	1
2,4-Dimethylphenol	**5.1**	~~J~~ J-	10	0.24	ug/L		04/20/18 08:43	04/20/18 20:09	1
2,4-Dichlorophenol	**2.8**	~~J~~ J-	10	0.42	ug/L		04/20/18 08:43	04/20/18 20:09	1
4-Chloro-3-methylphenol	0.58	~~U~~ UJ	10	0.58	ug/L		04/20/18 08:43	04/20/18 20:09	1
2,4,6-Trichlorophenol	0.30	~~U~~ UJ	10	0.30	ug/L		04/20/18 08:43	04/20/18 20:09	1
2,4,5-Trichlorophenol	0.28	~~U~~ UJ	10	0.28	ug/L		04/20/18 08:43	04/20/18 20:09	1
2,4-Dinitrophenol	14	~~U~~ UJ	20	14	ug/L		04/20/18 08:43	04/20/18 20:09	1
4-Nitrophenol	0.69	~~U~~ UJ	20	0.69	ug/L		04/20/18 08:43	04/20/18 20:09	1
4,6-Dinitro-2-methylphenol	13	~~U~~ UJ	20	13	ug/L		04/20/18 08:43	04/20/18 20:09	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/20/18 08:43	04/20/18 20:09	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/20/18 08:43	04/20/18 20:09	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/20/18 08:43	04/20/18 20:09	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/20/18 08:43	04/20/18 20:09	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/20/18 08:43	04/20/18 20:09	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/20/18 08:43	04/20/18 20:09	1
Isophorone	0.80	U	10	0.80	ug/L		04/20/18 08:43	04/20/18 20:09	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/20/18 08:43	04/20/18 20:09	1
1,2,4-Trichlorobenzene	**1.9**	**J**	2.0	1.3	ug/L		04/20/18 08:43	04/20/18 20:09	1
Naphthalene	**17**		10	1.1	ug/L		04/20/18 08:43	04/20/18 20:09	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/20/18 08:43	04/20/18 20:09	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/20/18 08:43	04/20/18 20:09	1
2-Methylnaphthalene	**1.9**	**J**	10	1.1	ug/L		04/20/18 08:43	04/20/18 20:09	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/20/18 08:43	04/20/18 20:09	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/20/18 08:43	04/20/18 20:09	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/20/18 08:43	04/20/18 20:09	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/20/18 08:43	04/20/18 20:09	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/20/18 08:43	04/20/18 20:09	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/20/18 08:43	04/20/18 20:09	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/20/18 08:43	04/20/18 20:09	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/20/18 08:43	04/20/18 20:09	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/20/18 08:43	04/20/18 20:09	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/20/18 08:43	04/20/18 20:09	1

Client Sample ID: PZ-6S

Lab Sample ID: 460-154284-6

Date Collected: 04/18/18 15:07
Date Received: 04/18/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diethyl phthalate	**40**		10	0.98	ug/L		04/20/18 08:43	04/20/18 20:09	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/20/18 08:43	04/20/18 20:09	1
Fluorene	0.91	U	10	0.91	ug/L		04/20/18 08:43	04/20/18 20:09	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/20/18 08:43	04/20/18 20:09	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/20/18 08:43	04/20/18 20:09	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/20/18 08:43	04/20/18 20:09	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/20/18 08:43	04/20/18 20:09	1
Anthracene	0.63	U	10	0.63	ug/L		04/20/18 08:43	04/20/18 20:09	1
Carbazole	0.68	U	10	0.68	ug/L		04/20/18 08:43	04/20/18 20:09	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/20/18 08:43	04/20/18 20:09	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/20/18 08:43	04/20/18 20:09	1
Pyrene	1.6	U	10	1.6	ug/L		04/20/18 08:43	04/20/18 20:09	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/20/18 08:43	04/20/18 20:09	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/20/18 08:43	04/20/18 20:09	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/20/18 08:43	04/20/18 20:09	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/20/18 08:43	04/20/18 20:09	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/20/18 08:43	04/20/18 20:09	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/20/18 08:43	04/20/18 20:09	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/20/18 08:43	04/20/18 20:09	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/20/18 08:43	04/20/18 20:09	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/20/18 08:43	04/20/18 20:09	1
Diphenyl ether	**5.3**	**J**	10	1.2	ug/L		04/20/18 08:43	04/20/18 20:09	1
n,n'-Dimethylaniline	**1.5**		1.0	0.91	ug/L		04/20/18 08:43	04/20/18 20:09	1
Caprolactam	0.68	U	10	0.68	ug/L		04/20/18 08:43	04/20/18 20:09	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/20/18 08:43	04/20/18 20:09	1
Bisphenol-A	**66**	J-	10	9.9	ug/L		04/20/18 08:43	04/20/18 20:09	1
N-Methylaniline	0.48	U	5.0	0.48	ug/L		04/20/18 08:43	04/20/18 20:09	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene	*3800*	*J N*	*ug/L*		*2.49*	*108-88-3*	*04/20/18 08:43*	*04/20/18 20:09*	*1*
Unknown	*74*	*J*	*ug/L*		*2.73*		*04/20/18 08:43*	*04/20/18 20:09*	*1*
Benzene, chloro-	*150*	*J N*	*ug/L*		*3.09*	*108-90-7*	*04/20/18 08:43*	*04/20/18 20:09*	*1*
Ethylbenzene	*650*	*J N*	*ug/L*		*3.22*	*100-41-4*	*04/20/18 08:43*	*04/20/18 20:09*	*1*
o-Xylene	*710*	*J N*	*ug/L*		*3.51*	*95-47-6*	*04/20/18 08:43*	*04/20/18 20:09*	*1*
Benzene, propyl-	*98*	*J N*	*ug/L*		*4.00*	*103-65-1*	*04/20/18 08:43*	*04/20/18 20:09*	*1*
Benzene, 1-ethyl-2-methyl-	*270*	*J N*	*ug/L*		*4.06*	*611-14-3*	*04/20/18 08:43*	*04/20/18 20:09*	*1*
Benzene, 1-ethyl-4-methyl-	*130*	*J N*	*ug/L*		*4.09*	*622-96-8*	*04/20/18 08:43*	*04/20/18 20:09*	*1*
Benzene, 1,3,5-trimethyl-	*200*	*J N*	*ug/L*		*4.13*	*108-67-8*	*04/20/18 08:43*	*04/20/18 20:09*	*1*
Benzene, 1-ethyl-3-methyl-	*160*	*J N*	*ug/L*		*4.21*	*620-14-4*	*04/20/18 08:43*	*04/20/18 20:09*	*1*
Unknown	*71*	*J*	*ug/L*		*4.28*		*04/20/18 08:43*	*04/20/18 20:09*	*1*
Benzene, 1,2,4-trimethyl-	*540*	*J N*	*ug/L*		*4.34*	*95-63-6*	*04/20/18 08:43*	*04/20/18 20:09*	*1*
Hexanoic acid	*130*	*J N*	*ug/L*		*4.39*	*142-62-1*	*04/20/18 08:43*	*04/20/18 20:09*	*1*
Benzene, 1,2,3-trimethyl-	*160*	*J N*	*ug/L*		*4.55*	*526-73-8*	*04/20/18 08:43*	*04/20/18 20:09*	*1*
Unknown	*63*	*J*	*ug/L*		*5.30*		*04/20/18 08:43*	*04/20/18 20:09*	*1*
Unknown	*51*	*J*	*ug/L*		*5.35*		*04/20/18 08:43*	*04/20/18 20:09*	*1*
Octanoic Acid	*80*	*J N*	*ug/L*		*5.63*	*124-07-2*	*04/20/18 08:43*	*04/20/18 20:09*	*1*
Unknown	*58*	*J*	*ug/L*		*7.46*		*04/20/18 08:43*	*04/20/18 20:09*	*1*
Unknown	*70*	*J*	*ug/L*		*7.52*		*04/20/18 08:43*	*04/20/18 20:09*	*1*
Unknown	*180*	*J*	*ug/L*		*12.68*		*04/20/18 08:43*	*04/20/18 20:09*	*1*

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G

TestAmerica Job ID: 460-154202-1

Client Sample ID: PZ-6S

Lab Sample ID: 460-154284-6

Date Collected: 04/18/18 15:07
Date Received: 04/18/18 19:30

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	79		51 - 108	04/20/18 08:43	04/20/18 20:09	1
Phenol-d5	23		14 - 39	04/20/18 08:43	04/20/18 20:09	1
Terphenyl-d14	62		40 - 148	04/20/18 08:43	04/20/18 20:09	1
2,4,6-Tribromophenol	85		26 - 139	04/20/18 08:43	04/20/18 20:09	1
2-Fluorophenol	17	X	25 - 58	04/20/18 08:43	04/20/18 20:09	1
2-Fluorobiphenyl	72		45 - 107	04/20/18 08:43	04/20/18 20:09	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/20/18 23:35	04/23/18 16:15	5
Aluminum	**36.2**	**J**	50.0	28.5	ug/L		04/20/18 23:35	04/23/18 16:15	5
Arsenic	**10.0**		2.5	1.5	ug/L		04/20/18 23:35	04/23/18 16:15	5
Barium	**59.0**		5.0	3.2	ug/L		04/20/18 23:35	04/23/18 16:15	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/20/18 23:35	04/23/18 16:15	5
Calcium	**50500**		250	233	ug/L		04/20/18 23:35	04/23/18 16:15	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/20/18 23:35	04/23/18 16:15	5
Cobalt	**8.0**		5.0	3.1	ug/L		04/20/18 23:35	04/23/18 16:15	5
Chromium	3.1	U	5.0	3.1	ug/L		04/20/18 23:35	04/23/18 16:15	5
Copper	**3.8**	**J**	5.0	3.3	ug/L		04/20/18 23:35	04/23/18 16:15	5
Iron	**55900**		150	97.8	ug/L		04/20/18 23:35	04/23/18 16:15	5
Potassium	**1390**		250	143	ug/L		04/20/18 23:35	04/23/18 16:15	5
Magnesium	**31300**		250	155	ug/L		04/20/18 23:35	04/23/18 16:15	5
Manganese	**1390**		10.0	6.1	ug/L		04/20/18 23:35	04/23/18 16:15	5
Sodium	**7500**		250	213	ug/L		04/20/18 23:35	04/23/18 16:15	5
Nickel	3.1	U	5.0	3.1	ug/L		04/20/18 23:35	04/23/18 16:15	5
Lead	0.93	U	1.5	0.93	ug/L		04/20/18 23:35	04/23/18 16:15	5
Antimony	1.4	U	2.5	1.4	ug/L		04/20/18 23:35	04/23/18 16:15	5
Selenium	1.4	U	2.5	1.4	ug/L		04/20/18 23:35	04/23/18 16:15	5
Thallium	0.60	U	1.0	0.60	ug/L		04/20/18 23:35	04/23/18 16:15	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/20/18 23:35	04/23/18 16:15	5
Zinc	16.3	U	20.0	16.3	ug/L		04/20/18 23:35	04/23/18 16:15	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12	U	0.20	0.12	ug/L		04/23/18 12:30	04/23/18 14:03	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**66400**		150	92.1	ug/L		04/20/18 08:34	04/21/18 21:52	1
Manganese, Dissolved	**1580**		15.0	3.1	ug/L		04/20/18 08:34	04/21/18 21:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.67**		0.10	0.045	mg/L		04/20/18 18:37	04/23/18 10:40	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G

TestAmerica Job ID: 460-154202-1

Client Sample ID: FDGW_041818

Lab Sample ID: 460-154284-7

Date Collected: 04/18/18 00:00
Date Received: 04/18/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	**0.41**	**J**	1.0	0.22	ug/L			04/22/18 05:19	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/22/18 05:19	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/22/18 05:19	1
Chloroethane	**0.50**	**J**	1.0	0.37	ug/L			04/22/18 05:19	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/22/18 05:19	1
Acetone	5 ~~3.1~~	~~J~~ U	5.0	1.1	ug/L			04/22/18 05:19	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/22/18 05:19	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/22/18 05:19	1
1,1-Dichloroethane	**0.72**	**J**	1.0	0.24	ug/L			04/22/18 05:19	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/22/18 05:19	1
cis-1,2-Dichloroethene	**0.33**	**J**	1.0	0.26	ug/L			04/22/18 05:19	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/22/18 05:19	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/22/18 05:19	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/22/18 05:19	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/22/18 05:19	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/22/18 05:19	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/22/18 05:19	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/22/18 05:19	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/22/18 05:19	1
Trichloroethene	**0.35**	**J**	1.0	0.22	ug/L			04/22/18 05:19	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/22/18 05:19	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/22/18 05:19	1
Benzene	**16**		1.0	0.090	ug/L			04/22/18 05:19	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/22/18 05:19	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/22/18 05:19	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/22/18 05:19	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/22/18 05:19	1
Tetrachloroethene	**0.37**	**J**	1.0	0.12	ug/L			04/22/18 05:19	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/22/18 05:19	1
Toluene	0.25	U	1.0	0.25	ug/L			04/22/18 05:19	1
Chlorobenzene	**13**		1.0	0.24	ug/L			04/22/18 05:19	1
Ethylbenzene	**0.58**	**J**	1.0	0.30	ug/L			04/22/18 05:19	1
Styrene	0.17	U	1.0	0.17	ug/L			04/22/18 05:19	1
Xylenes, Total	**2.5**		2.0	0.28	ug/L			04/22/18 05:19	1
Ethyl ether	**11**		1.0	0.11	ug/L			04/22/18 05:19	1
MTBE	0.13	U	1.0	0.13	ug/L			04/22/18 05:19	1
Tetrahydrofuran	**17**		2.0	0.36	ug/L			04/22/18 05:19	1
Cyclohexane	**0.31**	**J**	1.0	0.26	ug/L			04/22/18 05:19	1
1,4-Dioxane	**1300**		50	8.7	ug/L			04/22/18 05:19	1
1,2,4-Trimethylbenzene	**0.49**	**J**	1.0	0.23	ug/L			04/22/18 05:19	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/22/18 05:19	1
Isopropylbenzene	**2.2**		1.0	0.32	ug/L			04/22/18 05:19	1
N-Propylbenzene	**1.1**		1.0	0.29	ug/L			04/22/18 05:19	1
Methylcyclohexane	**0.38**	**J**	1.0	0.22	ug/L			04/22/18 05:19	1
Indane	**6.2**		1.0	0.12	ug/L			04/22/18 05:19	1
Dichlorofluoromethane	**0.76**	**J**	1.0	0.21	ug/L			04/22/18 05:19	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/22/18 05:19	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Propane	*5.4*	*J N*	*ug/L*		*0.90*	*74-98-6*		*04/22/18 05:19*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*117*		*74 - 132*		*04/22/18 05:19*	*1*
Bromofluorobenzene	*96*		*77 - 124*		*04/22/18 05:19*	*1*
Toluene-d8 (Surr)	*109*		*80 - 120*		*04/22/18 05:19*	*1*
Dibromofluoromethane (Surr)	*111*		*72 - 131*		*04/22/18 05:19*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/20/18 08:43	04/20/18 20:30	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/20/18 08:43	04/20/18 20:30	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/20/18 08:43	04/20/18 20:30	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/20/18 08:43	04/20/18 20:30	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/20/18 08:43	04/20/18 20:30	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/20/18 08:43	04/20/18 20:30	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/20/18 08:43	04/20/18 20:30	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/20/18 08:43	04/20/18 20:30	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/20/18 08:43	04/20/18 20:30	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/20/18 08:43	04/20/18 20:30	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/20/18 08:43	04/20/18 20:30	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/20/18 08:43	04/20/18 20:30	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/20/18 08:43	04/20/18 20:30	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/20/18 08:43	04/20/18 20:30	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/20/18 08:43	04/20/18 20:30	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/20/18 08:43	04/20/18 20:30	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/20/18 08:43	04/20/18 20:30	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/20/18 08:43	04/20/18 20:30	1
Bis(2-chloroethyl)ether	**28**		1.0	0.30	ug/L		04/20/18 08:43	04/20/18 20:30	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/20/18 08:43	04/20/18 20:30	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/20/18 08:43	04/20/18 20:30	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/20/18 08:43	04/20/18 20:30	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/20/18 08:43	04/20/18 20:30	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/20/18 08:43	04/20/18 20:30	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/20/18 08:43	04/20/18 20:30	1
Isophorone	0.80	U	10	0.80	ug/L		04/20/18 08:43	04/20/18 20:30	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/20/18 08:43	04/20/18 20:30	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/20/18 08:43	04/20/18 20:30	1
Naphthalene	1.1	U	10	1.1	ug/L		04/20/18 08:43	04/20/18 20:30	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/20/18 08:43	04/20/18 20:30	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/20/18 08:43	04/20/18 20:30	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/20/18 08:43	04/20/18 20:30	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/20/18 08:43	04/20/18 20:30	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/20/18 08:43	04/20/18 20:30	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/20/18 08:43	04/20/18 20:30	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/20/18 08:43	04/20/18 20:30	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/20/18 08:43	04/20/18 20:30	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/20/18 08:43	04/20/18 20:30	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/20/18 08:43	04/20/18 20:30	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/20/18 08:43	04/20/18 20:30	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/20/18 08:43	04/20/18 20:30	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/20/18 08:43	04/20/18 20:30	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/20/18 08:43	04/20/18 20:30	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/20/18 08:43	04/20/18 20:30	1
Fluorene	0.91	U	10	0.91	ug/L		04/20/18 08:43	04/20/18 20:30	1

Client Sample ID: FDGW_041818

Lab Sample ID: 460-154284-7

Date Collected: 04/18/18 00:00
Date Received: 04/18/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/20/18 08:43	04/20/18 20:30	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/20/18 08:43	04/20/18 20:30	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/20/18 08:43	04/20/18 20:30	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/20/18 08:43	04/20/18 20:30	1
Anthracene	0.63	U	10	0.63	ug/L		04/20/18 08:43	04/20/18 20:30	1
Carbazole	0.68	U	10	0.68	ug/L		04/20/18 08:43	04/20/18 20:30	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/20/18 08:43	04/20/18 20:30	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/20/18 08:43	04/20/18 20:30	1
Pyrene	1.6	U	10	1.6	ug/L		04/20/18 08:43	04/20/18 20:30	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/20/18 08:43	04/20/18 20:30	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/20/18 08:43	04/20/18 20:30	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/20/18 08:43	04/20/18 20:30	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/20/18 08:43	04/20/18 20:30	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/20/18 08:43	04/20/18 20:30	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/20/18 08:43	04/20/18 20:30	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/20/18 08:43	04/20/18 20:30	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/20/18 08:43	04/20/18 20:30	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/20/18 08:43	04/20/18 20:30	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/20/18 08:43	04/20/18 20:30	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/20/18 08:43	04/20/18 20:30	1
Caprolactam	0.68	U	10	0.68	ug/L		04/20/18 08:43	04/20/18 20:30	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/20/18 08:43	04/20/18 20:30	1
Bisphenol-A	**36**		10	9.9	ug/L		04/20/18 08:43	04/20/18 20:30	1
N-Methylaniline	**1.0**	**J**	5.0	0.48	ug/L		04/20/18 08:43	04/20/18 20:30	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Butane, 2-methoxy-2-methyl-	*6.4*	*J N*	*ug/L*		*1.84*	*994-05-8*	*04/20/18 08:43*	*04/20/18 20:30*	*1*
1,4-Dioxane	*79*	*J N*	*ug/L*		*2.03*	*123-91-1*	*04/20/18 08:43*	*04/20/18 20:30*	*1*
Benzene, chloro-	*6.4*	*J N*	*ug/L*		*3.09*	*108-90-7*	*04/20/18 08:43*	*04/20/18 20:30*	*1*
1,4-Oxathiane	*23*	*J N*	*ug/L*		*3.47*	*15980-15-1*	*04/20/18 08:43*	*04/20/18 20:30*	*1*
Urea, tetramethyl-	*21*	*J N*	*ug/L*		*4.40*	*632-22-4*	*04/20/18 08:43*	*04/20/18 20:30*	*1*
Phenol, p-tert-butyl-	*9.5*	*J N*	*ug/L*		*6.28*	*98-54-4*	*04/20/18 08:43*	*04/20/18 20:30*	*1*
Unknown	*22*	*J*	*ug/L*		*6.32*		*04/20/18 08:43*	*04/20/18 20:30*	*1*
Unknown	*10*	*J*	*ug/L*		*6.56*		*04/20/18 08:43*	*04/20/18 20:30*	*1*
Unknown	*310*	*J*	*ug/L*		*7.17*		*04/20/18 08:43*	*04/20/18 20:30*	*1*
Unknown	*21*	*J*	*ug/L*		*7.28*		*04/20/18 08:43*	*04/20/18 20:30*	*1*
Acetamide, N-methyl-N-phenyl-	*12*	*J N*	*ug/L*		*7.49*	*579-10-2*	*04/20/18 08:43*	*04/20/18 20:30*	*1*
Unknown	*10*	*J*	*ug/L*		*7.98*		*04/20/18 08:43*	*04/20/18 20:30*	*1*
Unknown	*8.4*	*J*	*ug/L*		*8.28*		*04/20/18 08:43*	*04/20/18 20:30*	*1*
Unknown	*8.3*	*J*	*ug/L*		*8.38*		*04/20/18 08:43*	*04/20/18 20:30*	*1*
Unknown	*6.7*	*J*	*ug/L*		*8.64*		*04/20/18 08:43*	*04/20/18 20:30*	*1*
Unknown	*9.4*	*J*	*ug/L*		*8.75*		*04/20/18 08:43*	*04/20/18 20:30*	*1*
Unknown	*11*	*J*	*ug/L*		*8.89*		*04/20/18 08:43*	*04/20/18 20:30*	*1*
Unknown	*8.5*	*J*	*ug/L*		*9.28*		*04/20/18 08:43*	*04/20/18 20:30*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*71*		*51 - 108*	*04/20/18 08:43*	*04/20/18 20:30*	*1*
Phenol-d5	*21*		*14 - 39*	*04/20/18 08:43*	*04/20/18 20:30*	*1*
Terphenyl-d14	*55*		*40 - 148*	*04/20/18 08:43*	*04/20/18 20:30*	*1*
2,4,6-Tribromophenol	*81*		*26 - 139*	*04/20/18 08:43*	*04/20/18 20:30*	*1*

Client Sample ID: FDGW_041818

Lab Sample ID: 460-154284-7

Date Collected: 04/18/18 00:00
Date Received: 04/18/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	33		25 - 58	04/20/18 08:43	04/20/18 20:30	1
2-Fluorobiphenyl	66		45 - 107	04/20/18 08:43	04/20/18 20:30	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/20/18 23:35	04/23/18 16:20	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/20/18 23:35	04/23/18 16:20	5
Arsenic	**1.5**	**J**	2.5	1.5	ug/L		04/20/18 23:35	04/23/18 16:20	5
Barium	**175**		5.0	3.2	ug/L		04/20/18 23:35	04/23/18 16:20	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/20/18 23:35	04/23/18 16:20	5
Calcium	**9940**		250	233	ug/L		04/20/18 23:35	04/23/18 16:20	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/20/18 23:35	04/23/18 16:20	5
Cobalt	**125**		5.0	3.1	ug/L		04/20/18 23:35	04/23/18 16:20	5
Chromium	**53.2**		5.0	3.1	ug/L		04/20/18 23:35	04/23/18 16:20	5
Copper	**4.6**	**J**	5.0	3.3	ug/L		04/20/18 23:35	04/23/18 16:20	5
Iron	**21300**		150	97.8	ug/L		04/20/18 23:35	04/23/18 16:20	5
Potassium	**2850**		250	143	ug/L		04/20/18 23:35	04/23/18 16:20	5
Magnesium	**23800**		250	155	ug/L		04/20/18 23:35	04/23/18 16:20	5
Manganese	**20700**		10.0	6.1	ug/L		04/20/18 23:35	04/23/18 16:20	5
Sodium	**46500**		250	213	ug/L		04/20/18 23:35	04/23/18 16:20	5
Nickel	**91.5**		5.0	3.1	ug/L		04/20/18 23:35	04/23/18 16:20	5
Lead	0.93	U	1.5	0.93	ug/L		04/20/18 23:35	04/23/18 16:20	5
Antimony	1.4	U	2.5	1.4	ug/L		04/20/18 23:35	04/23/18 16:20	5
Selenium	1.4	U	2.5	1.4	ug/L		04/20/18 23:35	04/23/18 16:20	5
Thallium	0.60	U	1.0	0.60	ug/L		04/20/18 23:35	04/23/18 16:20	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/20/18 23:35	04/23/18 16:20	5
Zinc	**53.5**		20.0	16.3	ug/L		04/20/18 23:35	04/23/18 16:20	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12	U	0.20	0.12	ug/L		04/23/18 12:30	04/23/18 14:04	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**26200**		150	92.1	ug/L		04/20/18 09:48	04/21/18 21:56	1
Manganese, Dissolved	**27700**		75.0	15.6	ug/L		04/20/18 09:48	04/22/18 12:14	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**1.7**		0.10	0.045	mg/L		04/24/18 10:18	04/24/18 11:12	1

Client Sample ID: TBGW_041818

Lab Sample ID: 460-154284-8

Date Collected: 04/18/18 00:00
Date Received: 04/18/18 19:30

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.20	U	0.40	0.20	ug/L			04/20/18 23:02	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G

TestAmerica Job ID: 460-154202-1

Client Sample ID: TBGW_041818

Lab Sample ID: 460-154284-8

Date Collected: 04/18/18 00:00
Date Received: 04/18/18 19:30

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*72 - 133*		*04/20/18 23:02*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*71 - 144*		*04/20/18 23:02*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/21/18 23:46	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/21/18 23:46	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/21/18 23:46	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/21/18 23:46	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/21/18 23:46	1
Acetone	**1.5**	**J**	5.0	1.1	ug/L			04/21/18 23:46	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/21/18 23:46	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/21/18 23:46	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/21/18 23:46	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/21/18 23:46	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/21/18 23:46	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/21/18 23:46	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/21/18 23:46	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/21/18 23:46	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/21/18 23:46	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/21/18 23:46	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/21/18 23:46	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/21/18 23:46	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/21/18 23:46	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/21/18 23:46	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/21/18 23:46	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/21/18 23:46	1
Benzene	0.090	U	1.0	0.090	ug/L			04/21/18 23:46	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/21/18 23:46	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/21/18 23:46	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/21/18 23:46	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/21/18 23:46	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/21/18 23:46	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/21/18 23:46	1
Toluene	0.25	U	1.0	0.25	ug/L			04/21/18 23:46	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/21/18 23:46	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/21/18 23:46	1
Styrene	0.17	U	1.0	0.17	ug/L			04/21/18 23:46	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/21/18 23:46	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/21/18 23:46	1
MTBE	0.13	U	1.0	0.13	ug/L			04/21/18 23:46	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/21/18 23:46	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/21/18 23:46	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/21/18 23:46	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/21/18 23:46	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/21/18 23:46	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/21/18 23:46	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/21/18 23:46	1
Indane	0.12	U	1.0	0.12	ug/L			04/21/18 23:46	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/21/18 23:46	1

Client Sample ID: TBGW_041818 Lab Sample ID: 460-154284-8

Date Collected: 04/18/18 00:00 Matrix: Water
Date Received: 04/18/18 19:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/21/18 23:46	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/21/18 23:46*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*115*		*74 - 132*		*04/21/18 23:46*	*1*
Bromofluorobenzene	*95*		*77 - 124*		*04/21/18 23:46*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*		*04/21/18 23:46*	*1*
Dibromofluoromethane (Surr)	*110*		*72 - 131*		*04/21/18 23:46*	*1*

Client Sample ID: PZ-6N Lab Sample ID: 460-154381-1

Date Collected: 04/19/18 10:05 Matrix: Water
Date Received: 04/19/18 20:40

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**6.1**		0.40	0.20	ug/L			04/22/18 18:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*72 - 133*		*04/22/18 18:50*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*71 - 144*		*04/22/18 18:50*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/22/18 13:57	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/22/18 13:57	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/22/18 13:57	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/22/18 13:57	1
Methylene Chloride	**0.36**	**J**	1.0	0.21	ug/L			04/22/18 13:57	1
Acetone	1.1	U	5.0	1.1	ug/L			04/22/18 13:57	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/22/18 13:57	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/22/18 13:57	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/22/18 13:57	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/22/18 13:57	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/22/18 13:57	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/22/18 13:57	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/22/18 13:57	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/22/18 13:57	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/22/18 13:57	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/22/18 13:57	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/22/18 13:57	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/22/18 13:57	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/22/18 13:57	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/22/18 13:57	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/22/18 13:57	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/22/18 13:57	1
Benzene	**0.16**	**J**	1.0	0.090	ug/L			04/22/18 13:57	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/22/18 13:57	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/22/18 13:57	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/22/18 13:57	1

Client Sample ID: PZ-6N

Lab Sample ID: 460-154381-1

Date Collected: 04/19/18 10:05
Date Received: 04/19/18 20:40

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/22/18 13:57	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/22/18 13:57	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/22/18 13:57	1
Toluene	**0.25**	**J**	1.0	0.25	ug/L			04/22/18 13:57	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/22/18 13:57	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/22/18 13:57	1
Styrene	0.17	U	1.0	0.17	ug/L			04/22/18 13:57	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/22/18 13:57	1
Ethyl ether	**0.25**	**J**	1.0	0.11	ug/L			04/22/18 13:57	1
MTBE	0.13	U	1.0	0.13	ug/L			04/22/18 13:57	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/22/18 13:57	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/22/18 13:57	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/22/18 13:57	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/22/18 13:57	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/22/18 13:57	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/22/18 13:57	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/22/18 13:57	1
Indane	0.12	U	1.0	0.12	ug/L			04/22/18 13:57	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/22/18 13:57	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/22/18 13:57	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/22/18 13:57*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*115*		*74 - 132*		*04/22/18 13:57*	*1*
Bromofluorobenzene	*93*		*77 - 124*		*04/22/18 13:57*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*04/22/18 13:57*	*1*
Dibromofluoromethane (Surr)	*112*		*72 - 131*		*04/22/18 13:57*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/21/18 11:30	04/22/18 15:04	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/21/18 11:30	04/22/18 15:04	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/21/18 11:30	04/22/18 15:04	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/21/18 11:30	04/22/18 15:04	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/21/18 11:30	04/22/18 15:04	1
Bis(2-chloroethyl)ether	**0.14**		0.030	0.026	ug/L		04/21/18 11:30	04/22/18 15:04	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/21/18 11:30	04/22/18 12:29	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/21/18 11:30	04/22/18 12:29	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/21/18 11:30	04/22/18 12:29	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/21/18 11:30	04/22/18 12:29	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/21/18 11:30	04/22/18 12:29	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/21/18 11:30	04/22/18 12:29	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/21/18 11:30	04/22/18 12:29	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/21/18 11:30	04/22/18 12:29	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/21/18 11:30	04/22/18 12:29	1

Client Sample ID: PZ-6N

Lab Sample ID: 460-154381-1

Date Collected: 04/19/18 10:05
Date Received: 04/19/18 20:40

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/21/18 11:30	04/22/18 12:29	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/21/18 11:30	04/22/18 12:29	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/21/18 11:30	04/22/18 12:29	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/21/18 11:30	04/22/18 12:29	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/21/18 11:30	04/22/18 12:29	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/21/18 11:30	04/22/18 12:29	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/21/18 11:30	04/22/18 12:29	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/21/18 11:30	04/22/18 12:29	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/21/18 11:30	04/22/18 12:29	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/21/18 11:30	04/22/18 12:29	1
Isophorone	0.80	U	10	0.80	ug/L		04/21/18 11:30	04/22/18 12:29	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/21/18 11:30	04/22/18 12:29	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/21/18 11:30	04/22/18 12:29	1
Naphthalene	1.1	U	10	1.1	ug/L		04/21/18 11:30	04/22/18 12:29	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/21/18 11:30	04/22/18 12:29	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/21/18 11:30	04/22/18 12:29	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/21/18 11:30	04/22/18 12:29	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/21/18 11:30	04/22/18 12:29	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/21/18 11:30	04/22/18 12:29	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/21/18 11:30	04/22/18 12:29	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/21/18 11:30	04/22/18 12:29	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/21/18 11:30	04/22/18 12:29	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/21/18 11:30	04/22/18 12:29	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/21/18 11:30	04/22/18 12:29	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/21/18 11:30	04/22/18 12:29	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/21/18 11:30	04/22/18 12:29	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/21/18 11:30	04/22/18 12:29	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/21/18 11:30	04/22/18 12:29	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/21/18 11:30	04/22/18 12:29	1
Fluorene	0.91	U	10	0.91	ug/L		04/21/18 11:30	04/22/18 12:29	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/21/18 11:30	04/22/18 12:29	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/21/18 11:30	04/22/18 12:29	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/21/18 11:30	04/22/18 12:29	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/21/18 11:30	04/22/18 12:29	1
Anthracene	0.63	U	10	0.63	ug/L		04/21/18 11:30	04/22/18 12:29	1
Carbazole	0.68	U	10	0.68	ug/L		04/21/18 11:30	04/22/18 12:29	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/21/18 11:30	04/22/18 12:29	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/21/18 11:30	04/22/18 12:29	1
Pyrene	1.6	U	10	1.6	ug/L		04/21/18 11:30	04/22/18 12:29	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/21/18 11:30	04/22/18 12:29	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/21/18 11:30	04/22/18 12:29	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/21/18 11:30	04/22/18 12:29	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/21/18 11:30	04/22/18 12:29	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/21/18 11:30	04/22/18 12:29	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/21/18 11:30	04/22/18 12:29	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/21/18 11:30	04/22/18 12:29	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/21/18 11:30	04/22/18 12:29	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/21/18 11:30	04/22/18 12:29	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/21/18 11:30	04/22/18 12:29	1

Client Sample ID: PZ-6N

Lab Sample ID: 460-154381-1

Date Collected: 04/19/18 10:05
Date Received: 04/19/18 20:40

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/21/18 11:30	04/22/18 12:29	1
Caprolactam	0.68	U	10	0.68	ug/L		04/21/18 11:30	04/22/18 12:29	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/21/18 11:30	04/22/18 12:29	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/21/18 11:30	04/22/18 12:29	1
N-Methylaniline	0.48	U	5.0	0.48	ug/L		04/21/18 11:30	04/22/18 12:29	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*7.2*	*J*	*ug/L*		*7.11*		*04/21/18 11:30*	*04/22/18 12:29*	*1*
Eicosane	*7.9*	*J N*	*ug/L*		*10.30*	*112-95-8*	*04/21/18 11:30*	*04/22/18 12:29*	*1*
Unknown	*14*	*J*	*ug/L*		*10.43*		*04/21/18 11:30*	*04/22/18 12:29*	*1*
Unknown	*6.6*	*J*	*ug/L*		*10.52*		*04/21/18 11:30*	*04/22/18 12:29*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*96*		*51 - 108*	*04/21/18 11:30*	*04/22/18 12:29*	*1*
Phenol-d5	*31*		*14 - 39*	*04/21/18 11:30*	*04/22/18 12:29*	*1*
Terphenyl-d14	*108*		*40 - 148*	*04/21/18 11:30*	*04/22/18 12:29*	*1*
2,4,6-Tribromophenol	*108*		*26 - 139*	*04/21/18 11:30*	*04/22/18 12:29*	*1*
2-Fluorophenol	*45*		*25 - 58*	*04/21/18 11:30*	*04/22/18 12:29*	*1*
2-Fluorobiphenyl	*83*		*45 - 107*	*04/21/18 11:30*	*04/22/18 12:29*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/20/18 23:35	04/23/18 16:30	5
Aluminum	**41.0**	**J**	50.0	28.5	ug/L		04/20/18 23:35	04/23/18 16:30	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/20/18 23:35	04/23/18 16:30	5
Barium	**62.9**		5.0	3.2	ug/L		04/20/18 23:35	04/23/18 16:30	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/20/18 23:35	04/23/18 16:30	5
Calcium	**43800**		250	233	ug/L		04/20/18 23:35	04/23/18 16:30	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/20/18 23:35	04/23/18 16:30	5
Cobalt	3.1	U	5.0	3.1	ug/L		04/20/18 23:35	04/23/18 16:30	5
Chromium	3.1	U	5.0	3.1	ug/L		04/20/18 23:35	04/23/18 16:30	5
Copper	3.3	U	5.0	3.3	ug/L		04/20/18 23:35	04/23/18 16:30	5
Iron	**185**		150	97.8	ug/L		04/20/18 23:35	04/23/18 16:30	5
Potassium	**3990**		250	143	ug/L		04/20/18 23:35	04/23/18 16:30	5
Magnesium	**31700**		250	155	ug/L		04/20/18 23:35	04/23/18 16:30	5
Manganese	**40.9**		10.0	6.1	ug/L		04/20/18 23:35	04/23/18 16:30	5
Sodium	**6450**		250	213	ug/L		04/20/18 23:35	04/23/18 16:30	5
Nickel	3.1	U	5.0	3.1	ug/L		04/20/18 23:35	04/23/18 16:30	5
Lead	0.93	U	1.5	0.93	ug/L		04/20/18 23:35	04/23/18 16:30	5
Antimony	**1.8**	**J**	2.5	1.4	ug/L		04/20/18 23:35	04/23/18 16:30	5
Selenium	1.4	U	2.5	1.4	ug/L		04/20/18 23:35	04/23/18 16:30	5
Thallium	0.60	U	1.0	0.60	ug/L		04/20/18 23:35	04/23/18 16:30	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/20/18 23:35	04/23/18 16:30	5
Zinc	16.3	U	20.0	16.3	ug/L		04/20/18 23:35	04/23/18 16:30	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12	U	0.20	0.12	ug/L		04/24/18 12:04	04/24/18 14:28	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G

TestAmerica Job ID: 460-154202-1

Client Sample ID: PZ-6N

Lab Sample ID: 460-154381-1
Date Collected: 04/19/18 10:05
Matrix: Water
Date Received: 04/19/18 20:40

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**199**		150	92.1	ug/L		04/22/18 04:00	04/25/18 17:40	1
Manganese, Dissolved	**42.5**		15.0	3.1	ug/L		04/22/18 04:00	04/25/18 17:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.10**		0.10	0.045	mg/L		04/25/18 11:26	04/25/18 12:49	1

Client Sample ID: TBGW_041918

Lab Sample ID: 460-154381-2
Date Collected: 04/19/18 00:00
Matrix: Water
Date Received: 04/19/18 20:40

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.20	U	0.40	0.20	ug/L			04/22/18 18:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*92*		*72 - 133*		*04/22/18 18:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*108*		*71 - 144*		*04/22/18 18:23*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/22/18 00:37	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/22/18 00:37	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/22/18 00:37	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/22/18 00:37	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/22/18 00:37	1
Acetone	**2.9**	**J**	5.0	1.1	ug/L			04/22/18 00:37	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/22/18 00:37	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/22/18 00:37	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/22/18 00:37	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/22/18 00:37	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/22/18 00:37	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/22/18 00:37	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/22/18 00:37	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/22/18 00:37	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/22/18 00:37	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/22/18 00:37	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/22/18 00:37	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/22/18 00:37	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/22/18 00:37	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/22/18 00:37	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/22/18 00:37	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/22/18 00:37	1
Benzene	0.090	U	1.0	0.090	ug/L			04/22/18 00:37	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/22/18 00:37	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/22/18 00:37	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/22/18 00:37	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/22/18 00:37	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/22/18 00:37	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/22/18 00:37	1

Client Sample ID: TBGW_041918

Lab Sample ID: 460-154381-2

Date Collected: 04/19/18 00:00
Date Received: 04/19/18 20:40

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	0.25	U	1.0	0.25	ug/L			04/22/18 00:37	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/22/18 00:37	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/22/18 00:37	1
Styrene	0.17	U	1.0	0.17	ug/L			04/22/18 00:37	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/22/18 00:37	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/22/18 00:37	1
MTBE	0.13	U	1.0	0.13	ug/L			04/22/18 00:37	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/22/18 00:37	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/22/18 00:37	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/22/18 00:37	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/22/18 00:37	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/22/18 00:37	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/22/18 00:37	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/22/18 00:37	1
Indane	0.12	U	1.0	0.12	ug/L			04/22/18 00:37	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/22/18 00:37	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/22/18 00:37	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/22/18 00:37*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*118*		*74 - 132*		*04/22/18 00:37*	*1*
Bromofluorobenzene	*94*		*77 - 124*		*04/22/18 00:37*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*		*04/22/18 00:37*	*1*
Dibromofluoromethane (Surr)	*111*		*72 - 131*		*04/22/18 00:37*	*1*

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G Groundwater

TestAmerica Job ID: 460-153785-1
SDG: 153785

Client Sample ID: DGC-2S

Lab Sample ID: 460-153785-1

Date Collected: 04/11/18 08:55
Date Received: 04/11/18 20:05

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**2.6**		0.40	0.20	ug/L			04/13/18 23:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*		*72 - 133*		*04/13/18 23:31*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*71 - 144*		*04/13/18 23:31*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/17/18 15:23	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/17/18 15:23	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/17/18 15:23	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/17/18 15:23	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/17/18 15:23	1
Acetone	1.1	U	5.0	1.1	ug/L			04/17/18 15:23	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/17/18 15:23	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/17/18 15:23	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/17/18 15:23	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/17/18 15:23	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/17/18 15:23	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/17/18 15:23	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/17/18 15:23	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/17/18 15:23	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/17/18 15:23	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/17/18 15:23	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/17/18 15:23	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/17/18 15:23	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/17/18 15:23	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/17/18 15:23	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/17/18 15:23	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/17/18 15:23	1
Benzene	0.090	U	1.0	0.090	ug/L			04/17/18 15:23	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/17/18 15:23	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/17/18 15:23	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/17/18 15:23	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/17/18 15:23	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/17/18 15:23	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/17/18 15:23	1
Toluene	0.25	U	1.0	0.25	ug/L			04/17/18 15:23	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/17/18 15:23	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/17/18 15:23	1
Styrene	0.17	U	1.0	0.17	ug/L			04/17/18 15:23	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/17/18 15:23	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/17/18 15:23	1
MTBE	**0.37**	**J**	1.0	0.13	ug/L			04/17/18 15:23	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/17/18 15:23	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/17/18 15:23	1
1,2,4-Trimethylbenzene	0.23	U * UJ	1.0	0.23	ug/L			04/17/18 15:23	1
1,3,5-Trimethylbenzene	0.25	U * UJ	1.0	0.25	ug/L			04/17/18 15:23	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/17/18 15:23	1
N-Propylbenzene	0.29	U * UJ	1.0	0.29	ug/L			04/17/18 15:23	1

Client Sample ID: DGC-2S

Lab Sample ID: 460-153785-1

Date Collected: 04/11/18 08:55
Date Received: 04/11/18 20:05

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/17/18 15:23	1
Indane	0.12	U	1.0	0.12	ug/L			04/17/18 15:23	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/17/18 15:23	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/17/18 15:23	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/17/18 15:23*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*74 - 132*		*04/17/18 15:23*	*1*
Bromofluorobenzene	*110*		*77 - 124*		*04/17/18 15:23*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*04/17/18 15:23*	*1*
Dibromofluoromethane (Surr)	*113*		*72 - 131*		*04/17/18 15:23*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/12/18 15:39	04/13/18 19:56	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/12/18 15:39	04/13/18 19:56	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/12/18 15:39	04/13/18 19:56	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/12/18 15:39	04/13/18 19:56	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/12/18 15:39	04/13/18 19:56	1
Bis(2-chloroethyl)ether	**0.075**	J+	0.030	0.026	ug/L		04/12/18 15:39	04/13/18 19:56	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/12/18 15:39	04/13/18 14:16	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/12/18 15:39	04/13/18 14:16	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/12/18 15:39	04/13/18 14:16	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/12/18 15:39	04/13/18 14:16	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/12/18 15:39	04/13/18 14:16	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/12/18 15:39	04/13/18 14:16	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/12/18 15:39	04/13/18 14:16	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/12/18 15:39	04/13/18 14:16	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/12/18 15:39	04/13/18 14:16	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/12/18 15:39	04/13/18 14:16	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/12/18 15:39	04/13/18 14:16	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/12/18 15:39	04/13/18 14:16	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/12/18 15:39	04/13/18 14:16	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/12/18 15:39	04/13/18 14:16	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/12/18 15:39	04/13/18 14:16	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/12/18 15:39	04/13/18 14:16	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/12/18 15:39	04/13/18 14:16	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/12/18 15:39	04/13/18 14:16	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/12/18 15:39	04/13/18 14:16	1
Isophorone	0.80	U	10	0.80	ug/L		04/12/18 15:39	04/13/18 14:16	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/12/18 15:39	04/13/18 14:16	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/12/18 15:39	04/13/18 14:16	1
Naphthalene	1.1	U	10	1.1	ug/L		04/12/18 15:39	04/13/18 14:16	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/12/18 15:39	04/13/18 14:16	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/12/18 15:39	04/13/18 14:16	1

Client Sample ID: DGC-2S

Lab Sample ID: 460-153785-1

Date Collected: 04/11/18 08:55
Date Received: 04/11/18 20:05

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/12/18 15:39	04/13/18 14:16	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/12/18 15:39	04/13/18 14:16	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/12/18 15:39	04/13/18 14:16	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/12/18 15:39	04/13/18 14:16	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/12/18 15:39	04/13/18 14:16	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/12/18 15:39	04/13/18 14:16	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/12/18 15:39	04/13/18 14:16	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/12/18 15:39	04/13/18 14:16	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/12/18 15:39	04/13/18 14:16	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/12/18 15:39	04/13/18 14:16	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/12/18 15:39	04/13/18 14:16	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/12/18 15:39	04/13/18 14:16	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/12/18 15:39	04/13/18 14:16	1
Fluorene	0.91	U	10	0.91	ug/L		04/12/18 15:39	04/13/18 14:16	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/12/18 15:39	04/13/18 14:16	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/12/18 15:39	04/13/18 14:16	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/12/18 15:39	04/13/18 14:16	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/12/18 15:39	04/13/18 14:16	1
Anthracene	0.63	U	10	0.63	ug/L		04/12/18 15:39	04/13/18 14:16	1
Carbazole	0.68	U	10	0.68	ug/L		04/12/18 15:39	04/13/18 14:16	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/12/18 15:39	04/13/18 14:16	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/12/18 15:39	04/13/18 14:16	1
Pyrene	1.6	U	10	1.6	ug/L		04/12/18 15:39	04/13/18 14:16	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/12/18 15:39	04/13/18 14:16	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/12/18 15:39	04/13/18 14:16	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/12/18 15:39	04/13/18 14:16	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/12/18 15:39	04/13/18 14:16	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/12/18 15:39	04/13/18 14:16	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/12/18 15:39	04/13/18 14:16	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/12/18 15:39	04/13/18 14:16	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/12/18 15:39	04/13/18 14:16	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/12/18 15:39	04/13/18 14:16	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/12/18 15:39	04/13/18 14:16	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/12/18 15:39	04/13/18 14:16	1
Caprolactam	0.68	U	10	0.68	ug/L		04/12/18 15:39	04/13/18 14:16	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/12/18 15:39	04/13/18 14:16	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/12/18 15:39	04/13/18 14:16	1
N-Methylaniline	0.48	U *- UJ	5.0	0.48	ug/L		04/12/18 15:39	04/13/18 14:16	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/12/18 15:39*	*04/13/18 14:16*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*105*		*51 - 108*	*04/12/18 15:39*	*04/13/18 14:16*	*1*
Phenol-d5	*32*		*14 - 39*	*04/12/18 15:39*	*04/13/18 14:16*	*1*
Terphenyl-d14	*136*		*40 - 148*	*04/12/18 15:39*	*04/13/18 14:16*	*1*
2,4,6-Tribromophenol	*110*		*26 - 139*	*04/12/18 15:39*	*04/13/18 14:16*	*1*
2-Fluorophenol	*52*		*25 - 58*	*04/12/18 15:39*	*04/13/18 14:16*	*1*
2-Fluorobiphenyl	*113*	*X*	*45 - 107*	*04/12/18 15:39*	*04/13/18 14:16*	*1*

Client Sample ID: DGC-2S

Lab Sample ID: 460-153785-1

Date Collected: 04/11/18 08:55
Date Received: 04/11/18 20:05

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/12/18 21:00	04/13/18 14:56	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/12/18 21:00	04/13/18 14:56	5
Arsenic	**2.7**		2.5	1.5	ug/L		04/12/18 21:00	04/13/18 14:56	5
Barium	**102**		5.0	3.2	ug/L		04/12/18 21:00	04/13/18 14:56	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/12/18 21:00	04/13/18 14:56	5
Calcium	**14000**		250	233	ug/L		04/12/18 21:00	04/13/18 14:56	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/12/18 21:00	04/13/18 14:56	5
Cobalt	**18.2**		5.0	3.1	ug/L		04/12/18 21:00	04/13/18 14:56	5
Chromium	3.1	U	5.0	3.1	ug/L		04/12/18 21:00	04/13/18 14:56	5
Copper	3.3	U	5.0	3.3	ug/L		04/12/18 21:00	04/13/18 14:56	5
Iron	**1490**		150	97.8	ug/L		04/12/18 21:00	04/13/18 14:56	5
Potassium	**2790**		250	143	ug/L		04/12/18 21:00	04/13/18 14:56	5
Magnesium	**6290**		250	155	ug/L		04/12/18 21:00	04/13/18 14:56	5
Manganese	**1290**		10.0	6.1	ug/L		04/12/18 21:00	04/13/18 14:56	5
Sodium	**17200**		250	213	ug/L		04/12/18 21:00	04/13/18 14:56	5
Nickel	**4.3**	**J**	5.0	3.1	ug/L		04/12/18 21:00	04/13/18 14:56	5
Lead	0.93	U	1.5	0.93	ug/L		04/12/18 21:00	04/13/18 14:56	5
Antimony	1.4	U	2.5	1.4	ug/L		04/12/18 21:00	04/13/18 14:56	5
Selenium	1.4	U	2.5	1.4	ug/L		04/12/18 21:00	04/13/18 14:56	5
Thallium	0.60	U	1.0	0.60	ug/L		04/12/18 21:00	04/13/18 14:56	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/12/18 21:00	04/13/18 14:56	5
Zinc	16.3	U	20.0	16.3	ug/L		04/12/18 21:00	04/13/18 14:56	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/16/18 13:34	04/16/18 16:28	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**1540**		150	92.1	ug/L		04/12/18 23:50	04/13/18 13:13	1
Manganese, Dissolved	**1440**		15.0	3.1	ug/L		04/12/18 23:50	04/13/18 13:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.39**	**B**	0.10	0.045	mg/L		04/17/18 09:42	04/17/18 15:05	1

Client Sample ID: DDA-07-TZ

Lab Sample ID: 460-153785-2

Date Collected: 04/11/18 11:10
Date Received: 04/11/18 20:05

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**47**		0.40	0.20	ug/L			04/13/18 13:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*72 - 133*		*04/13/18 13:13*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*71 - 144*		*04/13/18 13:13*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/16/18 21:18	1

Client Sample ID: DDA-07-TZ

Lab Sample ID: 460-153785-2

Date Collected: 04/11/18 11:10
Date Received: 04/11/18 20:05

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	0.18	U	1.0	0.18	ug/L			04/16/18 21:18	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/16/18 21:18	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/16/18 21:18	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/16/18 21:18	1
Acetone	1.1	U	5.0	1.1	ug/L			04/16/18 21:18	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/16/18 21:18	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/16/18 21:18	1
1,1-Dichloroethane	**1.1**		1.0	0.24	ug/L			04/16/18 21:18	1
trans-1,2-Dichloroethene	**0.33**	**J**	1.0	0.18	ug/L			04/16/18 21:18	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/16/18 21:18	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/16/18 21:18	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/16/18 21:18	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/16/18 21:18	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/16/18 21:18	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/16/18 21:18	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/16/18 21:18	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/16/18 21:18	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/16/18 21:18	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/16/18 21:18	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/16/18 21:18	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/16/18 21:18	1
Benzene	**17**		1.0	0.090	ug/L			04/16/18 21:18	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/16/18 21:18	1
Bromoform	0.18	U ←	1.0	0.18	ug/L			04/16/18 21:18	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/16/18 21:18	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/16/18 21:18	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/16/18 21:18	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/16/18 21:18	1
Toluene	**0.67**	**J**	1.0	0.25	ug/L			04/16/18 21:18	1
Chlorobenzene	**48**		1.0	0.24	ug/L			04/16/18 21:18	1
Ethylbenzene	**1.5**		1.0	0.30	ug/L			04/16/18 21:18	1
Styrene	0.17	U	1.0	0.17	ug/L			04/16/18 21:18	1
Xylenes, Total	**2.4**		2.0	0.28	ug/L			04/16/18 21:18	1
Ethyl ether	**0.32**	**J**	1.0	0.11	ug/L			04/16/18 21:18	1
MTBE	0.13	U	1.0	0.13	ug/L			04/16/18 21:18	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/16/18 21:18	1
Cyclohexane	**0.72**	**J**	1.0	0.26	ug/L			04/16/18 21:18	1
1,2,4-Trimethylbenzene	**2.1**		1.0	0.23	ug/L			04/16/18 21:18	1
1,3,5-Trimethylbenzene	**0.68**	**J**	1.0	0.25	ug/L			04/16/18 21:18	1
Isopropylbenzene	**3.3**		1.0	0.32	ug/L			04/16/18 21:18	1
N-Propylbenzene	**1.8**		1.0	0.29	ug/L			04/16/18 21:18	1
Methylcyclohexane	**1.3**		1.0	0.22	ug/L			04/16/18 21:18	1
Indane	**15**		1.0	0.12	ug/L			04/16/18 21:18	1
Dichlorofluoromethane	**0.50**	**J**	1.0	0.21	ug/L			04/16/18 21:18	1
1,2,3-Trimethylbenzene	**0.54**	**J**	1.0	0.11	ug/L			04/16/18 21:18	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/16/18 21:18*	*1*

Client Sample ID: DDA-07-TZ

Lab Sample ID: 460-153785-2

Date Collected: 04/11/18 11:10
Date Received: 04/11/18 20:05

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*74 - 132*		*04/16/18 21:18*	*1*
Bromofluorobenzene	*105*		*77 - 124*		*04/16/18 21:18*	*1*
Toluene-d8 (Surr)	*87*		*80 - 120*		*04/16/18 21:18*	*1*
Dibromofluoromethane (Surr)	*102*		*72 - 131*		*04/16/18 21:18*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.052	0.016	ug/L		04/12/18 15:39	04/13/18 20:17	1
Benzo[a]pyrene	0.023	U	0.052	0.023	ug/L		04/12/18 15:39	04/13/18 20:17	1
Benzo[b]fluoranthene	0.025	U	0.052	0.025	ug/L		04/12/18 15:39	04/13/18 20:17	1
Hexachlorobenzene	0.014	U	0.021	0.014	ug/L		04/12/18 15:39	04/13/18 20:17	1
Pentachlorophenol	0.16	U	0.21	0.16	ug/L		04/12/18 15:39	04/13/18 20:17	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.30	U	10	0.30	ug/L		04/12/18 15:39	04/16/18 13:20	1
2-Chlorophenol	0.39	U	10	0.39	ug/L		04/12/18 15:39	04/16/18 13:20	1
2-Methylphenol	0.27	U	10	0.27	ug/L		04/12/18 15:39	04/16/18 13:20	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/12/18 15:39	04/16/18 13:20	1
2-Nitrophenol	0.78	U	10	0.78	ug/L		04/12/18 15:39	04/16/18 13:20	1
2,4-Dimethylphenol	0.25	U	10	0.25	ug/L		04/12/18 15:39	04/16/18 13:20	1
2,4-Dichlorophenol	0.44	U	10	0.44	ug/L		04/12/18 15:39	04/16/18 13:20	1
4-Chloro-3-methylphenol	0.60	U	10	0.60	ug/L		04/12/18 15:39	04/16/18 13:20	1
2,4,6-Trichlorophenol	0.31	U	10	0.31	ug/L		04/12/18 15:39	04/16/18 13:20	1
2,4,5-Trichlorophenol	0.29	U	10	0.29	ug/L		04/12/18 15:39	04/16/18 13:20	1
2,4-Dinitrophenol	15	U	21	15	ug/L		04/12/18 15:39	04/16/18 13:20	1
4-Nitrophenol	0.72	U	21	0.72	ug/L		04/12/18 15:39	04/16/18 13:20	1
4,6-Dinitro-2-methylphenol	14	U	21	14	ug/L		04/12/18 15:39	04/16/18 13:20	1
Bis(2-chloroethyl)ether	**7.1**		1.0	0.31	ug/L		04/12/18 15:39	04/16/18 13:20	1
1,3-Dichlorobenzene	2.1	U	10	2.1	ug/L		04/12/18 15:39	04/16/18 13:20	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/12/18 15:39	04/16/18 13:20	1
1,2-Dichlorobenzene	1.4	U	10	1.4	ug/L		04/12/18 15:39	04/16/18 13:20	1
N-Nitrosodi-n-propylamine	0.45	U	1.0	0.45	ug/L		04/12/18 15:39	04/16/18 13:20	1
Hexachloroethane	1.2	U	2.1	1.2	ug/L		04/12/18 15:39	04/16/18 13:20	1
Nitrobenzene	0.59	U	1.0	0.59	ug/L		04/12/18 15:39	04/16/18 13:20	1
Isophorone	0.83	U	10	0.83	ug/L		04/12/18 15:39	04/16/18 13:20	1
Bis(2-chloroethoxy)methane	0.25	U	10	0.25	ug/L		04/12/18 15:39	04/16/18 13:20	1
1,2,4-Trichlorobenzene	1.3	U	2.1	1.3	ug/L		04/12/18 15:39	04/16/18 13:20	1
Naphthalene	1.2	U	10	1.2	ug/L		04/12/18 15:39	04/16/18 13:20	1
4-Chloroaniline	2.0	U	10	2.0	ug/L		04/12/18 15:39	04/16/18 13:20	1
Hexachlorobutadiene	0.81	U	1.0	0.81	ug/L		04/12/18 15:39	04/16/18 13:20	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/12/18 15:39	04/16/18 13:20	1
Hexachlorocyclopentadiene	1.8	U	10	1.8	ug/L		04/12/18 15:39	04/16/18 13:20	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/12/18 15:39	04/16/18 13:20	1
2-Nitroaniline	0.49	U	10	0.49	ug/L		04/12/18 15:39	04/16/18 13:20	1
Dimethyl phthalate	0.80	U	10	0.80	ug/L		04/12/18 15:39	04/16/18 13:20	1
Acenaphthylene	0.86	U	10	0.86	ug/L		04/12/18 15:39	04/16/18 13:20	1
2,6-Dinitrotoluene	0.41	U	2.1	0.41	ug/L		04/12/18 15:39	04/16/18 13:20	1
3-Nitroaniline	1.0	U	10	1.0	ug/L		04/12/18 15:39	04/16/18 13:20	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/12/18 15:39	04/16/18 13:20	1

Client Sample ID: DDA-07-TZ

Lab Sample ID: 460-153785-2

Date Collected: 04/11/18 11:10
Date Received: 04/11/18 20:05

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenzofuran	1.1	U	10	1.1	ug/L		04/12/18 15:39	04/16/18 13:20	1
2,4-Dinitrotoluene	1.0	U	2.1	1.0	ug/L		04/12/18 15:39	04/16/18 13:20	1
Diethyl phthalate	**2.9**	**J**	10	1.0	ug/L		04/12/18 15:39	04/16/18 13:20	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/12/18 15:39	04/16/18 13:20	1
Fluorene	0.95	U	10	0.95	ug/L		04/12/18 15:39	04/16/18 13:20	1
4-Nitroaniline	0.57	U	10	0.57	ug/L		04/12/18 15:39	04/16/18 13:20	1
N-Nitrosodiphenylamine	0.93	U	10	0.93	ug/L		04/12/18 15:39	04/16/18 13:20	1
4-Bromophenyl phenyl ether	0.78	U	10	0.78	ug/L		04/12/18 15:39	04/16/18 13:20	1
Phenanthrene	0.60	U	10	0.60	ug/L		04/12/18 15:39	04/16/18 13:20	1
Anthracene	0.66	U	10	0.66	ug/L		04/12/18 15:39	04/16/18 13:20	1
Carbazole	0.71	U	10	0.71	ug/L		04/12/18 15:39	04/16/18 13:20	1
Di-n-butyl phthalate	**4.2**	**J**	10	0.88	ug/L		04/12/18 15:39	04/16/18 13:20	1
Fluoranthene	0.88	U	10	0.88	ug/L		04/12/18 15:39	04/16/18 13:20	1
Pyrene	1.7	U	10	1.7	ug/L		04/12/18 15:39	04/16/18 13:20	1
Butyl benzyl phthalate	0.89	U	10	0.89	ug/L		04/12/18 15:39	04/16/18 13:20	1
3,3'-Dichlorobenzidine	1.5	U	10	1.5	ug/L		04/12/18 15:39	04/16/18 13:20	1
Chrysene	0.94	U	2.1	0.94	ug/L		04/12/18 15:39	04/16/18 13:20	1
Bis(2-ethylhexyl) phthalate	1.8	U	2.1	1.8	ug/L		04/12/18 15:39	04/16/18 13:20	1
Di-n-octyl phthalate	5.0	U	10	5.0	ug/L		04/12/18 15:39	04/16/18 13:20	1
Benzo[k]fluoranthene	0.70	U	1.0	0.70	ug/L		04/12/18 15:39	04/16/18 13:20	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.1	1.3	ug/L		04/12/18 15:39	04/16/18 13:20	1
Dibenz(a,h)anthracene	0.75	U	1.0	0.75	ug/L		04/12/18 15:39	04/16/18 13:20	1
Benzo[g,h,i]perylene	1.5	U	10	1.5	ug/L		04/12/18 15:39	04/16/18 13:20	1
Diphenyl ether	**2.4**	**J**	10	1.3	ug/L		04/12/18 15:39	04/16/18 13:20	1
n,n'-Dimethylaniline	0.95	U	1.0	0.95	ug/L		04/12/18 15:39	04/16/18 13:20	1
Caprolactam	0.71	U	10	0.71	ug/L		04/12/18 15:39	04/16/18 13:20	1
bis (2-chloroisopropyl) ether	0.66	U	10	0.66	ug/L		04/12/18 15:39	04/16/18 13:20	1
Bisphenol-A	**150**		10	10	ug/L		04/12/18 15:39	04/16/18 13:20	1
N-Methylaniline	0.50	~~U~~ UJ	5.2	0.50	ug/L		04/12/18 15:39	04/16/18 13:20	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Indane	*15*	*J N*	*ug/L*		*4.43*	*496-11-7*	*04/12/18 15:39*	*04/16/18 13:20*	*1*
Benzenemethanamine, N,N-dimethyl-	*20*	*J N*	*ug/L*		*4.55*	*103-83-3*	*04/12/18 15:39*	*04/16/18 13:20*	*1*
Unknown	*11*	*J*	*ug/L*		*5.79*		*04/12/18 15:39*	*04/16/18 13:20*	*1*
Unknown	*9.1*	*J*	*ug/L*		*5.91*		*04/12/18 15:39*	*04/16/18 13:20*	*1*
Unknown	*120*	*J*	*ug/L*		*6.92*		*04/12/18 15:39*	*04/16/18 13:20*	*1*
5-Methyl-2,4-diisopropylphenol	*13*	*J N*	*ug/L*		*7.07*	*40625-96-5*	*04/12/18 15:39*	*04/16/18 13:20*	*1*
Phenol, 4-(1,1,3,3-tetramethylbutyl)-	*9.7*	*J N*	*ug/L*		*8.37*	*140-66-9*	*04/12/18 15:39*	*04/16/18 13:20*	*1*
Unknown	*11*	*J*	*ug/L*		*10.41*		*04/12/18 15:39*	*04/16/18 13:20*	*1*
9-Octadecenamide, (Z)-	*9.1*	*J N*	*ug/L*		*10.56*	*301-02-0*	*04/12/18 15:39*	*04/16/18 13:20*	*1*
Unknown	*20*	*J*	*ug/L*		*11.04*		*04/12/18 15:39*	*04/16/18 13:20*	*1*
Unknown	*15*	*J*	*ug/L*		*11.40*		*04/12/18 15:39*	*04/16/18 13:20*	*1*
Unknown	*14*	*J*	*ug/L*		*12.09*		*04/12/18 15:39*	*04/16/18 13:20*	*1*
Unknown	*61*	*J*	*ug/L*		*12.27*		*04/12/18 15:39*	*04/16/18 13:20*	*1*
Unknown	*20*	*J*	*ug/L*		*12.54*		*04/12/18 15:39*	*04/16/18 13:20*	*1*
Eicosane	*9.2*	*J N*	*ug/L*		*13.72*	*112-95-8*	*04/12/18 15:39*	*04/16/18 13:20*	*1*
Unknown	*21*	*J*	*ug/L*		*13.84*		*04/12/18 15:39*	*04/16/18 13:20*	*1*
Nonadecane	*12*	*J N*	*ug/L*		*14.24*	*629-92-5*	*04/12/18 15:39*	*04/16/18 13:20*	*1*
Unknown	*23*	*J*	*ug/L*		*15.38*		*04/12/18 15:39*	*04/16/18 13:20*	*1*
Unknown	*9.4*	*J*	*ug/L*		*15.48*		*04/12/18 15:39*	*04/16/18 13:20*	*1*

Client Sample ID: DDA-07-TZ

Lab Sample ID: 460-153785-2

Date Collected: 04/11/18 11:10
Date Received: 04/11/18 20:05

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*9.2*	*J*	*ug/L*		*15.91*		*04/12/18 15:39*	*04/16/18 13:20*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*96*		*51 - 108*	*04/12/18 15:39*	*04/16/18 13:20*	*1*
Phenol-d5	*28*		*14 - 39*	*04/12/18 15:39*	*04/16/18 13:20*	*1*
Terphenyl-d14	*97*		*40 - 148*	*04/12/18 15:39*	*04/16/18 13:20*	*1*
2,4,6-Tribromophenol	*112*		*26 - 139*	*04/12/18 15:39*	*04/16/18 13:20*	*1*
2-Fluorophenol	*49*		*25 - 58*	*04/12/18 15:39*	*04/16/18 13:20*	*1*
2-Fluorobiphenyl	*100*		*45 - 107*	*04/12/18 15:39*	*04/16/18 13:20*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/12/18 21:00	04/13/18 19:30	5
Aluminum	**48.9**	**J**	50.0	28.5	ug/L		04/12/18 21:00	04/13/18 19:30	5
Arsenic	**14.2**		2.5	1.5	ug/L		04/12/18 21:00	04/13/18 19:30	5
Barium	**74.7**		5.0	3.2	ug/L		04/12/18 21:00	04/13/18 19:30	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/12/18 21:00	04/13/18 19:30	5
Calcium	**8980**		250	233	ug/L		04/12/18 21:00	04/13/18 19:30	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/12/18 21:00	04/13/18 19:30	5
Cobalt	3.1	U	5.0	3.1	ug/L		04/12/18 21:00	04/13/18 19:30	5
Chromium	3.1	U	5.0	3.1	ug/L		04/12/18 21:00	04/13/18 19:30	5
Copper	3.3	U	5.0	3.3	ug/L		04/12/18 21:00	04/13/18 19:30	5
Iron	**42200**		150	97.8	ug/L		04/12/18 21:00	04/13/18 19:30	5
Potassium	**4600**		250	143	ug/L		04/12/18 21:00	04/13/18 19:30	5
Magnesium	**5550**		250	155	ug/L		04/12/18 21:00	04/13/18 19:30	5
Manganese	**5290**		10.0	6.1	ug/L		04/12/18 21:00	04/13/18 19:30	5
Sodium	**16400**		250	213	ug/L		04/12/18 21:00	04/13/18 19:30	5
Nickel	**4.1**	**J**	5.0	3.1	ug/L		04/12/18 21:00	04/13/18 19:30	5
Lead	0.93	U	1.5	0.93	ug/L		04/12/18 21:00	04/13/18 19:30	5
Antimony	1.4	U	2.5	1.4	ug/L		04/12/18 21:00	04/13/18 19:30	5
Selenium	1.4	U	2.5	1.4	ug/L		04/12/18 21:00	04/13/18 19:30	5
Thallium	0.60	U	1.0	0.60	ug/L		04/12/18 21:00	04/13/18 19:30	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/12/18 21:00	04/13/18 19:30	5
Zinc	16.3	U	20.0	16.3	ug/L		04/12/18 21:00	04/13/18 19:30	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/16/18 13:34	04/16/18 16:30	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**47100**		150	92.1	ug/L		04/12/18 23:50	04/13/18 13:17	1
Manganese, Dissolved	**5750**		15.0	3.1	ug/L		04/12/18 23:50	04/13/18 13:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**9.2**	**B**	0.25	0.11	mg/L		04/17/18 09:42	04/17/18 15:06	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G Groundwater

TestAmerica Job ID: 460-153785-1
SDG: 153785

Client Sample ID: DDA-07-US

Lab Sample ID: 460-153785-3

Date Collected: 04/11/18 11:35
Date Received: 04/11/18 20:05

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**10**		0.40	0.20	ug/L			04/13/18 12:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*72 - 133*		*04/13/18 12:50*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*71 - 144*		*04/13/18 12:50*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/16/18 21:43	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/16/18 21:43	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/16/18 21:43	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/16/18 21:43	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/16/18 21:43	1
Acetone	1.1	U	5.0	1.1	ug/L			04/16/18 21:43	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/16/18 21:43	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/16/18 21:43	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/16/18 21:43	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/16/18 21:43	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/16/18 21:43	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/16/18 21:43	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/16/18 21:43	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/16/18 21:43	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/16/18 21:43	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/16/18 21:43	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/16/18 21:43	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/16/18 21:43	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/16/18 21:43	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/16/18 21:43	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/16/18 21:43	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/16/18 21:43	1
Benzene	0.090	U	1.0	0.090	ug/L			04/16/18 21:43	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/16/18 21:43	1
Bromoform	0.18	U *	1.0	0.18	ug/L			04/16/18 21:43	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/16/18 21:43	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/16/18 21:43	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/16/18 21:43	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/16/18 21:43	1
Toluene	0.25	U	1.0	0.25	ug/L			04/16/18 21:43	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/16/18 21:43	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/16/18 21:43	1
Styrene	0.17	U	1.0	0.17	ug/L			04/16/18 21:43	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/16/18 21:43	1
Ethyl ether	**0.25**	**J**	1.0	0.11	ug/L			04/16/18 21:43	1
MTBE	**0.84**	**J**	1.0	0.13	ug/L			04/16/18 21:43	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/16/18 21:43	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/16/18 21:43	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/16/18 21:43	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/16/18 21:43	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/16/18 21:43	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/16/18 21:43	1

Client Sample ID: DDA-07-US

Lab Sample ID: 460-153785-3

Date Collected: 04/11/18 11:35
Date Received: 04/11/18 20:05

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/16/18 21:43	1
Indane	0.12	U	1.0	0.12	ug/L			04/16/18 21:43	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/16/18 21:43	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/16/18 21:43	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/16/18 21:43*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*74 - 132*		*04/16/18 21:43*	*1*
Bromofluorobenzene	*104*		*77 - 124*		*04/16/18 21:43*	*1*
Toluene-d8 (Surr)	*89*		*80 - 120*		*04/16/18 21:43*	*1*
Dibromofluoromethane (Surr)	*102*		*72 - 131*		*04/16/18 21:43*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/12/18 15:39	04/13/18 20:39	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/12/18 15:39	04/13/18 20:39	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/12/18 15:39	04/13/18 20:39	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/12/18 15:39	04/13/18 20:39	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/12/18 15:39	04/13/18 20:39	1
Bis(2-chloroethyl)ether	**0.14**		0.030	0.026	ug/L		04/12/18 15:39	04/13/18 20:39	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/12/18 15:39	04/16/18 13:44	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/12/18 15:39	04/16/18 13:44	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/12/18 15:39	04/16/18 13:44	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/12/18 15:39	04/16/18 13:44	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/12/18 15:39	04/16/18 13:44	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/12/18 15:39	04/16/18 13:44	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/12/18 15:39	04/16/18 13:44	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/12/18 15:39	04/16/18 13:44	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/12/18 15:39	04/16/18 13:44	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/12/18 15:39	04/16/18 13:44	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/12/18 15:39	04/16/18 13:44	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/12/18 15:39	04/16/18 13:44	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/12/18 15:39	04/16/18 13:44	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/12/18 15:39	04/16/18 13:44	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/12/18 15:39	04/16/18 13:44	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/12/18 15:39	04/16/18 13:44	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/12/18 15:39	04/16/18 13:44	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/12/18 15:39	04/16/18 13:44	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/12/18 15:39	04/16/18 13:44	1
Isophorone	0.80	U	10	0.80	ug/L		04/12/18 15:39	04/16/18 13:44	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/12/18 15:39	04/16/18 13:44	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/12/18 15:39	04/16/18 13:44	1
Naphthalene	1.1	U	10	1.1	ug/L		04/12/18 15:39	04/16/18 13:44	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/12/18 15:39	04/16/18 13:44	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/12/18 15:39	04/16/18 13:44	1

Client Sample ID: DDA-07-US

Lab Sample ID: 460-153785-3

Date Collected: 04/11/18 11:35
Date Received: 04/11/18 20:05

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/12/18 15:39	04/16/18 13:44	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/12/18 15:39	04/16/18 13:44	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/12/18 15:39	04/16/18 13:44	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/12/18 15:39	04/16/18 13:44	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/12/18 15:39	04/16/18 13:44	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/12/18 15:39	04/16/18 13:44	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/12/18 15:39	04/16/18 13:44	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/12/18 15:39	04/16/18 13:44	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/12/18 15:39	04/16/18 13:44	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/12/18 15:39	04/16/18 13:44	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/12/18 15:39	04/16/18 13:44	1
Diethyl phthalate	**1.1**	**J**	10	0.98	ug/L		04/12/18 15:39	04/16/18 13:44	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/12/18 15:39	04/16/18 13:44	1
Fluorene	0.91	U	10	0.91	ug/L		04/12/18 15:39	04/16/18 13:44	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/12/18 15:39	04/16/18 13:44	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/12/18 15:39	04/16/18 13:44	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/12/18 15:39	04/16/18 13:44	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/12/18 15:39	04/16/18 13:44	1
Anthracene	0.63	U	10	0.63	ug/L		04/12/18 15:39	04/16/18 13:44	1
Carbazole	0.68	U	10	0.68	ug/L		04/12/18 15:39	04/16/18 13:44	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/12/18 15:39	04/16/18 13:44	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/12/18 15:39	04/16/18 13:44	1
Pyrene	1.6	U	10	1.6	ug/L		04/12/18 15:39	04/16/18 13:44	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/12/18 15:39	04/16/18 13:44	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/12/18 15:39	04/16/18 13:44	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/12/18 15:39	04/16/18 13:44	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/12/18 15:39	04/16/18 13:44	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/12/18 15:39	04/16/18 13:44	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/12/18 15:39	04/16/18 13:44	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/12/18 15:39	04/16/18 13:44	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/12/18 15:39	04/16/18 13:44	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/12/18 15:39	04/16/18 13:44	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/12/18 15:39	04/16/18 13:44	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/12/18 15:39	04/16/18 13:44	1
Caprolactam	0.68	U	10	0.68	ug/L		04/12/18 15:39	04/16/18 13:44	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/12/18 15:39	04/16/18 13:44	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/12/18 15:39	04/16/18 13:44	1
N-Methylaniline	0.48	~~U~~* UJ	5.0	0.48	ug/L		04/12/18 15:39	04/16/18 13:44	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/12/18 15:39*	*04/16/18 13:44*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*101*		*51 - 108*	*04/12/18 15:39*	*04/16/18 13:44*	*1*
Phenol-d5	*28*		*14 - 39*	*04/12/18 15:39*	*04/16/18 13:44*	*1*
Terphenyl-d14	*101*		*40 - 148*	*04/12/18 15:39*	*04/16/18 13:44*	*1*
2,4,6-Tribromophenol	*113*		*26 - 139*	*04/12/18 15:39*	*04/16/18 13:44*	*1*
2-Fluorophenol	*46*		*25 - 58*	*04/12/18 15:39*	*04/16/18 13:44*	*1*
2-Fluorobiphenyl	*100*		*45 - 107*	*04/12/18 15:39*	*04/16/18 13:44*	*1*

Client Sample ID: DDA-07-US

Lab Sample ID: 460-153785-3

Date Collected: 04/11/18 11:35
Date Received: 04/11/18 20:05

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/12/18 21:00	04/13/18 19:33	5
Aluminum	**96.1**		50.0	28.5	ug/L		04/12/18 21:00	04/13/18 19:33	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/12/18 21:00	04/13/18 19:33	5
Barium	**134**		5.0	3.2	ug/L		04/12/18 21:00	04/13/18 19:33	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/12/18 21:00	04/13/18 19:33	5
Calcium	**14700**		250	233	ug/L		04/12/18 21:00	04/13/18 19:33	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/12/18 21:00	04/13/18 19:33	5
Cobalt	**11.8**		5.0	3.1	ug/L		04/12/18 21:00	04/13/18 19:33	5
Chromium	3.1	U	5.0	3.1	ug/L		04/12/18 21:00	04/13/18 19:33	5
Copper	**5.2**		5.0	3.3	ug/L		04/12/18 21:00	04/13/18 19:33	5
Iron	**2890**		150	97.8	ug/L		04/12/18 21:00	04/13/18 19:33	5
Potassium	**2590**		250	143	ug/L		04/12/18 21:00	04/13/18 19:33	5
Magnesium	**8700**		250	155	ug/L		04/12/18 21:00	04/13/18 19:33	5
Manganese	**1510**		10.0	6.1	ug/L		04/12/18 21:00	04/13/18 19:33	5
Sodium	**24600**		250	213	ug/L		04/12/18 21:00	04/13/18 19:33	5
Nickel	**5.4**		5.0	3.1	ug/L		04/12/18 21:00	04/13/18 19:33	5
Lead	**1.5**		1.5	0.93	ug/L		04/12/18 21:00	04/13/18 19:33	5
Antimony	1.4	U	2.5	1.4	ug/L		04/12/18 21:00	04/13/18 19:33	5
Selenium	1.4	U	2.5	1.4	ug/L		04/12/18 21:00	04/13/18 19:33	5
Thallium	0.60	U	1.0	0.60	ug/L		04/12/18 21:00	04/13/18 19:33	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/12/18 21:00	04/13/18 19:33	5
Zinc	**16.6**	**J**	20.0	16.3	ug/L		04/12/18 21:00	04/13/18 19:33	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/16/18 13:34	04/16/18 16:14	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**2580**		150	92.1	ug/L		04/12/18 23:50	04/13/18 13:21	1
Manganese, Dissolved	**1640**		15.0	3.1	ug/L		04/12/18 23:50	04/13/18 13:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.52**	**B**	0.10	0.045	mg/L		04/17/18 09:42	04/17/18 15:08	1

Client Sample ID: DGC-5

Lab Sample ID: 460-153785-4

Date Collected: 04/11/18 14:45
Date Received: 04/11/18 20:05

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**8.0**		0.80	0.40	ug/L			04/13/18 13:36	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*72 - 133*		*04/13/18 13:36*	*2*
1,2-Dichloroethane-d4 (Surr)	*86*		*71 - 144*		*04/13/18 13:36*	*2*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/16/18 22:09	1

Client Sample ID: DGC-5

Lab Sample ID: 460-153785-4

Date Collected: 04/11/18 14:45
Date Received: 04/11/18 20:05

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	0.18	U	1.0	0.18	ug/L			04/16/18 22:09	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/16/18 22:09	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/16/18 22:09	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/16/18 22:09	1
Acetone	1.1	U	5.0	1.1	ug/L			04/16/18 22:09	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/16/18 22:09	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/16/18 22:09	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/16/18 22:09	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/16/18 22:09	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/16/18 22:09	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/16/18 22:09	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/16/18 22:09	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/16/18 22:09	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/16/18 22:09	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/16/18 22:09	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/16/18 22:09	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/16/18 22:09	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/16/18 22:09	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/16/18 22:09	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/16/18 22:09	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/16/18 22:09	1
Benzene	0.090	U	1.0	0.090	ug/L			04/16/18 22:09	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/16/18 22:09	1
Bromoform	0.18	U *	1.0	0.18	ug/L			04/16/18 22:09	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/16/18 22:09	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/16/18 22:09	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/16/18 22:09	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/16/18 22:09	1
Toluene	0.25	U	1.0	0.25	ug/L			04/16/18 22:09	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/16/18 22:09	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/16/18 22:09	1
Styrene	0.17	U	1.0	0.17	ug/L			04/16/18 22:09	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/16/18 22:09	1
Ethyl ether	**0.12**	**J**	1.0	0.11	ug/L			04/16/18 22:09	1
MTBE	**0.15**	**J**	1.0	0.13	ug/L			04/16/18 22:09	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/16/18 22:09	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/16/18 22:09	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/16/18 22:09	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/16/18 22:09	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/16/18 22:09	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/16/18 22:09	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/16/18 22:09	1
Indane	0.12	U	1.0	0.12	ug/L			04/16/18 22:09	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/16/18 22:09	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/16/18 22:09	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/16/18 22:09*	*1*

Client Sample ID: DGC-5

Lab Sample ID: 460-153785-4

Date Collected: 04/11/18 14:45
Date Received: 04/11/18 20:05

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*74 - 132*		*04/16/18 22:09*	*1*
Bromofluorobenzene	*104*		*77 - 124*		*04/16/18 22:09*	*1*
Toluene-d8 (Surr)	*87*		*80 - 120*		*04/16/18 22:09*	*1*
Dibromofluoromethane (Surr)	*105*		*72 - 131*		*04/16/18 22:09*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/12/18 15:39	04/13/18 21:00	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/12/18 15:39	04/13/18 21:00	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/12/18 15:39	04/13/18 21:00	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/12/18 15:39	04/13/18 21:00	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/12/18 15:39	04/13/18 21:00	1
Bis(2-chloroethyl)ether	**0.67**		0.030	0.026	ug/L		04/12/18 15:39	04/13/18 21:00	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/12/18 15:39	04/13/18 22:59	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/12/18 15:39	04/13/18 22:59	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/12/18 15:39	04/13/18 22:59	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/12/18 15:39	04/13/18 22:59	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/12/18 15:39	04/13/18 22:59	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/12/18 15:39	04/13/18 22:59	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/12/18 15:39	04/13/18 22:59	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/12/18 15:39	04/13/18 22:59	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/12/18 15:39	04/13/18 22:59	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/12/18 15:39	04/13/18 22:59	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/12/18 15:39	04/13/18 22:59	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/12/18 15:39	04/13/18 22:59	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/12/18 15:39	04/13/18 22:59	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/12/18 15:39	04/13/18 22:59	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/12/18 15:39	04/13/18 22:59	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/12/18 15:39	04/13/18 22:59	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/12/18 15:39	04/13/18 22:59	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/12/18 15:39	04/13/18 22:59	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/12/18 15:39	04/13/18 22:59	1
Isophorone	0.80	U	10	0.80	ug/L		04/12/18 15:39	04/13/18 22:59	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/12/18 15:39	04/13/18 22:59	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/12/18 15:39	04/13/18 22:59	1
Naphthalene	1.1	U	10	1.1	ug/L		04/12/18 15:39	04/13/18 22:59	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/12/18 15:39	04/13/18 22:59	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/12/18 15:39	04/13/18 22:59	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/12/18 15:39	04/13/18 22:59	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/12/18 15:39	04/13/18 22:59	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/12/18 15:39	04/13/18 22:59	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/12/18 15:39	04/13/18 22:59	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/12/18 15:39	04/13/18 22:59	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/12/18 15:39	04/13/18 22:59	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/12/18 15:39	04/13/18 22:59	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/12/18 15:39	04/13/18 22:59	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/12/18 15:39	04/13/18 22:59	1

Client Sample ID: DGC-5

Lab Sample ID: 460-153785-4

Date Collected: 04/11/18 14:45
Date Received: 04/11/18 20:05

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenzofuran	1.1	U	10	1.1	ug/L		04/12/18 15:39	04/13/18 22:59	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/12/18 15:39	04/13/18 22:59	1
Diethyl phthalate	**1.0**	**J**	10	0.98	ug/L		04/12/18 15:39	04/13/18 22:59	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/12/18 15:39	04/13/18 22:59	1
Fluorene	0.91	U	10	0.91	ug/L		04/12/18 15:39	04/13/18 22:59	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/12/18 15:39	04/13/18 22:59	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/12/18 15:39	04/13/18 22:59	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/12/18 15:39	04/13/18 22:59	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/12/18 15:39	04/13/18 22:59	1
Anthracene	0.63	U	10	0.63	ug/L		04/12/18 15:39	04/13/18 22:59	1
Carbazole	0.68	U	10	0.68	ug/L		04/12/18 15:39	04/13/18 22:59	1
Di-n-butyl phthalate	**2.7**	**J**	10	0.84	ug/L		04/12/18 15:39	04/13/18 22:59	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/12/18 15:39	04/13/18 22:59	1
Pyrene	1.6	U	10	1.6	ug/L		04/12/18 15:39	04/13/18 22:59	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/12/18 15:39	04/13/18 22:59	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/12/18 15:39	04/13/18 22:59	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/12/18 15:39	04/13/18 22:59	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/12/18 15:39	04/13/18 22:59	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/12/18 15:39	04/13/18 22:59	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/12/18 15:39	04/13/18 22:59	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/12/18 15:39	04/13/18 22:59	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/12/18 15:39	04/13/18 22:59	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/12/18 15:39	04/13/18 22:59	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/12/18 15:39	04/13/18 22:59	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/12/18 15:39	04/13/18 22:59	1
Caprolactam	0.68	U	10	0.68	ug/L		04/12/18 15:39	04/13/18 22:59	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/12/18 15:39	04/13/18 22:59	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/12/18 15:39	04/13/18 22:59	1
N-Methylaniline	0.48	~~U~~ UJ	5.0	0.48	ug/L		04/12/18 15:39	04/13/18 22:59	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/12/18 15:39*	*04/13/18 22:59*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*107*		*51 - 108*	*04/12/18 15:39*	*04/13/18 22:59*	*1*
Phenol-d5	*29*		*14 - 39*	*04/12/18 15:39*	*04/13/18 22:59*	*1*
Terphenyl-d14	*92*		*40 - 148*	*04/12/18 15:39*	*04/13/18 22:59*	*1*
2,4,6-Tribromophenol	*100*		*26 - 139*	*04/12/18 15:39*	*04/13/18 22:59*	*1*
2-Fluorophenol	*52*		*25 - 58*	*04/12/18 15:39*	*04/13/18 22:59*	*1*
2-Fluorobiphenyl	*106*		*45 - 107*	*04/12/18 15:39*	*04/13/18 22:59*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/12/18 21:00	04/13/18 19:35	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/12/18 21:00	04/13/18 19:35	5
Arsenic	**1.6**	**J**	2.5	1.5	ug/L		04/12/18 21:00	04/13/18 19:35	5
Barium	**219**		5.0	3.2	ug/L		04/12/18 21:00	04/13/18 19:35	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/12/18 21:00	04/13/18 19:35	5
Calcium	**18000**		250	233	ug/L		04/12/18 21:00	04/13/18 19:35	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/12/18 21:00	04/13/18 19:35	5

Client Sample ID: DGC-5

Lab Sample ID: 460-153785-4
Date Collected: 04/11/18 14:45
Matrix: Water
Date Received: 04/11/18 20:05

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**51.6**		5.0	3.1	ug/L		04/12/18 21:00	04/13/18 19:35	5
Chromium	3.1	U	5.0	3.1	ug/L		04/12/18 21:00	04/13/18 19:35	5
Copper	3.3	U	5.0	3.3	ug/L		04/12/18 21:00	04/13/18 19:35	5
Iron	**15900**		150	97.8	ug/L		04/12/18 21:00	04/13/18 19:35	5
Potassium	**4210**		250	143	ug/L		04/12/18 21:00	04/13/18 19:35	5
Magnesium	**12000**		250	155	ug/L		04/12/18 21:00	04/13/18 19:35	5
Manganese	**1420**		10.0	6.1	ug/L		04/12/18 21:00	04/13/18 19:35	5
Sodium	**20900**		250	213	ug/L		04/12/18 21:00	04/13/18 19:35	5
Nickel	**25.0**		5.0	3.1	ug/L		04/12/18 21:00	04/13/18 19:35	5
Lead	0.93	U	1.5	0.93	ug/L		04/12/18 21:00	04/13/18 19:35	5
Antimony	1.4	U	2.5	1.4	ug/L		04/12/18 21:00	04/13/18 19:35	5
Selenium	1.4	U	2.5	1.4	ug/L		04/12/18 21:00	04/13/18 19:35	5
Thallium	0.60	U	1.0	0.60	ug/L		04/12/18 21:00	04/13/18 19:35	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/12/18 21:00	04/13/18 19:35	5
Zinc	16.3	U	20.0	16.3	ug/L		04/12/18 21:00	04/13/18 19:35	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/16/18 13:34	04/16/18 16:31	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**17800**		150	92.1	ug/L		04/12/18 23:50	04/13/18 13:25	1
Manganese, Dissolved	**1550**		15.0	3.1	ug/L		04/12/18 23:50	04/13/18 13:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.30**	**B**	0.10	0.045	mg/L		04/17/18 09:42	04/17/18 15:09	1

Client Sample ID: DDA-10-US

Lab Sample ID: 460-153785-5
Date Collected: 04/11/18 15:35
Matrix: Water
Date Received: 04/11/18 20:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/16/18 22:34	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/16/18 22:34	1
Vinyl chloride	**0.82**	**J**	1.0	0.060	ug/L			04/16/18 22:34	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/16/18 22:34	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/16/18 22:34	1
Acetone	1.1	U	5.0	1.1	ug/L			04/16/18 22:34	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/16/18 22:34	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/16/18 22:34	1
1,1-Dichloroethane	**0.39**	**J**	1.0	0.24	ug/L			04/16/18 22:34	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/16/18 22:34	1
cis-1,2-Dichloroethene	**0.52**	**J**	1.0	0.26	ug/L			04/16/18 22:34	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/16/18 22:34	1
1,2-Dichloroethane	**0.31**	**J**	1.0	0.25	ug/L			04/16/18 22:34	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/16/18 22:34	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/16/18 22:34	1

Client Sample ID: DDA-10-US

Lab Sample ID: 460-153785-5

Date Collected: 04/11/18 15:35
Date Received: 04/11/18 20:05

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/16/18 22:34	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/16/18 22:34	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/16/18 22:34	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/16/18 22:34	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/16/18 22:34	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/16/18 22:34	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/16/18 22:34	1
Benzene	**49**		1.0	0.090	ug/L			04/16/18 22:34	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/16/18 22:34	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/16/18 22:34	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/16/18 22:34	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/16/18 22:34	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/16/18 22:34	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/16/18 22:34	1
Toluene	0.25	U	1.0	0.25	ug/L			04/16/18 22:34	1
Chlorobenzene	**1.6**		1.0	0.24	ug/L			04/16/18 22:34	1
Ethylbenzene	**9.0**		1.0	0.30	ug/L			04/16/18 22:34	1
Styrene	0.17	U	1.0	0.17	ug/L			04/16/18 22:34	1
Xylenes, Total	**4.6**		2.0	0.28	ug/L			04/16/18 22:34	1
Ethyl ether	**2.4**		1.0	0.11	ug/L			04/16/18 22:34	1
MTBE	**0.37**	J	1.0	0.13	ug/L			04/16/18 22:34	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/16/18 22:34	1
Cyclohexane	**3.6**		1.0	0.26	ug/L			04/16/18 22:34	1
1,4-Dioxane	**110**		50	8.7	ug/L			04/16/18 22:34	1
1,2,4-Trimethylbenzene	**1.0**		1.0	0.23	ug/L			04/16/18 22:34	1
1,3,5-Trimethylbenzene	**0.35**	J	1.0	0.25	ug/L			04/16/18 22:34	1
Isopropylbenzene	**3.6**		1.0	0.32	ug/L			04/16/18 22:34	1
N-Propylbenzene	**1.8**		1.0	0.29	ug/L			04/16/18 22:34	1
Methylcyclohexane	**5.0**		1.0	0.22	ug/L			04/16/18 22:34	1
Indane	**3.3**		1.0	0.12	ug/L			04/16/18 22:34	1
Dichlorofluoromethane	**8.7**		1.0	0.21	ug/L			04/16/18 22:34	1
1,2,3-Trimethylbenzene	**0.28**	J	1.0	0.11	ug/L			04/16/18 22:34	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/16/18 22:34*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*74 - 132*		*04/16/18 22:34*	*1*
Bromofluorobenzene	*105*		*77 - 124*		*04/16/18 22:34*	*1*
Toluene-d8 (Surr)	*86*		*80 - 120*		*04/16/18 22:34*	*1*
Dibromofluoromethane (Surr)	*100*		*72 - 131*		*04/16/18 22:34*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/12/18 15:39	04/16/18 09:32	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/12/18 15:39	04/16/18 09:32	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/12/18 15:39	04/16/18 09:32	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/12/18 15:39	04/16/18 09:32	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/12/18 15:39	04/16/18 09:32	1

Client Sample ID: DDA-10-US

Lab Sample ID: 460-153785-5

Date Collected: 04/11/18 15:35
Date Received: 04/11/18 20:05

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/12/18 15:39	04/13/18 23:25	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/12/18 15:39	04/13/18 23:25	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/12/18 15:39	04/13/18 23:25	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/12/18 15:39	04/13/18 23:25	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/12/18 15:39	04/13/18 23:25	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/12/18 15:39	04/13/18 23:25	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/12/18 15:39	04/13/18 23:25	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/12/18 15:39	04/13/18 23:25	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/12/18 15:39	04/13/18 23:25	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/12/18 15:39	04/13/18 23:25	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/12/18 15:39	04/13/18 23:25	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/12/18 15:39	04/13/18 23:25	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/12/18 15:39	04/13/18 23:25	1
Bis(2-chloroethyl)ether	**35**		1.0	0.30	ug/L		04/12/18 15:39	04/13/18 23:25	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/12/18 15:39	04/13/18 23:25	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/12/18 15:39	04/13/18 23:25	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/12/18 15:39	04/13/18 23:25	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/12/18 15:39	04/13/18 23:25	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/12/18 15:39	04/13/18 23:25	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/12/18 15:39	04/13/18 23:25	1
Isophorone	0.80	U	10	0.80	ug/L		04/12/18 15:39	04/13/18 23:25	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/12/18 15:39	04/13/18 23:25	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/12/18 15:39	04/13/18 23:25	1
Naphthalene	1.1	U	10	1.1	ug/L		04/12/18 15:39	04/13/18 23:25	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/12/18 15:39	04/13/18 23:25	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/12/18 15:39	04/13/18 23:25	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/12/18 15:39	04/13/18 23:25	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/12/18 15:39	04/13/18 23:25	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/12/18 15:39	04/13/18 23:25	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/12/18 15:39	04/13/18 23:25	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/12/18 15:39	04/13/18 23:25	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/12/18 15:39	04/13/18 23:25	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/12/18 15:39	04/13/18 23:25	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/12/18 15:39	04/13/18 23:25	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/12/18 15:39	04/13/18 23:25	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/12/18 15:39	04/13/18 23:25	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/12/18 15:39	04/13/18 23:25	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/12/18 15:39	04/13/18 23:25	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/12/18 15:39	04/13/18 23:25	1
Fluorene	0.91	U	10	0.91	ug/L		04/12/18 15:39	04/13/18 23:25	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/12/18 15:39	04/13/18 23:25	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/12/18 15:39	04/13/18 23:25	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/12/18 15:39	04/13/18 23:25	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/12/18 15:39	04/13/18 23:25	1
Anthracene	0.63	U	10	0.63	ug/L		04/12/18 15:39	04/13/18 23:25	1
Carbazole	0.68	U	10	0.68	ug/L		04/12/18 15:39	04/13/18 23:25	1
Di-n-butyl phthalate	**6.9**	**J**	10	0.84	ug/L		04/12/18 15:39	04/13/18 23:25	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/12/18 15:39	04/13/18 23:25	1
Pyrene	1.6	U	10	1.6	ug/L		04/12/18 15:39	04/13/18 23:25	1

Client Sample ID: DDA-10-US

Lab Sample ID: 460-153785-5

Date Collected: 04/11/18 15:35
Date Received: 04/11/18 20:05

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/12/18 15:39	04/13/18 23:25	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/12/18 15:39	04/13/18 23:25	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/12/18 15:39	04/13/18 23:25	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/12/18 15:39	04/13/18 23:25	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/12/18 15:39	04/13/18 23:25	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/12/18 15:39	04/13/18 23:25	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/12/18 15:39	04/13/18 23:25	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/12/18 15:39	04/13/18 23:25	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/12/18 15:39	04/13/18 23:25	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/12/18 15:39	04/13/18 23:25	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/12/18 15:39	04/13/18 23:25	1
Caprolactam	0.68	U	10	0.68	ug/L		04/12/18 15:39	04/13/18 23:25	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/12/18 15:39	04/13/18 23:25	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/12/18 15:39	04/13/18 23:25	1
N-Methylaniline	**0.89**	~~J~~ J-	5.0	0.48	ug/L		04/12/18 15:39	04/13/18 23:25	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane	*20*	*J N*	*ug/L*		*1.74*	*123-91-1*	*04/12/18 15:39*	*04/13/18 23:25*	*1*
Unknown	*12*	*J*	*ug/L*		*2.64*		*04/12/18 15:39*	*04/13/18 23:25*	*1*
Unknown	*10*	*J*	*ug/L*		*2.86*		*04/12/18 15:39*	*04/13/18 23:25*	*1*
Carbamic acid, ethyl-, ethyl ester	*7.9*	*J N*	*ug/L*		*3.53*	*623-78-9*	*04/12/18 15:39*	*04/13/18 23:25*	*1*
2-Isopropoxyphenol	*34*	*J N*	*ug/L*		*5.37*	*4812-20-8*	*04/12/18 15:39*	*04/13/18 23:25*	*1*
1-Phenoxypropan-2-ol	*12*	*J N*	*ug/L*		*5.83*	*770-35-4*	*04/12/18 15:39*	*04/13/18 23:25*	*1*
Unknown	*13*	*J*	*ug/L*		*6.11*		*04/12/18 15:39*	*04/13/18 23:25*	*1*
Unknown	*9.2*	*J*	*ug/L*		*6.26*		*04/12/18 15:39*	*04/13/18 23:25*	*1*
Unknown	*11*	*J*	*ug/L*		*6.35*		*04/12/18 15:39*	*04/13/18 23:25*	*1*
Unknown	*51*	*J*	*ug/L*		*6.96*		*04/12/18 15:39*	*04/13/18 23:25*	*1*
p-Aminotoluene	*18*	*J N*	*ug/L*		*7.25*	*106-49-0*	*04/12/18 15:39*	*04/13/18 23:25*	*1*
Unknown	*14*	*J*	*ug/L*		*7.66*		*04/12/18 15:39*	*04/13/18 23:25*	*1*
Unknown	*9.8*	*J*	*ug/L*		*7.76*		*04/12/18 15:39*	*04/13/18 23:25*	*1*
Unknown	*7.8*	*J*	*ug/L*		*8.85*		*04/12/18 15:39*	*04/13/18 23:25*	*1*
Unknown	*23*	*J*	*ug/L*		*9.64*		*04/12/18 15:39*	*04/13/18 23:25*	*1*
Unknown	*13*	*J*	*ug/L*		*10.60*		*04/12/18 15:39*	*04/13/18 23:25*	*1*
Unknown	*7.3*	*J*	*ug/L*		*11.33*		*04/12/18 15:39*	*04/13/18 23:25*	*1*
Unknown	*7.2*	*J*	*ug/L*		*11.47*		*04/12/18 15:39*	*04/13/18 23:25*	*1*
Unknown	*7.7*	*J*	*ug/L*		*12.15*		*04/12/18 15:39*	*04/13/18 23:25*	*1*
9-Octadecenamide, (Z)-	*11*	*J N*	*ug/L*		*12.27*	*301-02-0*	*04/12/18 15:39*	*04/13/18 23:25*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*101*		*51 - 108*	*04/12/18 15:39*	*04/13/18 23:25*	*1*
Phenol-d5	*30*		*14 - 39*	*04/12/18 15:39*	*04/13/18 23:25*	*1*
Terphenyl-d14	*92*		*40 - 148*	*04/12/18 15:39*	*04/13/18 23:25*	*1*
2,4,6-Tribromophenol	*108*		*26 - 139*	*04/12/18 15:39*	*04/13/18 23:25*	*1*
2-Fluorophenol	*52*		*25 - 58*	*04/12/18 15:39*	*04/13/18 23:25*	*1*
2-Fluorobiphenyl	*101*		*45 - 107*	*04/12/18 15:39*	*04/13/18 23:25*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/12/18 21:00	04/13/18 19:37	5
Aluminum	**53.8**		50.0	28.5	ug/L		04/12/18 21:00	04/13/18 19:37	5

Client Sample ID: DDA-10-US

Lab Sample ID: 460-153785-5

Date Collected: 04/11/18 15:35
Date Received: 04/11/18 20:05

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**8.8**		2.5	1.5	ug/L		04/12/18 21:00	04/13/18 19:37	5
Barium	**808**		5.0	3.2	ug/L		04/12/18 21:00	04/13/18 19:37	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/12/18 21:00	04/13/18 19:37	5
Calcium	**35000**		250	233	ug/L		04/12/18 21:00	04/13/18 19:37	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/12/18 21:00	04/13/18 19:37	5
Cobalt	**119**		5.0	3.1	ug/L		04/12/18 21:00	04/13/18 19:37	5
Chromium	**3.1**	**J**	5.0	3.1	ug/L		04/12/18 21:00	04/13/18 19:37	5
Copper	3.3	U	5.0	3.3	ug/L		04/12/18 21:00	04/13/18 19:37	5
Iron	**53800**		150	97.8	ug/L		04/12/18 21:00	04/13/18 19:37	5
Potassium	**3900**		250	143	ug/L		04/12/18 21:00	04/13/18 19:37	5
Magnesium	**8480**		250	155	ug/L		04/12/18 21:00	04/13/18 19:37	5
Manganese	**4600**		10.0	6.1	ug/L		04/12/18 21:00	04/13/18 19:37	5
Sodium	**32800**		250	213	ug/L		04/12/18 21:00	04/13/18 19:37	5
Nickel	**4.5**	**J**	5.0	3.1	ug/L		04/12/18 21:00	04/13/18 19:37	5
Lead	0.93	U	1.5	0.93	ug/L		04/12/18 21:00	04/13/18 19:37	5
Antimony	1.4	U	2.5	1.4	ug/L		04/12/18 21:00	04/13/18 19:37	5
Selenium	1.4	U	2.5	1.4	ug/L		04/12/18 21:00	04/13/18 19:37	5
Thallium	0.60	U	1.0	0.60	ug/L		04/12/18 21:00	04/13/18 19:37	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/12/18 21:00	04/13/18 19:37	5
Zinc	16.3	U	20.0	16.3	ug/L		04/12/18 21:00	04/13/18 19:37	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/16/18 13:34	04/16/18 16:33	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**59300**		150	92.1	ug/L		04/12/18 23:50	04/13/18 13:29	1
Manganese, Dissolved	**5000**		15.0	3.1	ug/L		04/12/18 23:50	04/13/18 13:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.65**	**B**	0.10	0.045	mg/L		04/17/18 09:42	04/17/18 15:15	1

Client Sample ID: UPA-01

Lab Sample ID: 460-153785-6

Date Collected: 04/11/18 16:00
Date Received: 04/11/18 20:05

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/16/18 22:59	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/16/18 22:59	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/16/18 22:59	1
Chloroethane	**0.44**	**J**	1.0	0.37	ug/L			04/16/18 22:59	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/16/18 22:59	1
Acetone	1.1	U	5.0	1.1	ug/L			04/16/18 22:59	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/16/18 22:59	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/16/18 22:59	1
1,1-Dichloroethane	**1.6**		1.0	0.24	ug/L			04/16/18 22:59	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/16/18 22:59	1

Client Sample ID: UPA-01

Lab Sample ID: 460-153785-6

Date Collected: 04/11/18 16:00
Date Received: 04/11/18 20:05

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**0.59**	**J**	1.0	0.26	ug/L			04/16/18 22:59	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/16/18 22:59	1
1,2-Dichloroethane	**0.50**	**J**	1.0	0.25	ug/L			04/16/18 22:59	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/16/18 22:59	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/16/18 22:59	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/16/18 22:59	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/16/18 22:59	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/16/18 22:59	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/16/18 22:59	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/16/18 22:59	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/16/18 22:59	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/16/18 22:59	1
Benzene	**140**		1.0	0.090	ug/L			04/16/18 22:59	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/16/18 22:59	1
Bromoform	0.18	U *	1.0	0.18	ug/L			04/16/18 22:59	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/16/18 22:59	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/16/18 22:59	1
Tetrachloroethene	**0.24**	**J**	1.0	0.12	ug/L			04/16/18 22:59	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/16/18 22:59	1
Toluene	0.25	U	1.0	0.25	ug/L			04/16/18 22:59	1
Chlorobenzene	**4.2**		1.0	0.24	ug/L			04/16/18 22:59	1
Ethylbenzene	**13**		1.0	0.30	ug/L			04/16/18 22:59	1
Styrene	0.17	U	1.0	0.17	ug/L			04/16/18 22:59	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/16/18 22:59	1
Ethyl ether	**3.2**		1.0	0.11	ug/L			04/16/18 22:59	1
MTBE	**0.36**	**J**	1.0	0.13	ug/L			04/16/18 22:59	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/16/18 22:59	1
Cyclohexane	**0.31**	**J**	1.0	0.26	ug/L			04/16/18 22:59	1
1,4-Dioxane	**180**		50	8.7	ug/L			04/16/18 22:59	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/16/18 22:59	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/16/18 22:59	1
Isopropylbenzene	**9.2**		1.0	0.32	ug/L			04/16/18 22:59	1
N-Propylbenzene	**9.6**		1.0	0.29	ug/L			04/16/18 22:59	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/16/18 22:59	1
Indane	**9.0**		1.0	0.12	ug/L			04/16/18 22:59	1
Dichlorofluoromethane	**14**		1.0	0.21	ug/L			04/16/18 22:59	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/16/18 22:59	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/16/18 22:59*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*74 - 132*		*04/16/18 22:59*	*1*
Bromofluorobenzene	*105*		*77 - 124*		*04/16/18 22:59*	*1*
Toluene-d8 (Surr)	*87*		*80 - 120*		*04/16/18 22:59*	*1*
Dibromofluoromethane (Surr)	*102*		*72 - 131*		*04/16/18 22:59*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/12/18 15:39	04/16/18 09:53	1

Client Sample ID: UPA-01

Lab Sample ID: 460-153785-6

Date Collected: 04/11/18 16:00
Date Received: 04/11/18 20:05

Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/12/18 15:39	04/16/18 09:53	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/12/18 15:39	04/16/18 09:53	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/12/18 15:39	04/16/18 09:53	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/12/18 15:39	04/16/18 09:53	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	**0.57**	**J**	10	0.29	ug/L		04/12/18 15:39	04/13/18 16:00	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/12/18 15:39	04/13/18 16:00	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/12/18 15:39	04/13/18 16:00	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/12/18 15:39	04/13/18 16:00	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/12/18 15:39	04/13/18 16:00	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/12/18 15:39	04/13/18 16:00	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/12/18 15:39	04/13/18 16:00	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/12/18 15:39	04/13/18 16:00	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/12/18 15:39	04/13/18 16:00	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/12/18 15:39	04/13/18 16:00	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/12/18 15:39	04/13/18 16:00	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/12/18 15:39	04/13/18 16:00	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/12/18 15:39	04/13/18 16:00	1
Bis(2-chloroethyl)ether	**81**	J+	1.0	0.30	ug/L		04/12/18 15:39	04/13/18 16:00	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/12/18 15:39	04/13/18 16:00	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/12/18 15:39	04/13/18 16:00	1
1,2-Dichlorobenzene	**1.4**	**J** J+	10	1.3	ug/L		04/12/18 15:39	04/13/18 16:00	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/12/18 15:39	04/13/18 16:00	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/12/18 15:39	04/13/18 16:00	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/12/18 15:39	04/13/18 16:00	1
Isophorone	0.80	U	10	0.80	ug/L		04/12/18 15:39	04/13/18 16:00	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/12/18 15:39	04/13/18 16:00	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/12/18 15:39	04/13/18 16:00	1
Naphthalene	1.1	U	10	1.1	ug/L		04/12/18 15:39	04/13/18 16:00	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/12/18 15:39	04/13/18 16:00	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/12/18 15:39	04/13/18 16:00	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/12/18 15:39	04/13/18 16:00	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/12/18 15:39	04/13/18 16:00	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/12/18 15:39	04/13/18 16:00	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/12/18 15:39	04/13/18 16:00	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/12/18 15:39	04/13/18 16:00	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/12/18 15:39	04/13/18 16:00	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/12/18 15:39	04/13/18 16:00	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/12/18 15:39	04/13/18 16:00	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/12/18 15:39	04/13/18 16:00	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/12/18 15:39	04/13/18 16:00	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/12/18 15:39	04/13/18 16:00	1
Diethyl phthalate	**1.2**	**J** J+	10	0.98	ug/L		04/12/18 15:39	04/13/18 16:00	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/12/18 15:39	04/13/18 16:00	1
Fluorene	0.91	U	10	0.91	ug/L		04/12/18 15:39	04/13/18 16:00	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/12/18 15:39	04/13/18 16:00	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/12/18 15:39	04/13/18 16:00	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/12/18 15:39	04/13/18 16:00	1

Client Sample ID: UPA-01

Date Collected: 04/11/18 16:00
Date Received: 04/11/18 20:05

Lab Sample ID: 460-153785-6

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	0.58	U	10	0.58	ug/L		04/12/18 15:39	04/13/18 16:00	1
Anthracene	0.63	U	10	0.63	ug/L		04/12/18 15:39	04/13/18 16:00	1
Carbazole	0.68	U	10	0.68	ug/L		04/12/18 15:39	04/13/18 16:00	1
Di-n-butyl phthalate	**5.3**	**~~J~~ J+**	~~10~~	0.84	ug/L		04/12/18 15:39	04/13/18 16:00	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/12/18 15:39	04/13/18 16:00	1
Pyrene	1.6	U	10	1.6	ug/L		04/12/18 15:39	04/13/18 16:00	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/12/18 15:39	04/13/18 16:00	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/12/18 15:39	04/13/18 16:00	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/12/18 15:39	04/13/18 16:00	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/12/18 15:39	04/13/18 16:00	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/12/18 15:39	04/13/18 16:00	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/12/18 15:39	04/13/18 16:00	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/12/18 15:39	04/13/18 16:00	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/12/18 15:39	04/13/18 16:00	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/12/18 15:39	04/13/18 16:00	1
Diphenyl ether	**2.5**	**~~J~~ J+**	10	1.2	ug/L		04/12/18 15:39	04/13/18 16:00	1
n,n'-Dimethylaniline	**8.5**	J+	1.0	0.91	ug/L		04/12/18 15:39	04/13/18 16:00	1
Caprolactam	0.68	U	10	0.68	ug/L		04/12/18 15:39	04/13/18 16:00	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/12/18 15:39	04/13/18 16:00	1
Bisphenol-A	**37**		10	9.9	ug/L		04/12/18 15:39	04/13/18 16:00	1
N-Methylaniline	**4.4**	**~~J~~ J**	5.0	0.48	ug/L		04/12/18 15:39	04/13/18 16:00	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane	*21*	*J N*	*ug/L*		*1.66*	*123-91-1*	*04/12/18 15:39*	*04/13/18 16:00*	*1*
Benzene, (1-methylethyl)-	*17*	*J N*	*ug/L*		*3.44*	*98-82-8*	*04/12/18 15:39*	*04/13/18 16:00*	*1*
Benzene, propyl-	*17*	*J N*	*ug/L*		*3.70*	*103-65-1*	*04/12/18 15:39*	*04/13/18 16:00*	*1*
Indane	*17*	*J N*	*ug/L*		*4.38*	*496-11-7*	*04/12/18 15:39*	*04/13/18 16:00*	*1*
2-Isopropoxyphenol	*66*	*J N*	*ug/L*		*5.29*	*4812-20-8*	*04/12/18 15:39*	*04/13/18 16:00*	*1*
2-Propanone, 1-phenoxy-	*15*	*J N*	*ug/L*		*5.56*	*621-87-4*	*04/12/18 15:39*	*04/13/18 16:00*	*1*
1,4-Benzenediol, diacetate	*25*	*J N*	*ug/L*		*5.87*	*1205-91-0*	*04/12/18 15:39*	*04/13/18 16:00*	*1*
Unknown	*23*	*J*	*ug/L*		*6.04*		*04/12/18 15:39*	*04/13/18 16:00*	*1*
Unknown	*29*	*J*	*ug/L*		*6.27*		*04/12/18 15:39*	*04/13/18 16:00*	*1*
Unknown	*170*	*J*	*ug/L*		*6.89*		*04/12/18 15:39*	*04/13/18 16:00*	*1*
Unknown	*21*	*J*	*ug/L*		*7.18*		*04/12/18 15:39*	*04/13/18 16:00*	*1*
Unknown	*8.6*	*J*	*ug/L*		*7.60*		*04/12/18 15:39*	*04/13/18 16:00*	*1*
Unknown	*24*	*J*	*ug/L*		*7.70*		*04/12/18 15:39*	*04/13/18 16:00*	*1*
Unknown	*9.0*	*J*	*ug/L*		*8.87*		*04/12/18 15:39*	*04/13/18 16:00*	*1*
Unknown	*9.8*	*J*	*ug/L*		*10.45*		*04/12/18 15:39*	*04/13/18 16:00*	*1*
9-Octadecenamide, (Z)-	*11*	*J N*	*ug/L*		*10.55*	*301-02-0*	*04/12/18 15:39*	*04/13/18 16:00*	*1*
Unknown	*12*	*J*	*ug/L*		*11.25*		*04/12/18 15:39*	*04/13/18 16:00*	*1*
Unknown	*29*	*J*	*ug/L*		*11.46*		*04/12/18 15:39*	*04/13/18 16:00*	*1*
Unknown	*9.3*	*J*	*ug/L*		*12.29*		*04/12/18 15:39*	*04/13/18 16:00*	*1*
Unknown	*12*	*J*	*ug/L*		*12.61*		*04/12/18 15:39*	*04/13/18 16:00*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*107*		*51 - 108*	*04/12/18 15:39*	*04/13/18 16:00*	*1*
Phenol-d5	*33*		*14 - 39*	*04/12/18 15:39*	*04/13/18 16:00*	*1*
Terphenyl-d14	*133*		*40 - 148*	*04/12/18 15:39*	*04/13/18 16:00*	*1*
2,4,6-Tribromophenol	*114*		*26 - 139*	*04/12/18 15:39*	*04/13/18 16:00*	*1*
2-Fluorophenol	*52*		*25 - 58*	*04/12/18 15:39*	*04/13/18 16:00*	*1*

Client Sample ID: UPA-01

Lab Sample ID: 460-153785-6

Date Collected: 04/11/18 16:00
Date Received: 04/11/18 20:05

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*114*	*X*	*45 - 107*	*04/12/18 15:39*	*04/13/18 16:00*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/12/18 21:00	04/13/18 19:40	5
Aluminum	**115**		50.0	28.5	ug/L		04/12/18 21:00	04/13/18 19:40	5
Arsenic	**6.3**		2.5	1.5	ug/L		04/12/18 21:00	04/13/18 19:40	5
Barium	**413**		5.0	3.2	ug/L		04/12/18 21:00	04/13/18 19:40	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/12/18 21:00	04/13/18 19:40	5
Calcium	**19700**		250	233	ug/L		04/12/18 21:00	04/13/18 19:40	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/12/18 21:00	04/13/18 19:40	5
Cobalt	**32.2**		5.0	3.1	ug/L		04/12/18 21:00	04/13/18 19:40	5
Chromium	**4.0**	**J**	5.0	3.1	ug/L		04/12/18 21:00	04/13/18 19:40	5
Copper	3.3	U	5.0	3.3	ug/L		04/12/18 21:00	04/13/18 19:40	5
Iron	**25200**		150	97.8	ug/L		04/12/18 21:00	04/13/18 19:40	5
Potassium	**3230**		250	143	ug/L		04/12/18 21:00	04/13/18 19:40	5
Magnesium	**5730**		250	155	ug/L		04/12/18 21:00	04/13/18 19:40	5
Manganese	**3410**		10.0	6.1	ug/L		04/12/18 21:00	04/13/18 19:40	5
Sodium	**23900**		250	213	ug/L		04/12/18 21:00	04/13/18 19:40	5
Nickel	**6.5**		5.0	3.1	ug/L		04/12/18 21:00	04/13/18 19:40	5
Lead	0.93	U	1.5	0.93	ug/L		04/12/18 21:00	04/13/18 19:40	5
Antimony	1.4	U	2.5	1.4	ug/L		04/12/18 21:00	04/13/18 19:40	5
Selenium	1.4	U	2.5	1.4	ug/L		04/12/18 21:00	04/13/18 19:40	5
Thallium	0.60	U	1.0	0.60	ug/L		04/12/18 21:00	04/13/18 19:40	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/12/18 21:00	04/13/18 19:40	5
Zinc	16.3	U	20.0	16.3	ug/L		04/12/18 21:00	04/13/18 19:40	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/16/18 13:34	04/16/18 16:35	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**26300**		150	92.1	ug/L		04/12/18 23:50	04/13/18 13:33	1
Manganese, Dissolved	**3480**		15.0	3.1	ug/L		04/12/18 23:50	04/13/18 13:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.11**	**B**	0.10	0.045	mg/L		04/17/18 09:42	04/17/18 15:17	1

Client Sample ID: TBGW_041118

Lab Sample ID: 460-153785-7

Date Collected: 04/11/18 00:00
Date Received: 04/11/18 20:05

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.20	U	0.40	0.20	ug/L			04/13/18 11:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*72 - 133*		*04/13/18 11:41*	*1*

Client Sample ID: TBGW_041118

Lab Sample ID: 460-153785-7

Date Collected: 04/11/18 00:00
Date Received: 04/11/18 20:05

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	87		71 - 144		04/13/18 11:41	1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/16/18 20:27	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/16/18 20:27	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/16/18 20:27	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/16/18 20:27	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/16/18 20:27	1
Acetone	1.1	U	5.0	1.1	ug/L			04/16/18 20:27	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/16/18 20:27	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/16/18 20:27	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/16/18 20:27	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/16/18 20:27	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/16/18 20:27	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/16/18 20:27	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/16/18 20:27	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/16/18 20:27	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/16/18 20:27	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/16/18 20:27	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/16/18 20:27	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/16/18 20:27	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/16/18 20:27	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/16/18 20:27	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/16/18 20:27	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/16/18 20:27	1
Benzene	0.090	U	1.0	0.090	ug/L			04/16/18 20:27	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/16/18 20:27	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/16/18 20:27	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/16/18 20:27	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/16/18 20:27	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/16/18 20:27	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/16/18 20:27	1
Toluene	0.25	U	1.0	0.25	ug/L			04/16/18 20:27	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/16/18 20:27	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/16/18 20:27	1
Styrene	0.17	U	1.0	0.17	ug/L			04/16/18 20:27	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/16/18 20:27	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/16/18 20:27	1
MTBE	0.13	U	1.0	0.13	ug/L			04/16/18 20:27	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/16/18 20:27	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/16/18 20:27	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/16/18 20:27	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/16/18 20:27	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/16/18 20:27	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/16/18 20:27	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/16/18 20:27	1
Indane	0.12	U	1.0	0.12	ug/L			04/16/18 20:27	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/16/18 20:27	1

Client Sample ID: TBGW_041118 Lab Sample ID: 460-153785-7

Date Collected: 04/11/18 00:00 Matrix: Water
Date Received: 04/11/18 20:05

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/16/18 20:27	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/16/18 20:27*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*74 - 132*		*04/16/18 20:27*	*1*
Bromofluorobenzene	*102*		*77 - 124*		*04/16/18 20:27*	*1*
Toluene-d8 (Surr)	*88*		*80 - 120*		*04/16/18 20:27*	*1*
Dibromofluoromethane (Surr)	*104*		*72 - 131*		*04/16/18 20:27*	*1*

Client Sample ID: DDA-02 Lab Sample ID: 460-153929-1

Date Collected: 04/12/18 09:50 Matrix: Water
Date Received: 04/12/18 20:55

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**6.7**	J	0.40	0.20	ug/L			04/14/18 21:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*72 - 133*		*04/14/18 21:27*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*71 - 144*		*04/14/18 21:27*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/17/18 16:06	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/17/18 16:06	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/17/18 16:06	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/17/18 16:06	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/17/18 16:06	1
Acetone	5 ~~3.1~~ ~~J~~ U		5.0	1.1	ug/L			04/17/18 16:06	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/17/18 16:06	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/17/18 16:06	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/17/18 16:06	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/17/18 16:06	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/17/18 16:06	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/17/18 16:06	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/17/18 16:06	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/17/18 16:06	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/17/18 16:06	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/17/18 16:06	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/17/18 16:06	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/17/18 16:06	1
cis-1,3-Dichloropropene	0.16	~~U F1~~ UJ	1.0	0.16	ug/L			04/17/18 16:06	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/17/18 16:06	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/17/18 16:06	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/17/18 16:06	1
Benzene	0.090	U	1.0	0.090	ug/L			04/17/18 16:06	1
trans-1,3-Dichloropropene	0.19	~~U F1~~ UJ	1.0	0.19	ug/L			04/17/18 16:06	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/17/18 16:06	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/17/18 16:06	1

Client Sample ID: DDA-02

Lab Sample ID: 460-153929-1

Date Collected: 04/12/18 09:50
Date Received: 04/12/18 20:55

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/17/18 16:06	1
Tetrachloroethene	0.12	U ~~*F1~~	1.0	0.12	ug/L			04/17/18 16:06	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/17/18 16:06	1
Toluene	0.25	U	1.0	0.25	ug/L			04/17/18 16:06	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/17/18 16:06	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/17/18 16:06	1
Styrene	0.17	~~U F1~~ UJ	1.0	0.17	ug/L			04/17/18 16:06	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/17/18 16:06	1
Ethyl ether	**0.19**	**J**	1.0	0.11	ug/L			04/17/18 16:06	1
MTBE	**1.8**		1.0	0.13	ug/L			04/17/18 16:06	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/17/18 16:06	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/17/18 16:06	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/17/18 16:06	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/17/18 16:06	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/17/18 16:06	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/17/18 16:06	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/17/18 16:06	1
Indane	0.12	U	1.0	0.12	ug/L			04/17/18 16:06	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/17/18 16:06	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/17/18 16:06	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/17/18 16:06*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*82*		*74 - 132*		*04/17/18 16:06*	*1*
Bromofluorobenzene	*120*		*77 - 124*		*04/17/18 16:06*	*1*
Toluene-d8 (Surr)	*82*		*80 - 120*		*04/17/18 16:06*	*1*
Dibromofluoromethane (Surr)	*115*		*72 - 131*		*04/17/18 16:06*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.051	0.016	ug/L		04/14/18 13:51	04/16/18 16:16	1
Benzo[a]pyrene	0.022	U	0.051	0.022	ug/L		04/14/18 13:51	04/16/18 16:16	1
Benzo[b]fluoranthene	0.024	U	0.051	0.024	ug/L		04/14/18 13:51	04/16/18 16:16	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/14/18 13:51	04/16/18 16:16	1
Pentachlorophenol	0.16	U	0.20	0.16	ug/L		04/14/18 13:51	04/16/18 16:16	1
Bis(2-chloroethyl)ether	**0.30**	~~J+~~	0.031	0.027	ug/L		04/14/18 13:51	04/16/18 16:16	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.30	U	10	0.30	ug/L		04/14/18 13:51	04/15/18 18:27	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/14/18 13:51	04/15/18 18:27	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/14/18 13:51	04/15/18 18:27	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/14/18 13:51	04/15/18 18:27	1
2-Nitrophenol	0.76	U ~~F1~~	10	0.76	ug/L		04/14/18 13:51	04/15/18 18:27	1
2,4-Dimethylphenol	0.24	U ~~F1~~	10	0.24	ug/L		04/14/18 13:51	04/15/18 18:27	1
2,4-Dichlorophenol	0.43	U ~~F1~~	10	0.43	ug/L		04/14/18 13:51	04/15/18 18:27	1
4-Chloro-3-methylphenol	0.59	U	10	0.59	ug/L		04/14/18 13:51	04/15/18 18:27	1
2,4,6-Trichlorophenol	0.31	U	10	0.31	ug/L		04/14/18 13:51	04/15/18 18:27	1

Client Sample ID: DDA-02

Lab Sample ID: 460-153929-1

Date Collected: 04/12/18 09:50
Date Received: 04/12/18 20:55

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/14/18 13:51	04/15/18 18:27	1
2,4-Dinitrophenol	15	U	20	15	ug/L		04/14/18 13:51	04/15/18 18:27	1
4-Nitrophenol	0.70	U	20	0.70	ug/L		04/14/18 13:51	04/15/18 18:27	1
4,6-Dinitro-2-methylphenol	14	U	20	14	ug/L		04/14/18 13:51	04/15/18 18:27	1
1,3-Dichlorobenzene	2.1	U	10	2.1	ug/L		04/14/18 13:51	04/15/18 18:27	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/14/18 13:51	04/15/18 18:27	1
1,2-Dichlorobenzene	1.4	U	10	1.4	ug/L		04/14/18 13:51	04/15/18 18:27	1
N-Nitrosodi-n-propylamine	0.44	U	1.0	0.44	ug/L		04/14/18 13:51	04/15/18 18:27	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/14/18 13:51	04/15/18 18:27	1
Nitrobenzene	0.58	U ~~F1~~	1.0	0.58	ug/L		04/14/18 13:51	04/15/18 18:27	1
Isophorone	0.81	U ~~F1~~	10	0.81	ug/L		04/14/18 13:51	04/15/18 18:27	1
Bis(2-chloroethoxy)methane	0.24	U ~~F1~~	10	0.24	ug/L		04/14/18 13:51	04/15/18 18:27	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/14/18 13:51	04/15/18 18:27	1
Naphthalene	1.2	U ~~F1~~	10	1.2	ug/L		04/14/18 13:51	04/15/18 18:27	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/14/18 13:51	04/15/18 18:27	1
Hexachlorobutadiene	0.80	U	1.0	0.80	ug/L		04/14/18 13:51	04/15/18 18:27	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/14/18 13:51	04/15/18 18:27	1
Hexachlorocyclopentadiene	1.8	U	10	1.8	ug/L		04/14/18 13:51	04/15/18 18:27	1
2-Chloronaphthalene	1.2	U ~~F1~~	10	1.2	ug/L		04/14/18 13:51	04/15/18 18:27	1
2-Nitroaniline	0.48	U	10	0.48	ug/L		04/14/18 13:51	04/15/18 18:27	1
Dimethyl phthalate	0.78	U	10	0.78	ug/L		04/14/18 13:51	04/15/18 18:27	1
Acenaphthylene	0.84	U ~~F1~~	10	0.84	ug/L		04/14/18 13:51	04/15/18 18:27	1
2,6-Dinitrotoluene	0.40	U ~~F1~~	2.0	0.40	ug/L		04/14/18 13:51	04/15/18 18:27	1
3-Nitroaniline	0.98	U	10	0.98	ug/L		04/14/18 13:51	04/15/18 18:27	1
Acenaphthene	1.1	U ~~F1~~	10	1.1	ug/L		04/14/18 13:51	04/15/18 18:27	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/14/18 13:51	04/15/18 18:27	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/14/18 13:51	04/15/18 18:27	1
Diethyl phthalate	1.0	U	10	1.0	ug/L		04/14/18 13:51	04/15/18 18:27	1
4-Chlorophenyl phenyl ether	1.3	U ~~F1~~	10	1.3	ug/L		04/14/18 13:51	04/15/18 18:27	1
Fluorene	0.93	U ~~F1~~	10	0.93	ug/L		04/14/18 13:51	04/15/18 18:27	1
4-Nitroaniline	0.55	U	10	0.55	ug/L		04/14/18 13:51	04/15/18 18:27	1
N-Nitrosodiphenylamine	0.91	U	10	0.91	ug/L		04/14/18 13:51	04/15/18 18:27	1
4-Bromophenyl phenyl ether	0.76	U	10	0.76	ug/L		04/14/18 13:51	04/15/18 18:27	1
Phenanthrene	0.59	U	10	0.59	ug/L		04/14/18 13:51	04/15/18 18:27	1
Anthracene	0.65	U	10	0.65	ug/L		04/14/18 13:51	04/15/18 18:27	1
Carbazole	0.69	U	10	0.69	ug/L		04/14/18 13:51	04/15/18 18:27	1
Di-n-butyl phthalate	0.86	U	10	0.86	ug/L		04/14/18 13:51	04/15/18 18:27	1
Fluoranthene	0.86	U	10	0.86	ug/L		04/14/18 13:51	04/15/18 18:27	1
Pyrene	1.7	U	10	1.7	ug/L		04/14/18 13:51	04/15/18 18:27	1
Butyl benzyl phthalate	0.87	U	10	0.87	ug/L		04/14/18 13:51	04/15/18 18:27	1
3,3'-Dichlorobenzidine	1.5	U ~~F1~~	10	1.5	ug/L		04/14/18 13:51	04/15/18 18:27	1
Chrysene	0.93	U ~~F1~~	2.0	0.93	ug/L		04/14/18 13:51	04/15/18 18:27	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/14/18 13:51	04/15/18 18:27	1
Di-n-octyl phthalate	4.9	U	10	4.9	ug/L		04/14/18 13:51	04/15/18 18:27	1
Benzo[k]fluoranthene	0.69	U	1.0	0.69	ug/L		04/14/18 13:51	04/15/18 18:27	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/14/18 13:51	04/15/18 18:27	1
Dibenz(a,h)anthracene	0.73	U ~~F1~~	1.0	0.73	ug/L		04/14/18 13:51	04/15/18 18:27	1
Benzo[g,h,i]perylene	1.5	U	10	1.5	ug/L		04/14/18 13:51	04/15/18 18:27	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/14/18 13:51	04/15/18 18:27	1

Client Sample ID: DDA-02

Lab Sample ID: 460-153929-1

Date Collected: 04/12/18 09:50
Date Received: 04/12/18 20:55

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n,n'-Dimethylaniline	0.93	U	1.0	0.93	ug/L		04/14/18 13:51	04/15/18 18:27	1
Caprolactam	0.70	U	10	0.70	ug/L		04/14/18 13:51	04/15/18 18:27	1
bis (2-chloroisopropyl) ether	0.64	U	10	0.64	ug/L		04/14/18 13:51	04/15/18 18:27	1
Bisphenol-A	10	U	10	10	ug/L		04/14/18 13:51	04/15/18 18:27	1
N-Methylaniline	0.49	U	5.1	0.49	ug/L		04/14/18 13:51	04/15/18 18:27	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/14/18 13:51*	*04/15/18 18:27*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*118*	*X*	*51 - 108*	*04/14/18 13:51*	*04/15/18 18:27*	*1*
Phenol-d5	*23*		*14 - 39*	*04/14/18 13:51*	*04/15/18 18:27*	*1*
Terphenyl-d14	*110*		*40 - 148*	*04/14/18 13:51*	*04/15/18 18:27*	*1*
2,4,6-Tribromophenol	*121*		*26 - 139*	*04/14/18 13:51*	*04/15/18 18:27*	*1*
2-Fluorophenol	*54*		*25 - 58*	*04/14/18 13:51*	*04/15/18 18:27*	*1*
2-Fluorobiphenyl	*113*	*X*	*45 - 107*	*04/14/18 13:51*	*04/15/18 18:27*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/14/18 00:25	04/16/18 15:08	5
Aluminum	**66.0**		50.0	28.5	ug/L		04/14/18 00:25	04/16/18 15:08	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/14/18 00:25	04/16/18 15:08	5
Barium	**182**		5.0	3.2	ug/L		04/14/18 00:25	04/16/18 15:08	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/14/18 00:25	04/16/18 15:08	5
Calcium	**12500**		250	233	ug/L		04/14/18 00:25	04/16/18 15:08	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/14/18 00:25	04/16/18 15:08	5
Cobalt	**34.2**		5.0	3.1	ug/L		04/14/18 00:25	04/16/18 15:08	5
Chromium	**7.3**	J+	5.0	3.1	ug/L		04/14/18 00:25	04/16/18 15:08	5
Copper	3.3	U	5.0	3.3	ug/L		04/14/18 00:25	04/16/18 15:08	5
Iron	**14200**		150	97.8	ug/L		04/14/18 00:25	04/16/18 15:08	5
Potassium	**3220**		250	143	ug/L		04/14/18 00:25	04/16/18 15:08	5
Magnesium	**6100**		250	155	ug/L		04/14/18 00:25	04/16/18 15:08	5
Manganese	**1500**		10.0	6.1	ug/L		04/14/18 00:25	04/16/18 15:08	5
Sodium	**20800**		250	213	ug/L		04/14/18 00:25	04/16/18 15:08	5
Nickel	**5.3**		5.0	3.1	ug/L		04/14/18 00:25	04/16/18 15:08	5
Lead	0.93	U	1.5	0.93	ug/L		04/14/18 00:25	04/16/18 15:08	5
Antimony	1.4	U	2.5	1.4	ug/L		04/14/18 00:25	04/16/18 15:08	5
Selenium	1.4	U	2.5	1.4	ug/L		04/14/18 00:25	04/16/18 15:08	5
Thallium	0.60	U	1.0	0.60	ug/L		04/14/18 00:25	04/16/18 15:08	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/14/18 00:25	04/16/18 15:08	5
Zinc	16.3	U	20.0	16.3	ug/L		04/14/18 00:25	04/16/18 15:08	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/17/18 12:35	04/17/18 14:55	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**14500**		150	92.1	ug/L		04/15/18 17:45	04/16/18 15:41	1
Manganese, Dissolved	**1560**		15.0	3.1	ug/L		04/15/18 17:45	04/16/18 15:41	1

Client Sample ID: DDA-02

Lab Sample ID: 460-153929-1

Date Collected: 04/12/18 09:50
Date Received: 04/12/18 20:55

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.30**		0.10	0.045	mg/L		04/17/18 21:29	04/18/18 16:53	1

Client Sample ID: DDA-09-TZ

Lab Sample ID: 460-153929-2

Date Collected: 04/12/18 09:50
Date Received: 04/12/18 20:55

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/17/18 18:26	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/17/18 18:26	1
Vinyl chloride	**0.28**	**J**	1.0	0.060	ug/L			04/17/18 18:26	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/17/18 18:26	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/17/18 18:26	1
Acetone	**5.4**		5.0	1.1	ug/L			04/17/18 18:26	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/17/18 18:26	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/17/18 18:26	1
1,1-Dichloroethane	**0.73**	**J**	1.0	0.24	ug/L			04/17/18 18:26	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/17/18 18:26	1
cis-1,2-Dichloroethene	**1.2**		1.0	0.26	ug/L			04/17/18 18:26	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/17/18 18:26	1
1,2-Dichloroethane	**4.0**		1.0	0.25	ug/L			04/17/18 18:26	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/17/18 18:26	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/17/18 18:26	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/17/18 18:26	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/17/18 18:26	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/17/18 18:26	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/17/18 18:26	1
Trichloroethene	**1.4**		1.0	0.22	ug/L			04/17/18 18:26	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/17/18 18:26	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/17/18 18:26	1
Benzene	**97**		1.0	0.090	ug/L			04/17/18 18:26	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/17/18 18:26	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/17/18 18:26	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/17/18 18:26	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/17/18 18:26	1
Tetrachloroethene	0.12	U *	1.0	0.12	ug/L			04/17/18 18:26	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/17/18 18:26	1
Toluene	**0.30**	**J**	1.0	0.25	ug/L			04/17/18 18:26	1
Chlorobenzene	**5.1**		1.0	0.24	ug/L			04/17/18 18:26	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/17/18 18:26	1
Styrene	0.17	U	1.0	0.17	ug/L			04/17/18 18:26	1
Xylenes, Total	**9.7**		2.0	0.28	ug/L			04/17/18 18:26	1
Ethyl ether	**2.1**	J	1.0	0.11	ug/L			04/17/18 18:26	1
MTBE	**0.20**	**J**	1.0	0.13	ug/L			04/17/18 18:26	1
Tetrahydrofuran	**14**		2.0	0.36	ug/L			04/17/18 18:26	1
Cyclohexane	**16**	J	1.0	0.26	ug/L			04/17/18 18:26	1
1,4-Dioxane	**580**		50	8.7	ug/L			04/17/18 18:26	1
1,2,4-Trimethylbenzene	**54**		1.0	0.23	ug/L			04/17/18 18:26	1
1,3,5-Trimethylbenzene	**8.7**		1.0	0.25	ug/L			04/17/18 18:26	1
Isopropylbenzene	**18**		1.0	0.32	ug/L			04/17/18 18:26	1

Client Sample ID: DDA-09-TZ

Lab Sample ID: 460-153929-2

Date Collected: 04/12/18 09:50
Date Received: 04/12/18 20:55

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	**17**		1.0	0.29	ug/L			04/17/18 18:26	1
Methylcyclohexane	**18**		1.0	0.22	ug/L			04/17/18 18:26	1
Indane	**13**		1.0	0.12	ug/L			04/17/18 18:26	1
Dichlorofluoromethane	**6.3**	J	1.0	0.21	ug/L			04/17/18 18:26	1
1,2,3-Trimethylbenzene	**3.7**		1.0	0.11	ug/L			04/17/18 18:26	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclopentane, 1,1-dimethyl-	*5.7*	*J N*	*ug/L*		*4.79*	*1638-26-2*		*04/17/18 18:26*	*1*
Benzene, 1-ethyl-2-methyl-	*20*	*J N*	*ug/L*		*8.75*	*611-14-3*		*04/17/18 18:26*	*1*
Unknown	*11*	*J*	*ug/L*		*10.93*			*04/17/18 18:26*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*74 - 132*		*04/17/18 18:26*	*1*
Bromofluorobenzene	*123*		*77 - 124*		*04/17/18 18:26*	*1*
Toluene-d8 (Surr)	*91*		*80 - 120*		*04/17/18 18:26*	*1*
Dibromofluoromethane (Surr)	*110*		*72 - 131*		*04/17/18 18:26*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.051	0.016	ug/L		04/14/18 13:51	04/17/18 13:16	1
Benzo[a]pyrene	0.022	U	0.051	0.022	ug/L		04/14/18 13:51	04/17/18 13:16	1
Benzo[b]fluoranthene	0.024	U	0.051	0.024	ug/L		04/14/18 13:51	04/17/18 13:16	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/14/18 13:51	04/17/18 13:16	1
Pentachlorophenol	0.16	U	0.20	0.16	ug/L		04/14/18 13:51	04/17/18 13:16	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.30	U	10	0.30	ug/L		04/14/18 13:51	04/15/18 20:13	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/14/18 13:51	04/15/18 20:13	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/14/18 13:51	04/15/18 20:13	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/14/18 13:51	04/15/18 20:13	1
2-Nitrophenol	0.76	U	10	0.76	ug/L		04/14/18 13:51	04/15/18 20:13	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/14/18 13:51	04/15/18 20:13	1
2,4-Dichlorophenol	0.43	U	10	0.43	ug/L		04/14/18 13:51	04/15/18 20:13	1
4-Chloro-3-methylphenol	0.59	U	10	0.59	ug/L		04/14/18 13:51	04/15/18 20:13	1
2,4,6-Trichlorophenol	0.31	U	10	0.31	ug/L		04/14/18 13:51	04/15/18 20:13	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/14/18 13:51	04/15/18 20:13	1
2,4-Dinitrophenol	15	U	20	15	ug/L		04/14/18 13:51	04/15/18 20:13	1
4-Nitrophenol	0.70	U	20	0.70	ug/L		04/14/18 13:51	04/15/18 20:13	1
4,6-Dinitro-2-methylphenol	14	U	20	14	ug/L		04/14/18 13:51	04/15/18 20:13	1
Bis(2-chloroethyl)ether	**63**	J+	1.0	0.30	ug/L		04/14/18 13:51	04/15/18 20:13	1
1,3-Dichlorobenzene	2.1	U	10	2.1	ug/L		04/14/18 13:51	04/15/18 20:13	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/14/18 13:51	04/15/18 20:13	1
1,2-Dichlorobenzene	**2.0**	**J** J+	10	1.4	ug/L		04/14/18 13:51	04/15/18 20:13	1
N-Nitrosodi-n-propylamine	0.44	U	1.0	0.44	ug/L		04/14/18 13:51	04/15/18 20:13	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/14/18 13:51	04/15/18 20:13	1
Nitrobenzene	0.58	U	1.0	0.58	ug/L		04/14/18 13:51	04/15/18 20:13	1
Isophorone	0.81	U	10	0.81	ug/L		04/14/18 13:51	04/15/18 20:13	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/14/18 13:51	04/15/18 20:13	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/14/18 13:51	04/15/18 20:13	1

Client Sample ID: DDA-09-TZ

Lab Sample ID: 460-153929-2

Date Collected: 04/12/18 09:50
Date Received: 04/12/18 20:55

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	1.2	U	10	1.2	ug/L		04/14/18 13:51	04/15/18 20:13	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/14/18 13:51	04/15/18 20:13	1
Hexachlorobutadiene	0.80	U	1.0	0.80	ug/L		04/14/18 13:51	04/15/18 20:13	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/14/18 13:51	04/15/18 20:13	1
Hexachlorocyclopentadiene	1.8	U	10	1.8	ug/L		04/14/18 13:51	04/15/18 20:13	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/14/18 13:51	04/15/18 20:13	1
2-Nitroaniline	0.48	U	10	0.48	ug/L		04/14/18 13:51	04/15/18 20:13	1
Dimethyl phthalate	0.78	U	10	0.78	ug/L		04/14/18 13:51	04/15/18 20:13	1
Acenaphthylene	0.84	U	10	0.84	ug/L		04/14/18 13:51	04/15/18 20:13	1
2,6-Dinitrotoluene	0.40	U	2.0	0.40	ug/L		04/14/18 13:51	04/15/18 20:13	1
3-Nitroaniline	0.98	U	10	0.98	ug/L		04/14/18 13:51	04/15/18 20:13	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/14/18 13:51	04/15/18 20:13	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/14/18 13:51	04/15/18 20:13	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/14/18 13:51	04/15/18 20:13	1
Diethyl phthalate	1.0	U	10	1.0	ug/L		04/14/18 13:51	04/15/18 20:13	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/14/18 13:51	04/15/18 20:13	1
Fluorene	0.93	U	10	0.93	ug/L		04/14/18 13:51	04/15/18 20:13	1
4-Nitroaniline	0.55	U	10	0.55	ug/L		04/14/18 13:51	04/15/18 20:13	1
N-Nitrosodiphenylamine	0.91	U	10	0.91	ug/L		04/14/18 13:51	04/15/18 20:13	1
4-Bromophenyl phenyl ether	0.76	U	10	0.76	ug/L		04/14/18 13:51	04/15/18 20:13	1
Phenanthrene	0.59	U	10	0.59	ug/L		04/14/18 13:51	04/15/18 20:13	1
Anthracene	0.65	U	10	0.65	ug/L		04/14/18 13:51	04/15/18 20:13	1
Carbazole	0.69	U	10	0.69	ug/L		04/14/18 13:51	04/15/18 20:13	1
Di-n-butyl phthalate	0.86	U	10	0.86	ug/L		04/14/18 13:51	04/15/18 20:13	1
Fluoranthene	0.86	U	10	0.86	ug/L		04/14/18 13:51	04/15/18 20:13	1
Pyrene	1.7	U	10	1.7	ug/L		04/14/18 13:51	04/15/18 20:13	1
Butyl benzyl phthalate	0.87	U	10	0.87	ug/L		04/14/18 13:51	04/15/18 20:13	1
3,3'-Dichlorobenzidine	1.5	U	10	1.5	ug/L		04/14/18 13:51	04/15/18 20:13	1
Chrysene	0.93	U	2.0	0.93	ug/L		04/14/18 13:51	04/15/18 20:13	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/14/18 13:51	04/15/18 20:13	1
Di-n-octyl phthalate	4.9	U	10	4.9	ug/L		04/14/18 13:51	04/15/18 20:13	1
Benzo[k]fluoranthene	0.69	U	1.0	0.69	ug/L		04/14/18 13:51	04/15/18 20:13	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/14/18 13:51	04/15/18 20:13	1
Dibenz(a,h)anthracene	0.73	U *	1.0	0.73	ug/L		04/14/18 13:51	04/15/18 20:13	1
Benzo[g,h,i]perylene	1.5	U	10	1.5	ug/L		04/14/18 13:51	04/15/18 20:13	1
Diphenyl ether	**4.2**	**J** J+	10	1.2	ug/L		04/14/18 13:51	04/15/18 20:13	1
n,n'-Dimethylaniline	0.93	U	1.0	0.93	ug/L		04/14/18 13:51	04/15/18 20:13	1
Caprolactam	0.70	U	10	0.70	ug/L		04/14/18 13:51	04/15/18 20:13	1
bis (2-chloroisopropyl) ether	0.64	U	10	0.64	ug/L		04/14/18 13:51	04/15/18 20:13	1
Bisphenol-A	**17**		10	10	ug/L		04/14/18 13:51	04/15/18 20:13	1
N-Methylaniline	**1.5**	**J** J+	5.1	0.49	ug/L		04/14/18 13:51	04/15/18 20:13	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Benzene, (1-methylethyl)-	*18*	*J N*	*ug/L*		*3.29*	*98-82-8*	*04/14/18 13:51*	*04/15/18 20:13*	*1*
Benzene, propyl-	*16*	*J N*	*ug/L*		*3.56*	*103-65-1*	*04/14/18 13:51*	*04/15/18 20:13*	*1*
Benzene, 1,3,5-trimethyl-	*11*	*J N*	*ug/L*		*3.68*	*108-67-8*	*04/14/18 13:51*	*04/15/18 20:13*	*1*
Benzene, 1-ethyl-2-methyl-	*41*	*J N*	*ug/L*		*3.76*	*611-14-3*	*04/14/18 13:51*	*04/15/18 20:13*	*1*
Benzene, 1,2,3-trimethyl-	*61*	*J N*	*ug/L*		*3.89*	*526-73-8*	*04/14/18 13:51*	*04/15/18 20:13*	*1*
Benzene, 1,2,4-trimethyl-	*8.4*	*J N*	*ug/L*		*4.11*	*95-63-6*	*04/14/18 13:51*	*04/15/18 20:13*	*1*
1,4-Benzenediol, diacetate	*20*	*J N*	*ug/L*		*5.72*	*1205-91-0*	*04/14/18 13:51*	*04/15/18 20:13*	*1*

Client Sample ID: DDA-09-TZ

Lab Sample ID: 460-153929-2

Date Collected: 04/12/18 09:50
Date Received: 04/12/18 20:55

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	28	J	ug/L		5.89		04/14/18 13:51	04/15/18 20:13	1
Unknown	12	J	ug/L		6.13		04/14/18 13:51	04/15/18 20:13	1
Unknown	140	J	ug/L		6.74		04/14/18 13:51	04/15/18 20:13	1
Unknown	9.8	J	ug/L		7.03		04/14/18 13:51	04/15/18 20:13	1
Unknown	7.4	J	ug/L		7.54		04/14/18 13:51	04/15/18 20:13	1
Cyclic octaatomic sulfur	14	J N	ug/L		9.49	10544-50-0	04/14/18 13:51	04/15/18 20:13	1
Unknown	15	J	ug/L		10.24		04/14/18 13:51	04/15/18 20:13	1
Unknown	13	J	ug/L		11.12		04/14/18 13:51	04/15/18 20:13	1
Unknown	19	J	ug/L		11.15		04/14/18 13:51	04/15/18 20:13	1
Unknown	9.1	J	ug/L		11.93		04/14/18 13:51	04/15/18 20:13	1
Unknown	17	J	ug/L		12.20		04/14/18 13:51	04/15/18 20:13	1
Unknown	13	J	ug/L		13.45		04/14/18 13:51	04/15/18 20:13	1
Unknown	7.1	J	ug/L		14.80		04/14/18 13:51	04/15/18 20:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	111	X	51 - 108	04/14/18 13:51	04/15/18 20:13	1
Phenol-d5	23		14 - 39	04/14/18 13:51	04/15/18 20:13	1
Terphenyl-d14	95		40 - 148	04/14/18 13:51	04/15/18 20:13	1
2,4,6-Tribromophenol	116		26 - 139	04/14/18 13:51	04/15/18 20:13	1
2-Fluorophenol	54		25 - 58	04/14/18 13:51	04/15/18 20:13	1
2-Fluorobiphenyl	107		45 - 107	04/14/18 13:51	04/15/18 20:13	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/14/18 00:25	04/16/18 17:31	5
Aluminum	**183**		50.0	28.5	ug/L		04/14/18 00:25	04/16/18 17:31	5
Arsenic	**1.9**	**J**	2.5	1.5	ug/L		04/14/18 00:25	04/16/18 17:31	5
Barium	**611**		5.0	3.2	ug/L		04/14/18 00:25	04/16/18 17:31	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/14/18 00:25	04/16/18 17:31	5
Calcium	**19600**		250	233	ug/L		04/14/18 00:25	04/16/18 17:31	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/14/18 00:25	04/16/18 17:31	5
Cobalt	**78.0**		5.0	3.1	ug/L		04/14/18 00:25	04/16/18 17:31	5
Chromium	**7.1**	J+	5.0	3.1	ug/L		04/14/18 00:25	04/16/18 17:31	5
Copper	3.3	U	5.0	3.3	ug/L		04/14/18 00:25	04/16/18 17:31	5
Iron	**20900**		150	97.8	ug/L		04/14/18 00:25	04/16/18 17:31	5
Potassium	**2390**		250	143	ug/L		04/14/18 00:25	04/16/18 17:31	5
Magnesium	**16800**		250	155	ug/L		04/14/18 00:25	04/16/18 17:31	5
Manganese	**1740**		10.0	6.1	ug/L		04/14/18 00:25	04/16/18 17:31	5
Sodium	**20400**		250	213	ug/L		04/14/18 00:25	04/16/18 17:31	5
Nickel	**13.3**		5.0	3.1	ug/L		04/14/18 00:25	04/16/18 17:31	5
Lead	0.93	U	1.5	0.93	ug/L		04/14/18 00:25	04/16/18 17:31	5
Antimony	1.4	U	2.5	1.4	ug/L		04/14/18 00:25	04/16/18 17:31	5
Selenium	1.4	U	2.5	1.4	ug/L		04/14/18 00:25	04/16/18 17:31	5
Thallium	0.60	U	1.0	0.60	ug/L		04/14/18 00:25	04/16/18 17:31	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/14/18 00:25	04/16/18 17:31	5
Zinc	16.3	U	20.0	16.3	ug/L		04/14/18 00:25	04/16/18 17:31	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/17/18 12:35	04/17/18 15:29	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**21500**		150	92.1	ug/L		04/15/18 17:45	04/17/18 15:26	1
Manganese, Dissolved	**1860**		15.0	3.1	ug/L		04/15/18 17:45	04/17/18 15:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**1.5**		0.10	0.045	mg/L		04/17/18 21:29	04/18/18 16:58	1

Client Sample ID: DGC-7S — Lab Sample ID: 460-153929-3

Date Collected: 04/12/18 12:40 — Matrix: Water
Date Received: 04/12/18 20:55

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**8.4**		0.40	0.20	ug/L			04/16/18 02:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*72 - 133*		*04/16/18 02:06*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*71 - 144*		*04/16/18 02:06*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/18/18 17:14	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/18/18 17:14	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/18/18 17:14	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/18/18 17:14	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/18/18 17:14	1
Acetone	1.1	U	5.0	1.1	ug/L			04/18/18 17:14	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/18/18 17:14	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/18/18 17:14	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/18/18 17:14	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/18/18 17:14	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/18/18 17:14	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/18/18 17:14	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/18/18 17:14	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/18/18 17:14	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/18/18 17:14	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/18/18 17:14	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/18/18 17:14	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/18/18 17:14	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/18/18 17:14	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/18/18 17:14	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/18/18 17:14	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/18/18 17:14	1
Benzene	0.090	U	1.0	0.090	ug/L			04/18/18 17:14	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/18/18 17:14	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/18/18 17:14	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/18/18 17:14	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/18/18 17:14	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/18/18 17:14	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/18/18 17:14	1
Toluene	0.25	U	1.0	0.25	ug/L			04/18/18 17:14	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/18/18 17:14	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/18/18 17:14	1
Styrene	0.17	U	1.0	0.17	ug/L			04/18/18 17:14	1

Client Sample ID: DGC-7S

Lab Sample ID: 460-153929-3

Date Collected: 04/12/18 12:40
Date Received: 04/12/18 20:55

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/18/18 17:14	1
Ethyl ether	**0.17**	**J**	1.0	0.11	ug/L			04/18/18 17:14	1
MTBE	**0.41**	**J**	1.0	0.13	ug/L			04/18/18 17:14	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/18/18 17:14	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/18/18 17:14	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/18/18 17:14	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/18/18 17:14	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/18/18 17:14	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/18/18 17:14	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/18/18 17:14	1
Indane	**0.13**	**J**	1.0	0.12	ug/L			04/18/18 17:14	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/18/18 17:14	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/18/18 17:14	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/18/18 17:14*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*74 - 132*		*04/18/18 17:14*	*1*
Bromofluorobenzene	*96*		*77 - 124*		*04/18/18 17:14*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*04/18/18 17:14*	*1*
Dibromofluoromethane (Surr)	*99*		*72 - 131*		*04/18/18 17:14*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.051	0.016	ug/L		04/14/18 13:51	04/17/18 13:38	1
Benzo[a]pyrene	0.022	U	0.051	0.022	ug/L		04/14/18 13:51	04/17/18 13:38	1
Benzo[b]fluoranthene	0.024	U	0.051	0.024	ug/L		04/14/18 13:51	04/17/18 13:38	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/14/18 13:51	04/17/18 13:38	1
Pentachlorophenol	0.16	U	0.20	0.16	ug/L		04/14/18 13:51	04/17/18 13:38	1
Bis(2-chloroethyl)ether	**0.69**	**J+**	0.031	0.027	ug/L		04/14/18 13:51	04/17/18 13:38	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.30	U	10	0.30	ug/L		04/14/18 13:51	04/15/18 20:34	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/14/18 13:51	04/15/18 20:34	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/14/18 13:51	04/15/18 20:34	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/14/18 13:51	04/15/18 20:34	1
2-Nitrophenol	0.76	U	10	0.76	ug/L		04/14/18 13:51	04/15/18 20:34	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/14/18 13:51	04/15/18 20:34	1
2,4-Dichlorophenol	0.43	U	10	0.43	ug/L		04/14/18 13:51	04/15/18 20:34	1
4-Chloro-3-methylphenol	0.59	U	10	0.59	ug/L		04/14/18 13:51	04/15/18 20:34	1
2,4,6-Trichlorophenol	0.31	U	10	0.31	ug/L		04/14/18 13:51	04/15/18 20:34	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/14/18 13:51	04/15/18 20:34	1
2,4-Dinitrophenol	15	U	20	15	ug/L		04/14/18 13:51	04/15/18 20:34	1
4-Nitrophenol	0.70	U	20	0.70	ug/L		04/14/18 13:51	04/15/18 20:34	1
4,6-Dinitro-2-methylphenol	14	U	20	14	ug/L		04/14/18 13:51	04/15/18 20:34	1
1,3-Dichlorobenzene	2.1	U	10	2.1	ug/L		04/14/18 13:51	04/15/18 20:34	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/14/18 13:51	04/15/18 20:34	1
1,2-Dichlorobenzene	1.4	U	10	1.4	ug/L		04/14/18 13:51	04/15/18 20:34	1

Client Sample ID: DGC-7S

Lab Sample ID: 460-153929-3

Date Collected: 04/12/18 12:40
Date Received: 04/12/18 20:55

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	0.44	U	1.0	0.44	ug/L		04/14/18 13:51	04/15/18 20:34	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/14/18 13:51	04/15/18 20:34	1
Nitrobenzene	0.58	U	1.0	0.58	ug/L		04/14/18 13:51	04/15/18 20:34	1
Isophorone	0.81	U	10	0.81	ug/L		04/14/18 13:51	04/15/18 20:34	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/14/18 13:51	04/15/18 20:34	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/14/18 13:51	04/15/18 20:34	1
Naphthalene	1.2	U	10	1.2	ug/L		04/14/18 13:51	04/15/18 20:34	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/14/18 13:51	04/15/18 20:34	1
Hexachlorobutadiene	0.80	U	1.0	0.80	ug/L		04/14/18 13:51	04/15/18 20:34	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/14/18 13:51	04/15/18 20:34	1
Hexachlorocyclopentadiene	1.8	U	10	1.8	ug/L		04/14/18 13:51	04/15/18 20:34	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/14/18 13:51	04/15/18 20:34	1
2-Nitroaniline	0.48	U	10	0.48	ug/L		04/14/18 13:51	04/15/18 20:34	1
Dimethyl phthalate	0.78	U	10	0.78	ug/L		04/14/18 13:51	04/15/18 20:34	1
Acenaphthylene	0.84	U	10	0.84	ug/L		04/14/18 13:51	04/15/18 20:34	1
2,6-Dinitrotoluene	0.40	U	2.0	0.40	ug/L		04/14/18 13:51	04/15/18 20:34	1
3-Nitroaniline	0.98	U	10	0.98	ug/L		04/14/18 13:51	04/15/18 20:34	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/14/18 13:51	04/15/18 20:34	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/14/18 13:51	04/15/18 20:34	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/14/18 13:51	04/15/18 20:34	1
Diethyl phthalate	1.0	U	10	1.0	ug/L		04/14/18 13:51	04/15/18 20:34	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/14/18 13:51	04/15/18 20:34	1
Fluorene	0.93	U	10	0.93	ug/L		04/14/18 13:51	04/15/18 20:34	1
4-Nitroaniline	0.55	U	10	0.55	ug/L		04/14/18 13:51	04/15/18 20:34	1
N-Nitrosodiphenylamine	0.91	U	10	0.91	ug/L		04/14/18 13:51	04/15/18 20:34	1
4-Bromophenyl phenyl ether	0.76	U	10	0.76	ug/L		04/14/18 13:51	04/15/18 20:34	1
Phenanthrene	0.59	U	10	0.59	ug/L		04/14/18 13:51	04/15/18 20:34	1
Anthracene	0.65	U	10	0.65	ug/L		04/14/18 13:51	04/15/18 20:34	1
Carbazole	0.69	U	10	0.69	ug/L		04/14/18 13:51	04/15/18 20:34	1
Di-n-butyl phthalate	0.86	U	10	0.86	ug/L		04/14/18 13:51	04/15/18 20:34	1
Fluoranthene	0.86	U	10	0.86	ug/L		04/14/18 13:51	04/15/18 20:34	1
Pyrene	1.7	U	10	1.7	ug/L		04/14/18 13:51	04/15/18 20:34	1
Butyl benzyl phthalate	0.87	U	10	0.87	ug/L		04/14/18 13:51	04/15/18 20:34	1
3,3'-Dichlorobenzidine	1.5	U	10	1.5	ug/L		04/14/18 13:51	04/15/18 20:34	1
Chrysene	0.93	U	2.0	0.93	ug/L		04/14/18 13:51	04/15/18 20:34	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/14/18 13:51	04/15/18 20:34	1
Di-n-octyl phthalate	4.9	U	10	4.9	ug/L		04/14/18 13:51	04/15/18 20:34	1
Benzo[k]fluoranthene	0.69	U	1.0	0.69	ug/L		04/14/18 13:51	04/15/18 20:34	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/14/18 13:51	04/15/18 20:34	1
Dibenz(a,h)anthracene	0.73	U *	1.0	0.73	ug/L		04/14/18 13:51	04/15/18 20:34	1
Benzo[g,h,i]perylene	1.5	U	10	1.5	ug/L		04/14/18 13:51	04/15/18 20:34	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/14/18 13:51	04/15/18 20:34	1
n,n'-Dimethylaniline	0.93	U	1.0	0.93	ug/L		04/14/18 13:51	04/15/18 20:34	1
Caprolactam	0.70	U	10	0.70	ug/L		04/14/18 13:51	04/15/18 20:34	1
bis (2-chloroisopropyl) ether	0.64	U	10	0.64	ug/L		04/14/18 13:51	04/15/18 20:34	1
Bisphenol-A	10	U	10	10	ug/L		04/14/18 13:51	04/15/18 20:34	1
N-Methylaniline	0.49	U	5.1	0.49	ug/L		04/14/18 13:51	04/15/18 20:34	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*6.7*	*J*	*ug/L*		*14.83*		*04/14/18 13:51*	*04/15/18 20:34*	*1*

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	112	X	51 - 108	04/14/18 13:51	04/15/18 20:34	1
Phenol-d5	21		14 - 39	04/14/18 13:51	04/15/18 20:34	1
Terphenyl-d14	100		40 - 148	04/14/18 13:51	04/15/18 20:34	1
2,4,6-Tribromophenol	108		26 - 139	04/14/18 13:51	04/15/18 20:34	1
2-Fluorophenol	51		25 - 58	04/14/18 13:51	04/15/18 20:34	1
2-Fluorobiphenyl	107		45 - 107	04/14/18 13:51	04/15/18 20:34	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/14/18 00:25	04/16/18 17:34	5
Aluminum	**109**		50.0	28.5	ug/L		04/14/18 00:25	04/16/18 17:34	5
Arsenic	**3.2**		2.5	1.5	ug/L		04/14/18 00:25	04/16/18 17:34	5
Barium	**158**		5.0	3.2	ug/L		04/14/18 00:25	04/16/18 17:34	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/14/18 00:25	04/16/18 17:34	5
Calcium	**10600**		250	233	ug/L		04/14/18 00:25	04/16/18 17:34	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/14/18 00:25	04/16/18 17:34	5
Cobalt	**4.9**	**J**	5.0	3.1	ug/L		04/14/18 00:25	04/16/18 17:34	5
Chromium	5 ~~**3.9**~~	~~**J**~~ U	5.0	3.1	ug/L		04/14/18 00:25	04/16/18 17:34	5
Copper	3.3	U	5.0	3.3	ug/L		04/14/18 00:25	04/16/18 17:34	5
Iron	**41500**		150	97.8	ug/L		04/14/18 00:25	04/16/18 17:34	5
Potassium	**2290**		250	143	ug/L		04/14/18 00:25	04/16/18 17:34	5
Magnesium	**5700**		250	155	ug/L		04/14/18 00:25	04/16/18 17:34	5
Manganese	**1670**		10.0	6.1	ug/L		04/14/18 00:25	04/16/18 17:34	5
Sodium	**13900**		250	213	ug/L		04/14/18 00:25	04/16/18 17:34	5
Nickel	5 ~~**3.3**~~	~~**J**~~ U	5.0	3.1	ug/L		04/14/18 00:25	04/16/18 17:34	5
Lead	**0.95**	**J**	1.5	0.93	ug/L		04/14/18 00:25	04/16/18 17:34	5
Antimony	1.4	U	2.5	1.4	ug/L		04/14/18 00:25	04/16/18 17:34	5
Selenium	1.4	U	2.5	1.4	ug/L		04/14/18 00:25	04/16/18 17:34	5
Thallium	0.60	U	1.0	0.60	ug/L		04/14/18 00:25	04/16/18 17:34	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/14/18 00:25	04/16/18 17:34	5
Zinc	16.3	U	20.0	16.3	ug/L		04/14/18 00:25	04/16/18 17:34	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/17/18 12:35	04/17/18 15:31	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**45000**		150	92.1	ug/L		04/15/18 17:45	04/17/18 15:30	1
Manganese, Dissolved	**1830**		15.0	3.1	ug/L		04/15/18 17:45	04/17/18 15:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.81**		0.10	0.045	mg/L		04/17/18 21:29	04/18/18 17:06	1

Client Sample ID: DGC-7C — Lab Sample ID: 460-153929-4

Date Collected: 04/12/18 16:00 Matrix: Water
Date Received: 04/12/18 20:55

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**1.9**		0.40	0.20	ug/L			04/16/18 01:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	105		72 - 133		04/16/18 01:43	1
1,2-Dichloroethane-d4 (Surr)	82		71 - 144		04/16/18 01:43	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G Groundwater

TestAmerica Job ID: 460-153785-1
SDG: 153785

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/18/18 17:42	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/18/18 17:42	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/18/18 17:42	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/18/18 17:42	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/18/18 17:42	1
Acetone	**13**		5.0	1.1	ug/L			04/18/18 17:42	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/18/18 17:42	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/18/18 17:42	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/18/18 17:42	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/18/18 17:42	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/18/18 17:42	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/18/18 17:42	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/18/18 17:42	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/18/18 17:42	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/18/18 17:42	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/18/18 17:42	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/18/18 17:42	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/18/18 17:42	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/18/18 17:42	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/18/18 17:42	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/18/18 17:42	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/18/18 17:42	1
Benzene	**0.46**	**J**	1.0	0.090	ug/L			04/18/18 17:42	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/18/18 17:42	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/18/18 17:42	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/18/18 17:42	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/18/18 17:42	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/18/18 17:42	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/18/18 17:42	1
Toluene	0.25	U	1.0	0.25	ug/L			04/18/18 17:42	1
Chlorobenzene	**5.9**		1.0	0.24	ug/L			04/18/18 17:42	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/18/18 17:42	1
Styrene	0.17	U	1.0	0.17	ug/L			04/18/18 17:42	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/18/18 17:42	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/18/18 17:42	1
MTBE	0.13	U	1.0	0.13	ug/L			04/18/18 17:42	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/18/18 17:42	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/18/18 17:42	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/18/18 17:42	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/18/18 17:42	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/18/18 17:42	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/18/18 17:42	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/18/18 17:42	1
Indane	0.12	U	1.0	0.12	ug/L			04/18/18 17:42	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/18/18 17:42	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/18/18 17:42	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/18/18 17:42*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*74 - 132*		*04/18/18 17:42*	*1*
Bromofluorobenzene	*97*		*77 - 124*		*04/18/18 17:42*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*04/18/18 17:42*	*1*

Client Sample ID: DGC-7C

Lab Sample ID: 460-153929-4

Date Collected: 04/12/18 16:00
Date Received: 04/12/18 20:55

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*101*		*72 - 131*		*04/18/18 17:42*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.052	0.016	ug/L		04/14/18 13:51	04/16/18 17:20	1
Benzo[a]pyrene	0.023	U	0.052	0.023	ug/L		04/14/18 13:51	04/16/18 17:20	1
Benzo[b]fluoranthene	0.025	U	0.052	0.025	ug/L		04/14/18 13:51	04/16/18 17:20	1
Hexachlorobenzene	0.014	U	0.021	0.014	ug/L		04/14/18 13:51	04/16/18 17:20	1
Pentachlorophenol	0.16	U	0.21	0.16	ug/L		04/14/18 13:51	04/16/18 17:20	1
Bis(2-chloroethyl)ether	0.027	U	0.031	0.027	ug/L		04/14/18 13:51	04/16/18 17:20	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.30	U	10	0.30	ug/L		04/14/18 13:51	04/15/18 20:56	1
2-Chlorophenol	0.39	U	10	0.39	ug/L		04/14/18 13:51	04/15/18 20:56	1
2-Methylphenol	0.27	U	10	0.27	ug/L		04/14/18 13:51	04/15/18 20:56	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/14/18 13:51	04/15/18 20:56	1
2-Nitrophenol	0.78	U	10	0.78	ug/L		04/14/18 13:51	04/15/18 20:56	1
2,4-Dimethylphenol	0.25	U	10	0.25	ug/L		04/14/18 13:51	04/15/18 20:56	1
2,4-Dichlorophenol	0.44	U	10	0.44	ug/L		04/14/18 13:51	04/15/18 20:56	1
4-Chloro-3-methylphenol	0.60	U	10	0.60	ug/L		04/14/18 13:51	04/15/18 20:56	1
2,4,6-Trichlorophenol	0.31	U	10	0.31	ug/L		04/14/18 13:51	04/15/18 20:56	1
2,4,5-Trichlorophenol	0.29	U	10	0.29	ug/L		04/14/18 13:51	04/15/18 20:56	1
2,4-Dinitrophenol	15	U	21	15	ug/L		04/14/18 13:51	04/15/18 20:56	1
4-Nitrophenol	0.72	U	21	0.72	ug/L		04/14/18 13:51	04/15/18 20:56	1
4,6-Dinitro-2-methylphenol	14	U	21	14	ug/L		04/14/18 13:51	04/15/18 20:56	1
1,3-Dichlorobenzene	2.1	U	10	2.1	ug/L		04/14/18 13:51	04/15/18 20:56	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/14/18 13:51	04/15/18 20:56	1
1,2-Dichlorobenzene	1.4	U	10	1.4	ug/L		04/14/18 13:51	04/15/18 20:56	1
N-Nitrosodi-n-propylamine	0.45	U	1.0	0.45	ug/L		04/14/18 13:51	04/15/18 20:56	1
Hexachloroethane	1.2	U	2.1	1.2	ug/L		04/14/18 13:51	04/15/18 20:56	1
Nitrobenzene	0.59	U	1.0	0.59	ug/L		04/14/18 13:51	04/15/18 20:56	1
Isophorone	0.83	U	10	0.83	ug/L		04/14/18 13:51	04/15/18 20:56	1
Bis(2-chloroethoxy)methane	0.25	U	10	0.25	ug/L		04/14/18 13:51	04/15/18 20:56	1
1,2,4-Trichlorobenzene	1.3	U	2.1	1.3	ug/L		04/14/18 13:51	04/15/18 20:56	1
Naphthalene	1.2	U	10	1.2	ug/L		04/14/18 13:51	04/15/18 20:56	1
4-Chloroaniline	2.0	U	10	2.0	ug/L		04/14/18 13:51	04/15/18 20:56	1
Hexachlorobutadiene	0.81	U	1.0	0.81	ug/L		04/14/18 13:51	04/15/18 20:56	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/14/18 13:51	04/15/18 20:56	1
Hexachlorocyclopentadiene	1.8	U	10	1.8	ug/L		04/14/18 13:51	04/15/18 20:56	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/14/18 13:51	04/15/18 20:56	1
2-Nitroaniline	0.49	U	10	0.49	ug/L		04/14/18 13:51	04/15/18 20:56	1
Dimethyl phthalate	0.80	U	10	0.80	ug/L		04/14/18 13:51	04/15/18 20:56	1
Acenaphthylene	0.86	U	10	0.86	ug/L		04/14/18 13:51	04/15/18 20:56	1
2,6-Dinitrotoluene	0.41	U	2.1	0.41	ug/L		04/14/18 13:51	04/15/18 20:56	1
3-Nitroaniline	1.0	U	10	1.0	ug/L		04/14/18 13:51	04/15/18 20:56	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/14/18 13:51	04/15/18 20:56	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/14/18 13:51	04/15/18 20:56	1
2,4-Dinitrotoluene	1.0	U	2.1	1.0	ug/L		04/14/18 13:51	04/15/18 20:56	1

Client Sample ID: DGC-7C

Lab Sample ID: 460-153929-4

Date Collected: 04/12/18 16:00
Date Received: 04/12/18 20:55

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diethyl phthalate	1.0	U	10	1.0	ug/L		04/14/18 13:51	04/15/18 20:56	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/14/18 13:51	04/15/18 20:56	1
Fluorene	0.95	U	10	0.95	ug/L		04/14/18 13:51	04/15/18 20:56	1
4-Nitroaniline	0.57	U	10	0.57	ug/L		04/14/18 13:51	04/15/18 20:56	1
N-Nitrosodiphenylamine	0.93	U	10	0.93	ug/L		04/14/18 13:51	04/15/18 20:56	1
4-Bromophenyl phenyl ether	0.78	U	10	0.78	ug/L		04/14/18 13:51	04/15/18 20:56	1
Phenanthrene	0.60	U	10	0.60	ug/L		04/14/18 13:51	04/15/18 20:56	1
Anthracene	0.66	U	10	0.66	ug/L		04/14/18 13:51	04/15/18 20:56	1
Carbazole	0.71	U	10	0.71	ug/L		04/14/18 13:51	04/15/18 20:56	1
Di-n-butyl phthalate	**3.7**	**J**	10	0.88	ug/L		04/14/18 13:51	04/15/18 20:56	1
Fluoranthene	0.88	U	10	0.88	ug/L		04/14/18 13:51	04/15/18 20:56	1
Pyrene	1.7	U	10	1.7	ug/L		04/14/18 13:51	04/15/18 20:56	1
Butyl benzyl phthalate	**6.3**	**J**	10	0.89	ug/L		04/14/18 13:51	04/15/18 20:56	1
3,3'-Dichlorobenzidine	1.5	U	10	1.5	ug/L		04/14/18 13:51	04/15/18 20:56	1
Chrysene	0.94	U	2.1	0.94	ug/L		04/14/18 13:51	04/15/18 20:56	1
Bis(2-ethylhexyl) phthalate	1.8	U	2.1	1.8	ug/L		04/14/18 13:51	04/15/18 20:56	1
Di-n-octyl phthalate	5.0	U	10	5.0	ug/L		04/14/18 13:51	04/15/18 20:56	1
Benzo[k]fluoranthene	0.70	U	1.0	0.70	ug/L		04/14/18 13:51	04/15/18 20:56	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.1	1.3	ug/L		04/14/18 13:51	04/15/18 20:56	1
Dibenz(a,h)anthracene	0.75	U *	1.0	0.75	ug/L		04/14/18 13:51	04/15/18 20:56	1
Benzo[g,h,i]perylene	1.5	U	10	1.5	ug/L		04/14/18 13:51	04/15/18 20:56	1
Diphenyl ether	1.3	U	10	1.3	ug/L		04/14/18 13:51	04/15/18 20:56	1
n,n'-Dimethylaniline	0.95	U	1.0	0.95	ug/L		04/14/18 13:51	04/15/18 20:56	1
Caprolactam	0.71	U	10	0.71	ug/L		04/14/18 13:51	04/15/18 20:56	1
bis (2-chloroisopropyl) ether	0.66	U	10	0.66	ug/L		04/14/18 13:51	04/15/18 20:56	1
Bisphenol-A	10	U	10	10	ug/L		04/14/18 13:51	04/15/18 20:56	1
N-Methylaniline	0.50	U	5.2	0.50	ug/L		04/14/18 13:51	04/15/18 20:56	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/14/18 13:51*	*04/15/18 20:56*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*104*		*51 - 108*	*04/14/18 13:51*	*04/15/18 20:56*	*1*
Phenol-d5	*21*		*14 - 39*	*04/14/18 13:51*	*04/15/18 20:56*	*1*
Terphenyl-d14	*93*		*40 - 148*	*04/14/18 13:51*	*04/15/18 20:56*	*1*
2,4,6-Tribromophenol	*105*		*26 - 139*	*04/14/18 13:51*	*04/15/18 20:56*	*1*
2-Fluorophenol	*50*		*25 - 58*	*04/14/18 13:51*	*04/15/18 20:56*	*1*
2-Fluorobiphenyl	*96*		*45 - 107*	*04/14/18 13:51*	*04/15/18 20:56*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/14/18 00:25	04/16/18 17:36	5
Aluminum	**50.3**		50.0	28.5	ug/L		04/14/18 00:25	04/16/18 17:36	5
Arsenic	**9.7**		2.5	1.5	ug/L		04/14/18 00:25	04/16/18 17:36	5
Barium	**1140**		5.0	3.2	ug/L		04/14/18 00:25	04/16/18 17:36	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/14/18 00:25	04/16/18 17:36	5
Calcium	**13500**		250	233	ug/L		04/14/18 00:25	04/16/18 17:36	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/14/18 00:25	04/16/18 17:36	5
Cobalt	**114**		5.0	3.1	ug/L		04/14/18 00:25	04/16/18 17:36	5
Chromium	3.1	U	5.0	3.1	ug/L		04/14/18 00:25	04/16/18 17:36	5

Client Sample ID: DGC-7C

Lab Sample ID: 460-153929-4

Date Collected: 04/12/18 16:00
Date Received: 04/12/18 20:55

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	3.3	U	5.0	3.3	ug/L		04/14/18 00:25	04/16/18 17:36	5
Iron	**90900**		150	97.8	ug/L		04/14/18 00:25	04/16/18 17:36	5
Potassium	**5290**		250	143	ug/L		04/14/18 00:25	04/16/18 17:36	5
Magnesium	**18100**		250	155	ug/L		04/14/18 00:25	04/16/18 17:36	5
Manganese	**932**		10.0	6.1	ug/L		04/14/18 00:25	04/16/18 17:36	5
Sodium	**75900**		250	213	ug/L		04/14/18 00:25	04/16/18 17:36	5
Nickel	**22.8**		5.0	3.1	ug/L		04/14/18 00:25	04/16/18 17:36	5
Lead	**1.1**	**J**	1.5	0.93	ug/L		04/14/18 00:25	04/16/18 17:36	5
Antimony	1.4	U	2.5	1.4	ug/L		04/14/18 00:25	04/16/18 17:36	5
Selenium	1.4	U	2.5	1.4	ug/L		04/14/18 00:25	04/16/18 17:36	5
Thallium	0.60	U	1.0	0.60	ug/L		04/14/18 00:25	04/16/18 17:36	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/14/18 00:25	04/16/18 17:36	5
Zinc	16.3	U	20.0	16.3	ug/L		04/14/18 00:25	04/16/18 17:36	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/17/18 12:35	04/17/18 15:33	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**92500**		150	92.1	ug/L		04/15/18 17:45	04/17/18 15:45	1
Manganese, Dissolved	**1220**		15.0	3.1	ug/L		04/15/18 17:45	04/17/18 15:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.71**		0.10	0.045	mg/L		04/17/18 21:29	04/18/18 17:08	1

Client Sample ID: FDGW_041218

Lab Sample ID: 460-153929-5

Date Collected: 04/12/18 00:00
Date Received: 04/12/18 20:55

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/18/18 18:37	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/18/18 18:37	1
Vinyl chloride	**0.34**	**J**	1.0	0.060	ug/L			04/18/18 18:37	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/18/18 18:37	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/18/18 18:37	1
Acetone	1.1	U	5.0	1.1	ug/L			04/18/18 18:37	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/18/18 18:37	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/18/18 18:37	1
1,1-Dichloroethane	**0.75**	**J**	1.0	0.24	ug/L			04/18/18 18:37	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/18/18 18:37	1
cis-1,2-Dichloroethene	**1.0**		1.0	0.26	ug/L			04/18/18 18:37	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/18/18 18:37	1
1,2-Dichloroethane	**4.0**		1.0	0.25	ug/L			04/18/18 18:37	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/18/18 18:37	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/18/18 18:37	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/18/18 18:37	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/18/18 18:37	1

Client Sample ID: FDGW_041218

Lab Sample ID: 460-153929-5

Date Collected: 04/12/18 00:00
Date Received: 04/12/18 20:55

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/18/18 18:37	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/18/18 18:37	1
Trichloroethene	**1.3**		1.0	0.22	ug/L			04/18/18 18:37	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/18/18 18:37	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/18/18 18:37	1
Benzene	**110**		1.0	0.090	ug/L			04/18/18 18:37	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/18/18 18:37	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/18/18 18:37	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/18/18 18:37	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/18/18 18:37	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/18/18 18:37	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/18/18 18:37	1
Toluene	**0.33**	**J**	1.0	0.25	ug/L			04/18/18 18:37	1
Chlorobenzene	**4.8**		1.0	0.24	ug/L			04/18/18 18:37	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/18/18 18:37	1
Styrene	0.17	U	1.0	0.17	ug/L			04/18/18 18:37	1
Xylenes, Total	**10**		2.0	0.28	ug/L			04/18/18 18:37	1
Ethyl ether	**3.5**	J	1.0	0.11	ug/L			04/18/18 18:37	1
MTBE	**0.24**	**J**	1.0	0.13	ug/L			04/18/18 18:37	1
Tetrahydrofuran	**9.8**		2.0	0.36	ug/L			04/18/18 18:37	1
Cyclohexane	**9.1**	J	1.0	0.26	ug/L			04/18/18 18:37	1
1,4-Dioxane	**500**		50	8.7	ug/L			04/18/18 18:37	1
1,2,4-Trimethylbenzene	**62**		1.0	0.23	ug/L			04/18/18 18:37	1
1,3,5-Trimethylbenzene	**11**		1.0	0.25	ug/L			04/18/18 18:37	1
Isopropylbenzene	**18**		1.0	0.32	ug/L			04/18/18 18:37	1
N-Propylbenzene	**16**		1.0	0.29	ug/L			04/18/18 18:37	1
Methylcyclohexane	**17**		1.0	0.22	ug/L			04/18/18 18:37	1
Indane	**18**		1.0	0.12	ug/L			04/18/18 18:37	1
Dichlorofluoromethane	**10**	J	1.0	0.21	ug/L			04/18/18 18:37	1
1,2,3-Trimethylbenzene	**5.2**		1.0	0.11	ug/L			04/18/18 18:37	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Pentane, 2,3-dimethyl-	*6.9*	*J N*	*ug/L*		*3.19*	*565-59-3*		*04/18/18 18:37*	*1*
Isopropylcyclobutane	*6.4*	*J N*	*ug/L*		*3.53*	*872-56-0*		*04/18/18 18:37*	*1*
Benzene, 1-ethyl-2-methyl-	*21*	*J N*	*ug/L*		*10.22*	*611-14-3*		*04/18/18 18:37*	*1*
1,4-Benzenediol, diacetate	*7.8*	*J N*	*ug/L*		*13.43*	*1205-91-0*		*04/18/18 18:37*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*74 - 132*		*04/18/18 18:37*	*1*
Bromofluorobenzene	*97*		*77 - 124*		*04/18/18 18:37*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*04/18/18 18:37*	*1*
Dibromofluoromethane (Surr)	*103*		*72 - 131*		*04/18/18 18:37*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.052	0.016	ug/L		04/14/18 13:51	04/17/18 13:59	1
Benzo[a]pyrene	0.023	U	0.052	0.023	ug/L		04/14/18 13:51	04/17/18 13:59	1
Benzo[b]fluoranthene	0.025	U	0.052	0.025	ug/L		04/14/18 13:51	04/17/18 13:59	1
Hexachlorobenzene	0.014	U	0.021	0.014	ug/L		04/14/18 13:51	04/17/18 13:59	1
Pentachlorophenol	0.16	U	0.21	0.16	ug/L		04/14/18 13:51	04/17/18 13:59	1

Client Sample ID: FDGW_041218

Lab Sample ID: 460-153929-5

Date Collected: 04/12/18 00:00
Date Received: 04/12/18 20:55

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.30	U	10	0.30	ug/L		04/14/18 13:51	04/15/18 21:17	1
2-Chlorophenol	0.39	U	10	0.39	ug/L		04/14/18 13:51	04/15/18 21:17	1
2-Methylphenol	0.27	U	10	0.27	ug/L		04/14/18 13:51	04/15/18 21:17	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/14/18 13:51	04/15/18 21:17	1
2-Nitrophenol	0.78	U	10	0.78	ug/L		04/14/18 13:51	04/15/18 21:17	1
2,4-Dimethylphenol	0.25	U	10	0.25	ug/L		04/14/18 13:51	04/15/18 21:17	1
2,4-Dichlorophenol	0.44	U	10	0.44	ug/L		04/14/18 13:51	04/15/18 21:17	1
4-Chloro-3-methylphenol	0.60	U	10	0.60	ug/L		04/14/18 13:51	04/15/18 21:17	1
2,4,6-Trichlorophenol	0.31	U	10	0.31	ug/L		04/14/18 13:51	04/15/18 21:17	1
2,4,5-Trichlorophenol	0.29	U	10	0.29	ug/L		04/14/18 13:51	04/15/18 21:17	1
2,4-Dinitrophenol	15	U	21	15	ug/L		04/14/18 13:51	04/15/18 21:17	1
4-Nitrophenol	0.72	U	21	0.72	ug/L		04/14/18 13:51	04/15/18 21:17	1
4,6-Dinitro-2-methylphenol	14	U	21	14	ug/L		04/14/18 13:51	04/15/18 21:17	1
Bis(2-chloroethyl)ether	**64**		1.0	0.31	ug/L		04/14/18 13:51	04/15/18 21:17	1
1,3-Dichlorobenzene	2.1	U	10	2.1	ug/L		04/14/18 13:51	04/15/18 21:17	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/14/18 13:51	04/15/18 21:17	1
1,2-Dichlorobenzene	**2.1**	**J**	10	1.4	ug/L		04/14/18 13:51	04/15/18 21:17	1
N-Nitrosodi-n-propylamine	0.45	U	1.0	0.45	ug/L		04/14/18 13:51	04/15/18 21:17	1
Hexachloroethane	1.2	U	2.1	1.2	ug/L		04/14/18 13:51	04/15/18 21:17	1
Nitrobenzene	0.59	U	1.0	0.59	ug/L		04/14/18 13:51	04/15/18 21:17	1
Isophorone	0.83	U	10	0.83	ug/L		04/14/18 13:51	04/15/18 21:17	1
Bis(2-chloroethoxy)methane	0.25	U	10	0.25	ug/L		04/14/18 13:51	04/15/18 21:17	1
1,2,4-Trichlorobenzene	1.3	U	2.1	1.3	ug/L		04/14/18 13:51	04/15/18 21:17	1
Naphthalene	1.2	U	10	1.2	ug/L		04/14/18 13:51	04/15/18 21:17	1
4-Chloroaniline	2.0	U	10	2.0	ug/L		04/14/18 13:51	04/15/18 21:17	1
Hexachlorobutadiene	0.81	U	1.0	0.81	ug/L		04/14/18 13:51	04/15/18 21:17	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/14/18 13:51	04/15/18 21:17	1
Hexachlorocyclopentadiene	1.8	U	10	1.8	ug/L		04/14/18 13:51	04/15/18 21:17	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/14/18 13:51	04/15/18 21:17	1
2-Nitroaniline	0.49	U	10	0.49	ug/L		04/14/18 13:51	04/15/18 21:17	1
Dimethyl phthalate	0.80	U	10	0.80	ug/L		04/14/18 13:51	04/15/18 21:17	1
Acenaphthylene	0.86	U	10	0.86	ug/L		04/14/18 13:51	04/15/18 21:17	1
2,6-Dinitrotoluene	0.41	U	2.1	0.41	ug/L		04/14/18 13:51	04/15/18 21:17	1
3-Nitroaniline	1.0	U	10	1.0	ug/L		04/14/18 13:51	04/15/18 21:17	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/14/18 13:51	04/15/18 21:17	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/14/18 13:51	04/15/18 21:17	1
2,4-Dinitrotoluene	1.0	U	2.1	1.0	ug/L		04/14/18 13:51	04/15/18 21:17	1
Diethyl phthalate	1.0	U	10	1.0	ug/L		04/14/18 13:51	04/15/18 21:17	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/14/18 13:51	04/15/18 21:17	1
Fluorene	0.95	U	10	0.95	ug/L		04/14/18 13:51	04/15/18 21:17	1
4-Nitroaniline	0.57	U	10	0.57	ug/L		04/14/18 13:51	04/15/18 21:17	1
N-Nitrosodiphenylamine	0.93	U	10	0.93	ug/L		04/14/18 13:51	04/15/18 21:17	1
4-Bromophenyl phenyl ether	0.78	U	10	0.78	ug/L		04/14/18 13:51	04/15/18 21:17	1
Phenanthrene	0.60	U	10	0.60	ug/L		04/14/18 13:51	04/15/18 21:17	1
Anthracene	0.66	U	10	0.66	ug/L		04/14/18 13:51	04/15/18 21:17	1
Carbazole	0.71	U	10	0.71	ug/L		04/14/18 13:51	04/15/18 21:17	1
Di-n-butyl phthalate	0.88	U	10	0.88	ug/L		04/14/18 13:51	04/15/18 21:17	1
Fluoranthene	0.88	U	10	0.88	ug/L		04/14/18 13:51	04/15/18 21:17	1
Pyrene	1.7	U	10	1.7	ug/L		04/14/18 13:51	04/15/18 21:17	1

Client Sample ID: FDGW_041218

Lab Sample ID: 460-153929-5

Date Collected: 04/12/18 00:00
Date Received: 04/12/18 20:55

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Butyl benzyl phthalate	0.89	U	10	0.89	ug/L		04/14/18 13:51	04/15/18 21:17	1
3,3'-Dichlorobenzidine	1.5	U	10	1.5	ug/L		04/14/18 13:51	04/15/18 21:17	1
Chrysene	0.94	U	2.1	0.94	ug/L		04/14/18 13:51	04/15/18 21:17	1
Bis(2-ethylhexyl) phthalate	1.8	U	2.1	1.8	ug/L		04/14/18 13:51	04/15/18 21:17	1
Di-n-octyl phthalate	5.0	U	10	5.0	ug/L		04/14/18 13:51	04/15/18 21:17	1
Benzo[k]fluoranthene	0.70	U	1.0	0.70	ug/L		04/14/18 13:51	04/15/18 21:17	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.1	1.3	ug/L		04/14/18 13:51	04/15/18 21:17	1
Dibenz(a,h)anthracene	0.75	U *-	1.0	0.75	ug/L		04/14/18 13:51	04/15/18 21:17	1
Benzo[g,h,i]perylene	1.5	U	10	1.5	ug/L		04/14/18 13:51	04/15/18 21:17	1
Diphenyl ether	**4.2**	**J**	10	1.3	ug/L		04/14/18 13:51	04/15/18 21:17	1
n,n'-Dimethylaniline	0.95	U	1.0	0.95	ug/L		04/14/18 13:51	04/15/18 21:17	1
Caprolactam	0.71	U	10	0.71	ug/L		04/14/18 13:51	04/15/18 21:17	1
bis (2-chloroisopropyl) ether	0.66	U	10	0.66	ug/L		04/14/18 13:51	04/15/18 21:17	1
Bisphenol-A	**17**		10	10	ug/L		04/14/18 13:51	04/15/18 21:17	1
N-Methylaniline	**1.4**	**J**	5.2	0.50	ug/L		04/14/18 13:51	04/15/18 21:17	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane	*61*	*J N*	*ug/L*		*1.63*	*123-91-1*	*04/14/18 13:51*	*04/15/18 21:17*	*1*
Benzene, (1-methylethyl)-	*19*	*J N*	*ug/L*		*3.29*	*98-82-8*	*04/14/18 13:51*	*04/15/18 21:17*	*1*
Benzene, propyl-	*17*	*J N*	*ug/L*		*3.55*	*103-65-1*	*04/14/18 13:51*	*04/15/18 21:17*	*1*
Benzene, 1,3,5-trimethyl-	*11*	*J N*	*ug/L*		*3.68*	*108-67-8*	*04/14/18 13:51*	*04/15/18 21:17*	*1*
Benzene, 1,2,3-trimethyl-	*65*	*J N*	*ug/L*		*3.89*	*526-73-8*	*04/14/18 13:51*	*04/15/18 21:17*	*1*
Benzene, 1,2,4-trimethyl-	*9.0*	*J N*	*ug/L*		*4.11*	*95-63-6*	*04/14/18 13:51*	*04/15/18 21:17*	*1*
Indane	*27*	*J N*	*ug/L*		*4.23*	*496-11-7*	*04/14/18 13:51*	*04/15/18 21:17*	*1*
1,4-Benzenediol, diacetate	*20*	*J N*	*ug/L*		*5.72*	*1205-91-0*	*04/14/18 13:51*	*04/15/18 21:17*	*1*
Unknown	*28*	*J*	*ug/L*		*5.89*		*04/14/18 13:51*	*04/15/18 21:17*	*1*
Unknown	*12*	*J*	*ug/L*		*6.13*		*04/14/18 13:51*	*04/15/18 21:17*	*1*
Unknown	*140*	*J*	*ug/L*		*6.74*		*04/14/18 13:51*	*04/15/18 21:17*	*1*
Acetamide, N-methyl-N-phenyl-	*10*	*J N*	*ug/L*		*7.03*	*579-10-2*	*04/14/18 13:51*	*04/15/18 21:17*	*1*
Cyclic octaatomic sulfur	*11*	*J N*	*ug/L*		*9.49*	*10544-50-0*	*04/14/18 13:51*	*04/15/18 21:17*	*1*
Unknown	*15*	*J*	*ug/L*		*10.24*		*04/14/18 13:51*	*04/15/18 21:17*	*1*
Unknown	*12*	*J*	*ug/L*		*11.12*		*04/14/18 13:51*	*04/15/18 21:17*	*1*
Unknown	*21*	*J*	*ug/L*		*11.15*		*04/14/18 13:51*	*04/15/18 21:17*	*1*
Unknown	*8.9*	*J*	*ug/L*		*11.93*		*04/14/18 13:51*	*04/15/18 21:17*	*1*
Unknown	*19*	*J*	*ug/L*		*12.19*		*04/14/18 13:51*	*04/15/18 21:17*	*1*
Unknown	*6.7*	*J*	*ug/L*		*13.44*		*04/14/18 13:51*	*04/15/18 21:17*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*107*		*51 - 108*	*04/14/18 13:51*	*04/15/18 21:17*	*1*
Phenol-d5	*22*		*14 - 39*	*04/14/18 13:51*	*04/15/18 21:17*	*1*
Terphenyl-d14	*92*		*40 - 148*	*04/14/18 13:51*	*04/15/18 21:17*	*1*
2,4,6-Tribromophenol	*108*		*26 - 139*	*04/14/18 13:51*	*04/15/18 21:17*	*1*
2-Fluorophenol	*51*		*25 - 58*	*04/14/18 13:51*	*04/15/18 21:17*	*1*
2-Fluorobiphenyl	*96*		*45 - 107*	*04/14/18 13:51*	*04/15/18 21:17*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/14/18 00:25	04/16/18 17:38	5
Aluminum	**194**		50.0	28.5	ug/L		04/14/18 00:25	04/16/18 17:38	5
Arsenic	**2.3**	**J**	2.5	1.5	ug/L		04/14/18 00:25	04/16/18 17:38	5

Client Sample ID: FDGW_041218

Lab Sample ID: 460-153929-5

Date Collected: 04/12/18 00:00
Date Received: 04/12/18 20:55

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**652**		5.0	3.2	ug/L		04/14/18 00:25	04/16/18 17:38	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/14/18 00:25	04/16/18 17:38	5
Calcium	**21200**		250	233	ug/L		04/14/18 00:25	04/16/18 17:38	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/14/18 00:25	04/16/18 17:38	5
Cobalt	**82.6**		5.0	3.1	ug/L		04/14/18 00:25	04/16/18 17:38	5
Chromium	**7.7**	J+	5.0	3.1	ug/L		04/14/18 00:25	04/16/18 17:38	5
Copper	3.3	U	5.0	3.3	ug/L		04/14/18 00:25	04/16/18 17:38	5
Iron	**22600**		150	97.8	ug/L		04/14/18 00:25	04/16/18 17:38	5
Potassium	**2540**		250	143	ug/L		04/14/18 00:25	04/16/18 17:38	5
Magnesium	**18200**		250	155	ug/L		04/14/18 00:25	04/16/18 17:38	5
Manganese	**1870**		10.0	6.1	ug/L		04/14/18 00:25	04/16/18 17:38	5
Sodium	**22000**		250	213	ug/L		04/14/18 00:25	04/16/18 17:38	5
Nickel	**14.6**		5.0	3.1	ug/L		04/14/18 00:25	04/16/18 17:38	5
Lead	0.93	U	1.5	0.93	ug/L		04/14/18 00:25	04/16/18 17:38	5
Antimony	1.4	U	2.5	1.4	ug/L		04/14/18 00:25	04/16/18 17:38	5
Selenium	1.4	U	2.5	1.4	ug/L		04/14/18 00:25	04/16/18 17:38	5
Thallium	0.60	U	1.0	0.60	ug/L		04/14/18 00:25	04/16/18 17:38	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/14/18 00:25	04/16/18 17:38	5
Zinc	16.3	U	20.0	16.3	ug/L		04/14/18 00:25	04/16/18 17:38	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/17/18 12:28	04/17/18 14:29	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**21700**		150	92.1	ug/L		04/15/18 17:45	04/17/18 15:49	1
Manganese, Dissolved	**1890**		15.0	3.1	ug/L		04/15/18 17:45	04/17/18 15:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**1.5**		0.10	0.045	mg/L		04/17/18 21:29	04/18/18 17:09	1

Client Sample ID: TBGW_041218

Lab Sample ID: 460-153929-6

Date Collected: 04/12/18 00:00
Date Received: 04/12/18 20:55

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.20	U	0.40	0.20	ug/L			04/14/18 20:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*104*		*72 - 133*		*04/14/18 20:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*71 - 144*		*04/14/18 20:18*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/18/18 16:46	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/18/18 16:46	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/18/18 16:46	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/18/18 16:46	1

Client Sample ID: TBGW_041218

Lab Sample ID: 460-153929-6

Date Collected: 04/12/18 00:00
Date Received: 04/12/18 20:55

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/18/18 16:46	1
Acetone	1.1	U	5.0	1.1	ug/L			04/18/18 16:46	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/18/18 16:46	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/18/18 16:46	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/18/18 16:46	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/18/18 16:46	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/18/18 16:46	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/18/18 16:46	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/18/18 16:46	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/18/18 16:46	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/18/18 16:46	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/18/18 16:46	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/18/18 16:46	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/18/18 16:46	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/18/18 16:46	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/18/18 16:46	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/18/18 16:46	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/18/18 16:46	1
Benzene	0.090	U	1.0	0.090	ug/L			04/18/18 16:46	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/18/18 16:46	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/18/18 16:46	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/18/18 16:46	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/18/18 16:46	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/18/18 16:46	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/18/18 16:46	1
Toluene	0.25	U	1.0	0.25	ug/L			04/18/18 16:46	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/18/18 16:46	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/18/18 16:46	1
Styrene	0.17	U	1.0	0.17	ug/L			04/18/18 16:46	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/18/18 16:46	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/18/18 16:46	1
MTBE	0.13	U	1.0	0.13	ug/L			04/18/18 16:46	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/18/18 16:46	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/18/18 16:46	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/18/18 16:46	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/18/18 16:46	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/18/18 16:46	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/18/18 16:46	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/18/18 16:46	1
Indane	0.12	U	1.0	0.12	ug/L			04/18/18 16:46	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/18/18 16:46	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/18/18 16:46	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/18/18 16:46*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*74 - 132*		*04/18/18 16:46*	*1*
Bromofluorobenzene	*100*		*77 - 124*		*04/18/18 16:46*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*04/18/18 16:46*	*1*

Client Sample ID: TBGW_041218

Lab Sample ID: 460-153929-6

Date Collected: 04/12/18 00:00
Date Received: 04/12/18 20:55

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*103*		*72 - 131*		*04/18/18 16:46*	*1*

Client Sample ID: PW-1 (U)

Lab Sample ID: 460-153929-7

Date Collected: 04/12/18 14:45
Date Received: 04/12/18 20:55

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/18/18 18:10	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/18/18 18:10	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/18/18 18:10	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/18/18 18:10	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/18/18 18:10	1
Acetone	1.1	U	5.0	1.1	ug/L			04/18/18 18:10	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/18/18 18:10	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/18/18 18:10	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/18/18 18:10	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/18/18 18:10	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/18/18 18:10	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/18/18 18:10	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/18/18 18:10	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/18/18 18:10	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/18/18 18:10	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/18/18 18:10	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/18/18 18:10	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/18/18 18:10	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/18/18 18:10	1
Trichloroethene	**0.24**	**J**	1.0	0.22	ug/L			04/18/18 18:10	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/18/18 18:10	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/18/18 18:10	1
Benzene	**11**		1.0	0.090	ug/L			04/18/18 18:10	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/18/18 18:10	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/18/18 18:10	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/18/18 18:10	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/18/18 18:10	1
Tetrachloroethene	**2.6**		1.0	0.12	ug/L			04/18/18 18:10	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/18/18 18:10	1
Toluene	0.25	U	1.0	0.25	ug/L			04/18/18 18:10	1
Chlorobenzene	**1.8**		1.0	0.24	ug/L			04/18/18 18:10	1
Ethylbenzene	**2.8**		1.0	0.30	ug/L			04/18/18 18:10	1
Styrene	0.17	U	1.0	0.17	ug/L			04/18/18 18:10	1
Xylenes, Total	**15**		2.0	0.28	ug/L			04/18/18 18:10	1
Ethyl ether	**0.78**	**J**	1.0	0.11	ug/L			04/18/18 18:10	1
MTBE	**0.41**	**J**	1.0	0.13	ug/L			04/18/18 18:10	1
Tetrahydrofuran	**1.4**	**J**	2.0	0.36	ug/L			04/18/18 18:10	1
Cyclohexane	**0.85**	**J**	1.0	0.26	ug/L			04/18/18 18:10	1
1,4-Dioxane	**73**		50	8.7	ug/L			04/18/18 18:10	1
1,2,4-Trimethylbenzene	**10**		1.0	0.23	ug/L			04/18/18 18:10	1
1,3,5-Trimethylbenzene	**2.4**		1.0	0.25	ug/L			04/18/18 18:10	1

Client Sample ID: PW-1 (U)

Date Collected: 04/12/18 14:45
Date Received: 04/12/18 20:55

Lab Sample ID: 460-153929-7
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	**1.7**		1.0	0.32	ug/L			04/18/18 18:10	1
N-Propylbenzene	**1.9**		1.0	0.29	ug/L			04/18/18 18:10	1
Methylcyclohexane	**1.5**		1.0	0.22	ug/L			04/18/18 18:10	1
Indane	**3.1**		1.0	0.12	ug/L			04/18/18 18:10	1
Dichlorofluoromethane	**0.58**	J	1.0	0.21	ug/L			04/18/18 18:10	1
1,2,3-Trimethylbenzene	**2.5**		1.0	0.11	ug/L			04/18/18 18:10	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Benzene, 1-ethyl-2-methyl-	*5.0*	*J N*	*ug/L*		*9.75*	*611-14-3*		*04/18/18 18:10*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*74 - 132*		*04/18/18 18:10*	*1*
Bromofluorobenzene	*96*		*77 - 124*		*04/18/18 18:10*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*04/18/18 18:10*	*1*
Dibromofluoromethane (Surr)	*104*		*72 - 131*		*04/18/18 18:10*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.052	0.016	ug/L		04/14/18 13:51	04/17/18 14:21	1
Benzo[a]pyrene	0.023	U	0.052	0.023	ug/L		04/14/18 13:51	04/17/18 14:21	1
Benzo[b]fluoranthene	0.025	U	0.052	0.025	ug/L		04/14/18 13:51	04/17/18 14:21	1
Hexachlorobenzene	0.014	U	0.021	0.014	ug/L		04/14/18 13:51	04/17/18 14:21	1
Pentachlorophenol	0.16	U	0.21	0.16	ug/L		04/14/18 13:51	04/17/18 14:21	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.30	U	10	0.30	ug/L		04/14/18 13:51	04/15/18 21:39	1
2-Chlorophenol	0.39	U	10	0.39	ug/L		04/14/18 13:51	04/15/18 21:39	1
2-Methylphenol	0.27	U	10	0.27	ug/L		04/14/18 13:51	04/15/18 21:39	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/14/18 13:51	04/15/18 21:39	1
2-Nitrophenol	0.78	U	10	0.78	ug/L		04/14/18 13:51	04/15/18 21:39	1
2,4-Dimethylphenol	0.25	U	10	0.25	ug/L		04/14/18 13:51	04/15/18 21:39	1
2,4-Dichlorophenol	0.44	U	10	0.44	ug/L		04/14/18 13:51	04/15/18 21:39	1
4-Chloro-3-methylphenol	0.60	U	10	0.60	ug/L		04/14/18 13:51	04/15/18 21:39	1
2,4,6-Trichlorophenol	0.31	U	10	0.31	ug/L		04/14/18 13:51	04/15/18 21:39	1
2,4,5-Trichlorophenol	0.29	U	10	0.29	ug/L		04/14/18 13:51	04/15/18 21:39	1
2,4-Dinitrophenol	15	U	21	15	ug/L		04/14/18 13:51	04/15/18 21:39	1
4-Nitrophenol	0.72	U	21	0.72	ug/L		04/14/18 13:51	04/15/18 21:39	1
4,6-Dinitro-2-methylphenol	14	U	21	14	ug/L		04/14/18 13:51	04/15/18 21:39	1
Bis(2-chloroethyl)ether	**8.4**	J+	1.0	0.31	ug/L		04/14/18 13:51	04/15/18 21:39	1
1,3-Dichlorobenzene	2.1	U	10	2.1	ug/L		04/14/18 13:51	04/15/18 21:39	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/14/18 13:51	04/15/18 21:39	1
1,2-Dichlorobenzene	1.4	U	10	1.4	ug/L		04/14/18 13:51	04/15/18 21:39	1
N-Nitrosodi-n-propylamine	0.45	U	1.0	0.45	ug/L		04/14/18 13:51	04/15/18 21:39	1
Hexachloroethane	1.2	U	2.1	1.2	ug/L		04/14/18 13:51	04/15/18 21:39	1
Nitrobenzene	0.59	U	1.0	0.59	ug/L		04/14/18 13:51	04/15/18 21:39	1
Isophorone	0.83	U	10	0.83	ug/L		04/14/18 13:51	04/15/18 21:39	1
Bis(2-chloroethoxy)methane	0.25	U	10	0.25	ug/L		04/14/18 13:51	04/15/18 21:39	1
1,2,4-Trichlorobenzene	1.3	U	2.1	1.3	ug/L		04/14/18 13:51	04/15/18 21:39	1
Naphthalene	1.2	U	10	1.2	ug/L		04/14/18 13:51	04/15/18 21:39	1

Client Sample ID: PW-1 (U)

Date Collected: 04/12/18 14:45
Date Received: 04/12/18 20:55

Lab Sample ID: 460-153929-7

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	2.0	U	10	2.0	ug/L		04/14/18 13:51	04/15/18 21:39	1
Hexachlorobutadiene	0.81	U	1.0	0.81	ug/L		04/14/18 13:51	04/15/18 21:39	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/14/18 13:51	04/15/18 21:39	1
Hexachlorocyclopentadiene	1.8	U	10	1.8	ug/L		04/14/18 13:51	04/15/18 21:39	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/14/18 13:51	04/15/18 21:39	1
2-Nitroaniline	0.49	U	10	0.49	ug/L		04/14/18 13:51	04/15/18 21:39	1
Dimethyl phthalate	0.80	U	10	0.80	ug/L		04/14/18 13:51	04/15/18 21:39	1
Acenaphthylene	0.86	U	10	0.86	ug/L		04/14/18 13:51	04/15/18 21:39	1
2,6-Dinitrotoluene	0.41	U	2.1	0.41	ug/L		04/14/18 13:51	04/15/18 21:39	1
3-Nitroaniline	1.0	U	10	1.0	ug/L		04/14/18 13:51	04/15/18 21:39	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/14/18 13:51	04/15/18 21:39	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/14/18 13:51	04/15/18 21:39	1
2,4-Dinitrotoluene	1.0	U	2.1	1.0	ug/L		04/14/18 13:51	04/15/18 21:39	1
Diethyl phthalate	1.0	U	10	1.0	ug/L		04/14/18 13:51	04/15/18 21:39	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/14/18 13:51	04/15/18 21:39	1
Fluorene	0.95	U	10	0.95	ug/L		04/14/18 13:51	04/15/18 21:39	1
4-Nitroaniline	0.57	U	10	0.57	ug/L		04/14/18 13:51	04/15/18 21:39	1
N-Nitrosodiphenylamine	0.93	U	10	0.93	ug/L		04/14/18 13:51	04/15/18 21:39	1
4-Bromophenyl phenyl ether	0.78	U	10	0.78	ug/L		04/14/18 13:51	04/15/18 21:39	1
Phenanthrene	0.60	U	10	0.60	ug/L		04/14/18 13:51	04/15/18 21:39	1
Anthracene	0.66	U	10	0.66	ug/L		04/14/18 13:51	04/15/18 21:39	1
Carbazole	0.71	U	10	0.71	ug/L		04/14/18 13:51	04/15/18 21:39	1
Di-n-butyl phthalate	0.88	U	10	0.88	ug/L		04/14/18 13:51	04/15/18 21:39	1
Fluoranthene	0.88	U	10	0.88	ug/L		04/14/18 13:51	04/15/18 21:39	1
Pyrene	1.7	U	10	1.7	ug/L		04/14/18 13:51	04/15/18 21:39	1
Butyl benzyl phthalate	0.89	U	10	0.89	ug/L		04/14/18 13:51	04/15/18 21:39	1
3,3'-Dichlorobenzidine	1.5	U	10	1.5	ug/L		04/14/18 13:51	04/15/18 21:39	1
Chrysene	0.94	U	2.1	0.94	ug/L		04/14/18 13:51	04/15/18 21:39	1
Bis(2-ethylhexyl) phthalate	1.8	U	2.1	1.8	ug/L		04/14/18 13:51	04/15/18 21:39	1
Di-n-octyl phthalate	5.0	U	10	5.0	ug/L		04/14/18 13:51	04/15/18 21:39	1
Benzo[k]fluoranthene	0.70	U	1.0	0.70	ug/L		04/14/18 13:51	04/15/18 21:39	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.1	1.3	ug/L		04/14/18 13:51	04/15/18 21:39	1
Dibenz(a,h)anthracene	0.75	U	1.0	0.75	ug/L		04/14/18 13:51	04/15/18 21:39	1
Benzo[g,h,i]perylene	1.5	U	10	1.5	ug/L		04/14/18 13:51	04/15/18 21:39	1
Diphenyl ether	1.3	U	10	1.3	ug/L		04/14/18 13:51	04/15/18 21:39	1
n,n'-Dimethylaniline	0.95	U	1.0	0.95	ug/L		04/14/18 13:51	04/15/18 21:39	1
Caprolactam	0.71	U	10	0.71	ug/L		04/14/18 13:51	04/15/18 21:39	1
bis (2-chloroisopropyl) ether	0.66	U	10	0.66	ug/L		04/14/18 13:51	04/15/18 21:39	1
Bisphenol-A	10	U	10	10	ug/L		04/14/18 13:51	04/15/18 21:39	1
N-Methylaniline	0.50	U	5.2	0.50	ug/L		04/14/18 13:51	04/15/18 21:39	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Benzene, 1,2,4-trimethyl-	*7.4*	*J N*	*ug/L*		*3.89*	*95-63-6*	*04/14/18 13:51*	*04/15/18 21:39*	*1*
Unknown	*11*	*J*	*ug/L*		*6.73*		*04/14/18 13:51*	*04/15/18 21:39*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*111*	*X*	*51 - 108*	*04/14/18 13:51*	*04/15/18 21:39*	*1*
Phenol-d5	*22*		*14 - 39*	*04/14/18 13:51*	*04/15/18 21:39*	*1*
Terphenyl-d14	*96*		*40 - 148*	*04/14/18 13:51*	*04/15/18 21:39*	*1*
2,4,6-Tribromophenol	*105*		*26 - 139*	*04/14/18 13:51*	*04/15/18 21:39*	*1*

Client Sample ID: PW-1 (U)

Lab Sample ID: 460-153929-7

Date Collected: 04/12/18 14:45
Date Received: 04/12/18 20:55

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*52*		*25 - 58*	*04/14/18 13:51*	*04/15/18 21:39*	*1*
2-Fluorobiphenyl	*100*		*45 - 107*	*04/14/18 13:51*	*04/15/18 21:39*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/14/18 00:25	04/16/18 17:41	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/14/18 00:25	04/16/18 17:41	5
Arsenic	**1.7**	**J**	2.5	1.5	ug/L		04/14/18 00:25	04/16/18 17:41	5
Barium	**365**		5.0	3.2	ug/L		04/14/18 00:25	04/16/18 17:41	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/14/18 00:25	04/16/18 17:41	5
Calcium	**15000**		250	233	ug/L		04/14/18 00:25	04/16/18 17:41	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/14/18 00:25	04/16/18 17:41	5
Cobalt	**25.5**		5.0	3.1	ug/L		04/14/18 00:25	04/16/18 17:41	5
Chromium	3.1	U	5.0	3.1	ug/L		04/14/18 00:25	04/16/18 17:41	5
Copper	3.3	U	5.0	3.3	ug/L		04/14/18 00:25	04/16/18 17:41	5
Iron	**25200**		150	97.8	ug/L		04/14/18 00:25	04/16/18 17:41	5
Potassium	**3070**		250	143	ug/L		04/14/18 00:25	04/16/18 17:41	5
Magnesium	**8650**		250	155	ug/L		04/14/18 00:25	04/16/18 17:41	5
Manganese	**2150**		10.0	6.1	ug/L		04/14/18 00:25	04/16/18 17:41	5
Sodium	**26400**		250	213	ug/L		04/14/18 00:25	04/16/18 17:41	5
Nickel	5 ~~**3.2**~~	~~**J**~~ U	5.0	3.1	ug/L		04/14/18 00:25	04/16/18 17:41	5
Lead	0.93	U	1.5	0.93	ug/L		04/14/18 00:25	04/16/18 17:41	5
Antimony	1.4	U	2.5	1.4	ug/L		04/14/18 00:25	04/16/18 17:41	5
Selenium	1.4	U	2.5	1.4	ug/L		04/14/18 00:25	04/16/18 17:41	5
Thallium	0.60	U	1.0	0.60	ug/L		04/14/18 00:25	04/16/18 17:41	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/14/18 00:25	04/16/18 17:41	5
Zinc	**38.2**		20.0	16.3	ug/L		04/14/18 00:25	04/16/18 17:41	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/17/18 12:35	04/17/18 15:26	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**25500**		150	92.1	ug/L		04/15/18 17:45	04/17/18 15:53	1
Manganese, Dissolved	**2140**		15.0	3.1	ug/L		04/15/18 17:45	04/17/18 15:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.43**		0.10	0.045	mg/L		04/17/18 21:29	04/18/18 17:11	1

Client Sample ID: RBGW_041218

Lab Sample ID: 460-153929-8

Date Collected: 04/12/18 12:15
Date Received: 04/12/18 20:55

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.20	U	0.40	0.20	ug/L			04/16/18 01:20	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G Groundwater

TestAmerica Job ID: 460-153785-1
SDG: 153785

Client Sample ID: RBGW_041218

Lab Sample ID: 460-153929-8

Date Collected: 04/12/18 12:15
Date Received: 04/12/18 20:55

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*103*		*72 - 133*		*04/16/18 01:20*	*1*
1,2-Dichloroethane-d4 (Surr)	*83*		*71 - 144*		*04/16/18 01:20*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/17/18 16:30	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/17/18 16:30	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/17/18 16:30	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/17/18 16:30	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/17/18 16:30	1
Acetone	**4.6**	**J**	5.0	1.1	ug/L			04/17/18 16:30	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/17/18 16:30	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/17/18 16:30	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/17/18 16:30	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/17/18 16:30	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/17/18 16:30	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/17/18 16:30	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/17/18 16:30	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/17/18 16:30	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/17/18 16:30	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/17/18 16:30	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/17/18 16:30	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/17/18 16:30	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/17/18 16:30	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/17/18 16:30	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/17/18 16:30	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/17/18 16:30	1
Benzene	0.090	U	1.0	0.090	ug/L			04/17/18 16:30	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/17/18 16:30	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/17/18 16:30	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/17/18 16:30	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/17/18 16:30	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/17/18 16:30	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/17/18 16:30	1
Toluene	0.25	U	1.0	0.25	ug/L			04/17/18 16:30	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/17/18 16:30	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/17/18 16:30	1
Styrene	0.17	U	1.0	0.17	ug/L			04/17/18 16:30	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/17/18 16:30	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/17/18 16:30	1
MTBE	0.13	U	1.0	0.13	ug/L			04/17/18 16:30	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/17/18 16:30	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/17/18 16:30	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/17/18 16:30	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/17/18 16:30	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/17/18 16:30	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/17/18 16:30	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/17/18 16:30	1
Indane	0.12	U	1.0	0.12	ug/L			04/17/18 16:30	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/17/18 16:30	1

Client Sample ID: RBGW_041218

Lab Sample ID: 460-153929-8

Date Collected: 04/12/18 12:15
Date Received: 04/12/18 20:55

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/17/18 16:30	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*8.5*	*J*	*ug/L*		*3.05*			*04/17/18 16:30*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*74 - 132*		*04/17/18 16:30*	*1*
Bromofluorobenzene	*121*		*77 - 124*		*04/17/18 16:30*	*1*
Toluene-d8 (Surr)	*108*		*80 - 120*		*04/17/18 16:30*	*1*
Dibromofluoromethane (Surr)	*108*		*72 - 131*		*04/17/18 16:30*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.052	0.016	ug/L		04/14/18 13:51	04/16/18 18:23	1
Benzo[a]pyrene	0.023	U	0.052	0.023	ug/L		04/14/18 13:51	04/16/18 18:23	1
Benzo[b]fluoranthene	0.025	U	0.052	0.025	ug/L		04/14/18 13:51	04/16/18 18:23	1
Hexachlorobenzene	0.014	U	0.021	0.014	ug/L		04/14/18 13:51	04/16/18 18:23	1
Pentachlorophenol	0.16	U	0.21	0.16	ug/L		04/14/18 13:51	04/16/18 18:23	1
Bis(2-chloroethyl)ether	0.027	U	0.031	0.027	ug/L		04/14/18 13:51	04/16/18 18:23	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.30	U	10	0.30	ug/L		04/14/18 13:51	04/15/18 22:00	1
2-Chlorophenol	0.39	U	10	0.39	ug/L		04/14/18 13:51	04/15/18 22:00	1
2-Methylphenol	0.27	U	10	0.27	ug/L		04/14/18 13:51	04/15/18 22:00	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/14/18 13:51	04/15/18 22:00	1
2-Nitrophenol	0.78	U	10	0.78	ug/L		04/14/18 13:51	04/15/18 22:00	1
2,4-Dimethylphenol	0.25	U	10	0.25	ug/L		04/14/18 13:51	04/15/18 22:00	1
2,4-Dichlorophenol	0.44	U	10	0.44	ug/L		04/14/18 13:51	04/15/18 22:00	1
4-Chloro-3-methylphenol	0.60	U	10	0.60	ug/L		04/14/18 13:51	04/15/18 22:00	1
2,4,6-Trichlorophenol	0.31	U	10	0.31	ug/L		04/14/18 13:51	04/15/18 22:00	1
2,4,5-Trichlorophenol	0.29	U	10	0.29	ug/L		04/14/18 13:51	04/15/18 22:00	1
2,4-Dinitrophenol	15	U	21	15	ug/L		04/14/18 13:51	04/15/18 22:00	1
4-Nitrophenol	0.72	U	21	0.72	ug/L		04/14/18 13:51	04/15/18 22:00	1
4,6-Dinitro-2-methylphenol	14	U	21	14	ug/L		04/14/18 13:51	04/15/18 22:00	1
1,3-Dichlorobenzene	2.1	U	10	2.1	ug/L		04/14/18 13:51	04/15/18 22:00	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/14/18 13:51	04/15/18 22:00	1
1,2-Dichlorobenzene	1.4	U	10	1.4	ug/L		04/14/18 13:51	04/15/18 22:00	1
N-Nitrosodi-n-propylamine	0.45	U	1.0	0.45	ug/L		04/14/18 13:51	04/15/18 22:00	1
Hexachloroethane	1.2	U	2.1	1.2	ug/L		04/14/18 13:51	04/15/18 22:00	1
Nitrobenzene	0.59	U	1.0	0.59	ug/L		04/14/18 13:51	04/15/18 22:00	1
Isophorone	0.83	U	10	0.83	ug/L		04/14/18 13:51	04/15/18 22:00	1
Bis(2-chloroethoxy)methane	0.25	U	10	0.25	ug/L		04/14/18 13:51	04/15/18 22:00	1
1,2,4-Trichlorobenzene	1.3	U	2.1	1.3	ug/L		04/14/18 13:51	04/15/18 22:00	1
Naphthalene	1.2	U	10	1.2	ug/L		04/14/18 13:51	04/15/18 22:00	1
4-Chloroaniline	2.0	U	10	2.0	ug/L		04/14/18 13:51	04/15/18 22:00	1
Hexachlorobutadiene	0.81	U	1.0	0.81	ug/L		04/14/18 13:51	04/15/18 22:00	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/14/18 13:51	04/15/18 22:00	1
Hexachlorocyclopentadiene	1.8	U	10	1.8	ug/L		04/14/18 13:51	04/15/18 22:00	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/14/18 13:51	04/15/18 22:00	1

Client Sample ID: RBGW_041218

Lab Sample ID: 460-153929-8

Date Collected: 04/12/18 12:15
Date Received: 04/12/18 20:55

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.49	U	10	0.49	ug/L		04/14/18 13:51	04/15/18 22:00	1
Dimethyl phthalate	0.80	U	10	0.80	ug/L		04/14/18 13:51	04/15/18 22:00	1
Acenaphthylene	0.86	U	10	0.86	ug/L		04/14/18 13:51	04/15/18 22:00	1
2,6-Dinitrotoluene	0.41	U	2.1	0.41	ug/L		04/14/18 13:51	04/15/18 22:00	1
3-Nitroaniline	1.0	U	10	1.0	ug/L		04/14/18 13:51	04/15/18 22:00	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/14/18 13:51	04/15/18 22:00	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/14/18 13:51	04/15/18 22:00	1
2,4-Dinitrotoluene	1.0	U	2.1	1.0	ug/L		04/14/18 13:51	04/15/18 22:00	1
Diethyl phthalate	1.0	U	10	1.0	ug/L		04/14/18 13:51	04/15/18 22:00	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/14/18 13:51	04/15/18 22:00	1
Fluorene	0.95	U	10	0.95	ug/L		04/14/18 13:51	04/15/18 22:00	1
4-Nitroaniline	0.57	U	10	0.57	ug/L		04/14/18 13:51	04/15/18 22:00	1
N-Nitrosodiphenylamine	0.93	U	10	0.93	ug/L		04/14/18 13:51	04/15/18 22:00	1
4-Bromophenyl phenyl ether	0.78	U	10	0.78	ug/L		04/14/18 13:51	04/15/18 22:00	1
Phenanthrene	0.60	U	10	0.60	ug/L		04/14/18 13:51	04/15/18 22:00	1
Anthracene	0.66	U	10	0.66	ug/L		04/14/18 13:51	04/15/18 22:00	1
Carbazole	0.71	U	10	0.71	ug/L		04/14/18 13:51	04/15/18 22:00	1
Di-n-butyl phthalate	0.88	U	10	0.88	ug/L		04/14/18 13:51	04/15/18 22:00	1
Fluoranthene	0.88	U	10	0.88	ug/L		04/14/18 13:51	04/15/18 22:00	1
Pyrene	1.7	U	10	1.7	ug/L		04/14/18 13:51	04/15/18 22:00	1
Butyl benzyl phthalate	0.89	U	10	0.89	ug/L		04/14/18 13:51	04/15/18 22:00	1
3,3'-Dichlorobenzidine	1.5	U	10	1.5	ug/L		04/14/18 13:51	04/15/18 22:00	1
Chrysene	0.94	U	2.1	0.94	ug/L		04/14/18 13:51	04/15/18 22:00	1
Bis(2-ethylhexyl) phthalate	1.8	U	2.1	1.8	ug/L		04/14/18 13:51	04/15/18 22:00	1
Di-n-octyl phthalate	5.0	U	10	5.0	ug/L		04/14/18 13:51	04/15/18 22:00	1
Benzo[k]fluoranthene	0.70	U	1.0	0.70	ug/L		04/14/18 13:51	04/15/18 22:00	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.1	1.3	ug/L		04/14/18 13:51	04/15/18 22:00	1
Dibenz(a,h)anthracene	0.75	U ←	1.0	0.75	ug/L		04/14/18 13:51	04/15/18 22:00	1
Benzo[g,h,i]perylene	1.5	U	10	1.5	ug/L		04/14/18 13:51	04/15/18 22:00	1
Diphenyl ether	1.3	U	10	1.3	ug/L		04/14/18 13:51	04/15/18 22:00	1
n,n'-Dimethylaniline	0.95	U	1.0	0.95	ug/L		04/14/18 13:51	04/15/18 22:00	1
Caprolactam	0.71	U	10	0.71	ug/L		04/14/18 13:51	04/15/18 22:00	1
bis (2-chloroisopropyl) ether	0.66	U	10	0.66	ug/L		04/14/18 13:51	04/15/18 22:00	1
Bisphenol-A	10	U	10	10	ug/L		04/14/18 13:51	04/15/18 22:00	1
N-Methylaniline	0.50	U	5.2	0.50	ug/L		04/14/18 13:51	04/15/18 22:00	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/14/18 13:51*	*04/15/18 22:00*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*112*	*X*	*51 - 108*	*04/14/18 13:51*	*04/15/18 22:00*	*1*
Phenol-d5	*23*		*14 - 39*	*04/14/18 13:51*	*04/15/18 22:00*	*1*
Terphenyl-d14	*99*		*40 - 148*	*04/14/18 13:51*	*04/15/18 22:00*	*1*
2,4,6-Tribromophenol	*96*		*26 - 139*	*04/14/18 13:51*	*04/15/18 22:00*	*1*
2-Fluorophenol	*53*		*25 - 58*	*04/14/18 13:51*	*04/15/18 22:00*	*1*
2-Fluorobiphenyl	*105*		*45 - 107*	*04/14/18 13:51*	*04/15/18 22:00*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/14/18 00:25	04/16/18 17:29	5

Client Sample ID: RBGW_041218

Lab Sample ID: 460-153929-8

Date Collected: 04/12/18 12:15
Date Received: 04/12/18 20:55

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	28.5	U	50.0	28.5	ug/L		04/14/18 00:25	04/16/18 17:29	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/14/18 00:25	04/16/18 17:29	5
Barium	3.2	U	5.0	3.2	ug/L		04/14/18 00:25	04/16/18 17:29	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/14/18 00:25	04/16/18 17:29	5
Calcium	233	U	250	233	ug/L		04/14/18 00:25	04/16/18 17:29	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/14/18 00:25	04/16/18 17:29	5
Cobalt	3.1	U	5.0	3.1	ug/L		04/14/18 00:25	04/16/18 17:29	5
Chromium	**5.5**		5.0	3.1	ug/L		04/14/18 00:25	04/16/18 17:29	5
Copper	**10.8**		5.0	3.3	ug/L		04/14/18 00:25	04/16/18 17:29	5
Iron	97.8	U	150	97.8	ug/L		04/14/18 00:25	04/16/18 17:29	5
Potassium	143	U	250	143	ug/L		04/14/18 00:25	04/16/18 17:29	5
Magnesium	155	U	250	155	ug/L		04/14/18 00:25	04/16/18 17:29	5
Manganese	6.1	U	10.0	6.1	ug/L		04/14/18 00:25	04/16/18 17:29	5
Sodium	**416**		250	213	ug/L		04/14/18 00:25	04/16/18 17:29	5
Nickel	**4.0**	**J**	5.0	3.1	ug/L		04/14/18 00:25	04/16/18 17:29	5
Lead	0.93	U	1.5	0.93	ug/L		04/14/18 00:25	04/16/18 17:29	5
Antimony	1.4	U	2.5	1.4	ug/L		04/14/18 00:25	04/16/18 17:29	5
Selenium	1.4	U	2.5	1.4	ug/L		04/14/18 00:25	04/16/18 17:29	5
Thallium	0.60	U	1.0	0.60	ug/L		04/14/18 00:25	04/16/18 17:29	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/14/18 00:25	04/16/18 17:29	5
Zinc	16.3	U	20.0	16.3	ug/L		04/14/18 00:25	04/16/18 17:29	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/17/18 12:35	04/17/18 15:28	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	92.1	U	150	92.1	ug/L		04/15/18 17:45	04/17/18 15:57	1
Manganese, Dissolved	3.1	U	15.0	3.1	ug/L		04/15/18 17:45	04/17/18 15:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.062**	**J**	0.10	0.045	mg/L		04/17/18 21:29	04/18/18 17:12	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G Groundwater

TestAmerica Job ID: 460-153612-1
SDG: 153612

Client Sample ID: DDA-03

Date Collected: 04/09/18 09:30
Date Received: 04/09/18 19:15

Lab Sample ID: 460-153612-1

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.63**		0.40	0.20	ug/L			04/11/18 13:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*72 - 133*		*04/11/18 13:26*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*71 - 144*		*04/11/18 13:26*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/13/18 11:23	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/13/18 11:23	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/13/18 11:23	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/13/18 11:23	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/13/18 11:23	1
Acetone	5 ~~1.1~~	**J** U	5.0	1.1	ug/L			04/13/18 11:23	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/13/18 11:23	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/13/18 11:23	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/13/18 11:23	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/13/18 11:23	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/13/18 11:23	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/13/18 11:23	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/13/18 11:23	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/13/18 11:23	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/13/18 11:23	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/13/18 11:23	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/13/18 11:23	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/13/18 11:23	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/13/18 11:23	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/13/18 11:23	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/13/18 11:23	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/13/18 11:23	1
Benzene	0.090	U	1.0	0.090	ug/L			04/13/18 11:23	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/13/18 11:23	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/13/18 11:23	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/13/18 11:23	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/13/18 11:23	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/13/18 11:23	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/13/18 11:23	1
Toluene	0.25	U	1.0	0.25	ug/L			04/13/18 11:23	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/13/18 11:23	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/13/18 11:23	1
Styrene	0.17	U	1.0	0.17	ug/L			04/13/18 11:23	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/13/18 11:23	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/13/18 11:23	1
MTBE	**0.51**	**J**	1.0	0.13	ug/L			04/13/18 11:23	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/13/18 11:23	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/13/18 11:23	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/13/18 11:23	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/13/18 11:23	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/13/18 11:23	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/13/18 11:23	1

Client Sample ID: DDA-03

Lab Sample ID: 460-153612-1

Date Collected: 04/09/18 09:30
Date Received: 04/09/18 19:15

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/13/18 11:23	1
Indane	0.12	U	1.0	0.12	ug/L			04/13/18 11:23	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/13/18 11:23	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/13/18 11:23	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/13/18 11:23*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*74 - 132*		*04/13/18 11:23*	*1*
Bromofluorobenzene	*82*		*77 - 124*		*04/13/18 11:23*	*1*
Toluene-d8 (Surr)	*112*		*80 - 120*		*04/13/18 11:23*	*1*
Dibromofluoromethane (Surr)	*103*		*72 - 131*		*04/13/18 11:23*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/12/18 05:54	04/13/18 11:26	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/12/18 05:54	04/13/18 11:26	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/12/18 05:54	04/13/18 11:26	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/12/18 05:54	04/13/18 11:26	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/12/18 05:54	04/13/18 11:26	1
Bis(2-chloroethyl)ether	**0.060**		0.030	0.026	ug/L		04/12/18 05:54	04/13/18 11:26	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/12/18 05:54	04/12/18 14:48	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/12/18 05:54	04/12/18 14:48	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/12/18 05:54	04/12/18 14:48	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/12/18 05:54	04/12/18 14:48	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/12/18 05:54	04/12/18 14:48	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/12/18 05:54	04/12/18 14:48	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/12/18 05:54	04/12/18 14:48	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/12/18 05:54	04/12/18 14:48	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/12/18 05:54	04/12/18 14:48	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/12/18 05:54	04/12/18 14:48	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/12/18 05:54	04/12/18 14:48	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/12/18 05:54	04/12/18 14:48	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/12/18 05:54	04/12/18 14:48	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/12/18 05:54	04/12/18 14:48	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/12/18 05:54	04/12/18 14:48	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/12/18 05:54	04/12/18 14:48	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/12/18 05:54	04/12/18 14:48	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/12/18 05:54	04/12/18 14:48	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/12/18 05:54	04/12/18 14:48	1
Isophorone	0.80	U	10	0.80	ug/L		04/12/18 05:54	04/12/18 14:48	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/12/18 05:54	04/12/18 14:48	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/12/18 05:54	04/12/18 14:48	1
Naphthalene	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 14:48	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/12/18 05:54	04/12/18 14:48	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/12/18 05:54	04/12/18 14:48	1

Client Sample ID: DDA-03

Date Collected: 04/09/18 09:30
Date Received: 04/09/18 19:15

Lab Sample ID: 460-153612-1

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 14:48	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/12/18 05:54	04/12/18 14:48	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/12/18 05:54	04/12/18 14:48	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/12/18 05:54	04/12/18 14:48	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/12/18 05:54	04/12/18 14:48	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/12/18 05:54	04/12/18 14:48	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/12/18 05:54	04/12/18 14:48	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/12/18 05:54	04/12/18 14:48	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 14:48	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 14:48	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/12/18 05:54	04/12/18 14:48	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/12/18 05:54	04/12/18 14:48	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/12/18 05:54	04/12/18 14:48	1
Fluorene	0.91	U	10	0.91	ug/L		04/12/18 05:54	04/12/18 14:48	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/12/18 05:54	04/12/18 14:48	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/12/18 05:54	04/12/18 14:48	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/12/18 05:54	04/12/18 14:48	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/12/18 05:54	04/12/18 14:48	1
Anthracene	0.63	U	10	0.63	ug/L		04/12/18 05:54	04/12/18 14:48	1
Carbazole	0.68	U	10	0.68	ug/L		04/12/18 05:54	04/12/18 14:48	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/12/18 05:54	04/12/18 14:48	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/12/18 05:54	04/12/18 14:48	1
Pyrene	1.6	U	10	1.6	ug/L		04/12/18 05:54	04/12/18 14:48	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/12/18 05:54	04/12/18 14:48	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/12/18 05:54	04/12/18 14:48	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/12/18 05:54	04/12/18 14:48	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/12/18 05:54	04/12/18 14:48	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/12/18 05:54	04/12/18 14:48	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/12/18 05:54	04/12/18 14:48	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/12/18 05:54	04/12/18 14:48	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/12/18 05:54	04/12/18 14:48	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/12/18 05:54	04/12/18 14:48	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/12/18 05:54	04/12/18 14:48	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/12/18 05:54	04/12/18 14:48	1
Caprolactam	0.68	U	10	0.68	ug/L		04/12/18 05:54	04/12/18 14:48	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/12/18 05:54	04/12/18 14:48	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/12/18 05:54	04/12/18 14:48	1
N-Methylaniline	0.48	~~U~~ UJ	5.0	0.48	ug/L		04/12/18 05:54	04/12/18 14:48	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*8.5*	*J*	*ug/L*		*1.61*		*04/12/18 05:54*	*04/12/18 14:48*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*105*		*51 - 108*	*04/12/18 05:54*	*04/12/18 14:48*	*1*
Phenol-d5	*28*		*14 - 39*	*04/12/18 05:54*	*04/12/18 14:48*	*1*
Terphenyl-d14	*111*		*40 - 148*	*04/12/18 05:54*	*04/12/18 14:48*	*1*
2,4,6-Tribromophenol	*116*		*26 - 139*	*04/12/18 05:54*	*04/12/18 14:48*	*1*
2-Fluorophenol	*48*		*25 - 58*	*04/12/18 05:54*	*04/12/18 14:48*	*1*
2-Fluorobiphenyl	*96*		*45 - 107*	*04/12/18 05:54*	*04/12/18 14:48*	*1*

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G Groundwater

TestAmerica Job ID: 460-153612-1
SDG: 153612

Client Sample ID: DDA-03

Lab Sample ID: 460-153612-1
Matrix: Water

Date Collected: 04/09/18 09:30
Date Received: 04/09/18 19:15

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/11/18 08:52	04/13/18 17:58	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/11/18 08:52	04/13/18 17:58	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/11/18 08:52	04/13/18 17:58	5
Barium	**314**		5.0	3.2	ug/L		04/11/18 08:52	04/13/18 17:58	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/11/18 08:52	04/13/18 17:58	5
Calcium	**18500**		250	233	ug/L		04/11/18 08:52	04/13/18 17:58	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/11/18 08:52	04/13/18 17:58	5
Cobalt	**96.4**		5.0	3.1	ug/L		04/11/18 08:52	04/13/18 17:58	5
Chromium	3.1	U	5.0	3.1	ug/L		04/11/18 08:52	04/13/18 17:58	5
Copper	**5.5**		5.0	3.3	ug/L		04/11/18 08:52	04/13/18 17:58	5
Iron	**5040**		150	97.8	ug/L		04/11/18 08:52	04/13/18 17:58	5
Potassium	**3790**		250	143	ug/L		04/11/18 08:52	04/13/18 17:58	5
Magnesium	**8800**		250	155	ug/L		04/11/18 08:52	04/13/18 17:58	5
Manganese	**5010**		10.0	6.1	ug/L		04/11/18 08:52	04/13/18 17:58	5
Sodium	**52400**		250	213	ug/L		04/11/18 08:52	04/13/18 17:58	5
Nickel	**5.9**		5.0	3.1	ug/L		04/11/18 08:52	04/13/18 17:58	5
Lead	0.93	U	1.5	0.93	ug/L		04/11/18 08:52	04/13/18 17:58	5
Antimony	1.4	U	2.5	1.4	ug/L		04/11/18 08:52	04/13/18 17:58	5
Selenium	1.4	U	2.5	1.4	ug/L		04/11/18 08:52	04/13/18 17:58	5
Thallium	0.60	U	1.0	0.60	ug/L		04/11/18 08:52	04/13/18 17:58	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/11/18 08:52	04/13/18 17:58	5
Zinc	16.3	U	20.0	16.3	ug/L		04/11/18 08:52	04/13/18 17:58	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/12/18 11:52	04/12/18 13:52	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**5480**		150	92.1	ug/L		04/11/18 08:51	04/11/18 20:44	1
Manganese, Dissolved	**5400**		15.0	3.1	ug/L		04/11/18 08:51	04/11/18 20:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	0.10 ~~0.062~~	~~J~~ U	0.10	0.045	mg/L		04/13/18 10:36	04/13/18 11:52	1

Client Sample ID: BW-2

Lab Sample ID: 460-153612-2
Matrix: Water

Date Collected: 04/09/18 12:15
Date Received: 04/09/18 19:15

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/13/18 09:47	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/13/18 09:47	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/13/18 09:47	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/13/18 09:47	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/13/18 09:47	1
Acetone	1.1	U	5.0	1.1	ug/L			04/13/18 09:47	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/13/18 09:47	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/13/18 09:47	1

Client Sample ID: BW-2

Date Collected: 04/09/18 12:15
Date Received: 04/09/18 19:15

Lab Sample ID: 460-153612-2

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/13/18 09:47	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/13/18 09:47	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/13/18 09:47	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/13/18 09:47	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/13/18 09:47	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/13/18 09:47	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/13/18 09:47	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/13/18 09:47	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/13/18 09:47	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/13/18 09:47	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/13/18 09:47	1
Trichloroethene	**0.24**	**J**	1.0	0.22	ug/L			04/13/18 09:47	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/13/18 09:47	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/13/18 09:47	1
Benzene	**0.12**	**J**	1.0	0.090	ug/L			04/13/18 09:47	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/13/18 09:47	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/13/18 09:47	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/13/18 09:47	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/13/18 09:47	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/13/18 09:47	1
1,1,2,2-Tetrachloroethane	0.19	U ~~F1~~	1.0	0.19	ug/L			04/13/18 09:47	1
Toluene	0.25	U	1.0	0.25	ug/L			04/13/18 09:47	1
Chlorobenzene	**2.9**		1.0	0.24	ug/L			04/13/18 09:47	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/13/18 09:47	1
Styrene	0.17	U	1.0	0.17	ug/L			04/13/18 09:47	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/13/18 09:47	1
Ethyl ether	**9.1**		1.0	0.11	ug/L			04/13/18 09:47	1
MTBE	**0.39**	**J**	1.0	0.13	ug/L			04/13/18 09:47	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/13/18 09:47	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/13/18 09:47	1
1,4-Dioxane	**120**		50	8.7	ug/L			04/13/18 09:47	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/13/18 09:47	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/13/18 09:47	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/13/18 09:47	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/13/18 09:47	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/13/18 09:47	1
Indane	0.12	U	1.0	0.12	ug/L			04/13/18 09:47	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/13/18 09:47	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/13/18 09:47	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/13/18 09:47*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*74 - 132*		*04/13/18 09:47*	*1*
Bromofluorobenzene	*78*		*77 - 124*		*04/13/18 09:47*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*04/13/18 09:47*	*1*
Dibromofluoromethane (Surr)	*97*		*72 - 131*		*04/13/18 09:47*	*1*

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G Groundwater

TestAmerica Job ID: 460-153612-1
SDG: 153612

Client Sample ID: BW-2

Lab Sample ID: 460-153612-2

Date Collected: 04/09/18 12:15
Date Received: 04/09/18 19:15

Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/11/18 15:18	04/12/18 17:52	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/11/18 15:18	04/12/18 17:52	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/11/18 15:18	04/12/18 17:52	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/11/18 15:18	04/12/18 17:52	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/11/18 15:18	04/12/18 17:52	1
Bis(2-chloroethyl)ether	**0.24**	*	0.030	0.026	ug/L		04/11/18 15:18	04/12/18 17:52	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/11/18 15:18	04/11/18 22:42	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/11/18 15:18	04/11/18 22:42	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/11/18 15:18	04/11/18 22:42	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/11/18 22:42	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/11/18 15:18	04/11/18 22:42	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/11/18 22:42	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/11/18 15:18	04/11/18 22:42	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/11/18 15:18	04/11/18 22:42	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/11/18 15:18	04/11/18 22:42	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/11/18 15:18	04/11/18 22:42	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/11/18 15:18	04/11/18 22:42	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/11/18 15:18	04/11/18 22:42	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/11/18 15:18	04/11/18 22:42	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/11/18 15:18	04/11/18 22:42	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/11/18 22:42	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/11/18 22:42	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/11/18 15:18	04/11/18 22:42	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/11/18 15:18	04/11/18 22:42	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/11/18 15:18	04/11/18 22:42	1
Isophorone	0.80	U	10	0.80	ug/L		04/11/18 15:18	04/11/18 22:42	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/11/18 22:42	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/11/18 15:18	04/11/18 22:42	1
Naphthalene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/11/18 22:42	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/11/18 15:18	04/11/18 22:42	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/11/18 15:18	04/11/18 22:42	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/11/18 22:42	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/11/18 15:18	04/11/18 22:42	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/11/18 15:18	04/11/18 22:42	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/11/18 15:18	04/11/18 22:42	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/11/18 15:18	04/11/18 22:42	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/11/18 15:18	04/11/18 22:42	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/11/18 15:18	04/11/18 22:42	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/11/18 15:18	04/11/18 22:42	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/11/18 22:42	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/11/18 22:42	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/11/18 15:18	04/11/18 22:42	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/11/18 15:18	04/11/18 22:42	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/11/18 22:42	1
Fluorene	0.91	U	10	0.91	ug/L		04/11/18 15:18	04/11/18 22:42	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/11/18 15:18	04/11/18 22:42	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/11/18 15:18	04/11/18 22:42	1

Client Sample ID: BW-2

Date Collected: 04/09/18 12:15
Date Received: 04/09/18 19:15

Lab Sample ID: 460-153612-2

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/11/18 15:18	04/11/18 22:42	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/11/18 15:18	04/11/18 22:42	1
Anthracene	0.63	U	10	0.63	ug/L		04/11/18 15:18	04/11/18 22:42	1
Carbazole	0.68	U	10	0.68	ug/L		04/11/18 15:18	04/11/18 22:42	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/11/18 15:18	04/11/18 22:42	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/11/18 15:18	04/11/18 22:42	1
Pyrene	1.6	U	10	1.6	ug/L		04/11/18 15:18	04/11/18 22:42	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/11/18 15:18	04/11/18 22:42	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/11/18 15:18	04/11/18 22:42	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/11/18 15:18	04/11/18 22:42	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/11/18 15:18	04/11/18 22:42	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/11/18 15:18	04/11/18 22:42	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/11/18 15:18	04/11/18 22:42	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/11/18 15:18	04/11/18 22:42	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/11/18 15:18	04/11/18 22:42	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/11/18 15:18	04/11/18 22:42	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/11/18 15:18	04/11/18 22:42	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/11/18 15:18	04/11/18 22:42	1
Caprolactam	0.68	U	10	0.68	ug/L		04/11/18 15:18	04/11/18 22:42	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/11/18 15:18	04/11/18 22:42	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/11/18 15:18	04/11/18 22:42	1
N-Methylaniline	0.48	U	5.0	0.48	ug/L		04/11/18 15:18	04/11/18 22:42	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane	*35*		*ug/L*		*1.64*	*123-91-1*	*04/11/18 15:18*	*04/11/18 22:42*	*1*
Tentatively Identified Compound	*None*		*ug/L*				*04/11/18 15:18*	*04/11/18 22:42*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*82*		*51 - 108*	*04/11/18 15:18*	*04/11/18 22:42*	*1*
Phenol-d5	*25*		*14 - 39*	*04/11/18 15:18*	*04/11/18 22:42*	*1*
Terphenyl-d14	*87*		*40 - 148*	*04/11/18 15:18*	*04/11/18 22:42*	*1*
2,4,6-Tribromophenol	*83*		*26 - 139*	*04/11/18 15:18*	*04/11/18 22:42*	*1*
2-Fluorophenol	*39*		*25 - 58*	*04/11/18 15:18*	*04/11/18 22:42*	*1*
2-Fluorobiphenyl	*74*		*45 - 107*	*04/11/18 15:18*	*04/11/18 22:42*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/11/18 08:52	04/11/18 13:55	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/11/18 08:52	04/11/18 13:55	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/11/18 08:52	04/11/18 13:55	5
Barium	**223**		5.0	3.2	ug/L		04/11/18 08:52	04/11/18 13:55	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/11/18 08:52	04/11/18 13:55	5
Calcium	**22600**		250	233	ug/L		04/11/18 08:52	04/11/18 13:55	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/11/18 08:52	04/11/18 20:14	5
Cobalt	**18.6**		5.0	3.1	ug/L		04/11/18 08:52	04/11/18 13:55	5
Chromium	3.1	U	5.0	3.1	ug/L		04/11/18 08:52	04/11/18 13:55	5
Copper	3.3	U	5.0	3.3	ug/L		04/11/18 08:52	04/11/18 13:55	5
Iron	**4540**		150	97.8	ug/L		04/11/18 08:52	04/11/18 13:55	5
Potassium	**8620**		250	143	ug/L		04/11/18 08:52	04/11/18 20:14	5
Magnesium	**9900**		250	155	ug/L		04/11/18 08:52	04/11/18 13:55	5

Client Sample ID: BW-2

Lab Sample ID: 460-153612-2
Matrix: Water

Date Collected: 04/09/18 12:15
Date Received: 04/09/18 19:15

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**1790**		10.0	6.1	ug/L		04/11/18 08:52	04/11/18 13:55	5
Sodium	**25300**		250	213	ug/L		04/11/18 08:52	04/11/18 13:55	5
Nickel	**5.4**		5.0	3.1	ug/L		04/11/18 08:52	04/11/18 13:55	5
Lead	0.93	U	1.5	0.93	ug/L		04/11/18 08:52	04/11/18 13:55	5
Antimony	1.4	U	2.5	1.4	ug/L		04/11/18 08:52	04/11/18 13:55	5
Selenium	1.4	U	2.5	1.4	ug/L		04/11/18 08:52	04/11/18 20:14	5
Thallium	0.60	U	1.0	0.60	ug/L		04/11/18 08:52	04/11/18 13:55	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/11/18 08:52	04/11/18 13:55	5
Zinc	16.3	U	20.0	16.3	ug/L		04/11/18 08:52	04/11/18 13:55	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/12/18 11:52	04/12/18 13:33	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**4470**		150	92.1	ug/L		04/11/18 08:51	04/11/18 17:25	1
Manganese, Dissolved	**1970**		15.0	3.1	ug/L		04/11/18 08:51	04/11/18 17:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**6.2**		0.50	0.23	mg/L		04/13/18 10:36	04/13/18 12:12	5

Client Sample ID: BW-1

Lab Sample ID: 460-153612-3
Matrix: Water

Date Collected: 04/09/18 12:20
Date Received: 04/09/18 19:15

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**6.4**		0.40	0.20	ug/L			04/11/18 13:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*		*72 - 133*		*04/11/18 13:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*71 - 144*		*04/11/18 13:49*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/13/18 11:47	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/13/18 11:47	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/13/18 11:47	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/13/18 11:47	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/13/18 11:47	1
Acetone	5 ~~1.8~~	~~J~~ U	5.0	1.1	ug/L			04/13/18 11:47	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/13/18 11:47	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/13/18 11:47	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/13/18 11:47	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/13/18 11:47	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/13/18 11:47	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/13/18 11:47	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/13/18 11:47	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/13/18 11:47	1

Client Sample ID: BW-1

Lab Sample ID: 460-153612-3

Date Collected: 04/09/18 12:20
Date Received: 04/09/18 19:15

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/13/18 11:47	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/13/18 11:47	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/13/18 11:47	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/13/18 11:47	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/13/18 11:47	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/13/18 11:47	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/13/18 11:47	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/13/18 11:47	1
Benzene	**0.19**	**J**	1.0	0.090	ug/L			04/13/18 11:47	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/13/18 11:47	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/13/18 11:47	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/13/18 11:47	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/13/18 11:47	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/13/18 11:47	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/13/18 11:47	1
Toluene	0.25	U	1.0	0.25	ug/L			04/13/18 11:47	1
Chlorobenzene	**8.0**		1.0	0.24	ug/L			04/13/18 11:47	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/13/18 11:47	1
Styrene	0.17	U	1.0	0.17	ug/L			04/13/18 11:47	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/13/18 11:47	1
Ethyl ether	**13**		1.0	0.11	ug/L			04/13/18 11:47	1
MTBE	**0.27**	**J**	1.0	0.13	ug/L			04/13/18 11:47	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/13/18 11:47	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/13/18 11:47	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/13/18 11:47	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/13/18 11:47	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/13/18 11:47	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/13/18 11:47	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/13/18 11:47	1
Indane	0.12	U	1.0	0.12	ug/L			04/13/18 11:47	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/13/18 11:47	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/13/18 11:47	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/13/18 11:47*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*117*		*74 - 132*		*04/13/18 11:47*	*1*
Bromofluorobenzene	*82*		*77 - 124*		*04/13/18 11:47*	*1*
Toluene-d8 (Surr)	*109*		*80 - 120*		*04/13/18 11:47*	*1*
Dibromofluoromethane (Surr)	*104*		*72 - 131*		*04/13/18 11:47*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/11/18 15:18	04/12/18 18:14	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/11/18 15:18	04/12/18 18:14	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/11/18 15:18	04/12/18 18:14	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/11/18 15:18	04/12/18 18:14	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/11/18 15:18	04/12/18 18:14	1
Bis(2-chloroethyl)ether	**0.42**	*	0.030	0.026	ug/L		04/11/18 15:18	04/12/18 18:14	1

Client Sample ID: BW-1

Lab Sample ID: 460-153612-3

Date Collected: 04/09/18 12:20
Date Received: 04/09/18 19:15

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/11/18 15:18	04/12/18 02:57	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/11/18 15:18	04/12/18 02:57	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/11/18 15:18	04/12/18 02:57	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 02:57	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/11/18 15:18	04/12/18 02:57	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 02:57	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/11/18 15:18	04/12/18 02:57	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/11/18 15:18	04/12/18 02:57	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/11/18 15:18	04/12/18 02:57	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/11/18 15:18	04/12/18 02:57	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/11/18 15:18	04/12/18 02:57	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/11/18 15:18	04/12/18 02:57	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/11/18 15:18	04/12/18 02:57	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/11/18 15:18	04/12/18 02:57	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 02:57	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 02:57	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/11/18 15:18	04/12/18 02:57	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/11/18 15:18	04/12/18 02:57	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/11/18 15:18	04/12/18 02:57	1
Isophorone	0.80	U	10	0.80	ug/L		04/11/18 15:18	04/12/18 02:57	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 02:57	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/11/18 15:18	04/12/18 02:57	1
Naphthalene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 02:57	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/11/18 15:18	04/12/18 02:57	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/11/18 15:18	04/12/18 02:57	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 02:57	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/11/18 15:18	04/12/18 02:57	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/11/18 15:18	04/12/18 02:57	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/11/18 15:18	04/12/18 02:57	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/11/18 15:18	04/12/18 02:57	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/11/18 15:18	04/12/18 02:57	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/11/18 15:18	04/12/18 02:57	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/11/18 15:18	04/12/18 02:57	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 02:57	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 02:57	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/11/18 15:18	04/12/18 02:57	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/11/18 15:18	04/12/18 02:57	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 02:57	1
Fluorene	0.91	U	10	0.91	ug/L		04/11/18 15:18	04/12/18 02:57	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/11/18 15:18	04/12/18 02:57	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/11/18 15:18	04/12/18 02:57	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/11/18 15:18	04/12/18 02:57	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/11/18 15:18	04/12/18 02:57	1
Anthracene	0.63	U	10	0.63	ug/L		04/11/18 15:18	04/12/18 02:57	1
Carbazole	0.68	U	10	0.68	ug/L		04/11/18 15:18	04/12/18 02:57	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/11/18 15:18	04/12/18 02:57	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/11/18 15:18	04/12/18 02:57	1
Pyrene	1.6	U	10	1.6	ug/L		04/11/18 15:18	04/12/18 02:57	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/11/18 15:18	04/12/18 02:57	1

Client Sample ID: BW-1

Date Collected: 04/09/18 12:20
Date Received: 04/09/18 19:15

Lab Sample ID: 460-153612-3

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/11/18 15:18	04/12/18 02:57	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/11/18 15:18	04/12/18 02:57	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/11/18 15:18	04/12/18 02:57	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/11/18 15:18	04/12/18 02:57	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/11/18 15:18	04/12/18 02:57	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/11/18 15:18	04/12/18 02:57	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/11/18 15:18	04/12/18 02:57	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/11/18 15:18	04/12/18 02:57	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/11/18 15:18	04/12/18 02:57	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/11/18 15:18	04/12/18 02:57	1
Caprolactam	0.68	U	10	0.68	ug/L		04/11/18 15:18	04/12/18 02:57	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/11/18 15:18	04/12/18 02:57	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/11/18 15:18	04/12/18 02:57	1
N-Methylaniline	0.48	U	5.0	0.48	ug/L		04/11/18 15:18	04/12/18 02:57	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*12*	*J*	*ug/L*		*9.55*		*04/11/18 15:18*	*04/12/18 02:57*	*1*
Ethanol, 2-butoxy-, phosphate (3:1)	*7.2*	*J N*	*ug/L*		*10.40*	*78-51-3*	*04/11/18 15:18*	*04/12/18 02:57*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*79*		*51 - 108*	*04/11/18 15:18*	*04/12/18 02:57*	*1*
Phenol-d5	*25*		*14 - 39*	*04/11/18 15:18*	*04/12/18 02:57*	*1*
Terphenyl-d14	*77*		*40 - 148*	*04/11/18 15:18*	*04/12/18 02:57*	*1*
2,4,6-Tribromophenol	*78*		*26 - 139*	*04/11/18 15:18*	*04/12/18 02:57*	*1*
2-Fluorophenol	*40*		*25 - 58*	*04/11/18 15:18*	*04/12/18 02:57*	*1*
2-Fluorobiphenyl	*68*		*45 - 107*	*04/11/18 15:18*	*04/12/18 02:57*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/11/18 08:52	04/13/18 18:00	5
Aluminum	**67.0**		50.0	28.5	ug/L		04/11/18 08:52	04/13/18 18:00	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/11/18 08:52	04/13/18 18:00	5
Barium	**160**		5.0	3.2	ug/L		04/11/18 08:52	04/13/18 18:00	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/11/18 08:52	04/13/18 18:00	5
Calcium	**32800**		250	233	ug/L		04/11/18 08:52	04/13/18 18:00	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/11/18 08:52	04/13/18 18:00	5
Cobalt	**34.6**		5.0	3.1	ug/L		04/11/18 08:52	04/13/18 18:00	5
Chromium	**4.7**	**J**	5.0	3.1	ug/L		04/11/18 08:52	04/13/18 18:00	5
Copper	**3.3**	**J**	5.0	3.3	ug/L		04/11/18 08:52	04/13/18 18:00	5
Iron	**15500**		150	97.8	ug/L		04/11/18 08:52	04/13/18 18:00	5
Potassium	**10700**		250	143	ug/L		04/11/18 08:52	04/13/18 18:00	5
Magnesium	**15000**		250	155	ug/L		04/11/18 08:52	04/13/18 18:00	5
Manganese	**3670**		10.0	6.1	ug/L		04/11/18 08:52	04/13/18 18:00	5
Sodium	**31400**		250	213	ug/L		04/11/18 08:52	04/13/18 18:00	5
Nickel	**8.7**		5.0	3.1	ug/L		04/11/18 08:52	04/13/18 18:00	5
Lead	**5.2**	J	1.5	0.93	ug/L		04/11/18 08:52	04/13/18 18:00	5
Antimony	1.4	U	2.5	1.4	ug/L		04/11/18 08:52	04/13/18 18:00	5
Selenium	1.4	U	2.5	1.4	ug/L		04/11/18 08:52	04/13/18 18:00	5
Thallium	0.60	U	1.0	0.60	ug/L		04/11/18 08:52	04/13/18 18:00	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/11/18 08:52	04/13/18 18:00	5

Client Sample ID: BW-1

Lab Sample ID: 460-153612-3

Date Collected: 04/09/18 12:20
Date Received: 04/09/18 19:15

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	**33.7**		20.0	16.3	ug/L		04/11/18 08:52	04/13/18 18:00	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/12/18 11:52	04/12/18 13:54	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**15900**		150	92.1	ug/L		04/11/18 08:51	04/11/18 20:47	1
Manganese, Dissolved	**3790**		15.0	3.1	ug/L		04/11/18 08:51	04/11/18 20:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**9.7**		1.0	0.45	mg/L		04/13/18 10:36	04/13/18 12:17	10

Client Sample ID: P-5U (UPA)

Lab Sample ID: 460-153612-4

Date Collected: 04/09/18 15:30
Date Received: 04/09/18 19:15

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**2.6**		0.40	0.20	ug/L			04/12/18 04:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*72 - 133*		*04/12/18 04:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*71 - 144*		*04/12/18 04:08*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/13/18 12:10	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/13/18 12:10	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/13/18 12:10	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/13/18 12:10	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/13/18 12:10	1
Acetone	1.1	U	5.0	1.1	ug/L			04/13/18 12:10	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/13/18 12:10	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/13/18 12:10	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/13/18 12:10	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/13/18 12:10	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/13/18 12:10	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/13/18 12:10	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/13/18 12:10	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/13/18 12:10	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/13/18 12:10	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/13/18 12:10	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/13/18 12:10	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/13/18 12:10	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/13/18 12:10	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/13/18 12:10	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/13/18 12:10	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/13/18 12:10	1

Client Sample ID: P-5U (UPA)

Lab Sample ID: 460-153612-4

Date Collected: 04/09/18 15:30
Date Received: 04/09/18 19:15

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.090	U	1.0	0.090	ug/L			04/13/18 12:10	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/13/18 12:10	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/13/18 12:10	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/13/18 12:10	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/13/18 12:10	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/13/18 12:10	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/13/18 12:10	1
Toluene	0.25	U	1.0	0.25	ug/L			04/13/18 12:10	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/13/18 12:10	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/13/18 12:10	1
Styrene	0.17	U	1.0	0.17	ug/L			04/13/18 12:10	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/13/18 12:10	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/13/18 12:10	1
MTBE	0.13	U	1.0	0.13	ug/L			04/13/18 12:10	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/13/18 12:10	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/13/18 12:10	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/13/18 12:10	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/13/18 12:10	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/13/18 12:10	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/13/18 12:10	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/13/18 12:10	1
Indane	0.12	U	1.0	0.12	ug/L			04/13/18 12:10	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/13/18 12:10	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/13/18 12:10	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/13/18 12:10*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*74 - 132*		*04/13/18 12:10*	*1*
Bromofluorobenzene	*77*		*77 - 124*		*04/13/18 12:10*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*04/13/18 12:10*	*1*
Dibromofluoromethane (Surr)	*95*		*72 - 131*		*04/13/18 12:10*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/11/18 15:18	04/12/18 18:36	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/11/18 15:18	04/12/18 18:36	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/11/18 15:18	04/12/18 18:36	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/11/18 15:18	04/12/18 18:36	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/11/18 15:18	04/12/18 18:36	1
Bis(2-chloroethyl)ether	0.026	U *	0.030	0.026	ug/L		04/11/18 15:18	04/12/18 18:36	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/11/18 15:18	04/12/18 03:19	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/11/18 15:18	04/12/18 03:19	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/11/18 15:18	04/12/18 03:19	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 03:19	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/11/18 15:18	04/12/18 03:19	1

Client Sample ID: P-5U (UPA)

Lab Sample ID: 460-153612-4

Date Collected: 04/09/18 15:30
Date Received: 04/09/18 19:15

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 03:19	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/11/18 15:18	04/12/18 03:19	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/11/18 15:18	04/12/18 03:19	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/11/18 15:18	04/12/18 03:19	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/11/18 15:18	04/12/18 03:19	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/11/18 15:18	04/12/18 03:19	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/11/18 15:18	04/12/18 03:19	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/11/18 15:18	04/12/18 03:19	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/11/18 15:18	04/12/18 03:19	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 03:19	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 03:19	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/11/18 15:18	04/12/18 03:19	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/11/18 15:18	04/12/18 03:19	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/11/18 15:18	04/12/18 03:19	1
Isophorone	0.80	U	10	0.80	ug/L		04/11/18 15:18	04/12/18 03:19	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 03:19	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/11/18 15:18	04/12/18 03:19	1
Naphthalene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 03:19	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/11/18 15:18	04/12/18 03:19	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/11/18 15:18	04/12/18 03:19	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 03:19	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/11/18 15:18	04/12/18 03:19	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/11/18 15:18	04/12/18 03:19	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/11/18 15:18	04/12/18 03:19	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/11/18 15:18	04/12/18 03:19	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/11/18 15:18	04/12/18 03:19	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/11/18 15:18	04/12/18 03:19	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/11/18 15:18	04/12/18 03:19	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 03:19	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 03:19	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/11/18 15:18	04/12/18 03:19	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/11/18 15:18	04/12/18 03:19	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 03:19	1
Fluorene	0.91	U	10	0.91	ug/L		04/11/18 15:18	04/12/18 03:19	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/11/18 15:18	04/12/18 03:19	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/11/18 15:18	04/12/18 03:19	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/11/18 15:18	04/12/18 03:19	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/11/18 15:18	04/12/18 03:19	1
Anthracene	0.63	U	10	0.63	ug/L		04/11/18 15:18	04/12/18 03:19	1
Carbazole	0.68	U	10	0.68	ug/L		04/11/18 15:18	04/12/18 03:19	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/11/18 15:18	04/12/18 03:19	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/11/18 15:18	04/12/18 03:19	1
Pyrene	1.6	U	10	1.6	ug/L		04/11/18 15:18	04/12/18 03:19	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/11/18 15:18	04/12/18 03:19	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/11/18 15:18	04/12/18 03:19	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/11/18 15:18	04/12/18 03:19	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/11/18 15:18	04/12/18 03:19	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/11/18 15:18	04/12/18 03:19	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/11/18 15:18	04/12/18 03:19	1

Client Sample ID: P-5U (UPA)

Lab Sample ID: 460-153612-4

Date Collected: 04/09/18 15:30
Date Received: 04/09/18 19:15

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/11/18 15:18	04/12/18 03:19	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/11/18 15:18	04/12/18 03:19	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/11/18 15:18	04/12/18 03:19	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/11/18 15:18	04/12/18 03:19	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/11/18 15:18	04/12/18 03:19	1
Caprolactam	0.68	U	10	0.68	ug/L		04/11/18 15:18	04/12/18 03:19	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/11/18 15:18	04/12/18 03:19	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/11/18 15:18	04/12/18 03:19	1
N-Methylaniline	0.48	U	5.0	0.48	ug/L		04/11/18 15:18	04/12/18 03:19	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/11/18 15:18*	*04/12/18 03:19*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*87*		*51 - 108*	*04/11/18 15:18*	*04/12/18 03:19*	*1*
Phenol-d5	*27*		*14 - 39*	*04/11/18 15:18*	*04/12/18 03:19*	*1*
Terphenyl-d14	*83*		*40 - 148*	*04/11/18 15:18*	*04/12/18 03:19*	*1*
2,4,6-Tribromophenol	*77*		*26 - 139*	*04/11/18 15:18*	*04/12/18 03:19*	*1*
2-Fluorophenol	*43*		*25 - 58*	*04/11/18 15:18*	*04/12/18 03:19*	*1*
2-Fluorobiphenyl	*75*		*45 - 107*	*04/11/18 15:18*	*04/12/18 03:19*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/11/18 08:52	04/13/18 18:02	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/11/18 08:52	04/13/18 18:02	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/11/18 08:52	04/13/18 18:02	5
Barium	**115**		5.0	3.2	ug/L		04/11/18 08:52	04/13/18 18:02	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/11/18 08:52	04/13/18 18:02	5
Calcium	**25100**		250	233	ug/L		04/11/18 08:52	04/13/18 18:02	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/11/18 08:52	04/13/18 18:02	5
Cobalt	**13.5**		5.0	3.1	ug/L		04/11/18 08:52	04/13/18 18:02	5
Chromium	3.1	U	5.0	3.1	ug/L		04/11/18 08:52	04/13/18 18:02	5
Copper	3.3	U	5.0	3.3	ug/L		04/11/18 08:52	04/13/18 18:02	5
Iron	97.8	U	150	97.8	ug/L		04/11/18 08:52	04/13/18 18:02	5
Potassium	**3060**		250	143	ug/L		04/11/18 08:52	04/13/18 18:02	5
Magnesium	**11200**		250	155	ug/L		04/11/18 08:52	04/13/18 18:02	5
Manganese	**614**		10.0	6.1	ug/L		04/11/18 08:52	04/13/18 18:02	5
Sodium	**28800**		250	213	ug/L		04/11/18 08:52	04/13/18 18:02	5
Nickel	3.1	U	5.0	3.1	ug/L		04/11/18 08:52	04/13/18 18:02	5
Lead	0.93	U	1.5	0.93	ug/L		04/11/18 08:52	04/13/18 18:02	5
Antimony	1.4	U	2.5	1.4	ug/L		04/11/18 08:52	04/13/18 18:02	5
Selenium	1.4	U	2.5	1.4	ug/L		04/11/18 08:52	04/13/18 18:02	5
Thallium	0.60	U	1.0	0.60	ug/L		04/11/18 08:52	04/13/18 18:02	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/11/18 08:52	04/13/18 18:02	5
Zinc	16.3	U	20.0	16.3	ug/L		04/11/18 08:52	04/13/18 18:02	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.22**		0.20	0.17	ug/L		04/12/18 11:52	04/12/18 13:55	1

Client Sample ID: P-5U (UPA)

Lab Sample ID: 460-153612-4

Date Collected: 04/09/18 15:30
Date Received: 04/09/18 19:15

Matrix: Water

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	92.1	U	150	92.1	ug/L		04/11/18 08:51	04/11/18 20:51	1
Manganese, Dissolved	**621**		15.0	3.1	ug/L		04/11/18 08:51	04/11/18 20:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.25**		0.10	0.045	mg/L		04/13/18 10:36	04/13/18 12:05	1

Client Sample ID: DDA-05

Lab Sample ID: 460-153612-5

Date Collected: 04/09/18 16:00
Date Received: 04/09/18 19:15

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**45**		0.40	0.20	ug/L			04/11/18 17:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*72 - 133*		*04/11/18 17:17*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*71 - 144*		*04/11/18 17:17*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/13/18 12:34	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/13/18 12:34	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/13/18 12:34	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/13/18 12:34	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/13/18 12:34	1
Acetone	5 ~~**2.4**~~	~~**J**~~ U	5.0	1.1	ug/L			04/13/18 12:34	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/13/18 12:34	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/13/18 12:34	1
1,1-Dichloroethane	**0.49**	**J**	1.0	0.24	ug/L			04/13/18 12:34	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/13/18 12:34	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/13/18 12:34	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/13/18 12:34	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/13/18 12:34	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/13/18 12:34	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/13/18 12:34	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/13/18 12:34	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/13/18 12:34	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/13/18 12:34	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/13/18 12:34	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/13/18 12:34	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/13/18 12:34	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/13/18 12:34	1
Benzene	**53**		1.0	0.090	ug/L			04/13/18 12:34	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/13/18 12:34	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/13/18 12:34	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/13/18 12:34	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/13/18 12:34	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/13/18 12:34	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/13/18 12:34	1

Client Sample ID: DDA-05

Lab Sample ID: 460-153612-5

Date Collected: 04/09/18 16:00
Date Received: 04/09/18 19:15

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	**0.28**	**J**	1.0	0.25	ug/L			04/13/18 12:34	1
Chlorobenzene	**25**		1.0	0.24	ug/L			04/13/18 12:34	1
Ethylbenzene	**1.1**		1.0	0.30	ug/L			04/13/18 12:34	1
Styrene	0.17	U	1.0	0.17	ug/L			04/13/18 12:34	1
Xylenes, Total	**16**		2.0	0.28	ug/L			04/13/18 12:34	1
Ethyl ether	**0.27**	**J**	1.0	0.11	ug/L			04/13/18 12:34	1
MTBE	**0.26**	**J**	1.0	0.13	ug/L			04/13/18 12:34	1
Tetrahydrofuran	**4.9**		2.0	0.36	ug/L			04/13/18 12:34	1
Cyclohexane	**0.77**	**J**	1.0	0.26	ug/L			04/13/18 12:34	1
1,2,4-Trimethylbenzene	**32**		1.0	0.23	ug/L			04/13/18 12:34	1
1,3,5-Trimethylbenzene	**6.6**		1.0	0.25	ug/L			04/13/18 12:34	1
Isopropylbenzene	**10**		1.0	0.32	ug/L			04/13/18 12:34	1
N-Propylbenzene	**9.5**		1.0	0.29	ug/L			04/13/18 12:34	1
Methylcyclohexane	**1.7**		1.0	0.22	ug/L			04/13/18 12:34	1
Indane	**38**		1.0	0.12	ug/L			04/13/18 12:34	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/13/18 12:34	1
1,2,3-Trimethylbenzene	**10**		1.0	0.11	ug/L			04/13/18 12:34	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Benzene, 1-ethyl-2-methyl-	*12*	*J N*	*ug/L*		*9.87*	*611-14-3*		*04/13/18 12:34*	*1*
Benzene, 1,2,4,5-tetramethyl-	*7.4*	*J N*	*ug/L*		*11.09*	*95-93-2*		*04/13/18 12:34*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*74 - 132*		*04/13/18 12:34*	*1*
Bromofluorobenzene	*85*		*77 - 124*		*04/13/18 12:34*	*1*
Toluene-d8 (Surr)	*108*		*80 - 120*		*04/13/18 12:34*	*1*
Dibromofluoromethane (Surr)	*101*		*72 - 131*		*04/13/18 12:34*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/11/18 15:18	04/12/18 18:58	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/11/18 15:18	04/12/18 18:58	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/11/18 15:18	04/12/18 18:58	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/11/18 15:18	04/12/18 18:58	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/11/18 15:18	04/12/18 18:58	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/11/18 15:18	04/12/18 03:41	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/11/18 15:18	04/12/18 03:41	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/11/18 15:18	04/12/18 03:41	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 03:41	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/11/18 15:18	04/12/18 03:41	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 03:41	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/11/18 15:18	04/12/18 03:41	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/11/18 15:18	04/12/18 03:41	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/11/18 15:18	04/12/18 03:41	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/11/18 15:18	04/12/18 03:41	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/11/18 15:18	04/12/18 03:41	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/11/18 15:18	04/12/18 03:41	1

Client Sample ID: DDA-05

Lab Sample ID: 460-153612-5

Date Collected: 04/09/18 16:00
Date Received: 04/09/18 19:15

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/11/18 15:18	04/12/18 03:41	1
Bis(2-chloroethyl)ether	**8.9**		1.0	0.30	ug/L		04/11/18 15:18	04/12/18 03:41	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/11/18 15:18	04/12/18 03:41	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 03:41	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 03:41	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/11/18 15:18	04/12/18 03:41	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/11/18 15:18	04/12/18 03:41	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/11/18 15:18	04/12/18 03:41	1
Isophorone	0.80	U	10	0.80	ug/L		04/11/18 15:18	04/12/18 03:41	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 03:41	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/11/18 15:18	04/12/18 03:41	1
Naphthalene	**2.6**	**J**	10	1.1	ug/L		04/11/18 15:18	04/12/18 03:41	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/11/18 15:18	04/12/18 03:41	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/11/18 15:18	04/12/18 03:41	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 03:41	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/11/18 15:18	04/12/18 03:41	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/11/18 15:18	04/12/18 03:41	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/11/18 15:18	04/12/18 03:41	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/11/18 15:18	04/12/18 03:41	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/11/18 15:18	04/12/18 03:41	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/11/18 15:18	04/12/18 03:41	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/11/18 15:18	04/12/18 03:41	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 03:41	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 03:41	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/11/18 15:18	04/12/18 03:41	1
Diethyl phthalate	**3.2**	**J**	10	0.98	ug/L		04/11/18 15:18	04/12/18 03:41	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 03:41	1
Fluorene	0.91	U	10	0.91	ug/L		04/11/18 15:18	04/12/18 03:41	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/11/18 15:18	04/12/18 03:41	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/11/18 15:18	04/12/18 03:41	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/11/18 15:18	04/12/18 03:41	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/11/18 15:18	04/12/18 03:41	1
Anthracene	0.63	U	10	0.63	ug/L		04/11/18 15:18	04/12/18 03:41	1
Carbazole	0.68	U	10	0.68	ug/L		04/11/18 15:18	04/12/18 03:41	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/11/18 15:18	04/12/18 03:41	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/11/18 15:18	04/12/18 03:41	1
Pyrene	1.6	U	10	1.6	ug/L		04/11/18 15:18	04/12/18 03:41	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/11/18 15:18	04/12/18 03:41	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/11/18 15:18	04/12/18 03:41	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/11/18 15:18	04/12/18 03:41	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/11/18 15:18	04/12/18 03:41	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/11/18 15:18	04/12/18 03:41	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/11/18 15:18	04/12/18 03:41	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/11/18 15:18	04/12/18 03:41	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/11/18 15:18	04/12/18 03:41	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/11/18 15:18	04/12/18 03:41	1
Diphenyl ether	**4.5**	**J**	10	1.2	ug/L		04/11/18 15:18	04/12/18 03:41	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/11/18 15:18	04/12/18 03:41	1
Caprolactam	0.68	U	10	0.68	ug/L		04/11/18 15:18	04/12/18 03:41	1

Client Sample ID: DDA-05

Lab Sample ID: 460-153612-5

Date Collected: 04/09/18 16:00
Date Received: 04/09/18 19:15

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/11/18 15:18	04/12/18 03:41	1
Bisphenol-A	**52**		10	9.9	ug/L		04/11/18 15:18	04/12/18 03:41	1
N-Methylaniline	0.48	U	5.0	0.48	ug/L		04/11/18 15:18	04/12/18 03:41	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Benzene, (1-methylethyl)-	*8.6*	*J N*	*ug/L*		*3.26*	*98-82-8*	*04/11/18 15:18*	*04/12/18 03:41*	*1*
Benzene, propyl-	*6.6*	*J N*	*ug/L*		*3.52*	*103-65-1*	*04/11/18 15:18*	*04/12/18 03:41*	*1*
Benzene, 1-ethyl-2-methyl-	*11*	*J N*	*ug/L*		*3.74*	*611-14-3*	*04/11/18 15:18*	*04/12/18 03:41*	*1*
Benzene, 1,2,4-trimethyl-	*22*	*J N*	*ug/L*		*3.86*	*95-63-6*	*04/11/18 15:18*	*04/12/18 03:41*	*1*
Benzene, 1,2,3-trimethyl-	*7.9*	*J N*	*ug/L*		*4.08*	*526-73-8*	*04/11/18 15:18*	*04/12/18 03:41*	*1*
Indane	*41*	*J N*	*ug/L*		*4.19*	*496-11-7*	*04/11/18 15:18*	*04/12/18 03:41*	*1*
Unknown	*35*	*J*	*ug/L*		*6.69*		*04/11/18 15:18*	*04/12/18 03:41*	*1*
5-Methyl-2,4-diisopropylphenol	*7.4*	*J N*	*ug/L*		*6.84*	*40625-96-5*	*04/11/18 15:18*	*04/12/18 03:41*	*1*
Unknown	*11*	*J*	*ug/L*		*7.89*		*04/11/18 15:18*	*04/12/18 03:41*	*1*
Unknown	*8.9*	*J*	*ug/L*		*7.92*		*04/11/18 15:18*	*04/12/18 03:41*	*1*
Unknown	*6.8*	*J*	*ug/L*		*8.02*		*04/11/18 15:18*	*04/12/18 03:41*	*1*
Unknown	*17*	*J*	*ug/L*		*11.59*		*04/11/18 15:18*	*04/12/18 03:41*	*1*
Unknown	*34*	*J*	*ug/L*		*11.75*		*04/11/18 15:18*	*04/12/18 03:41*	*1*
Unknown	*29*	*J*	*ug/L*		*11.91*		*04/11/18 15:18*	*04/12/18 03:41*	*1*
Unknown	*9.9*	*J*	*ug/L*		*12.16*		*04/11/18 15:18*	*04/12/18 03:41*	*1*
Unknown	*15*	*J*	*ug/L*		*14.81*		*04/11/18 15:18*	*04/12/18 03:41*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*85*		*51 - 108*	*04/11/18 15:18*	*04/12/18 03:41*	*1*
Phenol-d5	*24*		*14 - 39*	*04/11/18 15:18*	*04/12/18 03:41*	*1*
Terphenyl-d14	*81*		*40 - 148*	*04/11/18 15:18*	*04/12/18 03:41*	*1*
2,4,6-Tribromophenol	*83*		*26 - 139*	*04/11/18 15:18*	*04/12/18 03:41*	*1*
2-Fluorophenol	*38*		*25 - 58*	*04/11/18 15:18*	*04/12/18 03:41*	*1*
2-Fluorobiphenyl	*67*		*45 - 107*	*04/11/18 15:18*	*04/12/18 03:41*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/11/18 08:52	04/13/18 18:05	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/11/18 08:52	04/13/18 18:05	5
Arsenic	**8.6**		2.5	1.5	ug/L		04/11/18 08:52	04/13/18 18:05	5
Barium	**224**		5.0	3.2	ug/L		04/11/18 08:52	04/13/18 18:05	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/11/18 08:52	04/13/18 18:05	5
Calcium	**12900**		250	233	ug/L		04/11/18 08:52	04/13/18 18:05	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/11/18 08:52	04/13/18 18:05	5
Cobalt	3.1	U	5.0	3.1	ug/L		04/11/18 08:52	04/13/18 18:05	5
Chromium	3.1	U	5.0	3.1	ug/L		04/11/18 08:52	04/13/18 18:05	5
Copper	3.3	U	5.0	3.3	ug/L		04/11/18 08:52	04/13/18 18:05	5
Iron	**48900**		150	97.8	ug/L		04/11/18 08:52	04/13/18 18:05	5
Potassium	**3530**		250	143	ug/L		04/11/18 08:52	04/13/18 18:05	5
Magnesium	**7420**		250	155	ug/L		04/11/18 08:52	04/13/18 18:05	5
Manganese	**1620**		10.0	6.1	ug/L		04/11/18 08:52	04/13/18 18:05	5
Sodium	**18000**		250	213	ug/L		04/11/18 08:52	04/13/18 18:05	5
Nickel	3.1	U	5.0	3.1	ug/L		04/11/18 08:52	04/13/18 18:05	5
Lead	0.93	U	1.5	0.93	ug/L		04/11/18 08:52	04/13/18 18:05	5
Antimony	1.4	U	2.5	1.4	ug/L		04/11/18 08:52	04/13/18 18:05	5

Client Sample ID: DDA-05

Lab Sample ID: 460-153612-5

Date Collected: 04/09/18 16:00
Date Received: 04/09/18 19:15

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	1.4	U	2.5	1.4	ug/L		04/11/18 08:52	04/13/18 18:05	5
Thallium	0.60	U	1.0	0.60	ug/L		04/11/18 08:52	04/13/18 18:05	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/11/18 08:52	04/13/18 18:05	5
Zinc	16.3	U	20.0	16.3	ug/L		04/11/18 08:52	04/13/18 18:05	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/12/18 11:52	04/12/18 13:57	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**52700**		150	92.1	ug/L		04/11/18 08:51	04/11/18 20:55	1
Manganese, Dissolved	**1740**		15.0	3.1	ug/L		04/11/18 08:51	04/11/18 20:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**3.8**		0.10	0.045	mg/L		04/13/18 10:36	04/13/18 12:01	1

Client Sample ID: FDGW_040918

Lab Sample ID: 460-153612-6

Date Collected: 04/09/18 00:00
Date Received: 04/09/18 19:15

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**7.0**		0.40	0.20	ug/L			04/11/18 17:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*104*		*72 - 133*		*04/11/18 17:40*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*71 - 144*		*04/11/18 17:40*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/13/18 12:58	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/13/18 12:58	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/13/18 12:58	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/13/18 12:58	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/13/18 12:58	1
Acetone	5 ~~**2.2**~~ ~~**J**~~ U		5.0	1.1	ug/L			04/13/18 12:58	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/13/18 12:58	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/13/18 12:58	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/13/18 12:58	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/13/18 12:58	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/13/18 12:58	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/13/18 12:58	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/13/18 12:58	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/13/18 12:58	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/13/18 12:58	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/13/18 12:58	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/13/18 12:58	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/13/18 12:58	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/13/18 12:58	1

Client Sample ID: FDGW_040918

Lab Sample ID: 460-153612-6

Date Collected: 04/09/18 00:00
Date Received: 04/09/18 19:15

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/13/18 12:58	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/13/18 12:58	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/13/18 12:58	1
Benzene	**0.23**	**J**	1.0	0.090	ug/L			04/13/18 12:58	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/13/18 12:58	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/13/18 12:58	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/13/18 12:58	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/13/18 12:58	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/13/18 12:58	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/13/18 12:58	1
Toluene	0.25	U	1.0	0.25	ug/L			04/13/18 12:58	1
Chlorobenzene	**8.0**		1.0	0.24	ug/L			04/13/18 12:58	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/13/18 12:58	1
Styrene	0.17	U	1.0	0.17	ug/L			04/13/18 12:58	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/13/18 12:58	1
Ethyl ether	**12**		1.0	0.11	ug/L			04/13/18 12:58	1
MTBE	**0.26**	**J**	1.0	0.13	ug/L			04/13/18 12:58	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/13/18 12:58	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/13/18 12:58	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/13/18 12:58	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/13/18 12:58	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/13/18 12:58	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/13/18 12:58	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/13/18 12:58	1
Indane	0.12	U	1.0	0.12	ug/L			04/13/18 12:58	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/13/18 12:58	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/13/18 12:58	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/13/18 12:58*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*74 - 132*		*04/13/18 12:58*	*1*
Bromofluorobenzene	*79*		*77 - 124*		*04/13/18 12:58*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*04/13/18 12:58*	*1*
Dibromofluoromethane (Surr)	*88*		*72 - 131*		*04/13/18 12:58*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/11/18 15:18	04/12/18 19:19	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/11/18 15:18	04/12/18 19:19	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/11/18 15:18	04/12/18 19:19	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/11/18 15:18	04/12/18 19:19	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/11/18 15:18	04/12/18 19:19	1
Bis(2-chloroethyl)ether	**0.42**	*	0.030	0.026	ug/L		04/11/18 15:18	04/12/18 19:19	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/11/18 15:18	04/12/18 04:04	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/11/18 15:18	04/12/18 04:04	1

Client Sample ID: FDGW_040918

Lab Sample ID: 460-153612-6

Date Collected: 04/09/18 00:00
Date Received: 04/09/18 19:15

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	0.26	U	10	0.26	ug/L		04/11/18 15:18	04/12/18 04:04	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 04:04	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/11/18 15:18	04/12/18 04:04	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 04:04	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/11/18 15:18	04/12/18 04:04	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/11/18 15:18	04/12/18 04:04	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/11/18 15:18	04/12/18 04:04	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/11/18 15:18	04/12/18 04:04	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/11/18 15:18	04/12/18 04:04	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/11/18 15:18	04/12/18 04:04	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/11/18 15:18	04/12/18 04:04	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/11/18 15:18	04/12/18 04:04	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 04:04	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 04:04	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/11/18 15:18	04/12/18 04:04	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/11/18 15:18	04/12/18 04:04	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/11/18 15:18	04/12/18 04:04	1
Isophorone	0.80	U	10	0.80	ug/L		04/11/18 15:18	04/12/18 04:04	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 04:04	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/11/18 15:18	04/12/18 04:04	1
Naphthalene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 04:04	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/11/18 15:18	04/12/18 04:04	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/11/18 15:18	04/12/18 04:04	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 04:04	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/11/18 15:18	04/12/18 04:04	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/11/18 15:18	04/12/18 04:04	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/11/18 15:18	04/12/18 04:04	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/11/18 15:18	04/12/18 04:04	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/11/18 15:18	04/12/18 04:04	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/11/18 15:18	04/12/18 04:04	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/11/18 15:18	04/12/18 04:04	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 04:04	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 04:04	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/11/18 15:18	04/12/18 04:04	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/11/18 15:18	04/12/18 04:04	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 04:04	1
Fluorene	0.91	U	10	0.91	ug/L		04/11/18 15:18	04/12/18 04:04	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/11/18 15:18	04/12/18 04:04	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/11/18 15:18	04/12/18 04:04	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/11/18 15:18	04/12/18 04:04	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/11/18 15:18	04/12/18 04:04	1
Anthracene	0.63	U	10	0.63	ug/L		04/11/18 15:18	04/12/18 04:04	1
Carbazole	0.68	U	10	0.68	ug/L		04/11/18 15:18	04/12/18 04:04	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/11/18 15:18	04/12/18 04:04	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/11/18 15:18	04/12/18 04:04	1
Pyrene	1.6	U	10	1.6	ug/L		04/11/18 15:18	04/12/18 04:04	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/11/18 15:18	04/12/18 04:04	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/11/18 15:18	04/12/18 04:04	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/11/18 15:18	04/12/18 04:04	1

Client Sample ID: FDGW_040918

Lab Sample ID: 460-153612-6

Date Collected: 04/09/18 00:00
Date Received: 04/09/18 19:15

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/11/18 15:18	04/12/18 04:04	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/11/18 15:18	04/12/18 04:04	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/11/18 15:18	04/12/18 04:04	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/11/18 15:18	04/12/18 04:04	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/11/18 15:18	04/12/18 04:04	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/11/18 15:18	04/12/18 04:04	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/11/18 15:18	04/12/18 04:04	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/11/18 15:18	04/12/18 04:04	1
Caprolactam	0.68	U	10	0.68	ug/L		04/11/18 15:18	04/12/18 04:04	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/11/18 15:18	04/12/18 04:04	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/11/18 15:18	04/12/18 04:04	1
N-Methylaniline	0.48	U	5.0	0.48	ug/L		04/11/18 15:18	04/12/18 04:04	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*12*	*J*	*ug/L*		*9.55*		*04/11/18 15:18*	*04/12/18 04:04*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*82*		*51 - 108*	*04/11/18 15:18*	*04/12/18 04:04*	*1*
Phenol-d5	*23*		*14 - 39*	*04/11/18 15:18*	*04/12/18 04:04*	*1*
Terphenyl-d14	*81*		*40 - 148*	*04/11/18 15:18*	*04/12/18 04:04*	*1*
2,4,6-Tribromophenol	*76*		*26 - 139*	*04/11/18 15:18*	*04/12/18 04:04*	*1*
2-Fluorophenol	*38*		*25 - 58*	*04/11/18 15:18*	*04/12/18 04:04*	*1*
2-Fluorobiphenyl	*75*		*45 - 107*	*04/11/18 15:18*	*04/12/18 04:04*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/11/18 08:52	04/13/18 18:07	5
Aluminum	**47.4**	**J**	50.0	28.5	ug/L		04/11/18 08:52	04/13/18 18:07	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/11/18 08:52	04/13/18 18:07	5
Barium	**166**		5.0	3.2	ug/L		04/11/18 08:52	04/13/18 18:07	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/11/18 08:52	04/13/18 18:07	5
Calcium	**33400**		250	233	ug/L		04/11/18 08:52	04/13/18 18:07	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/11/18 08:52	04/13/18 18:07	5
Cobalt	**35.0**		5.0	3.1	ug/L		04/11/18 08:52	04/13/18 18:07	5
Chromium	**3.4**	**J**	5.0	3.1	ug/L		04/11/18 08:52	04/13/18 18:07	5
Copper	3.3	U	5.0	3.3	ug/L		04/11/18 08:52	04/13/18 18:07	5
Iron	**15800**		150	97.8	ug/L		04/11/18 08:52	04/13/18 18:07	5
Potassium	**10900**		250	143	ug/L		04/11/18 08:52	04/13/18 18:07	5
Magnesium	**15300**		250	155	ug/L		04/11/18 08:52	04/13/18 18:07	5
Manganese	**3760**		10.0	6.1	ug/L		04/11/18 08:52	04/13/18 18:07	5
Sodium	**32000**		250	213	ug/L		04/11/18 08:52	04/13/18 18:07	5
Nickel	**8.2**		5.0	3.1	ug/L		04/11/18 08:52	04/13/18 18:07	5
Lead	0.93	~~U~~ UJ	1.5	0.93	ug/L		04/11/18 08:52	04/13/18 18:07	5
Antimony	1.4	U	2.5	1.4	ug/L		04/11/18 08:52	04/13/18 18:07	5
Selenium	1.4	U	2.5	1.4	ug/L		04/11/18 08:52	04/13/18 18:07	5
Thallium	0.60	U	1.0	0.60	ug/L		04/11/18 08:52	04/13/18 18:07	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/11/18 08:52	04/13/18 18:07	5
Zinc	**26.8**		20.0	16.3	ug/L		04/11/18 08:52	04/13/18 18:07	5

Client Sample ID: FDGW_040918

Lab Sample ID: 460-153612-6

Date Collected: 04/09/18 00:00
Date Received: 04/09/18 19:15

Matrix: Water

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/12/18 11:59	04/12/18 14:33	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**15900**		150	92.1	ug/L		04/11/18 11:21	04/11/18 21:11	1
Manganese, Dissolved	**3820**		15.0	3.1	ug/L		04/11/18 11:21	04/11/18 21:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**11.1**		1.0	0.45	mg/L		04/13/18 10:36	04/13/18 12:18	10

Client Sample ID: RBGW_040918

Lab Sample ID: 460-153612-7

Date Collected: 04/09/18 14:20
Date Received: 04/09/18 19:15

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.20	U	0.40	0.20	ug/L			04/11/18 11:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*72 - 133*		*04/11/18 11:53*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*71 - 144*		*04/11/18 11:53*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/13/18 10:59	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/13/18 10:59	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/13/18 10:59	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/13/18 10:59	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/13/18 10:59	1
Acetone	**3.8**	**J**	5.0	1.1	ug/L			04/13/18 10:59	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/13/18 10:59	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/13/18 10:59	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/13/18 10:59	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/13/18 10:59	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/13/18 10:59	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/13/18 10:59	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/13/18 10:59	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/13/18 10:59	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/13/18 10:59	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/13/18 10:59	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/13/18 10:59	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/13/18 10:59	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/13/18 10:59	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/13/18 10:59	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/13/18 10:59	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/13/18 10:59	1
Benzene	0.090	U	1.0	0.090	ug/L			04/13/18 10:59	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/13/18 10:59	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/13/18 10:59	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/13/18 10:59	1

Client Sample ID: RBGW_040918

Lab Sample ID: 460-153612-7

Date Collected: 04/09/18 14:20
Date Received: 04/09/18 19:15

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/13/18 10:59	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/13/18 10:59	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/13/18 10:59	1
Toluene	0.25	U	1.0	0.25	ug/L			04/13/18 10:59	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/13/18 10:59	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/13/18 10:59	1
Styrene	0.17	U	1.0	0.17	ug/L			04/13/18 10:59	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/13/18 10:59	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/13/18 10:59	1
MTBE	0.13	U	1.0	0.13	ug/L			04/13/18 10:59	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/13/18 10:59	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/13/18 10:59	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/13/18 10:59	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/13/18 10:59	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/13/18 10:59	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/13/18 10:59	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/13/18 10:59	1
Indane	0.12	U	1.0	0.12	ug/L			04/13/18 10:59	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/13/18 10:59	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/13/18 10:59	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Isopropyl Alcohol	*16*	*J N*	*ug/L*		*2.46*	*67-63-0*		*04/13/18 10:59*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*74 - 132*		*04/13/18 10:59*	*1*
Bromofluorobenzene	*77*		*77 - 124*		*04/13/18 10:59*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*04/13/18 10:59*	*1*
Dibromofluoromethane (Surr)	*94*		*72 - 131*		*04/13/18 10:59*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/11/18 15:18	04/12/18 19:41	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/11/18 15:18	04/12/18 19:41	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/11/18 15:18	04/12/18 19:41	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/11/18 15:18	04/12/18 19:41	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/11/18 15:18	04/12/18 19:41	1
Bis(2-chloroethyl)ether	0.026	U *	0.030	0.026	ug/L		04/11/18 15:18	04/12/18 19:41	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/11/18 15:18	04/12/18 04:26	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/11/18 15:18	04/12/18 04:26	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/11/18 15:18	04/12/18 04:26	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 04:26	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/11/18 15:18	04/12/18 04:26	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 04:26	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/11/18 15:18	04/12/18 04:26	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/11/18 15:18	04/12/18 04:26	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/11/18 15:18	04/12/18 04:26	1

Client Sample ID: RBGW_040918

Lab Sample ID: 460-153612-7

Date Collected: 04/09/18 14:20
Date Received: 04/09/18 19:15

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/11/18 15:18	04/12/18 04:26	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/11/18 15:18	04/12/18 04:26	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/11/18 15:18	04/12/18 04:26	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/11/18 15:18	04/12/18 04:26	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/11/18 15:18	04/12/18 04:26	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 04:26	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 04:26	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/11/18 15:18	04/12/18 04:26	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/11/18 15:18	04/12/18 04:26	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/11/18 15:18	04/12/18 04:26	1
Isophorone	0.80	U	10	0.80	ug/L		04/11/18 15:18	04/12/18 04:26	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 04:26	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/11/18 15:18	04/12/18 04:26	1
Naphthalene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 04:26	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/11/18 15:18	04/12/18 04:26	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/11/18 15:18	04/12/18 04:26	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 04:26	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/11/18 15:18	04/12/18 04:26	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/11/18 15:18	04/12/18 04:26	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/11/18 15:18	04/12/18 04:26	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/11/18 15:18	04/12/18 04:26	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/11/18 15:18	04/12/18 04:26	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/11/18 15:18	04/12/18 04:26	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/11/18 15:18	04/12/18 04:26	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 04:26	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 04:26	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/11/18 15:18	04/12/18 04:26	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/11/18 15:18	04/12/18 04:26	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 04:26	1
Fluorene	0.91	U	10	0.91	ug/L		04/11/18 15:18	04/12/18 04:26	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/11/18 15:18	04/12/18 04:26	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/11/18 15:18	04/12/18 04:26	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/11/18 15:18	04/12/18 04:26	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/11/18 15:18	04/12/18 04:26	1
Anthracene	0.63	U	10	0.63	ug/L		04/11/18 15:18	04/12/18 04:26	1
Carbazole	0.68	U	10	0.68	ug/L		04/11/18 15:18	04/12/18 04:26	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/11/18 15:18	04/12/18 04:26	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/11/18 15:18	04/12/18 04:26	1
Pyrene	1.6	U	10	1.6	ug/L		04/11/18 15:18	04/12/18 04:26	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/11/18 15:18	04/12/18 04:26	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/11/18 15:18	04/12/18 04:26	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/11/18 15:18	04/12/18 04:26	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/11/18 15:18	04/12/18 04:26	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/11/18 15:18	04/12/18 04:26	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/11/18 15:18	04/12/18 04:26	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/11/18 15:18	04/12/18 04:26	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/11/18 15:18	04/12/18 04:26	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/11/18 15:18	04/12/18 04:26	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/11/18 15:18	04/12/18 04:26	1

Client Sample ID: RBGW_040918

Lab Sample ID: 460-153612-7

Date Collected: 04/09/18 14:20
Date Received: 04/09/18 19:15

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/11/18 15:18	04/12/18 04:26	1
Caprolactam	0.68	U	10	0.68	ug/L		04/11/18 15:18	04/12/18 04:26	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/11/18 15:18	04/12/18 04:26	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/11/18 15:18	04/12/18 04:26	1
N-Methylaniline	0.48	U	5.0	0.48	ug/L		04/11/18 15:18	04/12/18 04:26	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/11/18 15:18*	*04/12/18 04:26*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*85*		*51 - 108*	*04/11/18 15:18*	*04/12/18 04:26*	*1*
Phenol-d5	*25*		*14 - 39*	*04/11/18 15:18*	*04/12/18 04:26*	*1*
Terphenyl-d14	*80*		*40 - 148*	*04/11/18 15:18*	*04/12/18 04:26*	*1*
2,4,6-Tribromophenol	*67*		*26 - 139*	*04/11/18 15:18*	*04/12/18 04:26*	*1*
2-Fluorophenol	*40*		*25 - 58*	*04/11/18 15:18*	*04/12/18 04:26*	*1*
2-Fluorobiphenyl	*76*		*45 - 107*	*04/11/18 15:18*	*04/12/18 04:26*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/11/18 09:23	04/13/18 17:55	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/11/18 09:23	04/13/18 17:55	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/11/18 09:23	04/13/18 17:55	5
Barium	3.2	U	5.0	3.2	ug/L		04/11/18 09:23	04/13/18 17:55	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/11/18 09:23	04/13/18 17:55	5
Calcium	233	U	250	233	ug/L		04/11/18 09:23	04/13/18 17:55	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/11/18 09:23	04/13/18 17:55	5
Cobalt	3.1	U	5.0	3.1	ug/L		04/11/18 09:23	04/13/18 17:55	5
Chromium	3.1	U	5.0	3.1	ug/L		04/11/18 09:23	04/13/18 17:55	5
Copper	3.3	U	5.0	3.3	ug/L		04/11/18 09:23	04/13/18 17:55	5
Iron	97.8	U	150	97.8	ug/L		04/11/18 09:23	04/13/18 17:55	5
Potassium	143	U	250	143	ug/L		04/11/18 09:23	04/13/18 17:55	5
Magnesium	155	U	250	155	ug/L		04/11/18 09:23	04/13/18 17:55	5
Manganese	6.1	U	10.0	6.1	ug/L		04/11/18 09:23	04/13/18 17:55	5
Sodium	213	U	250	213	ug/L		04/11/18 09:23	04/13/18 17:55	5
Nickel	3.1	U	5.0	3.1	ug/L		04/11/18 09:23	04/13/18 17:55	5
Lead	0.93	U	1.5	0.93	ug/L		04/11/18 09:23	04/13/18 17:55	5
Antimony	1.4	U	2.5	1.4	ug/L		04/11/18 09:23	04/13/18 17:55	5
Selenium	1.4	U	2.5	1.4	ug/L		04/11/18 09:23	04/13/18 17:55	5
Thallium	0.60	U	1.0	0.60	ug/L		04/11/18 09:23	04/13/18 17:55	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/11/18 09:23	04/13/18 17:55	5
Zinc	16.3	U	20.0	16.3	ug/L		04/11/18 09:23	04/13/18 17:55	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/12/18 11:59	04/12/18 14:35	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	92.1	U	150	92.1	ug/L		04/11/18 11:21	04/11/18 21:15	1
Manganese, Dissolved	3.1	U	15.0	3.1	ug/L		04/11/18 11:21	04/11/18 21:15	1

Client Sample ID: RBGW_040918

Lab Sample ID: 460-153612-7

Date Collected: 04/09/18 14:20
Date Received: 04/09/18 19:15

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.054**	**J**	0.10	0.045	mg/L		04/13/18 10:36	04/13/18 12:04	1

Client Sample ID: TBGW_040918

Lab Sample ID: 460-153612-8

Date Collected: 04/09/18 00:00
Date Received: 04/09/18 19:15

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.20	U	0.40	0.20	ug/L			04/11/18 12:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*72 - 133*		*04/11/18 12:16*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*71 - 144*		*04/11/18 12:16*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/13/18 09:23	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/13/18 09:23	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/13/18 09:23	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/13/18 09:23	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/13/18 09:23	1
Acetone	**19**		5.0	1.1	ug/L			04/13/18 09:23	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/13/18 09:23	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/13/18 09:23	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/13/18 09:23	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/13/18 09:23	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/13/18 09:23	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/13/18 09:23	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/13/18 09:23	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/13/18 09:23	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/13/18 09:23	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/13/18 09:23	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/13/18 09:23	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/13/18 09:23	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/13/18 09:23	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/13/18 09:23	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/13/18 09:23	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/13/18 09:23	1
Benzene	0.090	U	1.0	0.090	ug/L			04/13/18 09:23	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/13/18 09:23	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/13/18 09:23	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/13/18 09:23	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/13/18 09:23	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/13/18 09:23	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/13/18 09:23	1
Toluene	0.25	U	1.0	0.25	ug/L			04/13/18 09:23	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/13/18 09:23	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/13/18 09:23	1
Styrene	0.17	U	1.0	0.17	ug/L			04/13/18 09:23	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/13/18 09:23	1

Client Sample ID: TBGW_040918

Lab Sample ID: 460-153612-8

Date Collected: 04/09/18 00:00
Date Received: 04/09/18 19:15

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/13/18 09:23	1
MTBE	0.13	U	1.0	0.13	ug/L			04/13/18 09:23	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/13/18 09:23	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/13/18 09:23	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/13/18 09:23	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/13/18 09:23	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/13/18 09:23	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/13/18 09:23	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/13/18 09:23	1
Indane	0.12	U	1.0	0.12	ug/L			04/13/18 09:23	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/13/18 09:23	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/13/18 09:23	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/13/18 09:23*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*74 - 132*		*04/13/18 09:23*	*1*
Bromofluorobenzene	*80*		*77 - 124*		*04/13/18 09:23*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*04/13/18 09:23*	*1*
Dibromofluoromethane (Surr)	*91*		*72 - 131*		*04/13/18 09:23*	*1*

Client Sample ID: DDA-11-US

Lab Sample ID: 460-153700-1

Date Collected: 04/10/18 09:10
Date Received: 04/10/18 19:45

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**2.2**		0.40	0.20	ug/L			04/11/18 14:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*72 - 133*		*04/11/18 14:12*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*71 - 144*		*04/11/18 14:12*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/14/18 06:31	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/14/18 06:31	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/14/18 06:31	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/14/18 06:31	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/14/18 06:31	1
Acetone	1.1	U	5.0	1.1	ug/L			04/14/18 06:31	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/14/18 06:31	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/14/18 06:31	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/14/18 06:31	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/14/18 06:31	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/14/18 06:31	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/14/18 06:31	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/14/18 06:31	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/14/18 06:31	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/14/18 06:31	1

Client Sample ID: DDA-11-US

Lab Sample ID: 460-153700-1

Date Collected: 04/10/18 09:10
Matrix: Water
Date Received: 04/10/18 19:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.33	~~U~~ * UJ	1.0	0.33	ug/L			04/14/18 06:31	1
Bromodichloromethane	0.15	~~U~~ * UJ	1.0	0.15	ug/L			04/14/18 06:31	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/14/18 06:31	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/14/18 06:31	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/14/18 06:31	1
Dibromochloromethane	0.22	~~U~~ * UJ	1.0	0.22	ug/L			04/14/18 06:31	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/14/18 06:31	1
Benzene	0.090	U	1.0	0.090	ug/L			04/14/18 06:31	1
trans-1,3-Dichloropropene	0.19	~~U~~ * UJ	1.0	0.19	ug/L			04/14/18 06:31	1
Bromoform	0.18	~~U~~ * UJ	1.0	0.18	ug/L			04/14/18 06:31	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/14/18 06:31	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/14/18 06:31	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/14/18 06:31	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/14/18 06:31	1
Toluene	0.25	U	1.0	0.25	ug/L			04/14/18 06:31	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/14/18 06:31	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/14/18 06:31	1
Styrene	0.17	U	1.0	0.17	ug/L			04/14/18 06:31	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/14/18 06:31	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/14/18 06:31	1
MTBE	**0.19**	**J**	1.0	0.13	ug/L			04/14/18 06:31	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/14/18 06:31	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/14/18 06:31	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/14/18 06:31	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/14/18 06:31	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/14/18 06:31	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/14/18 06:31	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/14/18 06:31	1
Indane	0.12	U	1.0	0.12	ug/L			04/14/18 06:31	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/14/18 06:31	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/14/18 06:31	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/14/18 06:31*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*74 - 132*		*04/14/18 06:31*	*1*
Bromofluorobenzene	*86*		*77 - 124*		*04/14/18 06:31*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*04/14/18 06:31*	*1*
Dibromofluoromethane (Surr)	*97*		*72 - 131*		*04/14/18 06:31*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/12/18 05:54	04/13/18 12:51	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/12/18 05:54	04/13/18 12:51	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/12/18 05:54	04/13/18 12:51	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/12/18 05:54	04/13/18 12:51	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/12/18 05:54	04/13/18 12:51	1
Bis(2-chloroethyl)ether	**0.080**		0.030	0.026	ug/L		04/12/18 05:54	04/13/18 12:51	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G Groundwater

TestAmerica Job ID: 460-153612-1
SDG: 153612

Client Sample ID: DDA-11-US

Lab Sample ID: 460-153700-1

Date Collected: 04/10/18 09:10
Date Received: 04/10/18 19:45

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/12/18 05:54	04/12/18 16:12	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/12/18 05:54	04/12/18 16:12	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/12/18 05:54	04/12/18 16:12	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/12/18 05:54	04/12/18 16:12	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/12/18 05:54	04/12/18 16:12	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/12/18 05:54	04/12/18 16:12	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/12/18 05:54	04/12/18 16:12	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/12/18 05:54	04/12/18 16:12	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/12/18 05:54	04/12/18 16:12	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/12/18 05:54	04/12/18 16:12	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/12/18 05:54	04/12/18 16:12	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/12/18 05:54	04/12/18 16:12	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/12/18 05:54	04/12/18 16:12	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/12/18 05:54	04/12/18 16:12	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/12/18 05:54	04/12/18 16:12	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/12/18 05:54	04/12/18 16:12	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/12/18 05:54	04/12/18 16:12	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/12/18 05:54	04/12/18 16:12	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/12/18 05:54	04/12/18 16:12	1
Isophorone	0.80	U	10	0.80	ug/L		04/12/18 05:54	04/12/18 16:12	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/12/18 05:54	04/12/18 16:12	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/12/18 05:54	04/12/18 16:12	1
Naphthalene	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 16:12	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/12/18 05:54	04/12/18 16:12	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/12/18 05:54	04/12/18 16:12	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 16:12	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/12/18 05:54	04/12/18 16:12	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/12/18 05:54	04/12/18 16:12	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/12/18 05:54	04/12/18 16:12	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/12/18 05:54	04/12/18 16:12	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/12/18 05:54	04/12/18 16:12	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/12/18 05:54	04/12/18 16:12	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/12/18 05:54	04/12/18 16:12	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 16:12	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 16:12	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/12/18 05:54	04/12/18 16:12	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/12/18 05:54	04/12/18 16:12	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/12/18 05:54	04/12/18 16:12	1
Fluorene	0.91	U	10	0.91	ug/L		04/12/18 05:54	04/12/18 16:12	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/12/18 05:54	04/12/18 16:12	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/12/18 05:54	04/12/18 16:12	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/12/18 05:54	04/12/18 16:12	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/12/18 05:54	04/12/18 16:12	1
Anthracene	0.63	U	10	0.63	ug/L		04/12/18 05:54	04/12/18 16:12	1
Carbazole	0.68	U	10	0.68	ug/L		04/12/18 05:54	04/12/18 16:12	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/12/18 05:54	04/12/18 16:12	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/12/18 05:54	04/12/18 16:12	1
Pyrene	1.6	U	10	1.6	ug/L		04/12/18 05:54	04/12/18 16:12	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/12/18 05:54	04/12/18 16:12	1

Client Sample ID: DDA-11-US

Lab Sample ID: 460-153700-1

Date Collected: 04/10/18 09:10
Matrix: Water
Date Received: 04/10/18 19:45

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/12/18 05:54	04/12/18 16:12	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/12/18 05:54	04/12/18 16:12	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/12/18 05:54	04/12/18 16:12	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/12/18 05:54	04/12/18 16:12	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/12/18 05:54	04/12/18 16:12	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/12/18 05:54	04/12/18 16:12	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/12/18 05:54	04/12/18 16:12	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/12/18 05:54	04/12/18 16:12	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/12/18 05:54	04/12/18 16:12	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/12/18 05:54	04/12/18 16:12	1
Caprolactam	0.68	U	10	0.68	ug/L		04/12/18 05:54	04/12/18 16:12	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/12/18 05:54	04/12/18 16:12	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/12/18 05:54	04/12/18 16:12	1
N-Methylaniline	0.48	~~U~~ UJ	5.0	0.48	ug/L		04/12/18 05:54	04/12/18 16:12	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/12/18 05:54*	*04/12/18 16:12*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*117*	*X*	*51 - 108*	*04/12/18 05:54*	*04/12/18 16:12*	*1*
Phenol-d5	*25*		*14 - 39*	*04/12/18 05:54*	*04/12/18 16:12*	*1*
Terphenyl-d14	*117*		*40 - 148*	*04/12/18 05:54*	*04/12/18 16:12*	*1*
2,4,6-Tribromophenol	*105*		*26 - 139*	*04/12/18 05:54*	*04/12/18 16:12*	*1*
2-Fluorophenol	*40*		*25 - 58*	*04/12/18 05:54*	*04/12/18 16:12*	*1*
2-Fluorobiphenyl	*106*		*45 - 107*	*04/12/18 05:54*	*04/12/18 16:12*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/12/18 08:17	04/12/18 14:48	5
Aluminum	**34.7**	**J**	50.0	28.5	ug/L		04/12/18 08:17	04/12/18 14:48	5
Arsenic	**2.9**		2.5	1.5	ug/L		04/12/18 08:17	04/12/18 14:48	5
Barium	**123**		5.0	3.2	ug/L		04/12/18 08:17	04/12/18 14:48	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/12/18 08:17	04/12/18 14:48	5
Calcium	**10700**		250	233	ug/L		04/12/18 08:17	04/12/18 14:48	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/12/18 08:17	04/12/18 14:48	5
Cobalt	3.1	U	5.0	3.1	ug/L		04/12/18 08:17	04/12/18 14:48	5
Chromium	**5.6**		5.0	3.1	ug/L		04/12/18 08:17	04/12/18 14:48	5
Copper	3.3	U	5.0	3.3	ug/L		04/12/18 08:17	04/12/18 14:48	5
Iron	**38000**		150	97.8	ug/L		04/12/18 08:17	04/12/18 14:48	5
Potassium	**2620**		250	143	ug/L		04/12/18 08:17	04/12/18 14:48	5
Magnesium	**5720**		250	155	ug/L		04/12/18 08:17	04/12/18 14:48	5
Manganese	**1180**		10.0	6.1	ug/L		04/12/18 08:17	04/12/18 14:48	5
Sodium	**13900**		250	213	ug/L		04/12/18 08:17	04/12/18 14:48	5
Nickel	**3.2**	**J**	5.0	3.1	ug/L		04/12/18 08:17	04/12/18 14:48	5
Lead	0.93	U	1.5	0.93	ug/L		04/12/18 08:17	04/12/18 14:48	5
Antimony	1.4	U	2.5	1.4	ug/L		04/12/18 08:17	04/12/18 14:48	5
Selenium	1.4	U	2.5	1.4	ug/L		04/12/18 08:17	04/12/18 14:48	5
Thallium	0.60	U	1.0	0.60	ug/L		04/12/18 08:17	04/12/18 14:48	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/12/18 08:17	04/12/18 14:48	5
Zinc	16.3	U	20.0	16.3	ug/L		04/12/18 08:17	04/12/18 14:48	5

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G Groundwater

TestAmerica Job ID: 460-153612-1
SDG: 153612

Client Sample ID: DDA-11-US

Lab Sample ID: 460-153700-1
Matrix: Water

Date Collected: 04/10/18 09:10
Date Received: 04/10/18 19:45

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/13/18 11:55	04/13/18 14:04	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**44400**		150	92.1	ug/L		04/12/18 08:18	04/12/18 15:41	1
Manganese, Dissolved	**1170**		15.0	3.1	ug/L		04/12/18 08:18	04/12/18 15:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.69**		0.10	0.045	mg/L		04/15/18 16:56	04/16/18 12:41	1

Client Sample ID: DDA-17

Lab Sample ID: 460-153700-2
Matrix: Water

Date Collected: 04/10/18 09:25
Date Received: 04/10/18 19:45

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.98**		0.40	0.20	ug/L			04/11/18 14:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*72 - 133*		*04/11/18 14:35*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*71 - 144*		*04/11/18 14:35*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/14/18 06:54	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/14/18 06:54	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/14/18 06:54	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/14/18 06:54	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/14/18 06:54	1
Acetone	1.1	U	5.0	1.1	ug/L			04/14/18 06:54	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/14/18 06:54	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/14/18 06:54	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/14/18 06:54	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/14/18 06:54	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/14/18 06:54	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/14/18 06:54	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/14/18 06:54	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/14/18 06:54	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/14/18 06:54	1
Carbon tetrachloride	0.33	~~U~~ * UJ	1.0	0.33	ug/L			04/14/18 06:54	1
Bromodichloromethane	0.15	~~U~~ * UJ	1.0	0.15	ug/L			04/14/18 06:54	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/14/18 06:54	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/14/18 06:54	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/14/18 06:54	1
Dibromochloromethane	0.22	~~U~~ * UJ	1.0	0.22	ug/L			04/14/18 06:54	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/14/18 06:54	1
Benzene	0.090	U	1.0	0.090	ug/L			04/14/18 06:54	1
trans-1,3-Dichloropropene	0.19	~~U~~ * UJ	1.0	0.19	ug/L			04/14/18 06:54	1
Bromoform	0.18	~~U~~ * UJ	1.0	0.18	ug/L			04/14/18 06:54	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/14/18 06:54	1

Client Sample ID: DDA-17

Lab Sample ID: 460-153700-2

Date Collected: 04/10/18 09:25
Date Received: 04/10/18 19:45

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/14/18 06:54	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/14/18 06:54	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/14/18 06:54	1
Toluene	0.25	U	1.0	0.25	ug/L			04/14/18 06:54	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/14/18 06:54	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/14/18 06:54	1
Styrene	0.17	U	1.0	0.17	ug/L			04/14/18 06:54	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/14/18 06:54	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/14/18 06:54	1
MTBE	**0.41**	**J**	1.0	0.13	ug/L			04/14/18 06:54	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/14/18 06:54	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/14/18 06:54	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/14/18 06:54	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/14/18 06:54	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/14/18 06:54	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/14/18 06:54	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/14/18 06:54	1
Indane	0.12	U	1.0	0.12	ug/L			04/14/18 06:54	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/14/18 06:54	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/14/18 06:54	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/14/18 06:54*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*74 - 132*		*04/14/18 06:54*	*1*
Bromofluorobenzene	*86*		*77 - 124*		*04/14/18 06:54*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*04/14/18 06:54*	*1*
Dibromofluoromethane (Surr)	*92*		*72 - 131*		*04/14/18 06:54*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/12/18 05:54	04/13/18 13:12	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/12/18 05:54	04/13/18 13:12	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/12/18 05:54	04/13/18 13:12	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/12/18 05:54	04/13/18 13:12	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/12/18 05:54	04/13/18 13:12	1
Bis(2-chloroethyl)ether	0.026	U	0.030	0.026	ug/L		04/12/18 05:54	04/13/18 13:12	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/12/18 05:54	04/12/18 16:34	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/12/18 05:54	04/12/18 16:34	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/12/18 05:54	04/12/18 16:34	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/12/18 05:54	04/12/18 16:34	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/12/18 05:54	04/12/18 16:34	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/12/18 05:54	04/12/18 16:34	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/12/18 05:54	04/12/18 16:34	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/12/18 05:54	04/12/18 16:34	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/12/18 05:54	04/12/18 16:34	1

Client Sample ID: DDA-17

Date Collected: 04/10/18 09:25
Date Received: 04/10/18 19:45

Lab Sample ID: 460-153700-2
Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/12/18 05:54	04/12/18 16:34	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/12/18 05:54	04/12/18 16:34	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/12/18 05:54	04/12/18 16:34	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/12/18 05:54	04/12/18 16:34	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/12/18 05:54	04/12/18 16:34	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/12/18 05:54	04/12/18 16:34	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/12/18 05:54	04/12/18 16:34	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/12/18 05:54	04/12/18 16:34	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/12/18 05:54	04/12/18 16:34	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/12/18 05:54	04/12/18 16:34	1
Isophorone	0.80	U	10	0.80	ug/L		04/12/18 05:54	04/12/18 16:34	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/12/18 05:54	04/12/18 16:34	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/12/18 05:54	04/12/18 16:34	1
Naphthalene	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 16:34	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/12/18 05:54	04/12/18 16:34	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/12/18 05:54	04/12/18 16:34	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 16:34	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/12/18 05:54	04/12/18 16:34	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/12/18 05:54	04/12/18 16:34	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/12/18 05:54	04/12/18 16:34	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/12/18 05:54	04/12/18 16:34	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/12/18 05:54	04/12/18 16:34	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/12/18 05:54	04/12/18 16:34	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/12/18 05:54	04/12/18 16:34	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 16:34	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 16:34	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/12/18 05:54	04/12/18 16:34	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/12/18 05:54	04/12/18 16:34	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/12/18 05:54	04/12/18 16:34	1
Fluorene	0.91	U	10	0.91	ug/L		04/12/18 05:54	04/12/18 16:34	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/12/18 05:54	04/12/18 16:34	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/12/18 05:54	04/12/18 16:34	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/12/18 05:54	04/12/18 16:34	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/12/18 05:54	04/12/18 16:34	1
Anthracene	0.63	U	10	0.63	ug/L		04/12/18 05:54	04/12/18 16:34	1
Carbazole	0.68	U	10	0.68	ug/L		04/12/18 05:54	04/12/18 16:34	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/12/18 05:54	04/12/18 16:34	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/12/18 05:54	04/12/18 16:34	1
Pyrene	1.6	U	10	1.6	ug/L		04/12/18 05:54	04/12/18 16:34	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/12/18 05:54	04/12/18 16:34	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/12/18 05:54	04/12/18 16:34	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/12/18 05:54	04/12/18 16:34	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/12/18 05:54	04/12/18 16:34	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/12/18 05:54	04/12/18 16:34	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/12/18 05:54	04/12/18 16:34	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/12/18 05:54	04/12/18 16:34	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/12/18 05:54	04/12/18 16:34	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/12/18 05:54	04/12/18 16:34	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/12/18 05:54	04/12/18 16:34	1

Client Sample ID: DDA-17

Lab Sample ID: 460-153700-2

Date Collected: 04/10/18 09:25
Date Received: 04/10/18 19:45

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/12/18 05:54	04/12/18 16:34	1
Caprolactam	0.68	U	10	0.68	ug/L		04/12/18 05:54	04/12/18 16:34	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/12/18 05:54	04/12/18 16:34	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/12/18 05:54	04/12/18 16:34	1
N-Methylaniline	0.48	~~U~~ UJ	5.0	0.48	ug/L		04/12/18 05:54	04/12/18 16:34	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/12/18 05:54*	*04/12/18 16:34*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*116*	*X*	*51 - 108*	*04/12/18 05:54*	*04/12/18 16:34*	*1*
Phenol-d5	*34*		*14 - 39*	*04/12/18 05:54*	*04/12/18 16:34*	*1*
Terphenyl-d14	*115*		*40 - 148*	*04/12/18 05:54*	*04/12/18 16:34*	*1*
2,4,6-Tribromophenol	*121*		*26 - 139*	*04/12/18 05:54*	*04/12/18 16:34*	*1*
2-Fluorophenol	*56*		*25 - 58*	*04/12/18 05:54*	*04/12/18 16:34*	*1*
2-Fluorobiphenyl	*106*		*45 - 107*	*04/12/18 05:54*	*04/12/18 16:34*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/12/18 08:17	04/12/18 14:50	5
Aluminum	**135**		50.0	28.5	ug/L		04/12/18 08:17	04/12/18 14:50	5
Arsenic	**2.6**		2.5	1.5	ug/L		04/12/18 08:17	04/12/18 14:50	5
Barium	**1480**		5.0	3.2	ug/L		04/12/18 08:17	04/12/18 14:50	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/12/18 08:17	04/12/18 14:50	5
Calcium	**11100**		250	233	ug/L		04/12/18 08:17	04/12/18 14:50	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/12/18 08:17	04/12/18 14:50	5
Cobalt	**16.0**		5.0	3.1	ug/L		04/12/18 08:17	04/12/18 14:50	5
Chromium	3.1	U	5.0	3.1	ug/L		04/12/18 08:17	04/12/18 14:50	5
Copper	3.3	U	5.0	3.3	ug/L		04/12/18 08:17	04/12/18 14:50	5
Iron	**50900**		150	97.8	ug/L		04/12/18 08:17	04/12/18 14:50	5
Potassium	**2710**		250	143	ug/L		04/12/18 08:17	04/12/18 14:50	5
Magnesium	**12500**		250	155	ug/L		04/12/18 08:17	04/12/18 14:50	5
Manganese	**693**		10.0	6.1	ug/L		04/12/18 08:17	04/12/18 14:50	5
Sodium	**35200**		250	213	ug/L		04/12/18 08:17	04/12/18 14:50	5
Nickel	3.1	U	5.0	3.1	ug/L		04/12/18 08:17	04/12/18 14:50	5
Lead	0.93	U	1.5	0.93	ug/L		04/12/18 08:17	04/12/18 14:50	5
Antimony	1.4	U	2.5	1.4	ug/L		04/12/18 08:17	04/12/18 14:50	5
Selenium	1.4	U	2.5	1.4	ug/L		04/12/18 08:17	04/12/18 14:50	5
Thallium	0.60	U	1.0	0.60	ug/L		04/12/18 08:17	04/12/18 14:50	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/12/18 08:17	04/12/18 14:50	5
Zinc	16.3	U	20.0	16.3	ug/L		04/12/18 08:17	04/12/18 14:50	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/13/18 11:55	04/13/18 14:06	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**58400**		150	92.1	ug/L		04/12/18 08:18	04/12/18 15:45	1
Manganese, Dissolved	**696**		15.0	3.1	ug/L		04/12/18 08:18	04/12/18 15:45	1

Client Sample ID: DDA-17

Lab Sample ID: 460-153700-2

Date Collected: 04/10/18 09:25
Date Received: 04/10/18 19:45

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.75**		0.25	0.11	mg/L		04/15/18 16:56	04/16/18 12:42	1

Client Sample ID: DDA-11-LS

Lab Sample ID: 460-153700-3

Date Collected: 04/10/18 10:35
Date Received: 04/10/18 19:45

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.51**		0.40	0.20	ug/L			04/11/18 14:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*72 - 133*		*04/11/18 14:58*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*71 - 144*		*04/11/18 14:58*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/14/18 07:17	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/14/18 07:17	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/14/18 07:17	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/14/18 07:17	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/14/18 07:17	1
Acetone	**6.9**		5.0	1.1	ug/L			04/14/18 07:17	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/14/18 07:17	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/14/18 07:17	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/14/18 07:17	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/14/18 07:17	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/14/18 07:17	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/14/18 07:17	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/14/18 07:17	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/14/18 07:17	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/14/18 07:17	1
Carbon tetrachloride	0.33	~~U~~ * UJ	1.0	0.33	ug/L			04/14/18 07:17	1
Bromodichloromethane	0.15	~~U~~ * UJ	1.0	0.15	ug/L			04/14/18 07:17	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/14/18 07:17	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/14/18 07:17	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/14/18 07:17	1
Dibromochloromethane	0.22	~~U~~ * UJ	1.0	0.22	ug/L			04/14/18 07:17	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/14/18 07:17	1
Benzene	0.090	U	1.0	0.090	ug/L			04/14/18 07:17	1
trans-1,3-Dichloropropene	0.19	~~U~~ * UJ	1.0	0.19	ug/L			04/14/18 07:17	1
Bromoform	0.18	~~U~~ * UJ	1.0	0.18	ug/L			04/14/18 07:17	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/14/18 07:17	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/14/18 07:17	1
Tetrachloroethene	**4.3**		1.0	0.12	ug/L			04/14/18 07:17	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/14/18 07:17	1
Toluene	0.25	U	1.0	0.25	ug/L			04/14/18 07:17	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/14/18 07:17	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/14/18 07:17	1
Styrene	0.17	U	1.0	0.17	ug/L			04/14/18 07:17	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/14/18 07:17	1

Client Sample ID: DDA-11-LS

Lab Sample ID: 460-153700-3

Date Collected: 04/10/18 10:35
Date Received: 04/10/18 19:45

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/14/18 07:17	1
MTBE	**0.32**	**J**	1.0	0.13	ug/L			04/14/18 07:17	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/14/18 07:17	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/14/18 07:17	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/14/18 07:17	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/14/18 07:17	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/14/18 07:17	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/14/18 07:17	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/14/18 07:17	1
Indane	0.12	U	1.0	0.12	ug/L			04/14/18 07:17	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/14/18 07:17	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/14/18 07:17	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/14/18 07:17*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*74 - 132*		*04/14/18 07:17*	*1*
Bromofluorobenzene	*86*		*77 - 124*		*04/14/18 07:17*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*04/14/18 07:17*	*1*
Dibromofluoromethane (Surr)	*94*		*72 - 131*		*04/14/18 07:17*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	**0.048**	**J**	0.050	0.016	ug/L		04/12/18 05:54	04/13/18 13:34	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/12/18 05:54	04/13/18 13:34	1
Benzo[b]fluoranthene	**0.057**		0.050	0.024	ug/L		04/12/18 05:54	04/13/18 13:34	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/12/18 05:54	04/13/18 13:34	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/12/18 05:54	04/13/18 13:34	1
Bis(2-chloroethyl)ether	0.026	U	0.030	0.026	ug/L		04/12/18 05:54	04/13/18 13:34	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/12/18 05:54	04/12/18 16:55	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/12/18 05:54	04/12/18 16:55	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/12/18 05:54	04/12/18 16:55	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/12/18 05:54	04/12/18 16:55	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/12/18 05:54	04/12/18 16:55	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/12/18 05:54	04/12/18 16:55	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/12/18 05:54	04/12/18 16:55	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/12/18 05:54	04/12/18 16:55	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/12/18 05:54	04/12/18 16:55	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/12/18 05:54	04/12/18 16:55	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/12/18 05:54	04/12/18 16:55	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/12/18 05:54	04/12/18 16:55	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/12/18 05:54	04/12/18 16:55	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/12/18 05:54	04/12/18 16:55	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/12/18 05:54	04/12/18 16:55	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/12/18 05:54	04/12/18 16:55	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/12/18 05:54	04/12/18 16:55	1

Client Sample ID: DDA-11-LS

Lab Sample ID: 460-153700-3

Date Collected: 04/10/18 10:35
Date Received: 04/10/18 19:45

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/12/18 05:54	04/12/18 16:55	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/12/18 05:54	04/12/18 16:55	1
Isophorone	0.80	U	10	0.80	ug/L		04/12/18 05:54	04/12/18 16:55	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/12/18 05:54	04/12/18 16:55	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/12/18 05:54	04/12/18 16:55	1
Naphthalene	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 16:55	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/12/18 05:54	04/12/18 16:55	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/12/18 05:54	04/12/18 16:55	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 16:55	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/12/18 05:54	04/12/18 16:55	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/12/18 05:54	04/12/18 16:55	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/12/18 05:54	04/12/18 16:55	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/12/18 05:54	04/12/18 16:55	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/12/18 05:54	04/12/18 16:55	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/12/18 05:54	04/12/18 16:55	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/12/18 05:54	04/12/18 16:55	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 16:55	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 16:55	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/12/18 05:54	04/12/18 16:55	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/12/18 05:54	04/12/18 16:55	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/12/18 05:54	04/12/18 16:55	1
Fluorene	0.91	U	10	0.91	ug/L		04/12/18 05:54	04/12/18 16:55	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/12/18 05:54	04/12/18 16:55	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/12/18 05:54	04/12/18 16:55	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/12/18 05:54	04/12/18 16:55	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/12/18 05:54	04/12/18 16:55	1
Anthracene	0.63	U	10	0.63	ug/L		04/12/18 05:54	04/12/18 16:55	1
Carbazole	0.68	U	10	0.68	ug/L		04/12/18 05:54	04/12/18 16:55	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/12/18 05:54	04/12/18 16:55	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/12/18 05:54	04/12/18 16:55	1
Pyrene	1.6	U	10	1.6	ug/L		04/12/18 05:54	04/12/18 16:55	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/12/18 05:54	04/12/18 16:55	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/12/18 05:54	04/12/18 16:55	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/12/18 05:54	04/12/18 16:55	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/12/18 05:54	04/12/18 16:55	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/12/18 05:54	04/12/18 16:55	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/12/18 05:54	04/12/18 16:55	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/12/18 05:54	04/12/18 16:55	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/12/18 05:54	04/12/18 16:55	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/12/18 05:54	04/12/18 16:55	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/12/18 05:54	04/12/18 16:55	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/12/18 05:54	04/12/18 16:55	1
Caprolactam	0.68	U	10	0.68	ug/L		04/12/18 05:54	04/12/18 16:55	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/12/18 05:54	04/12/18 16:55	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/12/18 05:54	04/12/18 16:55	1
N-Methylaniline	0.48	~~U~~ UJ	5.0	0.48	ug/L		04/12/18 05:54	04/12/18 16:55	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/12/18 05:54*	*04/12/18 16:55*	*1*

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G Groundwater

TestAmerica Job ID: 460-153612-1
SDG: 153612

Client Sample ID: DDA-11-LS

Lab Sample ID: 460-153700-3

Date Collected: 04/10/18 10:35
Date Received: 04/10/18 19:45

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*107*		*51 - 108*	*04/12/18 05:54*	*04/12/18 16:55*	*1*
Phenol-d5	*29*		*14 - 39*	*04/12/18 05:54*	*04/12/18 16:55*	*1*
Terphenyl-d14	*108*		*40 - 148*	*04/12/18 05:54*	*04/12/18 16:55*	*1*
2,4,6-Tribromophenol	*114*		*26 - 139*	*04/12/18 05:54*	*04/12/18 16:55*	*1*
2-Fluorophenol	*49*		*25 - 58*	*04/12/18 05:54*	*04/12/18 16:55*	*1*
2-Fluorobiphenyl	*102*		*45 - 107*	*04/12/18 05:54*	*04/12/18 16:55*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/12/18 08:17	04/12/18 14:53	5
Aluminum	**34.0**	**J**	50.0	28.5	ug/L		04/12/18 08:17	04/12/18 14:53	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/12/18 08:17	04/12/18 14:53	5
Barium	**82.8**		5.0	3.2	ug/L		04/12/18 08:17	04/12/18 14:53	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/12/18 08:17	04/12/18 14:53	5
Calcium	**21500**		250	233	ug/L		04/12/18 08:17	04/12/18 14:53	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/12/18 08:17	04/12/18 14:53	5
Cobalt	3.1	U	5.0	3.1	ug/L		04/12/18 08:17	04/12/18 14:53	5
Chromium	3.1	U	5.0	3.1	ug/L		04/12/18 08:17	04/12/18 14:53	5
Copper	3.3	U	5.0	3.3	ug/L		04/12/18 08:17	04/12/18 14:53	5
Iron	97.8	U	150	97.8	ug/L		04/12/18 08:17	04/12/18 14:53	5
Potassium	**3160**		250	143	ug/L		04/12/18 08:17	04/12/18 14:53	5
Magnesium	**9220**		250	155	ug/L		04/12/18 08:17	04/12/18 14:53	5
Manganese	6.1	U	10.0	6.1	ug/L		04/12/18 08:17	04/12/18 14:53	5
Sodium	**19400**		250	213	ug/L		04/12/18 08:17	04/12/18 14:53	5
Nickel	**5.8**		5.0	3.1	ug/L		04/12/18 08:17	04/12/18 14:53	5
Lead	0.93	U	1.5	0.93	ug/L		04/12/18 08:17	04/12/18 14:53	5
Antimony	1.4	U	2.5	1.4	ug/L		04/12/18 08:17	04/12/18 14:53	5
Selenium	1.4	U	2.5	1.4	ug/L		04/12/18 08:17	04/12/18 14:53	5
Thallium	0.60	U	1.0	0.60	ug/L		04/12/18 08:17	04/12/18 14:53	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/12/18 08:17	04/12/18 14:53	5
Zinc	16.3	U	20.0	16.3	ug/L		04/12/18 08:17	04/12/18 14:53	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/13/18 11:55	04/13/18 14:07	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	92.1	U	150	92.1	ug/L		04/12/18 08:18	04/12/18 15:49	1
Manganese, Dissolved	3.1	U	15.0	3.1	ug/L		04/12/18 08:18	04/12/18 15:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	0.045	U	0.10	0.045	mg/L		04/15/18 16:56	04/16/18 12:44	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G Groundwater

TestAmerica Job ID: 460-153612-1
SDG: 153612

Client Sample ID: DDA-06

Lab Sample ID: 460-153700-4

Date Collected: 04/10/18 10:50
Date Received: 04/10/18 19:45

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/14/18 07:40	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/14/18 07:40	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/14/18 07:40	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/14/18 07:40	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/14/18 07:40	1
Acetone	1.1	U	5.0	1.1	ug/L			04/14/18 07:40	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/14/18 07:40	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/14/18 07:40	1
1,1-Dichloroethane	**0.25**	**J**	1.0	0.24	ug/L			04/14/18 07:40	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/14/18 07:40	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/14/18 07:40	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/14/18 07:40	1
1,2-Dichloroethane	**0.40**	**J**	1.0	0.25	ug/L			04/14/18 07:40	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/14/18 07:40	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/14/18 07:40	1
Carbon tetrachloride	0.33	~~U~~ ← UJ	1.0	0.33	ug/L			04/14/18 07:40	1
Bromodichloromethane	0.15	~~U~~ ← UJ	1.0	0.15	ug/L			04/14/18 07:40	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/14/18 07:40	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/14/18 07:40	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/14/18 07:40	1
Dibromochloromethane	0.22	~~U~~ ← UJ	1.0	0.22	ug/L			04/14/18 07:40	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/14/18 07:40	1
Benzene	**12**		1.0	0.090	ug/L			04/14/18 07:40	1
trans-1,3-Dichloropropene	0.19	~~U~~ ← UJ	1.0	0.19	ug/L			04/14/18 07:40	1
Bromoform	0.18	~~U~~ ← UJ	1.0	0.18	ug/L			04/14/18 07:40	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/14/18 07:40	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/14/18 07:40	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/14/18 07:40	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/14/18 07:40	1
Toluene	0.25	U	1.0	0.25	ug/L			04/14/18 07:40	1
Chlorobenzene	**2.8**		1.0	0.24	ug/L			04/14/18 07:40	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/14/18 07:40	1
Styrene	0.17	U	1.0	0.17	ug/L			04/14/18 07:40	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/14/18 07:40	1
Ethyl ether	**0.38**	**J**	1.0	0.11	ug/L			04/14/18 07:40	1
MTBE	**0.16**	**J**	1.0	0.13	ug/L			04/14/18 07:40	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/14/18 07:40	1
Cyclohexane	**1.2**		1.0	0.26	ug/L			04/14/18 07:40	1
1,4-Dioxane	**72**		50	8.7	ug/L			04/14/18 07:40	1
1,2,4-Trimethylbenzene	**0.95**	**J**	1.0	0.23	ug/L			04/14/18 07:40	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/14/18 07:40	1
Isopropylbenzene	**24**		1.0	0.32	ug/L			04/14/18 07:40	1
N-Propylbenzene	**18**		1.0	0.29	ug/L			04/14/18 07:40	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/14/18 07:40	1
Indane	**37**		1.0	0.12	ug/L			04/14/18 07:40	1
Dichlorofluoromethane	**0.73**	**J**	1.0	0.21	ug/L			04/14/18 07:40	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/14/18 07:40	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclopentane, 1,1-dimethyl-	*8.6*	*J N*	*ug/L*		*4.71*	*1638-26-2*		*04/14/18 07:40*	*1*

Client Sample ID: DDA-06

Lab Sample ID: 460-153700-4

Date Collected: 04/10/18 10:50
Date Received: 04/10/18 19:45

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	9.4	J	ug/L		4.87			04/14/18 07:40	1
Cycloheptane	6.7	J N	ug/L		5.73	291-64-5		04/14/18 07:40	1
1,4-Benzenediol, diacetate	8.6	J N	ug/L		13.61	1205-91-0		04/14/18 07:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		74 - 132		04/14/18 07:40	1
Bromofluorobenzene	88		77 - 124		04/14/18 07:40	1
Toluene-d8 (Surr)	100		80 - 120		04/14/18 07:40	1
Dibromofluoromethane (Surr)	94		72 - 131		04/14/18 07:40	1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/12/18 05:54	04/13/18 13:55	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/12/18 05:54	04/13/18 13:55	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/12/18 05:54	04/13/18 13:55	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/12/18 05:54	04/13/18 13:55	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/12/18 05:54	04/13/18 13:55	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/12/18 05:54	04/12/18 17:17	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/12/18 05:54	04/12/18 17:17	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/12/18 05:54	04/12/18 17:17	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/12/18 05:54	04/12/18 17:17	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/12/18 05:54	04/12/18 17:17	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/12/18 05:54	04/12/18 17:17	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/12/18 05:54	04/12/18 17:17	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/12/18 05:54	04/12/18 17:17	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/12/18 05:54	04/12/18 17:17	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/12/18 05:54	04/12/18 17:17	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/12/18 05:54	04/12/18 17:17	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/12/18 05:54	04/12/18 17:17	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/12/18 05:54	04/12/18 17:17	1
Bis(2-chloroethyl)ether	**12**		1.0	0.30	ug/L		04/12/18 05:54	04/12/18 17:17	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/12/18 05:54	04/12/18 17:17	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/12/18 05:54	04/12/18 17:17	1
1,2-Dichlorobenzene	**2.8**	**J**	10	1.3	ug/L		04/12/18 05:54	04/12/18 17:17	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/12/18 05:54	04/12/18 17:17	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/12/18 05:54	04/12/18 17:17	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/12/18 05:54	04/12/18 17:17	1
Isophorone	0.80	U	10	0.80	ug/L		04/12/18 05:54	04/12/18 17:17	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/12/18 05:54	04/12/18 17:17	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/12/18 05:54	04/12/18 17:17	1
Naphthalene	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 17:17	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/12/18 05:54	04/12/18 17:17	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/12/18 05:54	04/12/18 17:17	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 17:17	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/12/18 05:54	04/12/18 17:17	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/12/18 05:54	04/12/18 17:17	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/12/18 05:54	04/12/18 17:17	1

Client Sample ID: DDA-06

Date Collected: 04/10/18 10:50
Date Received: 04/10/18 19:45

Lab Sample ID: 460-153700-4

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/12/18 05:54	04/12/18 17:17	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/12/18 05:54	04/12/18 17:17	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/12/18 05:54	04/12/18 17:17	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/12/18 05:54	04/12/18 17:17	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 17:17	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 17:17	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/12/18 05:54	04/12/18 17:17	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/12/18 05:54	04/12/18 17:17	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/12/18 05:54	04/12/18 17:17	1
Fluorene	0.91	U	10	0.91	ug/L		04/12/18 05:54	04/12/18 17:17	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/12/18 05:54	04/12/18 17:17	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/12/18 05:54	04/12/18 17:17	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/12/18 05:54	04/12/18 17:17	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/12/18 05:54	04/12/18 17:17	1
Anthracene	0.63	U	10	0.63	ug/L		04/12/18 05:54	04/12/18 17:17	1
Carbazole	0.68	U	10	0.68	ug/L		04/12/18 05:54	04/12/18 17:17	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/12/18 05:54	04/12/18 17:17	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/12/18 05:54	04/12/18 17:17	1
Pyrene	1.6	U	10	1.6	ug/L		04/12/18 05:54	04/12/18 17:17	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/12/18 05:54	04/12/18 17:17	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/12/18 05:54	04/12/18 17:17	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/12/18 05:54	04/12/18 17:17	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/12/18 05:54	04/12/18 17:17	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/12/18 05:54	04/12/18 17:17	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/12/18 05:54	04/12/18 17:17	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/12/18 05:54	04/12/18 17:17	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/12/18 05:54	04/12/18 17:17	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/12/18 05:54	04/12/18 17:17	1
Diphenyl ether	**8.2**	**J**	10	1.2	ug/L		04/12/18 05:54	04/12/18 17:17	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/12/18 05:54	04/12/18 17:17	1
Caprolactam	0.68	U	10	0.68	ug/L		04/12/18 05:54	04/12/18 17:17	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/12/18 05:54	04/12/18 17:17	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/12/18 05:54	04/12/18 17:17	1
N-Methylaniline	**1.2**	**J**	5.0	0.48	ug/L		04/12/18 05:54	04/12/18 17:17	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane	*15*	*J N*	*ug/L*		*1.63*	*123-91-1*	*04/12/18 05:54*	*04/12/18 17:17*	*1*
Benzene, (1-methylethyl)-	*24*	*J N*	*ug/L*		*3.26*	*98-82-8*	*04/12/18 05:54*	*04/12/18 17:17*	*1*
1,4-Benzenediol, diacetate	*25*	*J N*	*ug/L*		*5.68*	*1205-91-0*	*04/12/18 05:54*	*04/12/18 17:17*	*1*
Unknown	*6.6*	*J*	*ug/L*		*5.85*		*04/12/18 05:54*	*04/12/18 17:17*	*1*
Unknown	*110*	*J*	*ug/L*		*6.69*		*04/12/18 05:54*	*04/12/18 17:17*	*1*
Urea, N,N'-dimethyl-N,N'-diphenyl-	*6.6*	*J N*	*ug/L*		*8.45*	*611-92-7*	*04/12/18 05:54*	*04/12/18 17:17*	*1*
Unknown	*8.6*	*J*	*ug/L*		*11.74*		*04/12/18 05:54*	*04/12/18 17:17*	*1*
Unknown	*7.9*	*J*	*ug/L*		*11.90*		*04/12/18 05:54*	*04/12/18 17:17*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*105*		*51 - 108*	*04/12/18 05:54*	*04/12/18 17:17*	*1*
Phenol-d5	*28*		*14 - 39*	*04/12/18 05:54*	*04/12/18 17:17*	*1*
Terphenyl-d14	*113*		*40 - 148*	*04/12/18 05:54*	*04/12/18 17:17*	*1*
2,4,6-Tribromophenol	*117*		*26 - 139*	*04/12/18 05:54*	*04/12/18 17:17*	*1*

Client Sample ID: DDA-06

Lab Sample ID: 460-153700-4
Matrix: Water

Date Collected: 04/10/18 10:50
Date Received: 04/10/18 19:45

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol	*47*		*25 - 58*	*04/12/18 05:54*	*04/12/18 17:17*	*1*
2-Fluorobiphenyl	*99*		*45 - 107*	*04/12/18 05:54*	*04/12/18 17:17*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/12/18 08:17	04/12/18 14:55	5
Aluminum	**153**		50.0	28.5	ug/L		04/12/18 08:17	04/12/18 14:55	5
Arsenic	**1.5**	**J**	2.5	1.5	ug/L		04/12/18 08:17	04/12/18 14:55	5
Barium	**578**		5.0	3.2	ug/L		04/12/18 08:17	04/12/18 14:55	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/12/18 08:17	04/12/18 14:55	5
Calcium	**12700**		250	233	ug/L		04/12/18 08:17	04/12/18 14:55	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/12/18 08:17	04/12/18 14:55	5
Cobalt	3.1	U	5.0	3.1	ug/L		04/12/18 08:17	04/12/18 14:55	5
Chromium	**5.1**		5.0	3.1	ug/L		04/12/18 08:17	04/12/18 14:55	5
Copper	3.3	U	5.0	3.3	ug/L		04/12/18 08:17	04/12/18 14:55	5
Iron	**618**		150	97.8	ug/L		04/12/18 08:17	04/12/18 14:55	5
Potassium	**3480**		250	143	ug/L		04/12/18 08:17	04/12/18 14:55	5
Magnesium	**31900**		250	155	ug/L		04/12/18 08:17	04/12/18 14:55	5
Manganese	**150**		10.0	6.1	ug/L		04/12/18 08:17	04/12/18 14:55	5
Sodium	**29500**		250	213	ug/L		04/12/18 08:17	04/12/18 14:55	5
Nickel	**9.1**		5.0	3.1	ug/L		04/12/18 08:17	04/12/18 14:55	5
Lead	0.93	U	1.5	0.93	ug/L		04/12/18 08:17	04/12/18 14:55	5
Antimony	1.4	U	2.5	1.4	ug/L		04/12/18 08:17	04/12/18 14:55	5
Selenium	1.4	U	2.5	1.4	ug/L		04/12/18 08:17	04/12/18 14:55	5
Thallium	0.60	U	1.0	0.60	ug/L		04/12/18 08:17	04/12/18 14:55	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/12/18 08:17	04/12/18 14:55	5
Zinc	16.3	U	20.0	16.3	ug/L		04/12/18 08:17	04/12/18 14:55	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/13/18 11:55	04/13/18 14:09	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**268**		150	92.1	ug/L		04/12/18 08:18	04/12/18 15:53	1
Manganese, Dissolved	**181**		15.0	3.1	ug/L		04/12/18 08:18	04/12/18 15:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**2.3**		0.10	0.045	mg/L		04/15/18 16:56	04/16/18 12:50	1

Client Sample ID: DDA-16-US

Lab Sample ID: 460-153700-5
Matrix: Water

Date Collected: 04/10/18 13:50
Date Received: 04/10/18 19:45

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**3.0**		0.40	0.20	ug/L			04/11/18 15:44	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G Groundwater

TestAmerica Job ID: 460-153612-1
SDG: 153612

Client Sample ID: DDA-16-US

Lab Sample ID: 460-153700-5

Date Collected: 04/10/18 13:50
Date Received: 04/10/18 19:45

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*72 - 133*		*04/11/18 15:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*71 - 144*		*04/11/18 15:44*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/15/18 00:19	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/15/18 00:19	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/15/18 00:19	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/15/18 00:19	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/15/18 00:19	1
Acetone	1.1	U	5.0	1.1	ug/L			04/15/18 00:19	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/15/18 00:19	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/15/18 00:19	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/15/18 00:19	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/15/18 00:19	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/15/18 00:19	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/15/18 00:19	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/15/18 00:19	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/15/18 00:19	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/15/18 00:19	1
Carbon tetrachloride	0.33	~~U~~ UJ	1.0	0.33	ug/L			04/15/18 00:19	1
Bromodichloromethane	0.15	~~U~~ UJ	1.0	0.15	ug/L			04/15/18 00:19	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/15/18 00:19	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/15/18 00:19	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/15/18 00:19	1
Dibromochloromethane	0.22	~~U~~ UJ	1.0	0.22	ug/L			04/15/18 00:19	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/15/18 00:19	1
Benzene	0.090	U	1.0	0.090	ug/L			04/15/18 00:19	1
trans-1,3-Dichloropropene	0.19	~~U~~ UJ	1.0	0.19	ug/L			04/15/18 00:19	1
Bromoform	0.18	~~U~~ UJ	1.0	0.18	ug/L			04/15/18 00:19	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/15/18 00:19	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/15/18 00:19	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/15/18 00:19	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/15/18 00:19	1
Toluene	0.25	U	1.0	0.25	ug/L			04/15/18 00:19	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/15/18 00:19	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/15/18 00:19	1
Styrene	0.17	U	1.0	0.17	ug/L			04/15/18 00:19	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/15/18 00:19	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/15/18 00:19	1
MTBE	**0.89**	~~J~~ J-	1.0	0.13	ug/L			04/15/18 00:19	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/15/18 00:19	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/15/18 00:19	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/15/18 00:19	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/15/18 00:19	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/15/18 00:19	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/15/18 00:19	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/15/18 00:19	1
Indane	**0.12**	**J**	1.0	0.12	ug/L			04/15/18 00:19	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/15/18 00:19	1

Client Sample ID: DDA-16-US

Lab Sample ID: 460-153700-5

Date Collected: 04/10/18 13:50
Date Received: 04/10/18 19:45

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/15/18 00:19	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Acenaphthene	*7.9*	*J N*	*ug/L*		*12.84*	*83-32-9*		*04/15/18 00:19*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*74 - 132*		*04/15/18 00:19*	*1*
Bromofluorobenzene	*91*		*77 - 124*		*04/15/18 00:19*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*04/15/18 00:19*	*1*
Dibromofluoromethane (Surr)	*94*		*72 - 131*		*04/15/18 00:19*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/12/18 05:54	04/13/18 14:16	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/12/18 05:54	04/13/18 14:16	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/12/18 05:54	04/13/18 14:16	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/12/18 05:54	04/13/18 14:16	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/12/18 05:54	04/13/18 14:16	1
Bis(2-chloroethyl)ether	**0.072**		0.030	0.026	ug/L		04/12/18 05:54	04/13/18 14:16	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/12/18 05:54	04/12/18 17:39	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/12/18 05:54	04/12/18 17:39	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/12/18 05:54	04/12/18 17:39	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/12/18 05:54	04/12/18 17:39	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/12/18 05:54	04/12/18 17:39	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/12/18 05:54	04/12/18 17:39	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/12/18 05:54	04/12/18 17:39	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/12/18 05:54	04/12/18 17:39	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/12/18 05:54	04/12/18 17:39	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/12/18 05:54	04/12/18 17:39	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/12/18 05:54	04/12/18 17:39	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/12/18 05:54	04/12/18 17:39	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/12/18 05:54	04/12/18 17:39	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/12/18 05:54	04/12/18 17:39	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/12/18 05:54	04/12/18 17:39	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/12/18 05:54	04/12/18 17:39	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/12/18 05:54	04/12/18 17:39	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/12/18 05:54	04/12/18 17:39	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/12/18 05:54	04/12/18 17:39	1
Isophorone	0.80	U	10	0.80	ug/L		04/12/18 05:54	04/12/18 17:39	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/12/18 05:54	04/12/18 17:39	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/12/18 05:54	04/12/18 17:39	1
Naphthalene	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 17:39	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/12/18 05:54	04/12/18 17:39	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/12/18 05:54	04/12/18 17:39	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 17:39	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/12/18 05:54	04/12/18 17:39	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/12/18 05:54	04/12/18 17:39	1

Client Sample ID: DDA-16-US

Lab Sample ID: 460-153700-5

Date Collected: 04/10/18 13:50
Date Received: 04/10/18 19:45

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/12/18 05:54	04/12/18 17:39	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/12/18 05:54	04/12/18 17:39	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/12/18 05:54	04/12/18 17:39	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/12/18 05:54	04/12/18 17:39	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/12/18 05:54	04/12/18 17:39	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 17:39	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 17:39	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/12/18 05:54	04/12/18 17:39	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/12/18 05:54	04/12/18 17:39	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/12/18 05:54	04/12/18 17:39	1
Fluorene	0.91	U	10	0.91	ug/L		04/12/18 05:54	04/12/18 17:39	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/12/18 05:54	04/12/18 17:39	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/12/18 05:54	04/12/18 17:39	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/12/18 05:54	04/12/18 17:39	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/12/18 05:54	04/12/18 17:39	1
Anthracene	0.63	U	10	0.63	ug/L		04/12/18 05:54	04/12/18 17:39	1
Carbazole	0.68	U	10	0.68	ug/L		04/12/18 05:54	04/12/18 17:39	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/12/18 05:54	04/12/18 17:39	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/12/18 05:54	04/12/18 17:39	1
Pyrene	1.6	U	10	1.6	ug/L		04/12/18 05:54	04/12/18 17:39	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/12/18 05:54	04/12/18 17:39	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/12/18 05:54	04/12/18 17:39	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/12/18 05:54	04/12/18 17:39	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/12/18 05:54	04/12/18 17:39	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/12/18 05:54	04/12/18 17:39	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/12/18 05:54	04/12/18 17:39	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/12/18 05:54	04/12/18 17:39	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/12/18 05:54	04/12/18 17:39	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/12/18 05:54	04/12/18 17:39	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/12/18 05:54	04/12/18 17:39	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/12/18 05:54	04/12/18 17:39	1
Caprolactam	0.68	U	10	0.68	ug/L		04/12/18 05:54	04/12/18 17:39	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/12/18 05:54	04/12/18 17:39	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/12/18 05:54	04/12/18 17:39	1
N-Methylaniline	0.48	~~U~~ UJ	5.0	0.48	ug/L		04/12/18 05:54	04/12/18 17:39	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/12/18 05:54*	*04/12/18 17:39*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*102*		*51 - 108*	*04/12/18 05:54*	*04/12/18 17:39*	*1*
Phenol-d5	*27*		*14 - 39*	*04/12/18 05:54*	*04/12/18 17:39*	*1*
Terphenyl-d14	*104*		*40 - 148*	*04/12/18 05:54*	*04/12/18 17:39*	*1*
2,4,6-Tribromophenol	*106*		*26 - 139*	*04/12/18 05:54*	*04/12/18 17:39*	*1*
2-Fluorophenol	*44*		*25 - 58*	*04/12/18 05:54*	*04/12/18 17:39*	*1*
2-Fluorobiphenyl	*92*		*45 - 107*	*04/12/18 05:54*	*04/12/18 17:39*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/12/18 08:17	04/12/18 14:57	5

Client Sample ID: DDA-16-US

Lab Sample ID: 460-153700-5

Date Collected: 04/10/18 13:50
Date Received: 04/10/18 19:45

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	28.5	U	50.0	28.5	ug/L		04/12/18 08:17	04/12/18 14:57	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/12/18 08:17	04/12/18 14:57	5
Barium	**122**		5.0	3.2	ug/L		04/12/18 08:17	04/12/18 14:57	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/12/18 08:17	04/12/18 14:57	5
Calcium	**13200**		250	233	ug/L		04/12/18 08:17	04/12/18 14:57	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/12/18 08:17	04/12/18 14:57	5
Cobalt	**3.7**	**J**	5.0	3.1	ug/L		04/12/18 08:17	04/12/18 14:57	5
Chromium	3.1	U	5.0	3.1	ug/L		04/12/18 08:17	04/12/18 14:57	5
Copper	3.3	U	5.0	3.3	ug/L		04/12/18 08:17	04/12/18 14:57	5
Iron	**6460**		150	97.8	ug/L		04/12/18 08:17	04/12/18 14:57	5
Potassium	**3180**		250	143	ug/L		04/12/18 08:17	04/12/18 14:57	5
Magnesium	**6350**		250	155	ug/L		04/12/18 08:17	04/12/18 14:57	5
Manganese	**1130**		10.0	6.1	ug/L		04/12/18 08:17	04/12/18 14:57	5
Sodium	**19300**		250	213	ug/L		04/12/18 08:17	04/12/18 14:57	5
Nickel	3.1	U	5.0	3.1	ug/L		04/12/18 08:17	04/12/18 14:57	5
Lead	0.93	U	1.5	0.93	ug/L		04/12/18 08:17	04/12/18 14:57	5
Antimony	1.4	U	2.5	1.4	ug/L		04/12/18 08:17	04/12/18 14:57	5
Selenium	1.4	U	2.5	1.4	ug/L		04/12/18 08:17	04/12/18 19:12	5
Thallium	0.60	U	1.0	0.60	ug/L		04/12/18 08:17	04/12/18 14:57	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/12/18 08:17	04/12/18 14:57	5
Zinc	**22.8**		20.0	16.3	ug/L		04/12/18 08:17	04/12/18 14:57	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/13/18 11:55	04/13/18 14:11	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**8270**		150	92.1	ug/L		04/12/18 08:18	04/12/18 15:57	1
Manganese, Dissolved	**1140**		15.0	3.1	ug/L		04/12/18 08:18	04/12/18 15:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.17**		0.10	0.045	mg/L		04/15/18 16:56	04/16/18 12:51	1

Client Sample ID: DDA-01

Lab Sample ID: 460-153700-6

Date Collected: 04/10/18 14:50
Date Received: 04/10/18 19:45

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**5.3**		0.40	0.20	ug/L			04/11/18 16:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*72 - 133*		*04/11/18 16:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*71 - 144*		*04/11/18 16:07*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/15/18 00:42	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/15/18 00:42	1

Client Sample ID: DDA-01

Date Collected: 04/10/18 14:50
Date Received: 04/10/18 19:45

Lab Sample ID: 460-153700-6

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/15/18 00:42	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/15/18 00:42	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/15/18 00:42	1
Acetone	1.1	U	5.0	1.1	ug/L			04/15/18 00:42	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/15/18 00:42	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/15/18 00:42	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/15/18 00:42	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/15/18 00:42	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/15/18 00:42	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/15/18 00:42	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/15/18 00:42	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/15/18 00:42	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/15/18 00:42	1
Carbon tetrachloride	0.33	~~U-*~~ UJ	1.0	0.33	ug/L			04/15/18 00:42	1
Bromodichloromethane	0.15	~~U-*~~ UJ	1.0	0.15	ug/L			04/15/18 00:42	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/15/18 00:42	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/15/18 00:42	1
Trichloroethene	**0.28**	**J**	1.0	0.22	ug/L			04/15/18 00:42	1
Dibromochloromethane	0.22	~~U-*~~ UJ	1.0	0.22	ug/L			04/15/18 00:42	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/15/18 00:42	1
Benzene	0.090	U	1.0	0.090	ug/L			04/15/18 00:42	1
trans-1,3-Dichloropropene	0.19	~~U-*~~ UJ	1.0	0.19	ug/L			04/15/18 00:42	1
Bromoform	0.18	~~U-*~~ UJ	1.0	0.18	ug/L			04/15/18 00:42	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/15/18 00:42	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/15/18 00:42	1
Tetrachloroethene	**2.6**		1.0	0.12	ug/L			04/15/18 00:42	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/15/18 00:42	1
Toluene	0.25	U	1.0	0.25	ug/L			04/15/18 00:42	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/15/18 00:42	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/15/18 00:42	1
Styrene	0.17	U	1.0	0.17	ug/L			04/15/18 00:42	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/15/18 00:42	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/15/18 00:42	1
MTBE	**0.31**	~~J-*~~ J-	1.0	0.13	ug/L			04/15/18 00:42	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/15/18 00:42	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/15/18 00:42	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/15/18 00:42	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/15/18 00:42	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/15/18 00:42	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/15/18 00:42	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/15/18 00:42	1
Indane	**0.13**	**J**	1.0	0.12	ug/L			04/15/18 00:42	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/15/18 00:42	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/15/18 00:42	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/15/18 00:42*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*74 - 132*		*04/15/18 00:42*	*1*

Client Sample ID: DDA-01

Lab Sample ID: 460-153700-6

Date Collected: 04/10/18 14:50
Date Received: 04/10/18 19:45

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Bromofluorobenzene	*90*		*77 - 124*		*04/15/18 00:42*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*04/15/18 00:42*	*1*
Dibromofluoromethane (Surr)	*92*		*72 - 131*		*04/15/18 00:42*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/12/18 05:54	04/13/18 14:38	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/12/18 05:54	04/13/18 14:38	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/12/18 05:54	04/13/18 14:38	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/12/18 05:54	04/13/18 14:38	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/12/18 05:54	04/13/18 14:38	1
Bis(2-chloroethyl)ether	**0.53**		0.030	0.026	ug/L		04/12/18 05:54	04/13/18 14:38	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/12/18 05:54	04/12/18 18:01	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/12/18 05:54	04/12/18 18:01	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/12/18 05:54	04/12/18 18:01	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/12/18 05:54	04/12/18 18:01	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/12/18 05:54	04/12/18 18:01	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/12/18 05:54	04/12/18 18:01	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/12/18 05:54	04/12/18 18:01	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/12/18 05:54	04/12/18 18:01	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/12/18 05:54	04/12/18 18:01	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/12/18 05:54	04/12/18 18:01	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/12/18 05:54	04/12/18 18:01	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/12/18 05:54	04/12/18 18:01	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/12/18 05:54	04/12/18 18:01	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/12/18 05:54	04/12/18 18:01	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/12/18 05:54	04/12/18 18:01	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/12/18 05:54	04/12/18 18:01	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/12/18 05:54	04/12/18 18:01	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/12/18 05:54	04/12/18 18:01	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/12/18 05:54	04/12/18 18:01	1
Isophorone	0.80	U	10	0.80	ug/L		04/12/18 05:54	04/12/18 18:01	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/12/18 05:54	04/12/18 18:01	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/12/18 05:54	04/12/18 18:01	1
Naphthalene	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 18:01	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/12/18 05:54	04/12/18 18:01	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/12/18 05:54	04/12/18 18:01	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 18:01	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/12/18 05:54	04/12/18 18:01	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/12/18 05:54	04/12/18 18:01	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/12/18 05:54	04/12/18 18:01	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/12/18 05:54	04/12/18 18:01	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/12/18 05:54	04/12/18 18:01	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/12/18 05:54	04/12/18 18:01	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/12/18 05:54	04/12/18 18:01	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 18:01	1

Client Sample ID: DDA-01

Date Collected: 04/10/18 14:50
Date Received: 04/10/18 19:45

Lab Sample ID: 460-153700-6
Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenzofuran	1.1	U	10	1.1	ug/L		04/12/18 05:54	04/12/18 18:01	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/12/18 05:54	04/12/18 18:01	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/12/18 05:54	04/12/18 18:01	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/12/18 05:54	04/12/18 18:01	1
Fluorene	0.91	U	10	0.91	ug/L		04/12/18 05:54	04/12/18 18:01	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/12/18 05:54	04/12/18 18:01	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/12/18 05:54	04/12/18 18:01	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/12/18 05:54	04/12/18 18:01	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/12/18 05:54	04/12/18 18:01	1
Anthracene	0.63	U	10	0.63	ug/L		04/12/18 05:54	04/12/18 18:01	1
Carbazole	0.68	U	10	0.68	ug/L		04/12/18 05:54	04/12/18 18:01	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/12/18 05:54	04/12/18 18:01	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/12/18 05:54	04/12/18 18:01	1
Pyrene	1.6	U	10	1.6	ug/L		04/12/18 05:54	04/12/18 18:01	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/12/18 05:54	04/12/18 18:01	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/12/18 05:54	04/12/18 18:01	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/12/18 05:54	04/12/18 18:01	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/12/18 05:54	04/12/18 18:01	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/12/18 05:54	04/12/18 18:01	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/12/18 05:54	04/12/18 18:01	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/12/18 05:54	04/12/18 18:01	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/12/18 05:54	04/12/18 18:01	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/12/18 05:54	04/12/18 18:01	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/12/18 05:54	04/12/18 18:01	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/12/18 05:54	04/12/18 18:01	1
Caprolactam	0.68	U	10	0.68	ug/L		04/12/18 05:54	04/12/18 18:01	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/12/18 05:54	04/12/18 18:01	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/12/18 05:54	04/12/18 18:01	1
N-Methylaniline	0.48	~~U~~ UJ	5.0	0.48	ug/L		04/12/18 05:54	04/12/18 18:01	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/12/18 05:54*	*04/12/18 18:01*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*103*		*51 - 108*	*04/12/18 05:54*	*04/12/18 18:01*	*1*
Phenol-d5	*28*		*14 - 39*	*04/12/18 05:54*	*04/12/18 18:01*	*1*
Terphenyl-d14	*105*		*40 - 148*	*04/12/18 05:54*	*04/12/18 18:01*	*1*
2,4,6-Tribromophenol	*111*		*26 - 139*	*04/12/18 05:54*	*04/12/18 18:01*	*1*
2-Fluorophenol	*47*		*25 - 58*	*04/12/18 05:54*	*04/12/18 18:01*	*1*
2-Fluorobiphenyl	*98*		*45 - 107*	*04/12/18 05:54*	*04/12/18 18:01*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/12/18 08:17	04/12/18 16:10	5
Aluminum	**253**		50.0	28.5	ug/L		04/12/18 08:17	04/12/18 16:10	5
Arsenic	**5.9**		2.5	1.5	ug/L		04/12/18 08:17	04/12/18 16:10	5
Barium	**183**		5.0	3.2	ug/L		04/12/18 08:17	04/12/18 16:10	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/12/18 08:17	04/12/18 16:10	5
Calcium	**13900**		250	233	ug/L		04/12/18 08:17	04/12/18 16:10	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/12/18 08:17	04/12/18 16:10	5

Client Sample ID: DDA-01

Lab Sample ID: 460-153700-6
Date Collected: 04/10/18 14:50
Matrix: Water
Date Received: 04/10/18 19:45

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**8.7**		5.0	3.1	ug/L		04/12/18 08:17	04/12/18 16:10	5
Chromium	**8.5**		5.0	3.1	ug/L		04/12/18 08:17	04/12/18 16:10	5
Copper	3.3	U	5.0	3.3	ug/L		04/12/18 08:17	04/12/18 16:10	5
Iron	**19000**		150	97.8	ug/L		04/12/18 08:17	04/12/18 16:10	5
Potassium	**2160**		250	143	ug/L		04/12/18 08:17	04/12/18 16:10	5
Magnesium	**5400**		250	155	ug/L		04/12/18 08:17	04/12/18 16:10	5
Manganese	**1110**		10.0	6.1	ug/L		04/12/18 08:17	04/12/18 16:10	5
Sodium	**17300**		250	213	ug/L		04/12/18 08:17	04/12/18 16:10	5
Nickel	**8.2**		5.0	3.1	ug/L		04/12/18 08:17	04/12/18 16:10	5
Lead	0.93	U	1.5	0.93	ug/L		04/12/18 08:17	04/12/18 16:10	5
Antimony	1.4	U	2.5	1.4	ug/L		04/12/18 08:17	04/12/18 16:10	5
Selenium	1.4	U	2.5	1.4	ug/L		04/12/18 08:17	04/12/18 16:10	5
Thallium	0.60	U	1.0	0.60	ug/L		04/12/18 08:17	04/12/18 16:10	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/12/18 08:17	04/12/18 16:10	5
Zinc	**41.9**		20.0	16.3	ug/L		04/12/18 08:17	04/12/18 16:10	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/13/18 11:55	04/13/18 14:12	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**24400**		150	92.1	ug/L		04/12/18 08:18	04/12/18 16:01	1
Manganese, Dissolved	**1210**		15.0	3.1	ug/L		04/12/18 08:18	04/12/18 16:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.21**		0.10	0.045	mg/L		04/15/18 16:56	04/16/18 12:52	1

Client Sample ID: DDA-16-TZ

Lab Sample ID: 460-153700-7
Date Collected: 04/10/18 15:35
Matrix: Water
Date Received: 04/10/18 19:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.1	U	5.0	1.1	ug/L			04/15/18 01:05	5
Bromomethane	0.90	U	5.0	0.90	ug/L			04/15/18 01:05	5
Vinyl chloride	0.30	U	5.0	0.30	ug/L			04/15/18 01:05	5
Chloroethane	1.9	U	5.0	1.9	ug/L			04/15/18 01:05	5
Methylene Chloride	1.1	U	5.0	1.1	ug/L			04/15/18 01:05	5
Acetone	**12**	**J**	25	5.4	ug/L			04/15/18 01:05	5
Carbon disulfide	1.1	U	5.0	1.1	ug/L			04/15/18 01:05	5
1,1-Dichloroethene	1.7	U	5.0	1.7	ug/L			04/15/18 01:05	5
1,1-Dichloroethane	1.2	U	5.0	1.2	ug/L			04/15/18 01:05	5
trans-1,2-Dichloroethene	0.90	U	5.0	0.90	ug/L			04/15/18 01:05	5
cis-1,2-Dichloroethene	1.3	U	5.0	1.3	ug/L			04/15/18 01:05	5
Chloroform	1.1	U	5.0	1.1	ug/L			04/15/18 01:05	5
1,2-Dichloroethane	1.3	U	5.0	1.3	ug/L			04/15/18 01:05	5
2-Butanone	11	U	25	11	ug/L			04/15/18 01:05	5
1,1,1-Trichloroethane	1.4	U	5.0	1.4	ug/L			04/15/18 01:05	5

Client Sample ID: DDA-16-TZ

Lab Sample ID: 460-153700-7

Date Collected: 04/10/18 15:35
Date Received: 04/10/18 19:45

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	1.7	~~U~~* UJ	5.0	1.7	ug/L			04/15/18 01:05	5
Bromodichloromethane	0.75	~~U~~* UJ	5.0	0.75	ug/L			04/15/18 01:05	5
1,2-Dichloropropane	0.90	U	5.0	0.90	ug/L			04/15/18 01:05	5
cis-1,3-Dichloropropene	0.80	U	5.0	0.80	ug/L			04/15/18 01:05	5
Trichloroethene	1.1	U	5.0	1.1	ug/L			04/15/18 01:05	5
Dibromochloromethane	1.1	~~U~~* UJ	5.0	1.1	ug/L			04/15/18 01:05	5
1,1,2-Trichloroethane	0.40	U	5.0	0.40	ug/L			04/15/18 01:05	5
Benzene	**730**		5.0	0.45	ug/L			04/15/18 01:05	5
trans-1,3-Dichloropropene	0.95	~~U~~* UJ	5.0	0.95	ug/L			04/15/18 01:05	5
Bromoform	0.90	~~U~~* UJ	5.0	0.90	ug/L			04/15/18 01:05	5
4-Methyl-2-pentanone	3.2	U	25	3.2	ug/L			04/15/18 01:05	5
2-Hexanone	3.6	U	25	3.6	ug/L			04/15/18 01:05	5
Tetrachloroethene	0.60	U	5.0	0.60	ug/L			04/15/18 01:05	5
1,1,2,2-Tetrachloroethane	0.95	U	5.0	0.95	ug/L			04/15/18 01:05	5
Toluene	1.3	U	5.0	1.3	ug/L			04/15/18 01:05	5
Chlorobenzene	**11**		5.0	1.2	ug/L			04/15/18 01:05	5
Ethylbenzene	**64**		5.0	1.5	ug/L			04/15/18 01:05	5
Styrene	0.85	U	5.0	0.85	ug/L			04/15/18 01:05	5
Xylenes, Total	**77**		10	1.4	ug/L			04/15/18 01:05	5
Ethyl ether	**11**		5.0	0.55	ug/L			04/15/18 01:05	5
MTBE	0.65	~~U~~* UJ	5.0	0.65	ug/L			04/15/18 01:05	5
Tetrahydrofuran	**260**		10	1.8	ug/L			04/15/18 01:05	5
Cyclohexane	1.3	U	5.0	1.3	ug/L			04/15/18 01:05	5
1,4-Dioxane	**1400**		250	44	ug/L			04/15/18 01:05	5
1,2,4-Trimethylbenzene	**33**		5.0	1.2	ug/L			04/15/18 01:05	5
1,3,5-Trimethylbenzene	**8.0**		5.0	1.3	ug/L			04/15/18 01:05	5
Isopropylbenzene	**4.7**	**J**	5.0	1.6	ug/L			04/15/18 01:05	5
N-Propylbenzene	**7.7**		5.0	1.5	ug/L			04/15/18 01:05	5
Methylcyclohexane	1.1	U	5.0	1.1	ug/L			04/15/18 01:05	5
Indane	**9.0**		5.0	0.60	ug/L			04/15/18 01:05	5
Dichlorofluoromethane	1.1	U	5.0	1.1	ug/L			04/15/18 01:05	5
1,2,3-Trimethylbenzene	**10**		5.0	0.55	ug/L			04/15/18 01:05	5

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/15/18 01:05*	*5*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*86*		*74 - 132*		*04/15/18 01:05*	*5*
Bromofluorobenzene	*90*		*77 - 124*		*04/15/18 01:05*	*5*
Toluene-d8 (Surr)	*99*		*80 - 120*		*04/15/18 01:05*	*5*
Dibromofluoromethane (Surr)	*92*		*72 - 131*		*04/15/18 01:05*	*5*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/12/18 05:54	04/13/18 14:59	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/12/18 05:54	04/13/18 14:59	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/12/18 05:54	04/13/18 14:59	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/12/18 05:54	04/13/18 14:59	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/12/18 05:54	04/13/18 14:59	1

Client Sample ID: DDA-16-TZ

Lab Sample ID: 460-153700-7

Date Collected: 04/10/18 15:35
Date Received: 04/10/18 19:45

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.58	U	20	0.58	ug/L		04/12/18 05:54	04/13/18 21:15	2
2-Chlorophenol	0.75	U	20	0.75	ug/L		04/12/18 05:54	04/13/18 21:15	2
2-Methylphenol	0.52	U	20	0.52	ug/L		04/12/18 05:54	04/13/18 21:15	2
4-Methylphenol	0.47	U	20	0.47	ug/L		04/12/18 05:54	04/13/18 21:15	2
2-Nitrophenol	1.5	U	20	1.5	ug/L		04/12/18 05:54	04/13/18 21:15	2
2,4-Dimethylphenol	**8.9**	**J**	20	0.48	ug/L		04/12/18 05:54	04/13/18 21:15	2
2,4-Dichlorophenol	0.84	U	20	0.84	ug/L		04/12/18 05:54	04/13/18 21:15	2
4-Chloro-3-methylphenol	1.2	U	20	1.2	ug/L		04/12/18 05:54	04/13/18 21:15	2
2,4,6-Trichlorophenol	0.60	U	20	0.60	ug/L		04/12/18 05:54	04/13/18 21:15	2
2,4,5-Trichlorophenol	0.56	U	20	0.56	ug/L		04/12/18 05:54	04/13/18 21:15	2
2,4-Dinitrophenol	29	U	40	29	ug/L		04/12/18 05:54	04/13/18 21:15	2
4-Nitrophenol	1.4	U	40	1.4	ug/L		04/12/18 05:54	04/13/18 21:15	2
4,6-Dinitro-2-methylphenol	27	U	40	27	ug/L		04/12/18 05:54	04/13/18 21:15	2
Bis(2-chloroethyl)ether	**250**		2.0	0.59	ug/L		04/12/18 05:54	04/13/18 21:15	2
1,3-Dichlorobenzene	4.1	U	20	4.1	ug/L		04/12/18 05:54	04/13/18 21:15	2
1,4-Dichlorobenzene	2.5	U	20	2.5	ug/L		04/12/18 05:54	04/13/18 21:15	2
1,2-Dichlorobenzene	2.7	U	20	2.7	ug/L		04/12/18 05:54	04/13/18 21:15	2
N-Nitrosodi-n-propylamine	0.86	U	2.0	0.86	ug/L		04/12/18 05:54	04/13/18 21:15	2
Hexachloroethane	2.4	U	4.0	2.4	ug/L		04/12/18 05:54	04/13/18 21:15	2
Nitrobenzene	1.1	U	2.0	1.1	ug/L		04/12/18 05:54	04/13/18 21:15	2
Isophorone	1.6	U	20	1.6	ug/L		04/12/18 05:54	04/13/18 21:15	2
Bis(2-chloroethoxy)methane	0.48	U	20	0.48	ug/L		04/12/18 05:54	04/13/18 21:15	2
1,2,4-Trichlorobenzene	2.5	U	4.0	2.5	ug/L		04/12/18 05:54	04/13/18 21:15	2
Naphthalene	2.3	U	20	2.3	ug/L		04/12/18 05:54	04/13/18 21:15	2
4-Chloroaniline	3.8	U	20	3.8	ug/L		04/12/18 05:54	04/13/18 21:15	2
Hexachlorobutadiene	1.6	U	2.0	1.6	ug/L		04/12/18 05:54	04/13/18 21:15	2
2-Methylnaphthalene	2.2	U	20	2.2	ug/L		04/12/18 05:54	04/13/18 21:15	2
Hexachlorocyclopentadiene	3.4	U	20	3.4	ug/L		04/12/18 05:54	04/13/18 21:15	2
2-Chloronaphthalene	2.4	U	20	2.4	ug/L		04/12/18 05:54	04/13/18 21:15	2
2-Nitroaniline	0.95	U	20	0.95	ug/L		04/12/18 05:54	04/13/18 21:15	2
Dimethyl phthalate	1.5	U	20	1.5	ug/L		04/12/18 05:54	04/13/18 21:15	2
Acenaphthylene	1.6	U	20	1.6	ug/L		04/12/18 05:54	04/13/18 21:15	2
2,6-Dinitrotoluene	0.78	U	4.0	0.78	ug/L		04/12/18 05:54	04/13/18 21:15	2
3-Nitroaniline	1.9	U	20	1.9	ug/L		04/12/18 05:54	04/13/18 21:15	2
Acenaphthene	2.2	U	20	2.2	ug/L		04/12/18 05:54	04/13/18 21:15	2
Dibenzofuran	2.2	U	20	2.2	ug/L		04/12/18 05:54	04/13/18 21:15	2
2,4-Dinitrotoluene	2.0	U	4.0	2.0	ug/L		04/12/18 05:54	04/13/18 21:15	2
Diethyl phthalate	**4.2**	**J**	20	2.0	ug/L		04/12/18 05:54	04/13/18 21:15	2
4-Chlorophenyl phenyl ether	2.6	U	20	2.6	ug/L		04/12/18 05:54	04/13/18 21:15	2
Fluorene	1.8	U	20	1.8	ug/L		04/12/18 05:54	04/13/18 21:15	2
4-Nitroaniline	1.1	U	20	1.1	ug/L		04/12/18 05:54	04/13/18 21:15	2
N-Nitrosodiphenylamine	1.8	U	20	1.8	ug/L		04/12/18 05:54	04/13/18 21:15	2
4-Bromophenyl phenyl ether	1.5	U	20	1.5	ug/L		04/12/18 05:54	04/13/18 21:15	2
Phenanthrene	1.2	U	20	1.2	ug/L		04/12/18 05:54	04/13/18 21:15	2
Anthracene	1.3	U	20	1.3	ug/L		04/12/18 05:54	04/13/18 21:15	2
Carbazole	1.4	U	20	1.4	ug/L		04/12/18 05:54	04/13/18 21:15	2
Di-n-butyl phthalate	1.7	U	20	1.7	ug/L		04/12/18 05:54	04/13/18 21:15	2
Fluoranthene	1.7	U	20	1.7	ug/L		04/12/18 05:54	04/13/18 21:15	2
Pyrene	3.3	U	20	3.3	ug/L		04/12/18 05:54	04/13/18 21:15	2

Client Sample ID: DDA-16-TZ

Lab Sample ID: 460-153700-7

Date Collected: 04/10/18 15:35
Date Received: 04/10/18 19:45

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Butyl benzyl phthalate	1.7	U	20	1.7	ug/L		04/12/18 05:54	04/13/18 21:15	2
3,3'-Dichlorobenzidine	2.9	U	20	2.9	ug/L		04/12/18 05:54	04/13/18 21:15	2
Chrysene	1.8	U	4.0	1.8	ug/L		04/12/18 05:54	04/13/18 21:15	2
Bis(2-ethylhexyl) phthalate	3.4	U	4.0	3.4	ug/L		04/12/18 05:54	04/13/18 21:15	2
Di-n-octyl phthalate	9.5	U	20	9.5	ug/L		04/12/18 05:54	04/13/18 21:15	2
Benzo[k]fluoranthene	1.3	U	2.0	1.3	ug/L		04/12/18 05:54	04/13/18 21:15	2
Indeno[1,2,3-cd]pyrene	2.6	U	4.0	2.6	ug/L		04/12/18 05:54	04/13/18 21:15	2
Dibenz(a,h)anthracene	1.4	U	2.0	1.4	ug/L		04/12/18 05:54	04/13/18 21:15	2
Benzo[g,h,i]perylene	2.9	U	20	2.9	ug/L		04/12/18 05:54	04/13/18 21:15	2
Diphenyl ether	2.4	U	20	2.4	ug/L		04/12/18 05:54	04/13/18 21:15	2
n,n'-Dimethylaniline	1.8	U	2.0	1.8	ug/L		04/12/18 05:54	04/13/18 21:15	2
Caprolactam	1.4	U	20	1.4	ug/L		04/12/18 05:54	04/13/18 21:15	2
bis (2-chloroisopropyl) ether	1.3	U	20	1.3	ug/L		04/12/18 05:54	04/13/18 21:15	2
Bisphenol-A	**130**		20	20	ug/L		04/12/18 05:54	04/13/18 21:15	2
N-Methylaniline	**1.4**	**J**	10	0.96	ug/L		04/12/18 05:54	04/13/18 21:15	2

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*56*	*J*	*ug/L*		*1.56*		*04/12/18 05:54*	*04/13/18 21:15*	*2*
1,4-Dioxane	*120*	*J N*	*ug/L*		*1.75*	*123-91-1*	*04/12/18 05:54*	*04/13/18 21:15*	*2*
Benzene, 1,2,3-trimethyl-	*13*	*J N*	*ug/L*		*3.93*	*526-73-8*	*04/12/18 05:54*	*04/13/18 21:15*	*2*
Benzene, 1,2,4-trimethyl-	*31*	*J N*	*ug/L*		*4.14*	*95-63-6*	*04/12/18 05:54*	*04/13/18 21:15*	*2*
Indane	*15*	*J N*	*ug/L*		*4.47*	*496-11-7*	*04/12/18 05:54*	*04/13/18 21:15*	*2*
1-Phenoxypropan-2-ol	*42*	*J N*	*ug/L*		*5.83*	*770-35-4*	*04/12/18 05:54*	*04/13/18 21:15*	*2*
Unknown	*20*	*J*	*ug/L*		*6.11*		*04/12/18 05:54*	*04/13/18 21:15*	*2*
Unknown	*14*	*J*	*ug/L*		*8.40*		*04/12/18 05:54*	*04/13/18 21:15*	*2*
Unknown	*18*	*J*	*ug/L*		*8.80*		*04/12/18 05:54*	*04/13/18 21:15*	*2*
Unknown	*27*	*J*	*ug/L*		*10.44*		*04/12/18 05:54*	*04/13/18 21:15*	*2*
Unknown	*18*	*J*	*ug/L*		*11.43*		*04/12/18 05:54*	*04/13/18 21:15*	*2*
Unknown	*20*	*J*	*ug/L*		*12.32*		*04/12/18 05:54*	*04/13/18 21:15*	*2*
Unknown	*15*	*J*	*ug/L*		*13.78*		*04/12/18 05:54*	*04/13/18 21:15*	*2*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*92*		*51 - 108*	*04/12/18 05:54*	*04/13/18 21:15*	*2*
Phenol-d5	*27*		*14 - 39*	*04/12/18 05:54*	*04/13/18 21:15*	*2*
Terphenyl-d14	*90*		*40 - 148*	*04/12/18 05:54*	*04/13/18 21:15*	*2*
2,4,6-Tribromophenol	*97*		*26 - 139*	*04/12/18 05:54*	*04/13/18 21:15*	*2*
2-Fluorophenol	*44*		*25 - 58*	*04/12/18 05:54*	*04/13/18 21:15*	*2*
2-Fluorobiphenyl	*93*		*45 - 107*	*04/12/18 05:54*	*04/13/18 21:15*	*2*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	3.0	U	5.0	3.0	ug/L		04/12/18 08:17	04/12/18 16:12	5
Aluminum	**57.6**		50.0	28.5	ug/L		04/12/18 08:17	04/12/18 16:12	5
Arsenic	**6.4**		2.5	1.5	ug/L		04/12/18 08:17	04/12/18 16:12	5
Barium	**136**		5.0	3.2	ug/L		04/12/18 08:17	04/12/18 16:12	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/12/18 08:17	04/12/18 16:12	5
Calcium	**14800**		250	233	ug/L		04/12/18 08:17	04/12/18 16:12	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/12/18 08:17	04/12/18 16:12	5
Cobalt	**3.9**	**J**	5.0	3.1	ug/L		04/12/18 08:17	04/12/18 16:12	5
Chromium	**3.6**	**J**	5.0	3.1	ug/L		04/12/18 08:17	04/12/18 16:12	5

Client Sample ID: DDA-16-TZ

Lab Sample ID: 460-153700-7
Date Collected: 04/10/18 15:35
Matrix: Water
Date Received: 04/10/18 19:45

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	3.3	U	5.0	3.3	ug/L		04/12/18 08:17	04/12/18 16:12	5
Iron	**20400**		150	97.8	ug/L		04/12/18 08:17	04/12/18 16:12	5
Potassium	**1420**		250	143	ug/L		04/12/18 08:17	04/12/18 16:12	5
Magnesium	**7970**		250	155	ug/L		04/12/18 08:17	04/12/18 16:12	5
Manganese	**485**		10.0	6.1	ug/L		04/12/18 08:17	04/12/18 16:12	5
Sodium	**13200**		250	213	ug/L		04/12/18 08:17	04/12/18 16:12	5
Nickel	**3.3**	J	5.0	3.1	ug/L		04/12/18 08:17	04/12/18 16:12	5
Lead	0.93	U	1.5	0.93	ug/L		04/12/18 08:17	04/12/18 16:12	5
Antimony	1.4	U	2.5	1.4	ug/L		04/12/18 08:17	04/12/18 16:12	5
Selenium	1.4	U	2.5	1.4	ug/L		04/12/18 08:17	04/12/18 16:12	5
Thallium	0.60	U	1.0	0.60	ug/L		04/12/18 08:17	04/12/18 16:12	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/12/18 08:17	04/12/18 16:12	5
Zinc	16.3	U	20.0	16.3	ug/L		04/12/18 08:17	04/12/18 16:12	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/13/18 11:55	04/13/18 14:14	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**35400**		150	92.1	ug/L		04/12/18 08:18	04/12/18 16:05	1
Manganese, Dissolved	**697**		15.0	3.1	ug/L		04/12/18 08:18	04/12/18 16:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**1.2**		0.25	0.11	mg/L		04/15/18 16:56	04/16/18 12:54	1

Client Sample ID: TBGW_041018

Lab Sample ID: 460-153700-8
Date Collected: 04/10/18 00:00
Matrix: Water
Date Received: 04/10/18 19:45

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.20	U	0.40	0.20	ug/L			04/11/18 12:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*72 - 133*		*04/11/18 12:40*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*71 - 144*		*04/11/18 12:40*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/14/18 01:06	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/14/18 01:06	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/14/18 01:06	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/14/18 01:06	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/14/18 01:06	1
Acetone	1.1	U	5.0	1.1	ug/L			04/14/18 01:06	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/14/18 01:06	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/14/18 01:06	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/14/18 01:06	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/14/18 01:06	1

Client Sample ID: TBGW_041018

Lab Sample ID: 460-153700-8

Date Collected: 04/10/18 00:00
Date Received: 04/10/18 19:45

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/14/18 01:06	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/14/18 01:06	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/14/18 01:06	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/14/18 01:06	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/14/18 01:06	1
Carbon tetrachloride	0.33	U *	1.0	0.33	ug/L			04/14/18 01:06	1
Bromodichloromethane	0.15	U *	1.0	0.15	ug/L			04/14/18 01:06	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/14/18 01:06	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/14/18 01:06	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/14/18 01:06	1
Dibromochloromethane	0.22	U *	1.0	0.22	ug/L			04/14/18 01:06	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/14/18 01:06	1
Benzene	0.090	U	1.0	0.090	ug/L			04/14/18 01:06	1
trans-1,3-Dichloropropene	0.19	U *	1.0	0.19	ug/L			04/14/18 01:06	1
Bromoform	0.18	U *	1.0	0.18	ug/L			04/14/18 01:06	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/14/18 01:06	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/14/18 01:06	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/14/18 01:06	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/14/18 01:06	1
Toluene	0.25	U	1.0	0.25	ug/L			04/14/18 01:06	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/14/18 01:06	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/14/18 01:06	1
Styrene	0.17	U	1.0	0.17	ug/L			04/14/18 01:06	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/14/18 01:06	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/14/18 01:06	1
MTBE	0.13	U	1.0	0.13	ug/L			04/14/18 01:06	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/14/18 01:06	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/14/18 01:06	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/14/18 01:06	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/14/18 01:06	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/14/18 01:06	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/14/18 01:06	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/14/18 01:06	1
Indane	0.12	U	1.0	0.12	ug/L			04/14/18 01:06	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/14/18 01:06	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/14/18 01:06	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/14/18 01:06*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*74 - 132*		*04/14/18 01:06*	*1*
Bromofluorobenzene	*86*		*77 - 124*		*04/14/18 01:06*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*04/14/18 01:06*	*1*
Dibromofluoromethane (Surr)	*94*		*72 - 131*		*04/14/18 01:06*	*1*

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G Groundwater

TestAmerica Job ID: 460-153430-1
SDG: 153430

Client Sample ID: DGC-10D

Lab Sample ID: 460-153430-1

Date Collected: 04/05/18 08:55
Date Received: 04/05/18 22:10

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.67**		0.40	0.20	ug/L			04/10/18 13:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*72 - 133*		*04/10/18 13:01*	*1*
1,2-Dichloroethane-d4 (Surr)	*84*		*71 - 144*		*04/10/18 13:01*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/11/18 13:41	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/11/18 13:41	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/11/18 13:41	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/11/18 13:41	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/11/18 13:41	1
Acetone	1.1	U	5.0	1.1	ug/L			04/11/18 13:41	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/11/18 13:41	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/11/18 13:41	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/11/18 13:41	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/11/18 13:41	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/11/18 13:41	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/11/18 13:41	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/11/18 13:41	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/11/18 13:41	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/11/18 13:41	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/11/18 13:41	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/11/18 13:41	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/11/18 13:41	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/11/18 13:41	1
Trichloroethene	**0.23**	**J**	1.0	0.22	ug/L			04/11/18 13:41	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/11/18 13:41	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/11/18 13:41	1
Benzene	0.090	U	1.0	0.090	ug/L			04/11/18 13:41	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/11/18 13:41	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/11/18 13:41	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/11/18 13:41	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/11/18 13:41	1
Tetrachloroethene	**0.25**	**J**	1.0	0.12	ug/L			04/11/18 13:41	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/11/18 13:41	1
Toluene	0.25	U	1.0	0.25	ug/L			04/11/18 13:41	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/11/18 13:41	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/11/18 13:41	1
Styrene	0.17	U	1.0	0.17	ug/L			04/11/18 13:41	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/11/18 13:41	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/11/18 13:41	1
MTBE	0.13	U	1.0	0.13	ug/L			04/11/18 13:41	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/11/18 13:41	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/11/18 13:41	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/11/18 13:41	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/11/18 13:41	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/11/18 13:41	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/11/18 13:41	1

Client Sample ID: DGC-10D

Lab Sample ID: 460-153430-1

Date Collected: 04/05/18 08:55
Date Received: 04/05/18 22:10

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/11/18 13:41	1
Indane	0.12	U	1.0	0.12	ug/L			04/11/18 13:41	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/11/18 13:41	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/11/18 13:41	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/11/18 13:41*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*74 - 132*		*04/11/18 13:41*	*1*
Bromofluorobenzene	*91*		*77 - 124*		*04/11/18 13:41*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*04/11/18 13:41*	*1*
Dibromofluoromethane (Surr)	*102*		*72 - 131*		*04/11/18 13:41*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/09/18 08:44	04/10/18 10:32	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/09/18 08:44	04/10/18 10:32	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/09/18 08:44	04/10/18 10:32	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/09/18 08:44	04/10/18 10:32	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/09/18 08:44	04/10/18 10:32	1
Bis(2-chloroethyl)ether	0.026	U	0.030	0.026	ug/L		04/09/18 08:44	04/10/18 10:32	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/09/18 08:44	04/09/18 19:09	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/09/18 08:44	04/09/18 19:09	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/09/18 08:44	04/09/18 19:09	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/09/18 08:44	04/09/18 19:09	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/09/18 08:44	04/09/18 19:09	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/09/18 08:44	04/09/18 19:09	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/09/18 08:44	04/09/18 19:09	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/09/18 08:44	04/09/18 19:09	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/09/18 08:44	04/09/18 19:09	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/09/18 08:44	04/09/18 19:09	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/09/18 08:44	04/09/18 19:09	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/09/18 08:44	04/09/18 19:09	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/09/18 08:44	04/09/18 19:09	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/09/18 08:44	04/09/18 19:09	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/09/18 08:44	04/09/18 19:09	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/09/18 08:44	04/09/18 19:09	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/09/18 08:44	04/09/18 19:09	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/09/18 08:44	04/09/18 19:09	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/09/18 08:44	04/09/18 19:09	1
Isophorone	0.80	U	10	0.80	ug/L		04/09/18 08:44	04/09/18 19:09	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/09/18 08:44	04/09/18 19:09	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/09/18 08:44	04/09/18 19:09	1
Naphthalene	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/09/18 19:09	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/09/18 08:44	04/09/18 19:09	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/09/18 08:44	04/09/18 19:09	1

Client Sample ID: DGC-10D

Lab Sample ID: 460-153430-1

Date Collected: 04/05/18 08:55
Date Received: 04/05/18 22:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/09/18 19:09	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/09/18 08:44	04/09/18 19:09	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/09/18 08:44	04/09/18 19:09	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/09/18 08:44	04/09/18 19:09	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/09/18 08:44	04/09/18 19:09	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/09/18 08:44	04/09/18 19:09	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/09/18 08:44	04/09/18 19:09	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/09/18 08:44	04/09/18 19:09	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/09/18 19:09	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/09/18 19:09	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/09/18 08:44	04/09/18 19:09	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/09/18 08:44	04/09/18 19:09	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/09/18 08:44	04/09/18 19:09	1
Fluorene	0.91	U	10	0.91	ug/L		04/09/18 08:44	04/09/18 19:09	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/09/18 08:44	04/09/18 19:09	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/09/18 08:44	04/09/18 19:09	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/09/18 08:44	04/09/18 19:09	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/09/18 08:44	04/09/18 19:09	1
Anthracene	0.63	U	10	0.63	ug/L		04/09/18 08:44	04/09/18 19:09	1
Carbazole	0.68	U	10	0.68	ug/L		04/09/18 08:44	04/09/18 19:09	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/09/18 08:44	04/09/18 19:09	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/09/18 08:44	04/09/18 19:09	1
Pyrene	1.6	U *-	10	1.6	ug/L		04/09/18 08:44	04/09/18 19:09	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/09/18 08:44	04/09/18 19:09	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/09/18 08:44	04/09/18 19:09	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/09/18 08:44	04/09/18 19:09	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/09/18 08:44	04/09/18 19:09	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/09/18 08:44	04/09/18 19:09	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/09/18 08:44	04/09/18 19:09	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/09/18 08:44	04/09/18 19:09	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/09/18 08:44	04/09/18 19:09	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/09/18 08:44	04/09/18 19:09	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/09/18 08:44	04/09/18 19:09	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/09/18 08:44	04/09/18 19:09	1
Caprolactam	0.68	U	10	0.68	ug/L		04/09/18 08:44	04/09/18 19:09	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/09/18 08:44	04/09/18 19:09	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/09/18 08:44	04/09/18 19:09	1
N-Methylaniline	0.48	U	5.0	0.48	ug/L		04/09/18 08:44	04/09/18 19:09	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/09/18 08:44*	*04/09/18 19:09*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*110*	*X*	*51 - 108*	*04/09/18 08:44*	*04/09/18 19:09*	*1*
Phenol-d5	*26*		*14 - 39*	*04/09/18 08:44*	*04/09/18 19:09*	*1*
Terphenyl-d14	*124*		*40 - 148*	*04/09/18 08:44*	*04/09/18 19:09*	*1*
2,4,6-Tribromophenol	*97*		*26 - 139*	*04/09/18 08:44*	*04/09/18 19:09*	*1*
2-Fluorophenol	*51*		*25 - 58*	*04/09/18 08:44*	*04/09/18 19:09*	*1*
2-Fluorobiphenyl	*103*		*45 - 107*	*04/09/18 08:44*	*04/09/18 19:09*	*1*

Client Sample ID: DGC-10D

Lab Sample ID: 460-153430-1

Date Collected: 04/05/18 08:55
Date Received: 04/05/18 22:10

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**13400**		250	233	ug/L		04/06/18 23:10	04/07/18 16:20	5
Potassium	**2700**		250	143	ug/L		04/06/18 23:10	04/07/18 16:20	5
Magnesium	**4190**		250	155	ug/L		04/06/18 23:10	04/07/18 16:20	5
Sodium	**15900**		250	213	ug/L		04/06/18 23:10	04/07/18 16:20	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/06/18 23:10	04/07/18 16:20	5
Antimony	1.4	U	2.5	1.4	ug/L		04/06/18 23:10	04/07/18 16:20	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/06/18 23:10	04/07/18 16:20	5
Barium	**71.8**		5.0	3.2	ug/L		04/06/18 23:10	04/07/18 16:20	5
Thallium	0.60	U	1.0	0.60	ug/L		04/06/18 23:10	04/07/18 16:20	5
Iron	**412**		150	97.8	ug/L		04/06/18 23:10	04/07/18 16:20	5
Nickel	**12.0**		5.0	3.1	ug/L		04/06/18 23:10	04/07/18 16:20	5
Vanadium	**3.3**	J	5.0	3.0	ug/L		04/06/18 23:10	04/07/18 16:20	5
Silver	3.0	U	5.0	3.0	ug/L		04/06/18 23:10	04/07/18 16:20	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/06/18 23:10	04/07/18 16:20	5
Copper	**10.9**		5.0	3.3	ug/L		04/06/18 23:10	04/07/18 16:20	5
Aluminum	**60.8**		50.0	28.5	ug/L		04/06/18 23:10	04/07/18 16:20	5
Lead	**1.5**		1.5	0.93	ug/L		04/06/18 23:10	04/07/18 16:20	5
Zinc	**29.9**		20.0	16.3	ug/L		04/06/18 23:10	04/07/18 16:20	5
Selenium	1.4	U	2.5	1.4	ug/L		04/06/18 23:10	04/07/18 16:20	5
Manganese	**118**		10.0	6.1	ug/L		04/06/18 23:10	04/07/18 16:20	5
Chromium	**7.2**		5.0	3.1	ug/L		04/06/18 23:10	04/07/18 16:20	5
Cobalt	**6.1**		5.0	3.1	ug/L		04/06/18 23:10	04/07/18 16:20	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/10/18 12:29	04/10/18 14:40	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	92.1	U	150	92.1	ug/L		04/10/18 08:55	04/10/18 22:39	1
Manganese, Dissolved	**103**		15.0	3.1	ug/L		04/10/18 08:55	04/10/18 22:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.072**	J	0.10	0.045	mg/L		04/09/18 18:04	04/10/18 11:03	1

Client Sample ID: DGC-10S

Lab Sample ID: 460-153430-2

Date Collected: 04/05/18 10:05
Date Received: 04/05/18 22:10

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**2.1**		0.40	0.20	ug/L			04/10/18 13:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*72 - 133*		*04/10/18 13:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*71 - 144*		*04/10/18 13:24*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/11/18 14:05	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G Groundwater

TestAmerica Job ID: 460-153430-1
SDG: 153430

Client Sample ID: DGC-10S

Lab Sample ID: 460-153430-2

Date Collected: 04/05/18 10:05
Date Received: 04/05/18 22:10

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	0.18	U	1.0	0.18	ug/L			04/11/18 14:05	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/11/18 14:05	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/11/18 14:05	1
Methylene Chloride	**0.24**	**J**	1.0	0.21	ug/L			04/11/18 14:05	1
Acetone	5 ~~**4.8**~~	~~**J**~~ U	5.0	1.1	ug/L			04/11/18 14:05	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/11/18 14:05	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/11/18 14:05	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/11/18 14:05	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/11/18 14:05	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/11/18 14:05	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/11/18 14:05	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/11/18 14:05	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/11/18 14:05	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/11/18 14:05	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/11/18 14:05	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/11/18 14:05	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/11/18 14:05	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/11/18 14:05	1
Trichloroethene	**0.32**	**J**	1.0	0.22	ug/L			04/11/18 14:05	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/11/18 14:05	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/11/18 14:05	1
Benzene	0.090	U	1.0	0.090	ug/L			04/11/18 14:05	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/11/18 14:05	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/11/18 14:05	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/11/18 14:05	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/11/18 14:05	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/11/18 14:05	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/11/18 14:05	1
Toluene	0.25	U	1.0	0.25	ug/L			04/11/18 14:05	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/11/18 14:05	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/11/18 14:05	1
Styrene	0.17	U	1.0	0.17	ug/L			04/11/18 14:05	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/11/18 14:05	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/11/18 14:05	1
MTBE	0.13	U	1.0	0.13	ug/L			04/11/18 14:05	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/11/18 14:05	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/11/18 14:05	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/11/18 14:05	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/11/18 14:05	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/11/18 14:05	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/11/18 14:05	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/11/18 14:05	1
Indane	0.12	U	1.0	0.12	ug/L			04/11/18 14:05	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/11/18 14:05	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/11/18 14:05	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/11/18 14:05*	*1*

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G Groundwater

TestAmerica Job ID: 460-153430-1
SDG: 153430

Client Sample ID: DGC-10S

Lab Sample ID: 460-153430-2

Date Collected: 04/05/18 10:05
Date Received: 04/05/18 22:10

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*74 - 132*		*04/11/18 14:05*	*1*
Bromofluorobenzene	*91*		*77 - 124*		*04/11/18 14:05*	*1*
Toluene-d8 (Surr)	*91*		*80 - 120*		*04/11/18 14:05*	*1*
Dibromofluoromethane (Surr)	*103*		*72 - 131*		*04/11/18 14:05*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/09/18 08:44	04/10/18 10:53	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/09/18 08:44	04/10/18 10:53	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/09/18 08:44	04/10/18 10:53	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/09/18 08:44	04/10/18 10:53	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/09/18 08:44	04/10/18 10:53	1
Bis(2-chloroethyl)ether	**0.13**		0.030	0.026	ug/L		04/09/18 08:44	04/10/18 10:53	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/09/18 08:44	04/09/18 19:30	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/09/18 08:44	04/09/18 19:30	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/09/18 08:44	04/09/18 19:30	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/09/18 08:44	04/09/18 19:30	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/09/18 08:44	04/09/18 19:30	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/09/18 08:44	04/09/18 19:30	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/09/18 08:44	04/09/18 19:30	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/09/18 08:44	04/09/18 19:30	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/09/18 08:44	04/09/18 19:30	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/09/18 08:44	04/09/18 19:30	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/09/18 08:44	04/09/18 19:30	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/09/18 08:44	04/09/18 19:30	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/09/18 08:44	04/09/18 19:30	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/09/18 08:44	04/09/18 19:30	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/09/18 08:44	04/09/18 19:30	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/09/18 08:44	04/09/18 19:30	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/09/18 08:44	04/09/18 19:30	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/09/18 08:44	04/09/18 19:30	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/09/18 08:44	04/09/18 19:30	1
Isophorone	0.80	U	10	0.80	ug/L		04/09/18 08:44	04/09/18 19:30	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/09/18 08:44	04/09/18 19:30	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/09/18 08:44	04/09/18 19:30	1
Naphthalene	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/09/18 19:30	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/09/18 08:44	04/09/18 19:30	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/09/18 08:44	04/09/18 19:30	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/09/18 19:30	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/09/18 08:44	04/09/18 19:30	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/09/18 08:44	04/09/18 19:30	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/09/18 08:44	04/09/18 19:30	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/09/18 08:44	04/09/18 19:30	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/09/18 08:44	04/09/18 19:30	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/09/18 08:44	04/09/18 19:30	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/09/18 08:44	04/09/18 19:30	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/09/18 19:30	1

Client Sample ID: DGC-10S

Lab Sample ID: 460-153430-2

Date Collected: 04/05/18 10:05
Date Received: 04/05/18 22:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenzofuran	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/09/18 19:30	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/09/18 08:44	04/09/18 19:30	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/09/18 08:44	04/09/18 19:30	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/09/18 08:44	04/09/18 19:30	1
Fluorene	0.91	U	10	0.91	ug/L		04/09/18 08:44	04/09/18 19:30	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/09/18 08:44	04/09/18 19:30	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/09/18 08:44	04/09/18 19:30	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/09/18 08:44	04/09/18 19:30	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/09/18 08:44	04/09/18 19:30	1
Anthracene	0.63	U	10	0.63	ug/L		04/09/18 08:44	04/09/18 19:30	1
Carbazole	0.68	U	10	0.68	ug/L		04/09/18 08:44	04/09/18 19:30	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/09/18 08:44	04/09/18 19:30	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/09/18 08:44	04/09/18 19:30	1
Pyrene	1.6	U *-	10	1.6	ug/L		04/09/18 08:44	04/09/18 19:30	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/09/18 08:44	04/09/18 19:30	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/09/18 08:44	04/09/18 19:30	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/09/18 08:44	04/09/18 19:30	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/09/18 08:44	04/09/18 19:30	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/09/18 08:44	04/09/18 19:30	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/09/18 08:44	04/09/18 19:30	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/09/18 08:44	04/09/18 19:30	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/09/18 08:44	04/09/18 19:30	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/09/18 08:44	04/09/18 19:30	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/09/18 08:44	04/09/18 19:30	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/09/18 08:44	04/09/18 19:30	1
Caprolactam	0.68	U	10	0.68	ug/L		04/09/18 08:44	04/09/18 19:30	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/09/18 08:44	04/09/18 19:30	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/09/18 08:44	04/09/18 19:30	1
N-Methylaniline	0.48	U	5.0	0.48	ug/L		04/09/18 08:44	04/09/18 19:30	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*12*	*J*	*ug/L*		*4.68*		*04/09/18 08:44*	*04/09/18 19:30*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*111*	*X*	*51 - 108*	*04/09/18 08:44*	*04/09/18 19:30*	*1*
Phenol-d5	*26*		*14 - 39*	*04/09/18 08:44*	*04/09/18 19:30*	*1*
Terphenyl-d14	*126*		*40 - 148*	*04/09/18 08:44*	*04/09/18 19:30*	*1*
2,4,6-Tribromophenol	*97*		*26 - 139*	*04/09/18 08:44*	*04/09/18 19:30*	*1*
2-Fluorophenol	*53*		*25 - 58*	*04/09/18 08:44*	*04/09/18 19:30*	*1*
2-Fluorobiphenyl	*99*		*45 - 107*	*04/09/18 08:44*	*04/09/18 19:30*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**43100**		250	233	ug/L		04/06/18 23:10	04/07/18 16:22	5
Potassium	**4530**		250	143	ug/L		04/06/18 23:10	04/07/18 16:22	5
Magnesium	**7940**		250	155	ug/L		04/06/18 23:10	04/07/18 16:22	5
Sodium	**7830**		250	213	ug/L		04/06/18 23:10	04/07/18 16:22	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/06/18 23:10	04/07/18 16:22	5
Antimony	1.4	U	2.5	1.4	ug/L		04/06/18 23:10	04/07/18 16:22	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/06/18 23:10	04/07/18 16:22	5

Client Sample ID: DGC-10S

Lab Sample ID: 460-153430-2

Date Collected: 04/05/18 10:05
Date Received: 04/05/18 22:10

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**61.8**		5.0	3.2	ug/L		04/06/18 23:10	04/07/18 16:22	5
Thallium	0.60	U	1.0	0.60	ug/L		04/06/18 23:10	04/07/18 16:22	5
Iron	**2490**		150	97.8	ug/L		04/06/18 23:10	04/07/18 16:22	5
Nickel	**8.4**		5.0	3.1	ug/L		04/06/18 23:10	04/07/18 16:22	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/06/18 23:10	04/07/18 16:22	5
Silver	3.0	U	5.0	3.0	ug/L		04/06/18 23:10	04/07/18 16:22	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/06/18 23:10	04/07/18 16:22	5
Copper	3.3	U	5.0	3.3	ug/L		04/06/18 23:10	04/07/18 16:22	5
Aluminum	**61.0**		50.0	28.5	ug/L		04/06/18 23:10	04/07/18 16:22	5
Lead	0.93	U	1.5	0.93	ug/L		04/06/18 23:10	04/07/18 16:22	5
Zinc	**30.3**		20.0	16.3	ug/L		04/06/18 23:10	04/07/18 16:22	5
Selenium	1.4	U	2.5	1.4	ug/L		04/06/18 23:10	04/07/18 16:22	5
Manganese	**122**		10.0	6.1	ug/L		04/06/18 23:10	04/07/18 16:22	5
Chromium	**4.9**	**J**	5.0	3.1	ug/L		04/06/18 23:10	04/07/18 16:22	5
Cobalt	**5.5**		5.0	3.1	ug/L		04/06/18 23:10	04/07/18 16:22	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/10/18 12:29	04/10/18 14:42	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**628**		150	92.1	ug/L		04/10/18 10:42	04/10/18 22:47	1
Manganese, Dissolved	**133**		15.0	3.1	ug/L		04/10/18 10:42	04/10/18 22:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.091**	**J**	0.10	0.045	mg/L		04/09/18 18:04	04/10/18 11:04	1

Client Sample ID: UPA-02D

Lab Sample ID: 460-153430-3

Date Collected: 04/05/18 10:35
Date Received: 04/05/18 22:10

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**41**		0.80	0.40	ug/L			04/10/18 16:30	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*72 - 133*		*04/10/18 16:30*	*2*
1,2-Dichloroethane-d4 (Surr)	*85*		*71 - 144*		*04/10/18 16:30*	*2*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/11/18 14:28	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/11/18 14:28	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/11/18 14:28	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/11/18 14:28	1
Methylene Chloride	**0.29**	**J**	1.0	0.21	ug/L			04/11/18 14:28	1
Acetone	1.1	U	5.0	1.1	ug/L			04/11/18 14:28	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/11/18 14:28	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/11/18 14:28	1

Client Sample ID: UPA-02D

Lab Sample ID: 460-153430-3

Date Collected: 04/05/18 10:35
Date Received: 04/05/18 22:10

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/11/18 14:28	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/11/18 14:28	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/11/18 14:28	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/11/18 14:28	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/11/18 14:28	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/11/18 14:28	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/11/18 14:28	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/11/18 14:28	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/11/18 14:28	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/11/18 14:28	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/11/18 14:28	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/11/18 14:28	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/11/18 14:28	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/11/18 14:28	1
Benzene	**0.22**	**J**	1.0	0.090	ug/L			04/11/18 14:28	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/11/18 14:28	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/11/18 14:28	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/11/18 14:28	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/11/18 14:28	1
Tetrachloroethene	**0.33**	**J**	1.0	0.12	ug/L			04/11/18 14:28	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/11/18 14:28	1
Toluene	0.25	U	1.0	0.25	ug/L			04/11/18 14:28	1
Chlorobenzene	**7.1**		1.0	0.24	ug/L			04/11/18 14:28	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/11/18 14:28	1
Styrene	0.17	U	1.0	0.17	ug/L			04/11/18 14:28	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/11/18 14:28	1
Ethyl ether	**4.0**		1.0	0.11	ug/L			04/11/18 14:28	1
MTBE	**3.1**		1.0	0.13	ug/L			04/11/18 14:28	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/11/18 14:28	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/11/18 14:28	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/11/18 14:28	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/11/18 14:28	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/11/18 14:28	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/11/18 14:28	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/11/18 14:28	1
Indane	0.12	U	1.0	0.12	ug/L			04/11/18 14:28	1
Dichlorofluoromethane	**0.43**	**J**	1.0	0.21	ug/L			04/11/18 14:28	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/11/18 14:28	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/11/18 14:28*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*74 - 132*		*04/11/18 14:28*	*1*
Bromofluorobenzene	*92*		*77 - 124*		*04/11/18 14:28*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*04/11/18 14:28*	*1*
Dibromofluoromethane (Surr)	*103*		*72 - 131*		*04/11/18 14:28*	*1*

Client Sample ID: UPA-02D

Lab Sample ID: 460-153430-3

Date Collected: 04/05/18 10:35
Date Received: 04/05/18 22:10

Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/09/18 08:44	04/10/18 11:14	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/09/18 08:44	04/10/18 11:14	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/09/18 08:44	04/10/18 11:14	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/09/18 08:44	04/10/18 11:14	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/09/18 08:44	04/10/18 11:14	1
Bis(2-chloroethyl)ether	**6.8**		0.030	0.026	ug/L		04/09/18 08:44	04/10/18 11:14	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/09/18 08:44	04/09/18 19:51	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/09/18 08:44	04/09/18 19:51	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/09/18 08:44	04/09/18 19:51	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/09/18 08:44	04/09/18 19:51	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/09/18 08:44	04/09/18 19:51	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/09/18 08:44	04/09/18 19:51	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/09/18 08:44	04/09/18 19:51	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/09/18 08:44	04/09/18 19:51	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/09/18 08:44	04/09/18 19:51	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/09/18 08:44	04/09/18 19:51	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/09/18 08:44	04/09/18 19:51	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/09/18 08:44	04/09/18 19:51	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/09/18 08:44	04/09/18 19:51	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/09/18 08:44	04/09/18 19:51	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/09/18 08:44	04/09/18 19:51	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/09/18 08:44	04/09/18 19:51	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/09/18 08:44	04/09/18 19:51	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/09/18 08:44	04/09/18 19:51	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/09/18 08:44	04/09/18 19:51	1
Isophorone	0.80	U	10	0.80	ug/L		04/09/18 08:44	04/09/18 19:51	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/09/18 08:44	04/09/18 19:51	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/09/18 08:44	04/09/18 19:51	1
Naphthalene	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/09/18 19:51	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/09/18 08:44	04/09/18 19:51	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/09/18 08:44	04/09/18 19:51	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/09/18 19:51	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/09/18 08:44	04/09/18 19:51	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/09/18 08:44	04/09/18 19:51	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/09/18 08:44	04/09/18 19:51	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/09/18 08:44	04/09/18 19:51	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/09/18 08:44	04/09/18 19:51	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/09/18 08:44	04/09/18 19:51	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/09/18 08:44	04/09/18 19:51	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/09/18 19:51	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/09/18 19:51	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/09/18 08:44	04/09/18 19:51	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/09/18 08:44	04/09/18 19:51	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/09/18 08:44	04/09/18 19:51	1
Fluorene	0.91	U	10	0.91	ug/L		04/09/18 08:44	04/09/18 19:51	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/09/18 08:44	04/09/18 19:51	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/09/18 08:44	04/09/18 19:51	1

Client Sample ID: UPA-02D

Lab Sample ID: 460-153430-3

Date Collected: 04/05/18 10:35
Date Received: 04/05/18 22:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/09/18 08:44	04/09/18 19:51	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/09/18 08:44	04/09/18 19:51	1
Anthracene	0.63	U	10	0.63	ug/L		04/09/18 08:44	04/09/18 19:51	1
Carbazole	0.68	U	10	0.68	ug/L		04/09/18 08:44	04/09/18 19:51	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/09/18 08:44	04/09/18 19:51	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/09/18 08:44	04/09/18 19:51	1
Pyrene	1.6	U	10	1.6	ug/L		04/09/18 08:44	04/09/18 19:51	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/09/18 08:44	04/09/18 19:51	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/09/18 08:44	04/09/18 19:51	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/09/18 08:44	04/09/18 19:51	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/09/18 08:44	04/09/18 19:51	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/09/18 08:44	04/09/18 19:51	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/09/18 08:44	04/09/18 19:51	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/09/18 08:44	04/09/18 19:51	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/09/18 08:44	04/09/18 19:51	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/09/18 08:44	04/09/18 19:51	1
Diphenyl ether	**3.1**	**J**	10	1.2	ug/L		04/09/18 08:44	04/09/18 19:51	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/09/18 08:44	04/09/18 19:51	1
Caprolactam	0.68	U	10	0.68	ug/L		04/09/18 08:44	04/09/18 19:51	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/09/18 08:44	04/09/18 19:51	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/09/18 08:44	04/09/18 19:51	1
N-Methylaniline	0.48	U	5.0	0.48	ug/L		04/09/18 08:44	04/09/18 19:51	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*9.0*	*J*	*ug/L*		*6.69*		*04/09/18 08:44*	*04/09/18 19:51*	*1*
Unknown	*17*	*J*	*ug/L*		*9.57*		*04/09/18 08:44*	*04/09/18 19:51*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*108*		*51 - 108*	*04/09/18 08:44*	*04/09/18 19:51*	*1*
Phenol-d5	*27*		*14 - 39*	*04/09/18 08:44*	*04/09/18 19:51*	*1*
Terphenyl-d14	*123*		*40 - 148*	*04/09/18 08:44*	*04/09/18 19:51*	*1*
2,4,6-Tribromophenol	*98*		*26 - 139*	*04/09/18 08:44*	*04/09/18 19:51*	*1*
2-Fluorophenol	*54*		*25 - 58*	*04/09/18 08:44*	*04/09/18 19:51*	*1*
2-Fluorobiphenyl	*102*		*45 - 107*	*04/09/18 08:44*	*04/09/18 19:51*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**22800**		250	233	ug/L		04/06/18 23:10	04/07/18 16:25	5
Potassium	**5250**		250	143	ug/L		04/06/18 23:10	04/07/18 16:25	5
Magnesium	**11800**		250	155	ug/L		04/06/18 23:10	04/07/18 16:25	5
Sodium	**23300**		250	213	ug/L		04/06/18 23:10	04/07/18 16:25	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/06/18 23:10	04/07/18 16:25	5
Antimony	1.4	U	2.5	1.4	ug/L		04/06/18 23:10	04/07/18 16:25	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/06/18 23:10	04/07/18 16:25	5
Barium	**152**		5.0	3.2	ug/L		04/06/18 23:10	04/07/18 16:25	5
Thallium	0.60	U	1.0	0.60	ug/L		04/06/18 23:10	04/07/18 16:25	5
Iron	**3530**		150	97.8	ug/L		04/06/18 23:10	04/07/18 16:25	5
Nickel	**10**		5.0	3.1	ug/L		04/06/18 23:10	04/07/18 16:25	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/06/18 23:10	04/07/18 16:25	5
Silver	3.0	U	5.0	3.0	ug/L		04/06/18 23:10	04/07/18 16:25	5

Client Sample ID: UPA-02D

Lab Sample ID: 460-153430-3
Date Collected: 04/05/18 10:35
Matrix: Water
Date Received: 04/05/18 22:10

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.5	U	2.5	1.5	ug/L		04/06/18 23:10	04/07/18 16:25	5
Copper	3.3	U	5.0	3.3	ug/L		04/06/18 23:10	04/07/18 16:25	5
Aluminum	**42.6**	**J**	50.0	28.5	ug/L		04/06/18 23:10	04/07/18 16:25	5
Lead	0.93	U	1.5	0.93	ug/L		04/06/18 23:10	04/07/18 16:25	5
Zinc	16.3	U	20.0	16.3	ug/L		04/06/18 23:10	04/07/18 16:25	5
Selenium	1.4	U	2.5	1.4	ug/L		04/06/18 23:10	04/07/18 16:25	5
Manganese	**1100**		10.0	6.1	ug/L		04/06/18 23:10	04/07/18 16:25	5
Chromium	**8.2**		5.0	3.1	ug/L		04/06/18 23:10	04/07/18 16:25	5
Cobalt	**13.4**		5.0	3.1	ug/L		04/06/18 23:10	04/07/18 16:25	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/10/18 12:29	04/10/18 14:14	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**3710**		150	92.1	ug/L		04/10/18 10:42	04/10/18 22:51	1
Manganese, Dissolved	**1180**		15.0	3.1	ug/L		04/10/18 10:42	04/10/18 22:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**1.2**		0.10	0.045	mg/L		04/09/18 18:04	04/10/18 11:06	1

Client Sample ID: UPA-03D

Lab Sample ID: 460-153430-4
Date Collected: 04/05/18 12:10
Matrix: Water
Date Received: 04/05/18 22:10

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**67**		0.80	0.40	ug/L			04/11/18 15:21	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*72 - 133*		*04/11/18 15:21*	*2*
1,2-Dichloroethane-d4 (Surr)	*100*		*71 - 144*		*04/11/18 15:21*	*2*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/11/18 14:51	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/11/18 14:51	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/11/18 14:51	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/11/18 14:51	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/11/18 14:51	1
Acetone	1.1	U	5.0	1.1	ug/L			04/11/18 14:51	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/11/18 14:51	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/11/18 14:51	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/11/18 14:51	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/11/18 14:51	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/11/18 14:51	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/11/18 14:51	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/11/18 14:51	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/11/18 14:51	1

Client Sample ID: UPA-03D

Lab Sample ID: 460-153430-4

Date Collected: 04/05/18 12:10
Date Received: 04/05/18 22:10

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/11/18 14:51	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/11/18 14:51	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/11/18 14:51	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/11/18 14:51	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/11/18 14:51	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/11/18 14:51	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/11/18 14:51	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/11/18 14:51	1
Benzene	**0.18**	**J**	1.0	0.090	ug/L			04/11/18 14:51	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/11/18 14:51	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/11/18 14:51	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/11/18 14:51	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/11/18 14:51	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/11/18 14:51	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/11/18 14:51	1
Toluene	0.25	U	1.0	0.25	ug/L			04/11/18 14:51	1
Chlorobenzene	**3.7**		1.0	0.24	ug/L			04/11/18 14:51	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/11/18 14:51	1
Styrene	0.17	U	1.0	0.17	ug/L			04/11/18 14:51	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/11/18 14:51	1
Ethyl ether	**0.72**	**J**	1.0	0.11	ug/L			04/11/18 14:51	1
MTBE	**0.94**	**J**	1.0	0.13	ug/L			04/11/18 14:51	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/11/18 14:51	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/11/18 14:51	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/11/18 14:51	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/11/18 14:51	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/11/18 14:51	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/11/18 14:51	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/11/18 14:51	1
Indane	0.12	U	1.0	0.12	ug/L			04/11/18 14:51	1
Dichlorofluoromethane	**0.73**	**J**	1.0	0.21	ug/L			04/11/18 14:51	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/11/18 14:51	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/11/18 14:51*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*74 - 132*		*04/11/18 14:51*	*1*
Bromofluorobenzene	*90*		*77 - 124*		*04/11/18 14:51*	*1*
Toluene-d8 (Surr)	*89*		*80 - 120*		*04/11/18 14:51*	*1*
Dibromofluoromethane (Surr)	*101*		*72 - 131*		*04/11/18 14:51*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/09/18 08:44	04/10/18 11:36	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/09/18 08:44	04/10/18 11:36	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/09/18 08:44	04/10/18 11:36	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/09/18 08:44	04/10/18 11:36	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/09/18 08:44	04/10/18 11:36	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G Groundwater

TestAmerica Job ID: 460-153430-1
SDG: 153430

Client Sample ID: UPA-03D

Date Collected: 04/05/18 12:10
Date Received: 04/05/18 22:10

Lab Sample ID: 460-153430-4

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/09/18 08:44	04/09/18 20:12	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/09/18 08:44	04/09/18 20:12	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/09/18 08:44	04/09/18 20:12	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/09/18 08:44	04/09/18 20:12	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/09/18 08:44	04/09/18 20:12	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/09/18 08:44	04/09/18 20:12	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/09/18 08:44	04/09/18 20:12	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/09/18 08:44	04/09/18 20:12	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/09/18 08:44	04/09/18 20:12	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/09/18 08:44	04/09/18 20:12	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/09/18 08:44	04/09/18 20:12	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/09/18 08:44	04/09/18 20:12	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/09/18 08:44	04/09/18 20:12	1
Bis(2-chloroethyl)ether	**11**	J+	1.0	0.30	ug/L		04/09/18 08:44	04/09/18 20:12	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/09/18 08:44	04/09/18 20:12	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/09/18 08:44	04/09/18 20:12	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/09/18 08:44	04/09/18 20:12	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/09/18 08:44	04/09/18 20:12	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/09/18 08:44	04/09/18 20:12	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/09/18 08:44	04/09/18 20:12	1
Isophorone	0.80	U	10	0.80	ug/L		04/09/18 08:44	04/09/18 20:12	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/09/18 08:44	04/09/18 20:12	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/09/18 08:44	04/09/18 20:12	1
Naphthalene	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/09/18 20:12	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/09/18 08:44	04/09/18 20:12	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/09/18 08:44	04/09/18 20:12	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/09/18 20:12	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/09/18 08:44	04/09/18 20:12	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/09/18 08:44	04/09/18 20:12	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/09/18 08:44	04/09/18 20:12	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/09/18 08:44	04/09/18 20:12	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/09/18 08:44	04/09/18 20:12	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/09/18 08:44	04/09/18 20:12	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/09/18 08:44	04/09/18 20:12	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/09/18 20:12	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/09/18 20:12	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/09/18 08:44	04/09/18 20:12	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/09/18 08:44	04/09/18 20:12	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/09/18 08:44	04/09/18 20:12	1
Fluorene	0.91	U	10	0.91	ug/L		04/09/18 08:44	04/09/18 20:12	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/09/18 08:44	04/09/18 20:12	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/09/18 08:44	04/09/18 20:12	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/09/18 08:44	04/09/18 20:12	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/09/18 08:44	04/09/18 20:12	1
Anthracene	0.63	U	10	0.63	ug/L		04/09/18 08:44	04/09/18 20:12	1
Carbazole	0.68	U	10	0.68	ug/L		04/09/18 08:44	04/09/18 20:12	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/09/18 08:44	04/09/18 20:12	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/09/18 08:44	04/09/18 20:12	1
Pyrene	1.6	U *	10	1.6	ug/L		04/09/18 08:44	04/09/18 20:12	1

Client Sample ID: UPA-03D

Lab Sample ID: 460-153430-4

Date Collected: 04/05/18 12:10
Date Received: 04/05/18 22:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/09/18 08:44	04/09/18 20:12	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/09/18 08:44	04/09/18 20:12	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/09/18 08:44	04/09/18 20:12	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/09/18 08:44	04/09/18 20:12	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/09/18 08:44	04/09/18 20:12	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/09/18 08:44	04/09/18 20:12	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/09/18 08:44	04/09/18 20:12	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/09/18 08:44	04/09/18 20:12	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/09/18 08:44	04/09/18 20:12	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/09/18 08:44	04/09/18 20:12	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/09/18 08:44	04/09/18 20:12	1
Caprolactam	0.68	U	10	0.68	ug/L		04/09/18 08:44	04/09/18 20:12	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/09/18 08:44	04/09/18 20:12	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/09/18 08:44	04/09/18 20:12	1
N-Methylaniline	0.48	U	5.0	0.48	ug/L		04/09/18 08:44	04/09/18 20:12	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/09/18 08:44*	*04/09/18 20:12*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*114*	*X*	*51 - 108*	*04/09/18 08:44*	*04/09/18 20:12*	*1*
Phenol-d5	*27*		*14 - 39*	*04/09/18 08:44*	*04/09/18 20:12*	*1*
Terphenyl-d14	*128*		*40 - 148*	*04/09/18 08:44*	*04/09/18 20:12*	*1*
2,4,6-Tribromophenol	*98*		*26 - 139*	*04/09/18 08:44*	*04/09/18 20:12*	*1*
2-Fluorophenol	*53*		*25 - 58*	*04/09/18 08:44*	*04/09/18 20:12*	*1*
2-Fluorobiphenyl	*104*		*45 - 107*	*04/09/18 08:44*	*04/09/18 20:12*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**12400**		250	233	ug/L		04/06/18 23:10	04/07/18 16:30	5
Potassium	**2250**		250	143	ug/L		04/06/18 23:10	04/07/18 16:30	5
Magnesium	**5070**		250	155	ug/L		04/06/18 23:10	04/07/18 16:30	5
Sodium	**17500**		250	213	ug/L		04/06/18 23:10	04/07/18 16:30	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/06/18 23:10	04/07/18 16:30	5
Antimony	1.4	U	2.5	1.4	ug/L		04/06/18 23:10	04/07/18 16:30	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/06/18 23:10	04/07/18 16:30	5
Barium	**81.7**		5.0	3.2	ug/L		04/06/18 23:10	04/07/18 16:30	5
Thallium	0.60	U	1.0	0.60	ug/L		04/06/18 23:10	04/07/18 16:30	5
Iron	**617**		150	97.8	ug/L		04/06/18 23:10	04/07/18 16:30	5
Nickel	**16.9**		5.0	3.1	ug/L		04/06/18 23:10	04/07/18 16:30	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/06/18 23:10	04/07/18 16:30	5
Silver	3.0	U	5.0	3.0	ug/L		04/06/18 23:10	04/07/18 16:30	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/06/18 23:10	04/07/18 16:30	5
Copper	**4.5**	**J**	5.0	3.3	ug/L		04/06/18 23:10	04/07/18 16:30	5
Aluminum	**173**		50.0	28.5	ug/L		04/06/18 23:10	04/07/18 16:30	5
Lead	0.93	U	1.5	0.93	ug/L		04/06/18 23:10	04/07/18 16:30	5
Zinc	**56.6**		20.0	16.3	ug/L		04/06/18 23:10	04/07/18 16:30	5
Selenium	1.4	U	2.5	1.4	ug/L		04/06/18 23:10	04/07/18 16:30	5
Manganese	**12.3**		10.0	6.1	ug/L		04/06/18 23:10	04/07/18 16:30	5
Chromium	**12.7**		5.0	3.1	ug/L		04/06/18 23:10	04/07/18 16:30	5

Client Sample ID: UPA-03D

Lab Sample ID: 460-153430-4

Date Collected: 04/05/18 12:10
Date Received: 04/05/18 22:10

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	3.1	U	5.0	3.1	ug/L		04/06/18 23:10	04/07/18 16:30	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/10/18 12:29	04/10/18 14:44	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**213**		150	92.1	ug/L		04/10/18 10:42	04/10/18 23:14	1
Manganese, Dissolved	**12.7**	**J**	15.0	3.1	ug/L		04/10/18 10:42	04/10/18 23:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.13**		0.10	0.045	mg/L		04/09/18 18:04	04/10/18 11:07	1

Client Sample ID: UPA-101-TZ

Lab Sample ID: 460-153430-5

Date Collected: 04/05/18 15:10
Date Received: 04/05/18 22:10

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/11/18 17:13	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/11/18 17:13	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/11/18 17:13	1
Chloroethane	**4.0**		1.0	0.37	ug/L			04/11/18 17:13	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/11/18 17:13	1
Acetone	**6.1**	U	6.1 ~~5.0~~	1.1	ug/L			04/11/18 17:13	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/11/18 17:13	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/11/18 17:13	1
1,1-Dichloroethane	**1.0**		1.0	0.24	ug/L			04/11/18 17:13	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/11/18 17:13	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/11/18 17:13	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/11/18 17:13	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/11/18 17:13	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/11/18 17:13	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/11/18 17:13	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/11/18 17:13	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/11/18 17:13	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/11/18 17:13	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/11/18 17:13	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/11/18 17:13	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/11/18 17:13	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/11/18 17:13	1
Benzene	**240**		1.0	0.090	ug/L			04/11/18 17:13	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/11/18 17:13	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/11/18 17:13	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/11/18 17:13	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/11/18 17:13	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/11/18 17:13	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/11/18 17:13	1

Client Sample ID: UPA-101-TZ

Lab Sample ID: 460-153430-5

Date Collected: 04/05/18 15:10
Date Received: 04/05/18 22:10

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	**2.4**		1.0	0.25	ug/L			04/11/18 17:13	1
Chlorobenzene	**7.4**		1.0	0.24	ug/L			04/11/18 17:13	1
Ethylbenzene	**46**		1.0	0.30	ug/L			04/11/18 17:13	1
Styrene	0.17	U	1.0	0.17	ug/L			04/11/18 17:13	1
Xylenes, Total	**21**		2.0	0.28	ug/L			04/11/18 17:13	1
Ethyl ether	**7.3**		1.0	0.11	ug/L			04/11/18 17:13	1
MTBE	0.13	U	1.0	0.13	ug/L			04/11/18 17:13	1
Tetrahydrofuran	**130**		2.0	0.36	ug/L			04/11/18 17:13	1
Cyclohexane	**6.7**		1.0	0.26	ug/L			04/11/18 17:13	1
1,4-Dioxane	**300**		50	8.7	ug/L			04/11/18 17:13	1
1,2,4-Trimethylbenzene	**6.0**		1.0	0.23	ug/L			04/11/18 17:13	1
1,3,5-Trimethylbenzene	**2.8**		1.0	0.25	ug/L			04/11/18 17:13	1
Isopropylbenzene	**8.3**		1.0	0.32	ug/L			04/11/18 17:13	1
N-Propylbenzene	**11**		1.0	0.29	ug/L			04/11/18 17:13	1
Methylcyclohexane	**4.8**		1.0	0.22	ug/L			04/11/18 17:13	1
Indane	**9.4**		1.0	0.12	ug/L			04/11/18 17:13	1
Dichlorofluoromethane	**26**		1.0	0.21	ug/L			04/11/18 17:13	1
1,2,3-Trimethylbenzene	**19**		1.0	0.11	ug/L			04/11/18 17:13	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*14*	*J*	*ug/L*		*1.53*			*04/11/18 17:13*	*1*
Methane, chlorofluoro-	*10*	*J N*	*ug/L*		*1.84*	*593-70-4*		*04/11/18 17:13*	*1*
Benzene, 1-ethyl-3-methyl-	*11*	*J N*	*ug/L*		*10.32*	*620-14-4*		*04/11/18 17:13*	*1*
Benzene, 1-ethyl-2-methyl-	*21*	*J N*	*ug/L*		*10.54*	*611-14-3*		*04/11/18 17:13*	*1*
1,4-Benzenediol, diacetate	*7.9*	*J N*	*ug/L*		*12.64*	*1205-91-0*		*04/11/18 17:13*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*74 - 132*		*04/11/18 17:13*	*1*
Bromofluorobenzene	*91*		*77 - 124*		*04/11/18 17:13*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*04/11/18 17:13*	*1*
Dibromofluoromethane (Surr)	*98*		*72 - 131*		*04/11/18 17:13*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/09/18 08:44	04/10/18 11:56	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/09/18 08:44	04/10/18 11:56	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/09/18 08:44	04/10/18 11:56	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/09/18 08:44	04/10/18 11:56	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/09/18 08:44	04/10/18 11:56	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/09/18 08:44	04/09/18 20:33	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/09/18 08:44	04/09/18 20:33	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/09/18 08:44	04/09/18 20:33	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/09/18 08:44	04/09/18 20:33	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/09/18 08:44	04/09/18 20:33	1
2,4-Dimethylphenol	**1.4**	**J**	10	0.24	ug/L		04/09/18 08:44	04/09/18 20:33	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/09/18 08:44	04/09/18 20:33	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/09/18 08:44	04/09/18 20:33	1

Client Sample ID: UPA-101-TZ

Lab Sample ID: 460-153430-5

Date Collected: 04/05/18 15:10
Date Received: 04/05/18 22:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/09/18 08:44	04/09/18 20:33	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/09/18 08:44	04/09/18 20:33	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/09/18 08:44	04/09/18 20:33	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/09/18 08:44	04/09/18 20:33	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/09/18 08:44	04/09/18 20:33	1
Bis(2-chloroethyl)ether	**140**	J+	1.0	0.30	ug/L		04/09/18 08:44	04/09/18 20:33	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/09/18 08:44	04/09/18 20:33	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/09/18 08:44	04/09/18 20:33	1
1,2-Dichlorobenzene	**2.2**	J J+	10	1.3	ug/L		04/09/18 08:44	04/09/18 20:33	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/09/18 08:44	04/09/18 20:33	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/09/18 08:44	04/09/18 20:33	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/09/18 08:44	04/09/18 20:33	1
Isophorone	0.80	U	10	0.80	ug/L		04/09/18 08:44	04/09/18 20:33	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/09/18 08:44	04/09/18 20:33	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/09/18 08:44	04/09/18 20:33	1
Naphthalene	**2.4**	J J+	10	1.1	ug/L		04/09/18 08:44	04/09/18 20:33	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/09/18 08:44	04/09/18 20:33	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/09/18 08:44	04/09/18 20:33	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/09/18 20:33	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/09/18 08:44	04/09/18 20:33	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/09/18 08:44	04/09/18 20:33	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/09/18 08:44	04/09/18 20:33	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/09/18 08:44	04/09/18 20:33	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/09/18 08:44	04/09/18 20:33	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/09/18 08:44	04/09/18 20:33	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/09/18 08:44	04/09/18 20:33	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/09/18 20:33	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/09/18 20:33	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/09/18 08:44	04/09/18 20:33	1
Diethyl phthalate	**1.8**	J J+	10	0.98	ug/L		04/09/18 08:44	04/09/18 20:33	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/09/18 08:44	04/09/18 20:33	1
Fluorene	0.91	U	10	0.91	ug/L		04/09/18 08:44	04/09/18 20:33	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/09/18 08:44	04/09/18 20:33	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/09/18 08:44	04/09/18 20:33	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/09/18 08:44	04/09/18 20:33	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/09/18 08:44	04/09/18 20:33	1
Anthracene	0.63	U	10	0.63	ug/L		04/09/18 08:44	04/09/18 20:33	1
Carbazole	0.68	U	10	0.68	ug/L		04/09/18 08:44	04/09/18 20:33	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/09/18 08:44	04/09/18 20:33	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/09/18 08:44	04/09/18 20:33	1
Pyrene	1.6	U	10	1.6	ug/L		04/09/18 08:44	04/09/18 20:33	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/09/18 08:44	04/09/18 20:33	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/09/18 08:44	04/09/18 20:33	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/09/18 08:44	04/09/18 20:33	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/09/18 08:44	04/09/18 20:33	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/09/18 08:44	04/09/18 20:33	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/09/18 08:44	04/09/18 20:33	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/09/18 08:44	04/09/18 20:33	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/09/18 08:44	04/09/18 20:33	1

Client Sample ID: UPA-101-TZ

Lab Sample ID: 460-153430-5

Date Collected: 04/05/18 15:10
Date Received: 04/05/18 22:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/09/18 08:44	04/09/18 20:33	1
Diphenyl ether	**2.6**	~~J~~ J+	10	1.2	ug/L		04/09/18 08:44	04/09/18 20:33	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/09/18 08:44	04/09/18 20:33	1
Caprolactam	0.68	U	10	0.68	ug/L		04/09/18 08:44	04/09/18 20:33	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/09/18 08:44	04/09/18 20:33	1
Bisphenol-A	**74**		10	9.9	ug/L		04/09/18 08:44	04/09/18 20:33	1
N-Methylaniline	**11**	J+	5.0	0.48	ug/L		04/09/18 08:44	04/09/18 20:33	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane	*84*	*J N*	*ug/L*		*1.58*	*123-91-1*	*04/09/18 08:44*	*04/09/18 20:33*	*1*
1,3-Oxathiolane	*39*	*J N*	*ug/L*		*2.22*	*2094-97-5*	*04/09/18 08:44*	*04/09/18 20:33*	*1*
Benzene, 1,3-dimethyl-	*47*	*J N*	*ug/L*		*3.00*	*108-38-3*	*04/09/18 08:44*	*04/09/18 20:33*	*1*
Unknown	*36*	*J*	*ug/L*		*3.25*		*04/09/18 08:44*	*04/09/18 20:33*	*1*
2-Isopropoxyphenol	*340*	*J N*	*ug/L*		*5.12*	*4812-20-8*	*04/09/18 08:44*	*04/09/18 20:33*	*1*
1-Phenoxypropan-2-ol	*61*	*J N*	*ug/L*		*5.57*	*770-35-4*	*04/09/18 08:44*	*04/09/18 20:33*	*1*
Phenol, 4-(hexyloxy)-	*45*	*J N*	*ug/L*		*5.69*	*18979-55-0*	*04/09/18 08:44*	*04/09/18 20:33*	*1*
Unknown	*120*	*J*	*ug/L*		*5.86*		*04/09/18 08:44*	*04/09/18 20:33*	*1*
Unknown	*50*	*J*	*ug/L*		*6.01*		*04/09/18 08:44*	*04/09/18 20:33*	*1*
Unknown	*88*	*J*	*ug/L*		*6.10*		*04/09/18 08:44*	*04/09/18 20:33*	*1*
Unknown	*370*	*J*	*ug/L*		*6.71*		*04/09/18 08:44*	*04/09/18 20:33*	*1*
Unknown	*100*	*J*	*ug/L*		*7.00*		*04/09/18 08:44*	*04/09/18 20:33*	*1*
Unknown	*71*	*J*	*ug/L*		*7.41*		*04/09/18 08:44*	*04/09/18 20:33*	*1*
Unknown	*92*	*J*	*ug/L*		*7.51*		*04/09/18 08:44*	*04/09/18 20:33*	*1*
Unknown	*39*	*J*	*ug/L*		*8.57*		*04/09/18 08:44*	*04/09/18 20:33*	*1*
Unknown	*65*	*J*	*ug/L*		*8.68*		*04/09/18 08:44*	*04/09/18 20:33*	*1*
Unknown	*46*	*J*	*ug/L*		*9.62*		*04/09/18 08:44*	*04/09/18 20:33*	*1*
Unknown	*51*	*J*	*ug/L*		*10.24*		*04/09/18 08:44*	*04/09/18 20:33*	*1*
Unknown	*52*	*J*	*ug/L*		*10.53*		*04/09/18 08:44*	*04/09/18 20:33*	*1*
Unknown	*83*	*J*	*ug/L*		*11.17*		*04/09/18 08:44*	*04/09/18 20:33*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*111*	*X*	*51 - 108*	*04/09/18 08:44*	*04/09/18 20:33*	*1*
Phenol-d5	*25*		*14 - 39*	*04/09/18 08:44*	*04/09/18 20:33*	*1*
Terphenyl-d14	*129*		*40 - 148*	*04/09/18 08:44*	*04/09/18 20:33*	*1*
2,4,6-Tribromophenol	*98*		*26 - 139*	*04/09/18 08:44*	*04/09/18 20:33*	*1*
2-Fluorophenol	*53*		*25 - 58*	*04/09/18 08:44*	*04/09/18 20:33*	*1*
2-Fluorobiphenyl	*103*		*45 - 107*	*04/09/18 08:44*	*04/09/18 20:33*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**20000**		250	233	ug/L		04/06/18 23:10	04/07/18 16:32	5
Potassium	**3120**		250	143	ug/L		04/06/18 23:10	04/07/18 16:32	5
Magnesium	**7250**		250	155	ug/L		04/06/18 23:10	04/07/18 16:32	5
Sodium	**52000**		250	213	ug/L		04/06/18 23:10	04/07/18 16:32	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/06/18 23:10	04/07/18 16:32	5
Antimony	1.4	U	2.5	1.4	ug/L		04/06/18 23:10	04/07/18 16:32	5
Beryllium	**2.4**		1.0	0.61	ug/L		04/06/18 23:10	04/07/18 16:32	5
Barium	**137**		5.0	3.2	ug/L		04/06/18 23:10	04/07/18 16:32	5
Thallium	0.60	U	1.0	0.60	ug/L		04/06/18 23:10	04/07/18 16:32	5
Iron	**9900**		150	97.8	ug/L		04/06/18 23:10	04/07/18 16:32	5

Client Sample ID: UPA-101-TZ

Lab Sample ID: 460-153430-5
Matrix: Water

Date Collected: 04/05/18 15:10
Date Received: 04/05/18 22:10

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	**281**		5.0	3.1	ug/L		04/06/18 23:10	04/07/18 16:32	5
Vanadium	**7.1**		5.0	3.0	ug/L		04/06/18 23:10	04/07/18 16:32	5
Silver	3.0	U	5.0	3.0	ug/L		04/06/18 23:10	04/07/18 16:32	5
Arsenic	**4.2**		2.5	1.5	ug/L		04/06/18 23:10	04/07/18 16:32	5
Copper	**33.3**		5.0	3.3	ug/L		04/06/18 23:10	04/07/18 16:32	5
Aluminum	**180**		50.0	28.5	ug/L		04/06/18 23:10	04/07/18 16:32	5
Lead	**4.1**		1.5	0.93	ug/L		04/06/18 23:10	04/07/18 16:32	5
Zinc	**712**		20.0	16.3	ug/L		04/06/18 23:10	04/07/18 16:32	5
Selenium	1.4	U	2.5	1.4	ug/L		04/06/18 23:10	04/07/18 16:32	5
Manganese	**458**		10.0	6.1	ug/L		04/06/18 23:10	04/07/18 16:32	5
Chromium	**6.9**		5.0	3.1	ug/L		04/06/18 23:10	04/07/18 16:32	5
Cobalt	**331**		5.0	3.1	ug/L		04/06/18 23:10	04/07/18 16:32	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/10/18 12:29	04/10/18 14:45	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**10300**		150	92.1	ug/L		04/10/18 10:42	04/10/18 23:18	1
Manganese, Dissolved	**478**		15.0	3.1	ug/L		04/10/18 10:42	04/10/18 23:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.095**	**J**	0.10	0.045	mg/L		04/09/18 18:04	04/10/18 11:09	1

Client Sample ID: P6-UPA

Lab Sample ID: 460-153430-6
Matrix: Water

Date Collected: 04/05/18 14:20
Date Received: 04/05/18 22:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/11/18 15:15	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/11/18 15:15	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/11/18 15:15	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/11/18 15:15	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/11/18 15:15	1
Acetone	**6.3**	U	6.3 ~~5.0~~	1.1	ug/L			04/11/18 15:15	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/11/18 15:15	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/11/18 15:15	1
1,1-Dichloroethane	**0.41**	**J**	1.0	0.24	ug/L			04/11/18 15:15	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/11/18 15:15	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/11/18 15:15	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/11/18 15:15	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/11/18 15:15	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/11/18 15:15	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/11/18 15:15	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/11/18 15:15	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/11/18 15:15	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/11/18 15:15	1

Client Sample ID: P6-UPA

Date Collected: 04/05/18 14:20
Date Received: 04/05/18 22:10

Lab Sample ID: 460-153430-6

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/11/18 15:15	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/11/18 15:15	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/11/18 15:15	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/11/18 15:15	1
Benzene	**140**		1.0	0.090	ug/L			04/11/18 15:15	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/11/18 15:15	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/11/18 15:15	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/11/18 15:15	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/11/18 15:15	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/11/18 15:15	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/11/18 15:15	1
Toluene	**0.93**	**J**	1.0	0.25	ug/L			04/11/18 15:15	1
Chlorobenzene	**6.0**		1.0	0.24	ug/L			04/11/18 15:15	1
Ethylbenzene	**4.7**		1.0	0.30	ug/L			04/11/18 15:15	1
Styrene	0.17	U	1.0	0.17	ug/L			04/11/18 15:15	1
Xylenes, Total	**21**		2.0	0.28	ug/L			04/11/18 15:15	1
Ethyl ether	**4.1**		1.0	0.11	ug/L			04/11/18 15:15	1
MTBE	0.13	U	1.0	0.13	ug/L			04/11/18 15:15	1
Tetrahydrofuran	**76**		2.0	0.36	ug/L			04/11/18 15:15	1
Cyclohexane	**3.8**		1.0	0.26	ug/L			04/11/18 15:15	1
1,4-Dioxane	**310**		50	8.7	ug/L			04/11/18 15:15	1
1,2,4-Trimethylbenzene	**17**		1.0	0.23	ug/L			04/11/18 15:15	1
1,3,5-Trimethylbenzene	**5.8**		1.0	0.25	ug/L			04/11/18 15:15	1
Isopropylbenzene	**5.8**		1.0	0.32	ug/L			04/11/18 15:15	1
N-Propylbenzene	**9.2**		1.0	0.29	ug/L			04/11/18 15:15	1
Methylcyclohexane	**3.8**		1.0	0.22	ug/L			04/11/18 15:15	1
Indane	**6.4**		1.0	0.12	ug/L			04/11/18 15:15	1
Dichlorofluoromethane	**15**		1.0	0.21	ug/L			04/11/18 15:15	1
1,2,3-Trimethylbenzene	**12**		1.0	0.11	ug/L			04/11/18 15:15	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Benzene, 1-ethyl-4-methyl-	*9.2*	*J N*	*ug/L*		*10.32*	*622-96-8*		*04/11/18 15:15*	*1*
Benzene, 1-ethyl-3-methyl-	*7.1*	*J N*	*ug/L*		*10.33*	*620-14-4*		*04/11/18 15:15*	*1*
Benzene, 1-ethyl-2-methyl-	*13*	*J N*	*ug/L*		*10.54*	*611-14-3*		*04/11/18 15:15*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*74 - 132*		*04/11/18 15:15*	*1*
Bromofluorobenzene	*94*		*77 - 124*		*04/11/18 15:15*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*04/11/18 15:15*	*1*
Dibromofluoromethane (Surr)	*101*		*72 - 131*		*04/11/18 15:15*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/09/18 08:44	04/10/18 12:17	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/09/18 08:44	04/10/18 12:17	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/09/18 08:44	04/10/18 12:17	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/09/18 08:44	04/10/18 12:17	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/09/18 08:44	04/10/18 12:17	1

Client Sample ID: P6-UPA

Lab Sample ID: 460-153430-6

Date Collected: 04/05/18 14:20
Date Received: 04/05/18 22:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/09/18 08:44	04/09/18 20:53	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/09/18 08:44	04/09/18 20:53	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/09/18 08:44	04/09/18 20:53	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/09/18 08:44	04/09/18 20:53	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/09/18 08:44	04/09/18 20:53	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/09/18 08:44	04/09/18 20:53	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/09/18 08:44	04/09/18 20:53	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/09/18 08:44	04/09/18 20:53	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/09/18 08:44	04/09/18 20:53	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/09/18 08:44	04/09/18 20:53	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/09/18 08:44	04/09/18 20:53	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/09/18 08:44	04/09/18 20:53	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/09/18 08:44	04/09/18 20:53	1
Bis(2-chloroethyl)ether	**54**		1.0	0.30	ug/L		04/09/18 08:44	04/09/18 20:53	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/09/18 08:44	04/09/18 20:53	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/09/18 08:44	04/09/18 20:53	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/09/18 08:44	04/09/18 20:53	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/09/18 08:44	04/09/18 20:53	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/09/18 08:44	04/09/18 20:53	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/09/18 08:44	04/09/18 20:53	1
Isophorone	0.80	U	10	0.80	ug/L		04/09/18 08:44	04/09/18 20:53	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/09/18 08:44	04/09/18 20:53	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/09/18 08:44	04/09/18 20:53	1
Naphthalene	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/09/18 20:53	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/09/18 08:44	04/09/18 20:53	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/09/18 08:44	04/09/18 20:53	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/09/18 20:53	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/09/18 08:44	04/09/18 20:53	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/09/18 08:44	04/09/18 20:53	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/09/18 08:44	04/09/18 20:53	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/09/18 08:44	04/09/18 20:53	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/09/18 08:44	04/09/18 20:53	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/09/18 08:44	04/09/18 20:53	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/09/18 08:44	04/09/18 20:53	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/09/18 20:53	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/09/18 20:53	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/09/18 08:44	04/09/18 20:53	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/09/18 08:44	04/09/18 20:53	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/09/18 08:44	04/09/18 20:53	1
Fluorene	0.91	U	10	0.91	ug/L		04/09/18 08:44	04/09/18 20:53	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/09/18 08:44	04/09/18 20:53	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/09/18 08:44	04/09/18 20:53	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/09/18 08:44	04/09/18 20:53	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/09/18 08:44	04/09/18 20:53	1
Anthracene	0.63	U	10	0.63	ug/L		04/09/18 08:44	04/09/18 20:53	1
Carbazole	0.68	U	10	0.68	ug/L		04/09/18 08:44	04/09/18 20:53	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/09/18 08:44	04/09/18 20:53	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/09/18 08:44	04/09/18 20:53	1
Pyrene	1.6	U	10	1.6	ug/L		04/09/18 08:44	04/09/18 20:53	1

Client Sample ID: P6-UPA

Date Collected: 04/05/18 14:20
Date Received: 04/05/18 22:10

Lab Sample ID: 460-153430-6

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/09/18 08:44	04/09/18 20:53	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/09/18 08:44	04/09/18 20:53	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/09/18 08:44	04/09/18 20:53	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/09/18 08:44	04/09/18 20:53	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/09/18 08:44	04/09/18 20:53	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/09/18 08:44	04/09/18 20:53	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/09/18 08:44	04/09/18 20:53	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/09/18 08:44	04/09/18 20:53	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/09/18 08:44	04/09/18 20:53	1
Diphenyl ether	**1.4**	**J**	10	1.2	ug/L		04/09/18 08:44	04/09/18 20:53	1
n,n'-Dimethylaniline	**11**		1.0	0.91	ug/L		04/09/18 08:44	04/09/18 20:53	1
Caprolactam	0.68	U	10	0.68	ug/L		04/09/18 08:44	04/09/18 20:53	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/09/18 08:44	04/09/18 20:53	1
Bisphenol-A	**59**		10	9.9	ug/L		04/09/18 08:44	04/09/18 20:53	1
N-Methylaniline	**7.5**		5.0	0.48	ug/L		04/09/18 08:44	04/09/18 20:53	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane	*19*	*J N*	*ug/L*		*1.58*	*123-91-1*	*04/09/18 08:44*	*04/09/18 20:53*	*1*
Unknown	*21*	*J*	*ug/L*		*2.22*		*04/09/18 08:44*	*04/09/18 20:53*	*1*
Benzene, 1,2,3-trimethyl-	*13*	*J N*	*ug/L*		*4.08*	*526-73-8*	*04/09/18 08:44*	*04/09/18 20:53*	*1*
Benzenemethanamine, N,N-dimethyl-	*23*	*J N*	*ug/L*		*4.21*	*103-83-3*	*04/09/18 08:44*	*04/09/18 20:53*	*1*
2-Isopropoxyphenol	*110*	*J N*	*ug/L*		*5.11*	*4812-20-8*	*04/09/18 08:44*	*04/09/18 20:53*	*1*
1-Phenoxypropan-2-ol	*25*	*J N*	*ug/L*		*5.57*	*770-35-4*	*04/09/18 08:44*	*04/09/18 20:53*	*1*
Unknown	*48*	*J*	*ug/L*		*5.85*		*04/09/18 08:44*	*04/09/18 20:53*	*1*
Unknown	*16*	*J*	*ug/L*		*6.00*		*04/09/18 08:44*	*04/09/18 20:53*	*1*
Unknown	*210*	*J*	*ug/L*		*6.71*		*04/09/18 08:44*	*04/09/18 20:53*	*1*
Unknown	*30*	*J*	*ug/L*		*6.99*		*04/09/18 08:44*	*04/09/18 20:53*	*1*
Unknown	*15*	*J*	*ug/L*		*7.32*		*04/09/18 08:44*	*04/09/18 20:53*	*1*
Unknown	*18*	*J*	*ug/L*		*7.35*		*04/09/18 08:44*	*04/09/18 20:53*	*1*
Unknown	*14*	*J*	*ug/L*		*7.43*		*04/09/18 08:44*	*04/09/18 20:53*	*1*
2(3H)-Benzothiazolone	*13*	*J N*	*ug/L*		*7.79*	*934-34-9*	*04/09/18 08:44*	*04/09/18 20:53*	*1*
Unknown	*13*	*J*	*ug/L*		*8.53*		*04/09/18 08:44*	*04/09/18 20:53*	*1*
Unknown	*22*	*J*	*ug/L*		*9.57*		*04/09/18 08:44*	*04/09/18 20:53*	*1*
Unknown	*15*	*J*	*ug/L*		*11.13*		*04/09/18 08:44*	*04/09/18 20:53*	*1*
Unknown	*29*	*J*	*ug/L*		*11.95*		*04/09/18 08:44*	*04/09/18 20:53*	*1*
Unknown	*16*	*J*	*ug/L*		*12.20*		*04/09/18 08:44*	*04/09/18 20:53*	*1*
Unknown	*18*	*J*	*ug/L*		*13.46*		*04/09/18 08:44*	*04/09/18 20:53*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*108*		*51 - 108*	*04/09/18 08:44*	*04/09/18 20:53*	*1*
Phenol-d5	*25*		*14 - 39*	*04/09/18 08:44*	*04/09/18 20:53*	*1*
Terphenyl-d14	*121*		*40 - 148*	*04/09/18 08:44*	*04/09/18 20:53*	*1*
2,4,6-Tribromophenol	*94*		*26 - 139*	*04/09/18 08:44*	*04/09/18 20:53*	*1*
2-Fluorophenol	*51*		*25 - 58*	*04/09/18 08:44*	*04/09/18 20:53*	*1*
2-Fluorobiphenyl	*103*		*45 - 107*	*04/09/18 08:44*	*04/09/18 20:53*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**31200**		250	233	ug/L		04/06/18 23:10	04/07/18 16:34	5
Potassium	**1500**		250	143	ug/L		04/06/18 23:10	04/07/18 16:34	5

Client Sample ID: P6-UPA

Lab Sample ID: 460-153430-6

Date Collected: 04/05/18 14:20
Date Received: 04/05/18 22:10

Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	**16200**		250	155	ug/L		04/06/18 23:10	04/07/18 16:34	5
Sodium	**55400**		250	213	ug/L		04/06/18 23:10	04/07/18 16:34	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/06/18 23:10	04/07/18 16:34	5
Antimony	1.4	U	2.5	1.4	ug/L		04/06/18 23:10	04/07/18 16:34	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/06/18 23:10	04/07/18 16:34	5
Barium	**46.2**		5.0	3.2	ug/L		04/06/18 23:10	04/07/18 16:34	5
Thallium	0.60	U	1.0	0.60	ug/L		04/06/18 23:10	04/07/18 16:34	5
Iron	**12900**		150	97.8	ug/L		04/06/18 23:10	04/07/18 16:34	5
Nickel	**13.8**		5.0	3.1	ug/L		04/06/18 23:10	04/07/18 16:34	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/06/18 23:10	04/07/18 16:34	5
Silver	3.0	U	5.0	3.0	ug/L		04/06/18 23:10	04/07/18 16:34	5
Arsenic	**5.7**		2.5	1.5	ug/L		04/06/18 23:10	04/07/18 16:34	5
Copper	3.3	U	5.0	3.3	ug/L		04/06/18 23:10	04/07/18 16:34	5
Aluminum	**156**		50.0	28.5	ug/L		04/06/18 23:10	04/07/18 16:34	5
Lead	**1.1**	**J**	1.5	0.93	ug/L		04/06/18 23:10	04/07/18 16:34	5
Zinc	16.3	U	20.0	16.3	ug/L		04/06/18 23:10	04/07/18 16:34	5
Selenium	1.4	U	2.5	1.4	ug/L		04/06/18 23:10	04/07/18 16:34	5
Manganese	**732**		10.0	6.1	ug/L		04/06/18 23:10	04/07/18 16:34	5
Chromium	**3.1**	**J**	5.0	3.1	ug/L		04/06/18 23:10	04/07/18 16:34	5
Cobalt	**12.9**		5.0	3.1	ug/L		04/06/18 23:10	04/07/18 16:34	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/10/18 12:29	04/10/18 14:47	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**13200**		150	92.1	ug/L		04/10/18 10:42	04/10/18 23:22	1
Manganese, Dissolved	**752**		15.0	3.1	ug/L		04/10/18 10:42	04/10/18 23:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.30**		0.25	0.11	mg/L		04/09/18 18:04	04/10/18 10:48	1

Client Sample ID: UPA-101-US

Lab Sample ID: 460-153430-7

Date Collected: 04/05/18 14:15
Date Received: 04/05/18 22:10

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/11/18 15:39	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/11/18 15:39	1
Vinyl chloride	**7.1**		1.0	0.060	ug/L			04/11/18 15:39	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/11/18 15:39	1
Methylene Chloride	**7.0**		1.0	0.21	ug/L			04/11/18 15:39	1
Acetone	**6.6**	U	6.6 ~~5.0~~	1.1	ug/L			04/11/18 15:39	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/11/18 15:39	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/11/18 15:39	1
1,1-Dichloroethane	**7.8**		1.0	0.24	ug/L			04/11/18 15:39	1
trans-1,2-Dichloroethene	**0.62**	**J**	1.0	0.18	ug/L			04/11/18 15:39	1

Client Sample ID: UPA-101-US

Lab Sample ID: 460-153430-7

Date Collected: 04/05/18 14:15
Date Received: 04/05/18 22:10

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**22**		1.0	0.26	ug/L			04/11/18 15:39	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/11/18 15:39	1
1,2-Dichloroethane	**36**		1.0	0.25	ug/L			04/11/18 15:39	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/11/18 15:39	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/11/18 15:39	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/11/18 15:39	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/11/18 15:39	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/11/18 15:39	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/11/18 15:39	1
Trichloroethene	**9.4**		1.0	0.22	ug/L			04/11/18 15:39	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/11/18 15:39	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/11/18 15:39	1
Benzene	**490**		1.0	0.090	ug/L			04/11/18 15:39	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/11/18 15:39	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/11/18 15:39	1
4-Methyl-2-pentanone	**3.4**	**J**	5.0	0.63	ug/L			04/11/18 15:39	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/11/18 15:39	1
Tetrachloroethene	**0.28**	**J**	1.0	0.12	ug/L			04/11/18 15:39	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/11/18 15:39	1
Toluene	**0.51**	**J**	1.0	0.25	ug/L			04/11/18 15:39	1
Chlorobenzene	**12**		1.0	0.24	ug/L			04/11/18 15:39	1
Ethylbenzene	**60**		1.0	0.30	ug/L			04/11/18 15:39	1
Styrene	0.17	U	1.0	0.17	ug/L			04/11/18 15:39	1
Xylenes, Total	**48**		2.0	0.28	ug/L			04/11/18 15:39	1
Ethyl ether	**18**		1.0	0.11	ug/L			04/11/18 15:39	1
MTBE	0.13	U	1.0	0.13	ug/L			04/11/18 15:39	1
Tetrahydrofuran	**330**		2.0	0.36	ug/L			04/11/18 15:39	1
Cyclohexane	**13**		1.0	0.26	ug/L			04/11/18 15:39	1
1,4-Dioxane	**700**		50	8.7	ug/L			04/11/18 15:39	1
1,2,4-Trimethylbenzene	**0.87**	**J**	1.0	0.23	ug/L			04/11/18 15:39	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/11/18 15:39	1
Isopropylbenzene	**14**		1.0	0.32	ug/L			04/11/18 15:39	1
N-Propylbenzene	**8.2**		1.0	0.29	ug/L			04/11/18 15:39	1
Methylcyclohexane	**9.9**		1.0	0.22	ug/L			04/11/18 15:39	1
Indane	**4.9**		1.0	0.12	ug/L			04/11/18 15:39	1
Dichlorofluoromethane	**100**		1.0	0.21	ug/L			04/11/18 15:39	1
1,2,3-Trimethylbenzene	**17**		1.0	0.11	ug/L			04/11/18 15:39	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*5.8*	*J*	*ug/L*		*5.58*			*04/11/18 15:39*	*1*
Benzene, 1-ethyl-2-methyl-	*25*	*J N*	*ug/L*		*10.54*	*611-14-3*		*04/11/18 15:39*	*1*
Phenol, 4-propoxy-	*12*	*J N*	*ug/L*		*12.65*	*18979-50-5*		*04/11/18 15:39*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*74 - 132*		*04/11/18 15:39*	*1*
Bromofluorobenzene	*90*		*77 - 124*		*04/11/18 15:39*	*1*
Toluene-d8 (Surr)	*93*		*80 - 120*		*04/11/18 15:39*	*1*
Dibromofluoromethane (Surr)	*95*		*72 - 131*		*04/11/18 15:39*	*1*

Client Sample ID: UPA-101-US

Lab Sample ID: 460-153430-7

Date Collected: 04/05/18 14:15
Date Received: 04/05/18 22:10

Matrix: Water

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/09/18 08:44	04/10/18 12:39	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/09/18 08:44	04/10/18 12:39	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/09/18 08:44	04/10/18 12:39	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/09/18 08:44	04/10/18 12:39	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/09/18 08:44	04/10/18 12:39	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/09/18 08:44	04/11/18 08:37	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/09/18 08:44	04/11/18 08:37	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/09/18 08:44	04/11/18 08:37	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/09/18 08:44	04/11/18 08:37	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/09/18 08:44	04/11/18 08:37	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/09/18 08:44	04/11/18 08:37	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/09/18 08:44	04/11/18 08:37	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/09/18 08:44	04/11/18 08:37	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/09/18 08:44	04/11/18 08:37	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/09/18 08:44	04/11/18 08:37	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/09/18 08:44	04/11/18 08:37	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/09/18 08:44	04/11/18 08:37	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/09/18 08:44	04/11/18 08:37	1
Bis(2-chloroethyl)ether	**110**		1.0	0.30	ug/L		04/09/18 08:44	04/11/18 08:37	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/09/18 08:44	04/11/18 08:37	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/09/18 08:44	04/11/18 08:37	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/09/18 08:44	04/11/18 08:37	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/09/18 08:44	04/11/18 08:37	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/09/18 08:44	04/11/18 08:37	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/09/18 08:44	04/11/18 08:37	1
Isophorone	0.80	U	10	0.80	ug/L		04/09/18 08:44	04/11/18 08:37	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/09/18 08:44	04/11/18 08:37	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/09/18 08:44	04/11/18 08:37	1
Naphthalene	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/11/18 08:37	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/09/18 08:44	04/11/18 08:37	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/09/18 08:44	04/11/18 08:37	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/11/18 08:37	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/09/18 08:44	04/11/18 08:37	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/09/18 08:44	04/11/18 08:37	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/09/18 08:44	04/11/18 08:37	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/09/18 08:44	04/11/18 08:37	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/09/18 08:44	04/11/18 08:37	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/09/18 08:44	04/11/18 08:37	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/09/18 08:44	04/11/18 08:37	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/11/18 08:37	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/09/18 08:44	04/11/18 08:37	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/09/18 08:44	04/11/18 08:37	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/09/18 08:44	04/11/18 08:37	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/09/18 08:44	04/11/18 08:37	1
Fluorene	0.91	U	10	0.91	ug/L		04/09/18 08:44	04/11/18 08:37	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/09/18 08:44	04/11/18 08:37	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/09/18 08:44	04/11/18 08:37	1

Client Sample ID: UPA-101-US

Lab Sample ID: 460-153430-7

Date Collected: 04/05/18 14:15
Date Received: 04/05/18 22:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/09/18 08:44	04/11/18 08:37	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/09/18 08:44	04/11/18 08:37	1
Anthracene	0.63	U	10	0.63	ug/L		04/09/18 08:44	04/11/18 08:37	1
Carbazole	0.68	U	10	0.68	ug/L		04/09/18 08:44	04/11/18 08:37	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/09/18 08:44	04/11/18 08:37	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/09/18 08:44	04/11/18 08:37	1
Pyrene	1.6	U *	10	1.6	ug/L		04/09/18 08:44	04/11/18 08:37	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/09/18 08:44	04/11/18 08:37	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/09/18 08:44	04/11/18 08:37	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/09/18 08:44	04/11/18 08:37	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/09/18 08:44	04/11/18 08:37	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/09/18 08:44	04/11/18 08:37	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/09/18 08:44	04/11/18 08:37	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/09/18 08:44	04/11/18 08:37	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/09/18 08:44	04/11/18 08:37	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/09/18 08:44	04/11/18 08:37	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/09/18 08:44	04/11/18 08:37	1
n,n'-Dimethylaniline	**17**		1.0	0.91	ug/L		04/09/18 08:44	04/11/18 08:37	1
Caprolactam	0.68	U	10	0.68	ug/L		04/09/18 08:44	04/11/18 08:37	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/09/18 08:44	04/11/18 08:37	1
Bisphenol-A	**49**		10	9.9	ug/L		04/09/18 08:44	04/11/18 08:37	1
N-Methylaniline	**9.7**		5.0	0.48	ug/L		04/09/18 08:44	04/11/18 08:37	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Benzene, 1,2,3-trimethyl-	*18*	*J N*	*ug/L*		*4.40*	*526-73-8*	*04/09/18 08:44*	*04/11/18 08:37*	*1*
2-Isopropoxyphenol	*190*	*J N*	*ug/L*		*5.41*	*4812-20-8*	*04/09/18 08:44*	*04/11/18 08:37*	*1*
1-Phenoxypropan-2-ol	*40*	*J N*	*ug/L*		*5.86*	*770-35-4*	*04/09/18 08:44*	*04/11/18 08:37*	*1*
Unknown	*43*	*J*	*ug/L*		*5.98*		*04/09/18 08:44*	*04/11/18 08:37*	*1*
Unknown	*48*	*J*	*ug/L*		*6.15*		*04/09/18 08:44*	*04/11/18 08:37*	*1*
Unknown	*23*	*J*	*ug/L*		*6.29*		*04/09/18 08:44*	*04/11/18 08:37*	*1*
1,3,5-Triazine-2,4,6(1H,3H,5H) -trione, 1,3,5-trimethyl-	*130*	*J N*	*ug/L*		*6.56*	*827-16-7*	*04/09/18 08:44*	*04/11/18 08:37*	*1*
Unknown	*420*	*J*	*ug/L*		*7.00*		*04/09/18 08:44*	*04/11/18 08:37*	*1*
Unknown	*35*	*J*	*ug/L*		*7.29*		*04/09/18 08:44*	*04/11/18 08:37*	*1*
Unknown	*28*	*J*	*ug/L*		*7.61*		*04/09/18 08:44*	*04/11/18 08:37*	*1*
Unknown	*40*	*J*	*ug/L*		*7.70*		*04/09/18 08:44*	*04/11/18 08:37*	*1*
Urea, N,N'-dimethyl-N,N'-diphenyl-	*50*	*J N*	*ug/L*		*8.77*	*611-92-7*	*04/09/18 08:44*	*04/11/18 08:37*	*1*
Unknown	*15*	*J*	*ug/L*		*9.67*		*04/09/18 08:44*	*04/11/18 08:37*	*1*
Unknown	*23*	*J*	*ug/L*		*9.86*		*04/09/18 08:44*	*04/11/18 08:37*	*1*
Unknown	*16*	*J*	*ug/L*		*10.49*		*04/09/18 08:44*	*04/11/18 08:37*	*1*
Unknown	*22*	*J*	*ug/L*		*11.46*		*04/09/18 08:44*	*04/11/18 08:37*	*1*
Unknown	*28*	*J*	*ug/L*		*12.37*		*04/09/18 08:44*	*04/11/18 08:37*	*1*
Unknown	*25*	*J*	*ug/L*		*12.64*		*04/09/18 08:44*	*04/11/18 08:37*	*1*
Unknown	*32*	*J*	*ug/L*		*13.91*		*04/09/18 08:44*	*04/11/18 08:37*	*1*
Unknown	*18*	*J*	*ug/L*		*15.55*		*04/09/18 08:44*	*04/11/18 08:37*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*99*		*51 - 108*	*04/09/18 08:44*	*04/11/18 08:37*	*1*
Phenol-d5	*24*		*14 - 39*	*04/09/18 08:44*	*04/11/18 08:37*	*1*
Terphenyl-d14	*90*		*40 - 148*	*04/09/18 08:44*	*04/11/18 08:37*	*1*

Client Sample ID: UPA-101-US

Lab Sample ID: 460-153430-7

Date Collected: 04/05/18 14:15
Date Received: 04/05/18 22:10

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*105*		*26 - 139*	*04/09/18 08:44*	*04/11/18 08:37*	*1*
2-Fluorophenol	*50*		*25 - 58*	*04/09/18 08:44*	*04/11/18 08:37*	*1*
2-Fluorobiphenyl	*98*		*45 - 107*	*04/09/18 08:44*	*04/11/18 08:37*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**33100**		250	233	ug/L		04/06/18 23:10	04/07/18 16:37	5
Potassium	**984**		250	143	ug/L		04/06/18 23:10	04/07/18 16:37	5
Magnesium	**14100**		250	155	ug/L		04/06/18 23:10	04/07/18 16:37	5
Sodium	**41300**		250	213	ug/L		04/06/18 23:10	04/07/18 16:37	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/06/18 23:10	04/07/18 16:37	5
Antimony	1.4	U	2.5	1.4	ug/L		04/06/18 23:10	04/07/18 16:37	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/06/18 23:10	04/07/18 16:37	5
Barium	**77.0**		5.0	3.2	ug/L		04/06/18 23:10	04/07/18 16:37	5
Thallium	0.60	U	1.0	0.60	ug/L		04/06/18 23:10	04/07/18 16:37	5
Iron	**19100**		150	97.8	ug/L		04/06/18 23:10	04/07/18 16:37	5
Nickel	**14.7**		5.0	3.1	ug/L		04/06/18 23:10	04/07/18 16:37	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/06/18 23:10	04/07/18 16:37	5
Silver	3.0	U	5.0	3.0	ug/L		04/06/18 23:10	04/07/18 16:37	5
Arsenic	**5.6**		2.5	1.5	ug/L		04/06/18 23:10	04/07/18 16:37	5
Copper	3.3	U	5.0	3.3	ug/L		04/06/18 23:10	04/07/18 16:37	5
Aluminum	**34.3**	**J**	50.0	28.5	ug/L		04/06/18 23:10	04/07/18 16:37	5
Lead	0.93	U	1.5	0.93	ug/L		04/06/18 23:10	04/07/18 16:37	5
Zinc	16.3	U	20.0	16.3	ug/L		04/06/18 23:10	04/07/18 16:37	5
Selenium	1.4	U	2.5	1.4	ug/L		04/06/18 23:10	04/07/18 16:37	5
Manganese	**1290**		10.0	6.1	ug/L		04/06/18 23:10	04/07/18 16:37	5
Chromium	**4.1**	**J**	5.0	3.1	ug/L		04/06/18 23:10	04/07/18 16:37	5
Cobalt	**14.8**		5.0	3.1	ug/L		04/06/18 23:10	04/07/18 16:37	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/10/18 12:29	04/10/18 14:52	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**19500**		150	92.1	ug/L		04/10/18 10:42	04/10/18 23:26	1
Manganese, Dissolved	**1360**		15.0	3.1	ug/L		04/10/18 10:42	04/10/18 23:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.60**		0.25	0.11	mg/L		04/09/18 18:04	04/10/18 10:50	1

Client Sample ID: TBGW-040518

Lab Sample ID: 460-153430-8

Date Collected: 04/05/18 00:00
Date Received: 04/05/18 22:10

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.20	U	0.40	0.20	ug/L			04/10/18 12:15	1

Client Sample ID: TBGW-040518

Lab Sample ID: 460-153430-8

Date Collected: 04/05/18 00:00
Date Received: 04/05/18 22:10

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*72 - 133*		*04/10/18 12:15*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*71 - 144*		*04/10/18 12:15*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/11/18 13:18	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/11/18 13:18	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/11/18 13:18	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/11/18 13:18	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/11/18 13:18	1
Acetone	**14**		5.0	1.1	ug/L			04/11/18 13:18	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/11/18 13:18	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/11/18 13:18	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/11/18 13:18	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/11/18 13:18	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/11/18 13:18	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/11/18 13:18	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/11/18 13:18	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/11/18 13:18	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/11/18 13:18	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/11/18 13:18	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/11/18 13:18	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/11/18 13:18	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/11/18 13:18	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/11/18 13:18	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/11/18 13:18	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/11/18 13:18	1
Benzene	0.090	U	1.0	0.090	ug/L			04/11/18 13:18	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/11/18 13:18	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/11/18 13:18	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/11/18 13:18	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/11/18 13:18	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/11/18 13:18	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/11/18 13:18	1
Toluene	0.25	U	1.0	0.25	ug/L			04/11/18 13:18	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/11/18 13:18	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/11/18 13:18	1
Styrene	0.17	U	1.0	0.17	ug/L			04/11/18 13:18	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/11/18 13:18	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/11/18 13:18	1
MTBE	0.13	U	1.0	0.13	ug/L			04/11/18 13:18	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/11/18 13:18	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/11/18 13:18	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/11/18 13:18	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/11/18 13:18	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/11/18 13:18	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/11/18 13:18	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/11/18 13:18	1
Indane	0.12	U	1.0	0.12	ug/L			04/11/18 13:18	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/11/18 13:18	1

Client Sample ID: TBGW-040518 Lab Sample ID: 460-153430-8

Date Collected: 04/05/18 00:00 Matrix: Water
Date Received: 04/05/18 22:10

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/11/18 13:18	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/11/18 13:18*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*74 - 132*		*04/11/18 13:18*	*1*
Bromofluorobenzene	*94*		*77 - 124*		*04/11/18 13:18*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*		*04/11/18 13:18*	*1*
Dibromofluoromethane (Surr)	*104*		*72 - 131*		*04/11/18 13:18*	*1*

Client Sample ID: MW-28 Lab Sample ID: 460-153561-1

Date Collected: 04/06/18 08:30 Matrix: Water
Date Received: 04/06/18 19:30

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**5.4**		0.40	0.20	ug/L			04/10/18 13:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*72 - 133*		*04/10/18 13:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*71 - 144*		*04/10/18 13:48*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/12/18 09:45	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/12/18 09:45	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/12/18 09:45	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/12/18 09:45	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/12/18 09:45	1
Acetone	1.1	U	5.0	1.1	ug/L			04/12/18 09:45	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/12/18 09:45	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/12/18 09:45	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/12/18 09:45	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/12/18 09:45	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/12/18 09:45	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/12/18 09:45	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/12/18 09:45	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/12/18 09:45	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/12/18 09:45	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/12/18 09:45	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/12/18 09:45	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/12/18 09:45	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/12/18 09:45	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/12/18 09:45	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/12/18 09:45	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/12/18 09:45	1
Benzene	0.090	U	1.0	0.090	ug/L			04/12/18 09:45	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/12/18 09:45	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/12/18 09:45	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/12/18 09:45	1

Client Sample ID: MW-28

Date Collected: 04/06/18 08:30
Date Received: 04/06/18 19:30

Lab Sample ID: 460-153561-1

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/12/18 09:45	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/12/18 09:45	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/12/18 09:45	1
Toluene	0.25	U	1.0	0.25	ug/L			04/12/18 09:45	1
Chlorobenzene	**0.43**	**J**	1.0	0.24	ug/L			04/12/18 09:45	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/12/18 09:45	1
Styrene	0.17	U	1.0	0.17	ug/L			04/12/18 09:45	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/12/18 09:45	1
Ethyl ether	**3.2**		1.0	0.11	ug/L			04/12/18 09:45	1
MTBE	0.13	U	1.0	0.13	ug/L			04/12/18 09:45	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/12/18 09:45	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/12/18 09:45	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/12/18 09:45	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/12/18 09:45	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/12/18 09:45	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/12/18 09:45	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/12/18 09:45	1
Indane	0.12	U	1.0	0.12	ug/L			04/12/18 09:45	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/12/18 09:45	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/12/18 09:45	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/12/18 09:45*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*74 - 132*		*04/12/18 09:45*	*1*
Bromofluorobenzene	*90*		*77 - 124*		*04/12/18 09:45*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*04/12/18 09:45*	*1*
Dibromofluoromethane (Surr)	*96*		*72 - 131*		*04/12/18 09:45*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/11/18 15:18	04/12/18 15:21	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/11/18 15:18	04/12/18 15:21	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/11/18 15:18	04/12/18 15:21	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/11/18 15:18	04/12/18 15:21	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/11/18 15:18	04/12/18 15:21	1
Bis(2-chloroethyl)ether	**0.14**	* J+	0.030	0.026	ug/L		04/11/18 15:18	04/12/18 15:21	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/11/18 15:18	04/12/18 00:06	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/11/18 15:18	04/12/18 00:06	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/11/18 15:18	04/12/18 00:06	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 00:06	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/11/18 15:18	04/12/18 00:06	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 00:06	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/11/18 15:18	04/12/18 00:06	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/11/18 15:18	04/12/18 00:06	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/11/18 15:18	04/12/18 00:06	1

Client Sample ID: MW-28

Date Collected: 04/06/18 08:30
Date Received: 04/06/18 19:30

Lab Sample ID: 460-153561-1

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/11/18 15:18	04/12/18 00:06	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/11/18 15:18	04/12/18 00:06	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/11/18 15:18	04/12/18 00:06	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/11/18 15:18	04/12/18 00:06	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/11/18 15:18	04/12/18 00:06	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 00:06	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 00:06	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/11/18 15:18	04/12/18 00:06	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/11/18 15:18	04/12/18 00:06	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/11/18 15:18	04/12/18 00:06	1
Isophorone	0.80	U	10	0.80	ug/L		04/11/18 15:18	04/12/18 00:06	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 00:06	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/11/18 15:18	04/12/18 00:06	1
Naphthalene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 00:06	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/11/18 15:18	04/12/18 00:06	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/11/18 15:18	04/12/18 00:06	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 00:06	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/11/18 15:18	04/12/18 00:06	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/11/18 15:18	04/12/18 00:06	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/11/18 15:18	04/12/18 00:06	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/11/18 15:18	04/12/18 00:06	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/11/18 15:18	04/12/18 00:06	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/11/18 15:18	04/12/18 00:06	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/11/18 15:18	04/12/18 00:06	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 00:06	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 00:06	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/11/18 15:18	04/12/18 00:06	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/11/18 15:18	04/12/18 00:06	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 00:06	1
Fluorene	0.91	U	10	0.91	ug/L		04/11/18 15:18	04/12/18 00:06	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/11/18 15:18	04/12/18 00:06	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/11/18 15:18	04/12/18 00:06	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/11/18 15:18	04/12/18 00:06	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/11/18 15:18	04/12/18 00:06	1
Anthracene	0.63	U	10	0.63	ug/L		04/11/18 15:18	04/12/18 00:06	1
Carbazole	0.68	U	10	0.68	ug/L		04/11/18 15:18	04/12/18 00:06	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/11/18 15:18	04/12/18 00:06	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/11/18 15:18	04/12/18 00:06	1
Pyrene	1.6	U	10	1.6	ug/L		04/11/18 15:18	04/12/18 00:06	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/11/18 15:18	04/12/18 00:06	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/11/18 15:18	04/12/18 00:06	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/11/18 15:18	04/12/18 00:06	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/11/18 15:18	04/12/18 00:06	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/11/18 15:18	04/12/18 00:06	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/11/18 15:18	04/12/18 00:06	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/11/18 15:18	04/12/18 00:06	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/11/18 15:18	04/12/18 00:06	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/11/18 15:18	04/12/18 00:06	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/11/18 15:18	04/12/18 00:06	1

Client Sample ID: MW-28

Date Collected: 04/06/18 08:30
Date Received: 04/06/18 19:30

Lab Sample ID: 460-153561-1

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/11/18 15:18	04/12/18 00:06	1
Caprolactam	0.68	U	10	0.68	ug/L		04/11/18 15:18	04/12/18 00:06	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/11/18 15:18	04/12/18 00:06	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/11/18 15:18	04/12/18 00:06	1
N-Methylaniline	0.48	U	5.0	0.48	ug/L		04/11/18 15:18	04/12/18 00:06	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/11/18 15:18*	*04/12/18 00:06*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*84*		*51 - 108*	*04/11/18 15:18*	*04/12/18 00:06*	*1*
Phenol-d5	*25*		*14 - 39*	*04/11/18 15:18*	*04/12/18 00:06*	*1*
Terphenyl-d14	*88*		*40 - 148*	*04/11/18 15:18*	*04/12/18 00:06*	*1*
2,4,6-Tribromophenol	*84*		*26 - 139*	*04/11/18 15:18*	*04/12/18 00:06*	*1*
2-Fluorophenol	*40*		*25 - 58*	*04/11/18 15:18*	*04/12/18 00:06*	*1*
2-Fluorobiphenyl	*75*		*45 - 107*	*04/11/18 15:18*	*04/12/18 00:06*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**19900**		250	233	ug/L		04/09/18 08:49	04/10/18 02:28	5
Potassium	**5280**		250	143	ug/L		04/09/18 08:49	04/10/18 19:52	5
Magnesium	**9110**		250	155	ug/L		04/09/18 08:49	04/10/18 02:28	5
Sodium	**33600**		250	213	ug/L		04/09/18 08:49	04/10/18 02:28	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/09/18 08:49	04/10/18 19:52	5
Antimony	1.4	U	2.5	1.4	ug/L		04/09/18 08:49	04/10/18 02:28	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/09/18 08:49	04/10/18 19:52	5
Barium	**184**		5.0	3.2	ug/L		04/09/18 08:49	04/10/18 19:52	5
Thallium	0.60	U	1.0	0.60	ug/L		04/09/18 08:49	04/10/18 02:28	5
Iron	**19400**		150	97.8	ug/L		04/09/18 08:49	04/10/18 02:28	5
Nickel	**7.6**		5.0	3.1	ug/L		04/09/18 08:49	04/10/18 02:28	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/09/18 08:49	04/10/18 02:28	5
Silver	3.0	U	5.0	3.0	ug/L		04/09/18 08:49	04/10/18 02:28	5
Arsenic	**6.1**		2.5	1.5	ug/L		04/09/18 08:49	04/10/18 02:28	5
Copper	**4.0**	**J**	5.0	3.3	ug/L		04/09/18 08:49	04/10/18 02:28	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/09/18 08:49	04/10/18 02:28	5
Lead	0.93	U	1.5	0.93	ug/L		04/09/18 08:49	04/10/18 02:28	5
Zinc	**38.9**		20.0	16.3	ug/L		04/09/18 08:49	04/10/18 02:28	5
Selenium	1.4	U	2.5	1.4	ug/L		04/09/18 08:49	04/10/18 19:52	5
Manganese	**1320**		10.0	6.1	ug/L		04/09/18 08:49	04/10/18 02:28	5
Chromium	3.1	U	5.0	3.1	ug/L		04/09/18 08:49	04/10/18 02:28	5
Cobalt	**45.1**		5.0	3.1	ug/L		04/09/18 08:49	04/10/18 02:28	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/11/18 11:41	04/11/18 13:27	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**20700**		150	92.1	ug/L		04/10/18 12:05	04/11/18 13:44	1
Manganese, Dissolved	**1350**		15.0	3.1	ug/L		04/10/18 12:05	04/11/18 13:44	1

Client Sample ID: MW-28

Lab Sample ID: 460-153561-1

Date Collected: 04/06/18 08:30
Date Received: 04/06/18 19:30

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.74**	J+	0.10	0.045	mg/L		04/12/18 10:27	04/12/18 11:42	1

Client Sample ID: DDA-12-US

Lab Sample ID: 460-153561-2

Date Collected: 04/06/18 09:55
Date Received: 04/06/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.44	U	2.0	0.44	ug/L			04/12/18 12:36	2
Bromomethane	0.36	U	2.0	0.36	ug/L			04/12/18 12:36	2
Vinyl chloride	0.12	U	2.0	0.12	ug/L			04/12/18 12:36	2
Chloroethane	0.74	U	2.0	0.74	ug/L			04/12/18 12:36	2
Methylene Chloride	0.42	U	2.0	0.42	ug/L			04/12/18 12:36	2
Acetone	2.1	U	10	2.1	ug/L			04/12/18 12:36	2
Carbon disulfide	0.44	U	2.0	0.44	ug/L			04/12/18 12:36	2
1,1-Dichloroethene	0.68	U	2.0	0.68	ug/L			04/12/18 12:36	2
1,1-Dichloroethane	**0.58**	**J**	2.0	0.48	ug/L			04/12/18 12:36	2
trans-1,2-Dichloroethene	0.36	U	2.0	0.36	ug/L			04/12/18 12:36	2
cis-1,2-Dichloroethene	0.52	U	2.0	0.52	ug/L			04/12/18 12:36	2
Chloroform	0.44	U	2.0	0.44	ug/L			04/12/18 12:36	2
1,2-Dichloroethane	0.50	U	2.0	0.50	ug/L			04/12/18 12:36	2
2-Butanone	4.4	U	10	4.4	ug/L			04/12/18 12:36	2
1,1,1-Trichloroethane	0.56	U	2.0	0.56	ug/L			04/12/18 12:36	2
Carbon tetrachloride	0.66	U	2.0	0.66	ug/L			04/12/18 12:36	2
Bromodichloromethane	0.30	U	2.0	0.30	ug/L			04/12/18 12:36	2
1,2-Dichloropropane	0.36	U	2.0	0.36	ug/L			04/12/18 12:36	2
cis-1,3-Dichloropropene	0.32	U	2.0	0.32	ug/L			04/12/18 12:36	2
Trichloroethene	0.44	U	2.0	0.44	ug/L			04/12/18 12:36	2
Dibromochloromethane	0.44	U	2.0	0.44	ug/L			04/12/18 12:36	2
1,1,2-Trichloroethane	0.16	U	2.0	0.16	ug/L			04/12/18 12:36	2
Benzene	**27**		2.0	0.18	ug/L			04/12/18 12:36	2
trans-1,3-Dichloropropene	0.38	U	2.0	0.38	ug/L			04/12/18 12:36	2
Bromoform	0.36	U	2.0	0.36	ug/L			04/12/18 12:36	2
4-Methyl-2-pentanone	1.3	U	10	1.3	ug/L			04/12/18 12:36	2
2-Hexanone	1.4	U	10	1.4	ug/L			04/12/18 12:36	2
Tetrachloroethene	0.24	U	2.0	0.24	ug/L			04/12/18 12:36	2
1,1,2,2-Tetrachloroethane	0.38	U	2.0	0.38	ug/L			04/12/18 12:36	2
Toluene	**0.93**	**J**	2.0	0.50	ug/L			04/12/18 12:36	2
Chlorobenzene	**3.4**		2.0	0.48	ug/L			04/12/18 12:36	2
Ethylbenzene	**11**		2.0	0.60	ug/L			04/12/18 12:36	2
Styrene	0.34	U	2.0	0.34	ug/L			04/12/18 12:36	2
Xylenes, Total	**640**		4.0	0.56	ug/L			04/12/18 12:36	2
Ethyl ether	0.22	U	2.0	0.22	ug/L			04/12/18 12:36	2
MTBE	**0.60**	**J**	2.0	0.26	ug/L			04/12/18 12:36	2
Tetrahydrofuran	0.72	U	4.0	0.72	ug/L			04/12/18 12:36	2
Cyclohexane	**23**		2.0	0.52	ug/L			04/12/18 12:36	2
1,4-Dioxane	**140**		100	17	ug/L			04/12/18 12:36	2
1,2,4-Trimethylbenzene	**460**		2.0	0.46	ug/L			04/12/18 12:36	2
1,3,5-Trimethylbenzene	**110**		2.0	0.50	ug/L			04/12/18 12:36	2
Isopropylbenzene	**38**		2.0	0.64	ug/L			04/12/18 12:36	2

Client Sample ID: DDA-12-US — Lab Sample ID: 460-153561-2

Date Collected: 04/06/18 09:55 Matrix: Water
Date Received: 04/06/18 19:30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	**73**		2.0	0.58	ug/L			04/12/18 12:36	2
Methylcyclohexane	**43**		2.0	0.44	ug/L			04/12/18 12:36	2
Indane	**54**		2.0	0.24	ug/L			04/12/18 12:36	2
Dichlorofluoromethane	**1.2**	**J**	2.0	0.42	ug/L			04/12/18 12:36	2
1,2,3-Trimethylbenzene	**110**		2.0	0.22	ug/L			04/12/18 12:36	2

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclopentane, 1,1-dimethyl-	*12*	*J N*	*ug/L*		*4.89*	*1638-26-2*		*04/12/18 12:36*	*2*
Cyclopentane, 1,2-dimethyl-, trans-	*17*	*J N*	*ug/L*		*5.16*	*822-50-4*		*04/12/18 12:36*	*2*
Cyclopentane, ethyl-	*12*	*J N*	*ug/L*		*6.04*	*1640-89-7*		*04/12/18 12:36*	*2*
Benzene, 1-ethyl-3-methyl-	*200*	*J N*	*ug/L*		*10.32*	*620-14-4*		*04/12/18 12:36*	*2*
Benzene, 1-ethyl-2-methyl-	*120*	*J N*	*ug/L*		*10.54*	*611-14-3*		*04/12/18 12:36*	*2*
Benzene, 1-methyl-2-(1-methylethyl)-	*15*	*J N*	*ug/L*		*11.14*	*527-84-4*		*04/12/18 12:36*	*2*
Benzene, 2-ethyl-1,3-dimethyl-	*13*	*J N*	*ug/L*		*11.38*	*2870-04-4*		*04/12/18 12:36*	*2*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*74 - 132*		*04/12/18 12:36*	*2*
Bromofluorobenzene	*89*		*77 - 124*		*04/12/18 12:36*	*2*
Toluene-d8 (Surr)	*100*		*80 - 120*		*04/12/18 12:36*	*2*
Dibromofluoromethane (Surr)	*99*		*72 - 131*		*04/12/18 12:36*	*2*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/11/18 15:18	04/12/18 15:43	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/11/18 15:18	04/12/18 15:43	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/11/18 15:18	04/12/18 15:43	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/11/18 15:18	04/12/18 15:43	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/11/18 15:18	04/12/18 15:43	1
Bis(2-chloroethyl)ether	**3.0**	* J+	0.030	0.026	ug/L		04/11/18 15:18	04/12/18 15:43	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/11/18 15:18	04/12/18 00:27	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/11/18 15:18	04/12/18 00:27	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/11/18 15:18	04/12/18 00:27	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 00:27	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/11/18 15:18	04/12/18 00:27	1
2,4-Dimethylphenol	**3.1**	**J**	10	0.24	ug/L		04/11/18 15:18	04/12/18 00:27	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/11/18 15:18	04/12/18 00:27	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/11/18 15:18	04/12/18 00:27	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/11/18 15:18	04/12/18 00:27	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/11/18 15:18	04/12/18 00:27	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/11/18 15:18	04/12/18 00:27	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/11/18 15:18	04/12/18 00:27	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/11/18 15:18	04/12/18 00:27	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/11/18 15:18	04/12/18 00:27	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 00:27	1
1,2-Dichlorobenzene	**1.6**	**J**	10	1.3	ug/L		04/11/18 15:18	04/12/18 00:27	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/11/18 15:18	04/12/18 00:27	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/11/18 15:18	04/12/18 00:27	1

Client Sample ID: DDA-12-US

Lab Sample ID: 460-153561-2

Date Collected: 04/06/18 09:55
Date Received: 04/06/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/11/18 15:18	04/12/18 00:27	1
Isophorone	0.80	U	10	0.80	ug/L		04/11/18 15:18	04/12/18 00:27	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 00:27	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/11/18 15:18	04/12/18 00:27	1
Naphthalene	**5.1**	**J**	10	1.1	ug/L		04/11/18 15:18	04/12/18 00:27	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/11/18 15:18	04/12/18 00:27	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/11/18 15:18	04/12/18 00:27	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 00:27	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/11/18 15:18	04/12/18 00:27	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/11/18 15:18	04/12/18 00:27	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/11/18 15:18	04/12/18 00:27	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/11/18 15:18	04/12/18 00:27	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/11/18 15:18	04/12/18 00:27	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/11/18 15:18	04/12/18 00:27	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/11/18 15:18	04/12/18 00:27	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 00:27	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 00:27	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/11/18 15:18	04/12/18 00:27	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/11/18 15:18	04/12/18 00:27	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 00:27	1
Fluorene	0.91	U	10	0.91	ug/L		04/11/18 15:18	04/12/18 00:27	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/11/18 15:18	04/12/18 00:27	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/11/18 15:18	04/12/18 00:27	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/11/18 15:18	04/12/18 00:27	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/11/18 15:18	04/12/18 00:27	1
Anthracene	0.63	U	10	0.63	ug/L		04/11/18 15:18	04/12/18 00:27	1
Carbazole	0.68	U	10	0.68	ug/L		04/11/18 15:18	04/12/18 00:27	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/11/18 15:18	04/12/18 00:27	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/11/18 15:18	04/12/18 00:27	1
Pyrene	1.6	U	10	1.6	ug/L		04/11/18 15:18	04/12/18 00:27	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/11/18 15:18	04/12/18 00:27	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/11/18 15:18	04/12/18 00:27	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/11/18 15:18	04/12/18 00:27	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/11/18 15:18	04/12/18 00:27	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/11/18 15:18	04/12/18 00:27	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/11/18 15:18	04/12/18 00:27	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/11/18 15:18	04/12/18 00:27	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/11/18 15:18	04/12/18 00:27	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/11/18 15:18	04/12/18 00:27	1
Diphenyl ether	**7.0**	**J**	10	1.2	ug/L		04/11/18 15:18	04/12/18 00:27	1
n,n'-Dimethylaniline	**3.4**		1.0	0.91	ug/L		04/11/18 15:18	04/12/18 00:27	1
Caprolactam	0.68	U	10	0.68	ug/L		04/11/18 15:18	04/12/18 00:27	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/11/18 15:18	04/12/18 00:27	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/11/18 15:18	04/12/18 00:27	1
N-Methylaniline	**1.4**	**J**	5.0	0.48	ug/L		04/11/18 15:18	04/12/18 00:27	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane	*13*	*J N*	*ug/L*		*1.64*	*123-91-1*	*04/11/18 15:18*	*04/12/18 00:27*	*1*
Benzene, (1-methylethyl)-	*36*	*J N*	*ug/L*		*3.26*	*98-82-8*	*04/11/18 15:18*	*04/12/18 00:27*	*1*
Benzene, 1-ethyl-3-methyl-	*82*	*J N*	*ug/L*		*3.59*	*620-14-4*	*04/11/18 15:18*	*04/12/18 00:27*	*1*

Client Sample ID: DDA-12-US

Lab Sample ID: 460-153561-2

Date Collected: 04/06/18 09:55
Date Received: 04/06/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Benzene, 1-ethyl-4-methyl-	56	J N	ug/L		3.61	622-96-8	04/11/18 15:18	04/12/18 00:27	1
Benzene, 1,2,3-trimethyl-	95	J N	ug/L		3.66	526-73-8	04/11/18 15:18	04/12/18 00:27	1
Benzene, 1-ethyl-2-methyl-	77	J N	ug/L		3.74	611-14-3	04/11/18 15:18	04/12/18 00:27	1
Benzene, 1,3,5-trimethyl-	340	J N	ug/L		3.86	108-67-8	04/11/18 15:18	04/12/18 00:27	1
Benzene, 1,2,4-trimethyl-	96	J N	ug/L		4.08	95-63-6	04/11/18 15:18	04/12/18 00:27	1
Benzene, 2-ethyl-1,4-dimethyl-	13	J N	ug/L		4.34	1758-88-9	04/11/18 15:18	04/12/18 00:27	1
Benzene, 1-ethyl-2,3-dimethyl-	6.7	J N	ug/L		4.48	933-98-2	04/11/18 15:18	04/12/18 00:27	1
1,4-Benzenediol, diacetate	15	J N	ug/L		5.68	1205-91-0	04/11/18 15:18	04/12/18 00:27	1
Unknown	65	J	ug/L		6.69		04/11/18 15:18	04/12/18 00:27	1
Unknown	23	J	ug/L		11.91		04/11/18 15:18	04/12/18 00:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	86		51 - 108	04/11/18 15:18	04/12/18 00:27	1
Phenol-d5	29		14 - 39	04/11/18 15:18	04/12/18 00:27	1
Terphenyl-d14	86		40 - 148	04/11/18 15:18	04/12/18 00:27	1
2,4,6-Tribromophenol	86		26 - 139	04/11/18 15:18	04/12/18 00:27	1
2-Fluorophenol	40		25 - 58	04/11/18 15:18	04/12/18 00:27	1
2-Fluorobiphenyl	78		45 - 107	04/11/18 15:18	04/12/18 00:27	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**11500**		250	233	ug/L		04/09/18 08:49	04/10/18 02:32	5
Potassium	**3970**		250	143	ug/L		04/09/18 08:49	04/10/18 19:55	5
Magnesium	**5200**		250	155	ug/L		04/09/18 08:49	04/10/18 02:32	5
Sodium	**24000**		250	213	ug/L		04/09/18 08:49	04/10/18 02:32	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/09/18 08:49	04/10/18 19:55	5
Antimony	1.4	U	2.5	1.4	ug/L		04/09/18 08:49	04/10/18 02:32	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/09/18 08:49	04/10/18 19:55	5
Barium	**545**		5.0	3.2	ug/L		04/09/18 08:49	04/10/18 19:55	5
Thallium	0.60	U	1.0	0.60	ug/L		04/09/18 08:49	04/10/18 02:32	5
Iron	**46600**		150	97.8	ug/L		04/09/18 08:49	04/10/18 02:32	5
Nickel	**6.4**		5.0	3.1	ug/L		04/09/18 08:49	04/10/18 02:32	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/09/18 08:49	04/10/18 02:32	5
Silver	3.0	U	5.0	3.0	ug/L		04/09/18 08:49	04/10/18 02:32	5
Arsenic	**3.7**		2.5	1.5	ug/L		04/09/18 08:49	04/10/18 02:32	5
Copper	3.3	U	5.0	3.3	ug/L		04/09/18 08:49	04/10/18 02:32	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/09/18 08:49	04/10/18 02:32	5
Lead	0.93	U	1.5	0.93	ug/L		04/09/18 08:49	04/10/18 02:32	5
Zinc	16.3	U	20.0	16.3	ug/L		04/09/18 08:49	04/10/18 02:32	5
Selenium	1.4	U	2.5	1.4	ug/L		04/09/18 08:49	04/10/18 19:55	5
Manganese	**2550**		10.0	6.1	ug/L		04/09/18 08:49	04/10/18 02:32	5
Chromium	3.1	U	5.0	3.1	ug/L		04/09/18 08:49	04/10/18 02:32	5
Cobalt	**16.7**		5.0	3.1	ug/L		04/09/18 08:49	04/10/18 02:32	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/11/18 11:41	04/11/18 13:29	1

Client Sample ID: DDA-12-US

Lab Sample ID: 460-153561-2
Matrix: Water

Date Collected: 04/06/18 09:55
Date Received: 04/06/18 19:30

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**55100**		150	92.1	ug/L		04/10/18 12:05	04/11/18 13:48	1
Manganese, Dissolved	**2610**		15.0	3.1	ug/L		04/10/18 12:05	04/11/18 13:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**3.0**	J+	0.10	0.045	mg/L		04/12/18 10:27	04/12/18 11:44	1

Client Sample ID: DDA-12-TZ

Lab Sample ID: 460-153561-3
Matrix: Water

Date Collected: 04/06/18 10:00
Date Received: 04/06/18 19:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/12/18 10:09	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/12/18 10:09	1
Vinyl chloride	**0.43**	**J**	1.0	0.060	ug/L			04/12/18 10:09	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/12/18 10:09	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/12/18 10:09	1
Acetone	**6.2**		5.0	1.1	ug/L			04/12/18 10:09	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/12/18 10:09	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/12/18 10:09	1
1,1-Dichloroethane	**2.1**		1.0	0.24	ug/L			04/12/18 10:09	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/12/18 10:09	1
cis-1,2-Dichloroethene	**0.59**	**J**	1.0	0.26	ug/L			04/12/18 10:09	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/12/18 10:09	1
1,2-Dichloroethane	**4.3**		1.0	0.25	ug/L			04/12/18 10:09	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/12/18 10:09	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/12/18 10:09	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/12/18 10:09	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/12/18 10:09	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/12/18 10:09	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/12/18 10:09	1
Trichloroethene	**1.6**		1.0	0.22	ug/L			04/12/18 10:09	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/12/18 10:09	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/12/18 10:09	1
Benzene	**190**		1.0	0.090	ug/L			04/12/18 10:09	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/12/18 10:09	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/12/18 10:09	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/12/18 10:09	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/12/18 10:09	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/12/18 10:09	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/12/18 10:09	1
Toluene	**1.2**		1.0	0.25	ug/L			04/12/18 10:09	1
Chlorobenzene	**40**		1.0	0.24	ug/L			04/12/18 10:09	1
Ethylbenzene	**3.3**		1.0	0.30	ug/L			04/12/18 10:09	1
Styrene	0.17	U	1.0	0.17	ug/L			04/12/18 10:09	1
Xylenes, Total	**91**		2.0	0.28	ug/L			04/12/18 10:09	1
Ethyl ether	**6.4**		1.0	0.11	ug/L			04/12/18 10:09	1
MTBE	0.13	U	1.0	0.13	ug/L			04/12/18 10:09	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/12/18 10:09	1

Client Sample ID: DDA-12-TZ

Lab Sample ID: 460-153561-3

Date Collected: 04/06/18 10:00
Date Received: 04/06/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyclohexane	**22**		1.0	0.26	ug/L			04/12/18 10:09	1
1,4-Dioxane	**1100**		50	8.7	ug/L			04/12/18 10:09	1
1,2,4-Trimethylbenzene	**250**		1.0	0.23	ug/L			04/12/18 10:09	1
1,3,5-Trimethylbenzene	**60**		1.0	0.25	ug/L			04/12/18 10:09	1
Isopropylbenzene	**35**		1.0	0.32	ug/L			04/12/18 10:09	1
N-Propylbenzene	**63**		1.0	0.29	ug/L			04/12/18 10:09	1
Methylcyclohexane	**55**		1.0	0.22	ug/L			04/12/18 10:09	1
Indane	**40**		1.0	0.12	ug/L			04/12/18 10:09	1
Dichlorofluoromethane	**24**		1.0	0.21	ug/L			04/12/18 10:09	1
1,2,3-Trimethylbenzene	**59**		1.0	0.11	ug/L			04/12/18 10:09	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Propene	*19*	*J N*	*ug/L*		*1.55*	*115-07-1*		*04/12/18 10:09*	*1*
Cyclopentane, methyl-	*11*	*J N*	*ug/L*		*4.12*	*96-37-7*		*04/12/18 10:09*	*1*
Unknown	*16*	*J*	*ug/L*		*4.89*			*04/12/18 10:09*	*1*
Unknown	*13*	*J*	*ug/L*		*6.04*			*04/12/18 10:09*	*1*
Benzene, 1-ethyl-4-methyl-	*13*	*J N*	*ug/L*		*10.33*	*622-96-8*		*04/12/18 10:09*	*1*
Benzene, 1-ethyl-2-methyl-	*84*	*J N*	*ug/L*		*10.54*	*611-14-3*		*04/12/18 10:09*	*1*
Benzene, 1,4-diethyl-	*11*	*J N*	*ug/L*		*11.13*	*105-05-5*		*04/12/18 10:09*	*1*
Benzene, 1,2-dichloro-	*25*	*J N*	*ug/L*		*11.20*	*95-50-1*		*04/12/18 10:09*	*1*
Benzene, 4-ethyl-1,2-dimethyl-	*11*	*J N*	*ug/L*		*11.31*	*934-80-5*		*04/12/18 10:09*	*1*
1,4-Benzenediol, diacetate	*78*	*J N*	*ug/L*		*12.63*	*1205-91-0*		*04/12/18 10:09*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*74 - 132*		*04/12/18 10:09*	*1*
Bromofluorobenzene	*91*		*77 - 124*		*04/12/18 10:09*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*04/12/18 10:09*	*1*
Dibromofluoromethane (Surr)	*97*		*72 - 131*		*04/12/18 10:09*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/11/18 15:18	04/12/18 16:04	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/11/18 15:18	04/12/18 16:04	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/11/18 15:18	04/12/18 16:04	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/11/18 15:18	04/12/18 16:04	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/11/18 15:18	04/12/18 16:04	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.58	U	20	0.58	ug/L		04/11/18 15:18	04/12/18 10:31	2
2-Chlorophenol	0.75	U	20	0.75	ug/L		04/11/18 15:18	04/12/18 10:31	2
2-Methylphenol	0.52	U	20	0.52	ug/L		04/11/18 15:18	04/12/18 10:31	2
4-Methylphenol	0.47	U	20	0.47	ug/L		04/11/18 15:18	04/12/18 10:31	2
2-Nitrophenol	1.5	U	20	1.5	ug/L		04/11/18 15:18	04/12/18 10:31	2
2,4-Dimethylphenol	0.48	U	20	0.48	ug/L		04/11/18 15:18	04/12/18 10:31	2
2,4-Dichlorophenol	0.84	U	20	0.84	ug/L		04/11/18 15:18	04/12/18 10:31	2
4-Chloro-3-methylphenol	1.2	U	20	1.2	ug/L		04/11/18 15:18	04/12/18 10:31	2
2,4,6-Trichlorophenol	0.60	U	20	0.60	ug/L		04/11/18 15:18	04/12/18 10:31	2
2,4,5-Trichlorophenol	0.56	U	20	0.56	ug/L		04/11/18 15:18	04/12/18 10:31	2
2,4-Dinitrophenol	29	U	40	29	ug/L		04/11/18 15:18	04/12/18 10:31	2

Client Sample ID: DDA-12-TZ

Lab Sample ID: 460-153561-3

Date Collected: 04/06/18 10:00
Date Received: 04/06/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	1.4	U	40	1.4	ug/L		04/11/18 15:18	04/12/18 10:31	2
4,6-Dinitro-2-methylphenol	27	U	40	27	ug/L		04/11/18 15:18	04/12/18 10:31	2
Bis(2-chloroethyl)ether	**320**		2.0	0.59	ug/L		04/11/18 15:18	04/12/18 10:31	2
1,3-Dichlorobenzene	4.1	U	20	4.1	ug/L		04/11/18 15:18	04/12/18 10:31	2
1,4-Dichlorobenzene	**2.5**	**J**	20	2.5	ug/L		04/11/18 15:18	04/12/18 10:31	2
1,2-Dichlorobenzene	**15**	**J**	20	2.7	ug/L		04/11/18 15:18	04/12/18 10:31	2
N-Nitrosodi-n-propylamine	0.86	U	2.0	0.86	ug/L		04/11/18 15:18	04/12/18 10:31	2
Hexachloroethane	2.4	U	4.0	2.4	ug/L		04/11/18 15:18	04/12/18 10:31	2
Nitrobenzene	1.1	U	2.0	1.1	ug/L		04/11/18 15:18	04/12/18 10:31	2
Isophorone	1.6	U	20	1.6	ug/L		04/11/18 15:18	04/12/18 10:31	2
Bis(2-chloroethoxy)methane	0.48	U	20	0.48	ug/L		04/11/18 15:18	04/12/18 10:31	2
1,2,4-Trichlorobenzene	2.5	U	4.0	2.5	ug/L		04/11/18 15:18	04/12/18 10:31	2
Naphthalene	**3.5**	**J**	20	2.3	ug/L		04/11/18 15:18	04/12/18 10:31	2
4-Chloroaniline	3.8	U	20	3.8	ug/L		04/11/18 15:18	04/12/18 10:31	2
Hexachlorobutadiene	1.6	U	2.0	1.6	ug/L		04/11/18 15:18	04/12/18 10:31	2
2-Methylnaphthalene	2.2	U	20	2.2	ug/L		04/11/18 15:18	04/12/18 10:31	2
Hexachlorocyclopentadiene	3.4	U	20	3.4	ug/L		04/11/18 15:18	04/12/18 10:31	2
2-Chloronaphthalene	2.4	U	20	2.4	ug/L		04/11/18 15:18	04/12/18 10:31	2
2-Nitroaniline	0.95	U	20	0.95	ug/L		04/11/18 15:18	04/12/18 10:31	2
Dimethyl phthalate	1.5	U	20	1.5	ug/L		04/11/18 15:18	04/12/18 10:31	2
Acenaphthylene	1.6	U	20	1.6	ug/L		04/11/18 15:18	04/12/18 10:31	2
2,6-Dinitrotoluene	0.78	U	4.0	0.78	ug/L		04/11/18 15:18	04/12/18 10:31	2
3-Nitroaniline	1.9	U	20	1.9	ug/L		04/11/18 15:18	04/12/18 10:31	2
Acenaphthene	2.2	U	20	2.2	ug/L		04/11/18 15:18	04/12/18 10:31	2
Dibenzofuran	2.2	U	20	2.2	ug/L		04/11/18 15:18	04/12/18 10:31	2
2,4-Dinitrotoluene	2.0	U	4.0	2.0	ug/L		04/11/18 15:18	04/12/18 10:31	2
Diethyl phthalate	2.0	U	20	2.0	ug/L		04/11/18 15:18	04/12/18 10:31	2
4-Chlorophenyl phenyl ether	2.6	U	20	2.6	ug/L		04/11/18 15:18	04/12/18 10:31	2
Fluorene	1.8	U	20	1.8	ug/L		04/11/18 15:18	04/12/18 10:31	2
4-Nitroaniline	1.1	U	20	1.1	ug/L		04/11/18 15:18	04/12/18 10:31	2
N-Nitrosodiphenylamine	1.8	U	20	1.8	ug/L		04/11/18 15:18	04/12/18 10:31	2
4-Bromophenyl phenyl ether	1.5	U	20	1.5	ug/L		04/11/18 15:18	04/12/18 10:31	2
Phenanthrene	1.2	U	20	1.2	ug/L		04/11/18 15:18	04/12/18 10:31	2
Anthracene	1.3	U	20	1.3	ug/L		04/11/18 15:18	04/12/18 10:31	2
Carbazole	1.4	U	20	1.4	ug/L		04/11/18 15:18	04/12/18 10:31	2
Di-n-butyl phthalate	1.7	U	20	1.7	ug/L		04/11/18 15:18	04/12/18 10:31	2
Fluoranthene	1.7	U	20	1.7	ug/L		04/11/18 15:18	04/12/18 10:31	2
Pyrene	3.3	U	20	3.3	ug/L		04/11/18 15:18	04/12/18 10:31	2
Butyl benzyl phthalate	1.7	U	20	1.7	ug/L		04/11/18 15:18	04/12/18 10:31	2
3,3'-Dichlorobenzidine	2.9	U	20	2.9	ug/L		04/11/18 15:18	04/12/18 10:31	2
Chrysene	1.8	U	4.0	1.8	ug/L		04/11/18 15:18	04/12/18 10:31	2
Bis(2-ethylhexyl) phthalate	3.4	U	4.0	3.4	ug/L		04/11/18 15:18	04/12/18 10:31	2
Di-n-octyl phthalate	9.5	U	20	9.5	ug/L		04/11/18 15:18	04/12/18 10:31	2
Benzo[k]fluoranthene	1.3	U	2.0	1.3	ug/L		04/11/18 15:18	04/12/18 10:31	2
Indeno[1,2,3-cd]pyrene	2.6	U	4.0	2.6	ug/L		04/11/18 15:18	04/12/18 10:31	2
Dibenz(a,h)anthracene	1.4	U	2.0	1.4	ug/L		04/11/18 15:18	04/12/18 10:31	2
Benzo[g,h,i]perylene	2.9	U	20	2.9	ug/L		04/11/18 15:18	04/12/18 10:31	2
Diphenyl ether	**12**	**J**	20	2.4	ug/L		04/11/18 15:18	04/12/18 10:31	2
n,n'-Dimethylaniline	**3.1**		2.0	1.8	ug/L		04/11/18 15:18	04/12/18 10:31	2

Client Sample ID: DDA-12-TZ

Lab Sample ID: 460-153561-3

Date Collected: 04/06/18 10:00
Date Received: 04/06/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Caprolactam	1.4	U	20	1.4	ug/L		04/11/18 15:18	04/12/18 10:31	2
bis (2-chloroisopropyl) ether	1.3	U	20	1.3	ug/L		04/11/18 15:18	04/12/18 10:31	2
Bisphenol-A	**52**		20	20	ug/L		04/11/18 15:18	04/12/18 10:31	2
N-Methylaniline	**4.9**	**J**	10	0.96	ug/L		04/11/18 15:18	04/12/18 10:31	2

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane	*59*	*J N*	*ug/L*		*1.71*	*123-91-1*	*04/11/18 15:18*	*04/12/18 10:31*	*2*
Benzene, chloro-	*24*	*J N*	*ug/L*		*2.78*	*108-90-7*	*04/11/18 15:18*	*04/12/18 10:31*	*2*
Benzene, (1-methylethyl)-	*33*	*J N*	*ug/L*		*3.46*	*98-82-8*	*04/11/18 15:18*	*04/12/18 10:31*	*2*
Benzene, propyl-	*43*	*J N*	*ug/L*		*3.72*	*103-65-1*	*04/11/18 15:18*	*04/12/18 10:31*	*2*
Benzene, 1,3,5-trimethyl-	*43*	*J N*	*ug/L*		*3.85*	*108-67-8*	*04/11/18 15:18*	*04/12/18 10:31*	*2*
Benzene, 1,2,3-trimethyl-	*180*	*J N*	*ug/L*		*4.06*	*526-73-8*	*04/11/18 15:18*	*04/12/18 10:31*	*2*
Benzene, 1,2,4-trimethyl-	*45*	*J N*	*ug/L*		*4.27*	*95-63-6*	*04/11/18 15:18*	*04/12/18 10:31*	*2*
2-Isopropoxyphenol	*75*	*J N*	*ug/L*		*5.30*	*4812-20-8*	*04/11/18 15:18*	*04/12/18 10:31*	*2*
Unknown	*17*	*J*	*ug/L*		*5.57*		*04/11/18 15:18*	*04/12/18 10:31*	*2*
1-Phenoxypropan-2-ol	*27*	*J N*	*ug/L*		*5.76*	*770-35-4*	*04/11/18 15:18*	*04/12/18 10:31*	*2*
Unknown	*240*	*J*	*ug/L*		*5.89*		*04/11/18 15:18*	*04/12/18 10:31*	*2*
Unknown	*170*	*J*	*ug/L*		*6.05*		*04/11/18 15:18*	*04/12/18 10:31*	*2*
Unknown	*17*	*J*	*ug/L*		*6.19*		*04/11/18 15:18*	*04/12/18 10:31*	*2*
Unknown	*24*	*J*	*ug/L*		*6.29*		*04/11/18 15:18*	*04/12/18 10:31*	*2*
Unknown	*410*	*J*	*ug/L*		*6.91*		*04/11/18 15:18*	*04/12/18 10:31*	*2*
o-Toluidine	*38*	*J N*	*ug/L*		*7.20*	*95-53-4*	*04/11/18 15:18*	*04/12/18 10:31*	*2*
Urea, N,N'-dimethyl-N,N'-diphenyl-	*39*	*J N*	*ug/L*		*8.69*	*611-92-7*	*04/11/18 15:18*	*04/12/18 10:31*	*2*
Unknown	*26*	*J*	*ug/L*		*10.46*		*04/11/18 15:18*	*04/12/18 10:31*	*2*
Unknown	*33*	*J*	*ug/L*		*11.48*		*04/11/18 15:18*	*04/12/18 10:31*	*2*
Unknown	*17*	*J*	*ug/L*		*12.65*		*04/11/18 15:18*	*04/12/18 10:31*	*2*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*76*		*51 - 108*	*04/11/18 15:18*	*04/12/18 10:31*	*2*
Phenol-d5	*22*		*14 - 39*	*04/11/18 15:18*	*04/12/18 10:31*	*2*
Terphenyl-d14	*98*		*40 - 148*	*04/11/18 15:18*	*04/12/18 10:31*	*2*
2,4,6-Tribromophenol	*81*		*26 - 139*	*04/11/18 15:18*	*04/12/18 10:31*	*2*
2-Fluorophenol	*36*		*25 - 58*	*04/11/18 15:18*	*04/12/18 10:31*	*2*
2-Fluorobiphenyl	*82*		*45 - 107*	*04/11/18 15:18*	*04/12/18 10:31*	*2*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**20900**		250	233	ug/L		04/09/18 08:49	04/10/18 02:35	5
Potassium	**2390**		250	143	ug/L		04/09/18 08:49	04/10/18 19:59	5
Magnesium	**10300**		250	155	ug/L		04/09/18 08:49	04/10/18 02:35	5
Sodium	**30200**		250	213	ug/L		04/09/18 08:49	04/10/18 02:35	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/09/18 08:49	04/10/18 19:59	5
Antimony	1.4	U	2.5	1.4	ug/L		04/09/18 08:49	04/10/18 02:35	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/09/18 08:49	04/10/18 19:59	5
Barium	**616**		5.0	3.2	ug/L		04/09/18 08:49	04/10/18 19:59	5
Thallium	0.60	U	1.0	0.60	ug/L		04/09/18 08:49	04/10/18 02:35	5
Iron	**18600**		150	97.8	ug/L		04/09/18 08:49	04/10/18 02:35	5
Nickel	**31.6**		5.0	3.1	ug/L		04/09/18 08:49	04/10/18 02:35	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/09/18 08:49	04/10/18 02:35	5
Silver	3.0	U	5.0	3.0	ug/L		04/09/18 08:49	04/10/18 02:35	5

Client Sample ID: DDA-12-TZ — Lab Sample ID: 460-153561-3

Date Collected: 04/06/18 10:00
Date Received: 04/06/18 19:30
Matrix: Water

Method: 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**11.9**		2.5	1.5	ug/L		04/09/18 08:49	04/10/18 02:35	5
Copper	3.3	U	5.0	3.3	ug/L		04/09/18 08:49	04/10/18 02:35	5
Aluminum	**52.2**		50.0	28.5	ug/L		04/09/18 08:49	04/10/18 02:35	5
Lead	0.93	U	1.5	0.93	ug/L		04/09/18 08:49	04/10/18 02:35	5
Zinc	16.3	U	20.0	16.3	ug/L		04/09/18 08:49	04/10/18 02:35	5
Selenium	1.4	U	2.5	1.4	ug/L		04/09/18 08:49	04/10/18 19:59	5
Manganese	**4030**		10.0	6.1	ug/L		04/09/18 08:49	04/10/18 02:35	5
Chromium	3.1	U	5.0	3.1	ug/L		04/09/18 08:49	04/10/18 02:35	5
Cobalt	**155**		5.0	3.1	ug/L		04/09/18 08:49	04/10/18 02:35	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/11/18 11:41	04/11/18 13:30	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**21300**		150	92.1	ug/L		04/10/18 12:05	04/11/18 13:52	1
Manganese, Dissolved	**4140**		15.0	3.1	ug/L		04/10/18 12:05	04/11/18 13:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**1.8**	J+	0.10	0.045	mg/L		04/12/18 10:27	04/12/18 11:50	1

Client Sample ID: P-4(UPA) — Lab Sample ID: 460-153561-4

Date Collected: 04/06/18 11:15
Date Received: 04/06/18 19:30
Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.37**	J	0.40	0.20	ug/L			04/11/18 13:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*72 - 133*		*04/11/18 13:03*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*71 - 144*		*04/11/18 13:03*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/12/18 12:12	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/12/18 12:12	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/12/18 12:12	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/12/18 12:12	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/12/18 12:12	1
Acetone	1.1	U	5.0	1.1	ug/L			04/12/18 12:12	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/12/18 12:12	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/12/18 12:12	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/12/18 12:12	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/12/18 12:12	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/12/18 12:12	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/12/18 12:12	1
1,2-Dichloroethane	**1.9**		1.0	0.25	ug/L			04/12/18 12:12	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/12/18 12:12	1

Client Sample ID: P-4(UPA)

Date Collected: 04/06/18 11:15
Date Received: 04/06/18 19:30

Lab Sample ID: 460-153561-4

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/12/18 12:12	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/12/18 12:12	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/12/18 12:12	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/12/18 12:12	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/12/18 12:12	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/12/18 12:12	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/12/18 12:12	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/12/18 12:12	1
Benzene	0.090	U	1.0	0.090	ug/L			04/12/18 12:12	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/12/18 12:12	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/12/18 12:12	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/12/18 12:12	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/12/18 12:12	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/12/18 12:12	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/12/18 12:12	1
Toluene	0.25	U	1.0	0.25	ug/L			04/12/18 12:12	1
Chlorobenzene	**0.47**	**J**	1.0	0.24	ug/L			04/12/18 12:12	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/12/18 12:12	1
Styrene	0.17	U	1.0	0.17	ug/L			04/12/18 12:12	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/12/18 12:12	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/12/18 12:12	1
MTBE	**0.98**	**J**	1.0	0.13	ug/L			04/12/18 12:12	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/12/18 12:12	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/12/18 12:12	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/12/18 12:12	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/12/18 12:12	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/12/18 12:12	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/12/18 12:12	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/12/18 12:12	1
Indane	0.12	U	1.0	0.12	ug/L			04/12/18 12:12	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/12/18 12:12	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/12/18 12:12	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/12/18 12:12*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*116*		*74 - 132*		*04/12/18 12:12*	*1*
Bromofluorobenzene	*91*		*77 - 124*		*04/12/18 12:12*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*04/12/18 12:12*	*1*
Dibromofluoromethane (Surr)	*104*		*72 - 131*		*04/12/18 12:12*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/11/18 15:18	04/12/18 16:26	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/11/18 15:18	04/12/18 16:26	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/11/18 15:18	04/12/18 16:26	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/11/18 15:18	04/12/18 16:26	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/11/18 15:18	04/12/18 16:26	1
Bis(2-chloroethyl)ether	0.026	U *	0.030	0.026	ug/L		04/11/18 15:18	04/12/18 16:26	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G Groundwater

TestAmerica Job ID: 460-153430-1
SDG: 153430

Client Sample ID: P-4(UPA)

Date Collected: 04/06/18 11:15
Date Received: 04/06/18 19:30

Lab Sample ID: 460-153561-4

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/11/18 15:18	04/12/18 01:09	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/11/18 15:18	04/12/18 01:09	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/11/18 15:18	04/12/18 01:09	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 01:09	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/11/18 15:18	04/12/18 01:09	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 01:09	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/11/18 15:18	04/12/18 01:09	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/11/18 15:18	04/12/18 01:09	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/11/18 15:18	04/12/18 01:09	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/11/18 15:18	04/12/18 01:09	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/11/18 15:18	04/12/18 01:09	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/11/18 15:18	04/12/18 01:09	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/11/18 15:18	04/12/18 01:09	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/11/18 15:18	04/12/18 01:09	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 01:09	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 01:09	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/11/18 15:18	04/12/18 01:09	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/11/18 15:18	04/12/18 01:09	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/11/18 15:18	04/12/18 01:09	1
Isophorone	0.80	U	10	0.80	ug/L		04/11/18 15:18	04/12/18 01:09	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 01:09	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/11/18 15:18	04/12/18 01:09	1
Naphthalene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 01:09	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/11/18 15:18	04/12/18 01:09	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/11/18 15:18	04/12/18 01:09	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 01:09	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/11/18 15:18	04/12/18 01:09	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/11/18 15:18	04/12/18 01:09	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/11/18 15:18	04/12/18 01:09	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/11/18 15:18	04/12/18 01:09	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/11/18 15:18	04/12/18 01:09	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/11/18 15:18	04/12/18 01:09	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/11/18 15:18	04/12/18 01:09	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 01:09	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 01:09	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/11/18 15:18	04/12/18 01:09	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/11/18 15:18	04/12/18 01:09	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 01:09	1
Fluorene	0.91	U	10	0.91	ug/L		04/11/18 15:18	04/12/18 01:09	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/11/18 15:18	04/12/18 01:09	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/11/18 15:18	04/12/18 01:09	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/11/18 15:18	04/12/18 01:09	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/11/18 15:18	04/12/18 01:09	1
Anthracene	0.63	U	10	0.63	ug/L		04/11/18 15:18	04/12/18 01:09	1
Carbazole	0.68	U	10	0.68	ug/L		04/11/18 15:18	04/12/18 01:09	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/11/18 15:18	04/12/18 01:09	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/11/18 15:18	04/12/18 01:09	1
Pyrene	1.6	U	10	1.6	ug/L		04/11/18 15:18	04/12/18 01:09	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/11/18 15:18	04/12/18 01:09	1

Client Sample ID: P-4(UPA)

Lab Sample ID: 460-153561-4

Date Collected: 04/06/18 11:15
Date Received: 04/06/18 19:30

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/11/18 15:18	04/12/18 01:09	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/11/18 15:18	04/12/18 01:09	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/11/18 15:18	04/12/18 01:09	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/11/18 15:18	04/12/18 01:09	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/11/18 15:18	04/12/18 01:09	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/11/18 15:18	04/12/18 01:09	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/11/18 15:18	04/12/18 01:09	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/11/18 15:18	04/12/18 01:09	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/11/18 15:18	04/12/18 01:09	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/11/18 15:18	04/12/18 01:09	1
Caprolactam	0.68	U	10	0.68	ug/L		04/11/18 15:18	04/12/18 01:09	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/11/18 15:18	04/12/18 01:09	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/11/18 15:18	04/12/18 01:09	1
N-Methylaniline	0.48	U	5.0	0.48	ug/L		04/11/18 15:18	04/12/18 01:09	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/11/18 15:18*	*04/12/18 01:09*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*85*		*51 - 108*	*04/11/18 15:18*	*04/12/18 01:09*	*1*
Phenol-d5	*26*		*14 - 39*	*04/11/18 15:18*	*04/12/18 01:09*	*1*
Terphenyl-d14	*88*		*40 - 148*	*04/11/18 15:18*	*04/12/18 01:09*	*1*
2,4,6-Tribromophenol	*68*		*26 - 139*	*04/11/18 15:18*	*04/12/18 01:09*	*1*
2-Fluorophenol	*41*		*25 - 58*	*04/11/18 15:18*	*04/12/18 01:09*	*1*
2-Fluorobiphenyl	*79*		*45 - 107*	*04/11/18 15:18*	*04/12/18 01:09*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**66100**		250	233	ug/L		04/09/18 10:44	04/10/18 02:38	5
Potassium	**11900**		250	143	ug/L		04/09/18 10:44	04/10/18 20:02	5
Magnesium	**32200**		250	155	ug/L		04/09/18 10:44	04/10/18 02:38	5
Sodium	**783000**		250	213	ug/L		04/09/18 10:44	04/10/18 02:38	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/09/18 10:44	04/10/18 20:02	5
Antimony	1.4	U	2.5	1.4	ug/L		04/09/18 10:44	04/10/18 02:38	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/09/18 10:44	04/10/18 20:02	5
Barium	**232**		5.0	3.2	ug/L		04/09/18 10:44	04/10/18 20:02	5
Thallium	0.60	U	1.0	0.60	ug/L		04/09/18 10:44	04/10/18 02:38	5
Iron	**62800**		150	97.8	ug/L		04/09/18 10:44	04/10/18 02:38	5
Nickel	**7.5**		5.0	3.1	ug/L		04/09/18 10:44	04/10/18 02:38	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/09/18 10:44	04/10/18 02:38	5
Silver	3.0	U	5.0	3.0	ug/L		04/09/18 10:44	04/10/18 02:38	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/09/18 10:44	04/10/18 02:38	5
Copper	3.3	U	5.0	3.3	ug/L		04/09/18 10:44	04/10/18 02:38	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/09/18 10:44	04/10/18 02:38	5
Lead	0.93	U	1.5	0.93	ug/L		04/09/18 10:44	04/10/18 02:38	5
Zinc	**28.7**		20.0	16.3	ug/L		04/09/18 10:44	04/10/18 02:38	5
Selenium	1.4	U	2.5	1.4	ug/L		04/09/18 10:44	04/10/18 20:02	5
Manganese	**3260**		10.0	6.1	ug/L		04/09/18 10:44	04/10/18 02:38	5
Chromium	3.1	U	5.0	3.1	ug/L		04/09/18 10:44	04/10/18 02:38	5
Cobalt	**201**		5.0	3.1	ug/L		04/09/18 10:44	04/10/18 02:38	5

Client Sample ID: P-4(UPA)

Lab Sample ID: 460-153561-4

Date Collected: 04/06/18 11:15
Date Received: 04/06/18 19:30

Matrix: Water

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/11/18 11:41	04/11/18 13:32	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**73200**		150	92.1	ug/L		04/10/18 12:05	04/11/18 13:55	1
Manganese, Dissolved	**3520**		15.0	3.1	ug/L		04/10/18 12:05	04/11/18 13:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.90**	~~F1~~ J+	0.10	0.045	mg/L		04/12/18 10:27	04/12/18 11:51	1

Client Sample ID: MW-18

Lab Sample ID: 460-153561-5

Date Collected: 04/06/18 14:20
Date Received: 04/06/18 19:30

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**13**		0.40	0.20	ug/L			04/10/18 14:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*103*		*72 - 133*		*04/10/18 14:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*71 - 144*		*04/10/18 14:57*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/12/18 10:55	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/12/18 10:55	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/12/18 10:55	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/12/18 10:55	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/12/18 10:55	1
Acetone	1.1	U	5.0	1.1	ug/L			04/12/18 10:55	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/12/18 10:55	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/12/18 10:55	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/12/18 10:55	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/12/18 10:55	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/12/18 10:55	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/12/18 10:55	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/12/18 10:55	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/12/18 10:55	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/12/18 10:55	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/12/18 10:55	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/12/18 10:55	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/12/18 10:55	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/12/18 10:55	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/12/18 10:55	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/12/18 10:55	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/12/18 10:55	1
Benzene	**0.16**	**J**	1.0	0.090	ug/L			04/12/18 10:55	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/12/18 10:55	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/12/18 10:55	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/12/18 10:55	1

Client Sample ID: MW-18

Date Collected: 04/06/18 14:20
Date Received: 04/06/18 19:30

Lab Sample ID: 460-153561-5

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/12/18 10:55	1
Tetrachloroethene	**0.33**	**J**	1.0	0.12	ug/L			04/12/18 10:55	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/12/18 10:55	1
Toluene	0.25	U	1.0	0.25	ug/L			04/12/18 10:55	1
Chlorobenzene	**8.8**		1.0	0.24	ug/L			04/12/18 10:55	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/12/18 10:55	1
Styrene	0.17	U	1.0	0.17	ug/L			04/12/18 10:55	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/12/18 10:55	1
Ethyl ether	**13**		1.0	0.11	ug/L			04/12/18 10:55	1
MTBE	**0.67**	**J**	1.0	0.13	ug/L			04/12/18 10:55	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/12/18 10:55	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/12/18 10:55	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/12/18 10:55	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/12/18 10:55	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/12/18 10:55	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/12/18 10:55	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/12/18 10:55	1
Indane	**0.22**	**J**	1.0	0.12	ug/L			04/12/18 10:55	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/12/18 10:55	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/12/18 10:55	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/12/18 10:55*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*74 - 132*		*04/12/18 10:55*	*1*
Bromofluorobenzene	*88*		*77 - 124*		*04/12/18 10:55*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*04/12/18 10:55*	*1*
Dibromofluoromethane (Surr)	*99*		*72 - 131*		*04/12/18 10:55*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/11/18 15:18	04/12/18 16:47	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/11/18 15:18	04/12/18 16:47	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/11/18 15:18	04/12/18 16:47	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/11/18 15:18	04/12/18 16:47	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/11/18 15:18	04/12/18 16:47	1
Bis(2-chloroethyl)ether	**1.2**	* J+	0.030	0.026	ug/L		04/11/18 15:18	04/12/18 16:47	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/11/18 15:18	04/12/18 01:30	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/11/18 15:18	04/12/18 01:30	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/11/18 15:18	04/12/18 01:30	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 01:30	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/11/18 15:18	04/12/18 01:30	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 01:30	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/11/18 15:18	04/12/18 01:30	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/11/18 15:18	04/12/18 01:30	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/11/18 15:18	04/12/18 01:30	1

Client Sample ID: MW-18

Date Collected: 04/06/18 14:20
Date Received: 04/06/18 19:30

Lab Sample ID: 460-153561-5

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/11/18 15:18	04/12/18 01:30	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/11/18 15:18	04/12/18 01:30	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/11/18 15:18	04/12/18 01:30	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/11/18 15:18	04/12/18 01:30	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/11/18 15:18	04/12/18 01:30	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 01:30	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 01:30	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/11/18 15:18	04/12/18 01:30	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/11/18 15:18	04/12/18 01:30	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/11/18 15:18	04/12/18 01:30	1
Isophorone	0.80	U	10	0.80	ug/L		04/11/18 15:18	04/12/18 01:30	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 01:30	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/11/18 15:18	04/12/18 01:30	1
Naphthalene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 01:30	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/11/18 15:18	04/12/18 01:30	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/11/18 15:18	04/12/18 01:30	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 01:30	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/11/18 15:18	04/12/18 01:30	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/11/18 15:18	04/12/18 01:30	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/11/18 15:18	04/12/18 01:30	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/11/18 15:18	04/12/18 01:30	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/11/18 15:18	04/12/18 01:30	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/11/18 15:18	04/12/18 01:30	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/11/18 15:18	04/12/18 01:30	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 01:30	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 01:30	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/11/18 15:18	04/12/18 01:30	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/11/18 15:18	04/12/18 01:30	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 01:30	1
Fluorene	0.91	U	10	0.91	ug/L		04/11/18 15:18	04/12/18 01:30	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/11/18 15:18	04/12/18 01:30	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/11/18 15:18	04/12/18 01:30	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/11/18 15:18	04/12/18 01:30	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/11/18 15:18	04/12/18 01:30	1
Anthracene	0.63	U	10	0.63	ug/L		04/11/18 15:18	04/12/18 01:30	1
Carbazole	0.68	U	10	0.68	ug/L		04/11/18 15:18	04/12/18 01:30	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/11/18 15:18	04/12/18 01:30	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/11/18 15:18	04/12/18 01:30	1
Pyrene	1.6	U	10	1.6	ug/L		04/11/18 15:18	04/12/18 01:30	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/11/18 15:18	04/12/18 01:30	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/11/18 15:18	04/12/18 01:30	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/11/18 15:18	04/12/18 01:30	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/11/18 15:18	04/12/18 01:30	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/11/18 15:18	04/12/18 01:30	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/11/18 15:18	04/12/18 01:30	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/11/18 15:18	04/12/18 01:30	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/11/18 15:18	04/12/18 01:30	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/11/18 15:18	04/12/18 01:30	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/11/18 15:18	04/12/18 01:30	1

Client Sample ID: MW-18

Date Collected: 04/06/18 14:20
Date Received: 04/06/18 19:30

Lab Sample ID: 460-153561-5

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/11/18 15:18	04/12/18 01:30	1
Caprolactam	0.68	U	10	0.68	ug/L		04/11/18 15:18	04/12/18 01:30	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/11/18 15:18	04/12/18 01:30	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/11/18 15:18	04/12/18 01:30	1
N-Methylaniline	0.48	U	5.0	0.48	ug/L		04/11/18 15:18	04/12/18 01:30	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tributyl phosphate	*6.6*	*J N*	*ug/L*		*7.54*	*126-73-8*	*04/11/18 15:18*	*04/12/18 01:30*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*84*		*51 - 108*	*04/11/18 15:18*	*04/12/18 01:30*	*1*
Phenol-d5	*24*		*14 - 39*	*04/11/18 15:18*	*04/12/18 01:30*	*1*
Terphenyl-d14	*87*		*40 - 148*	*04/11/18 15:18*	*04/12/18 01:30*	*1*
2,4,6-Tribromophenol	*79*		*26 - 139*	*04/11/18 15:18*	*04/12/18 01:30*	*1*
2-Fluorophenol	*39*		*25 - 58*	*04/11/18 15:18*	*04/12/18 01:30*	*1*
2-Fluorobiphenyl	*76*		*45 - 107*	*04/11/18 15:18*	*04/12/18 01:30*	*1*

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**27400**		250	233	ug/L		04/09/18 10:44	04/10/18 02:42	5
Potassium	**10400**		250	143	ug/L		04/09/18 10:44	04/10/18 20:05	5
Magnesium	**13500**		250	155	ug/L		04/09/18 10:44	04/10/18 02:42	5
Sodium	**30400**		250	213	ug/L		04/09/18 10:44	04/10/18 02:42	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/09/18 10:44	04/10/18 20:05	5
Antimony	1.4	U	2.5	1.4	ug/L		04/09/18 10:44	04/10/18 02:42	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/09/18 10:44	04/10/18 20:05	5
Barium	**395**		5.0	3.2	ug/L		04/09/18 10:44	04/10/18 20:05	5
Thallium	0.60	U	1.0	0.60	ug/L		04/09/18 10:44	04/10/18 02:42	5
Iron	**42400**		150	97.8	ug/L		04/09/18 10:44	04/10/18 02:42	5
Nickel	**4.0**	**J**	5.0	3.1	ug/L		04/09/18 10:44	04/10/18 02:42	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/09/18 10:44	04/10/18 02:42	5
Silver	3.0	U	5.0	3.0	ug/L		04/09/18 10:44	04/10/18 02:42	5
Arsenic	**4.8**		2.5	1.5	ug/L		04/09/18 10:44	04/10/18 02:42	5
Copper	3.3	U	5.0	3.3	ug/L		04/09/18 10:44	04/10/18 02:42	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/09/18 10:44	04/10/18 02:42	5
Lead	0.93	U	1.5	0.93	ug/L		04/09/18 10:44	04/10/18 02:42	5
Zinc	16.3	U	20.0	16.3	ug/L		04/09/18 10:44	04/10/18 02:42	5
Selenium	1.4	U	2.5	1.4	ug/L		04/09/18 10:44	04/10/18 20:05	5
Manganese	**3450**		10.0	6.1	ug/L		04/09/18 10:44	04/10/18 02:42	5
Chromium	3.1	U	5.0	3.1	ug/L		04/09/18 10:44	04/10/18 02:42	5
Cobalt	**35.0**		5.0	3.1	ug/L		04/09/18 10:44	04/10/18 02:42	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/11/18 11:41	04/11/18 13:37	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**49700**		150	92.1	ug/L		04/10/18 12:05	04/11/18 14:00	1
Manganese, Dissolved	**3560**		15.0	3.1	ug/L		04/10/18 12:05	04/11/18 14:00	1

Client Sample ID: MW-18

Lab Sample ID: 460-153561-5

Date Collected: 04/06/18 14:20
Date Received: 04/06/18 19:30

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**6.8**	J+	0.50	0.23	mg/L		04/12/18 10:27	04/12/18 12:12	5

Client Sample ID: P-5L(UPA)

Lab Sample ID: 460-153561-6

Date Collected: 04/06/18 15:10
Date Received: 04/06/18 19:30

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**18**		0.40	0.20	ug/L			04/10/18 15:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*72 - 133*		*04/10/18 15:20*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*71 - 144*		*04/10/18 15:20*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/12/18 11:18	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/12/18 11:18	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/12/18 11:18	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/12/18 11:18	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/12/18 11:18	1
Acetone	1.1	U	5.0	1.1	ug/L			04/12/18 11:18	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/12/18 11:18	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/12/18 11:18	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/12/18 11:18	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/12/18 11:18	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/12/18 11:18	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/12/18 11:18	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/12/18 11:18	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/12/18 11:18	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/12/18 11:18	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/12/18 11:18	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/12/18 11:18	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/12/18 11:18	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/12/18 11:18	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/12/18 11:18	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/12/18 11:18	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/12/18 11:18	1
Benzene	0.090	U	1.0	0.090	ug/L			04/12/18 11:18	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/12/18 11:18	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/12/18 11:18	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/12/18 11:18	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/12/18 11:18	1
Tetrachloroethene	**1.3**		1.0	0.12	ug/L			04/12/18 11:18	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/12/18 11:18	1
Toluene	0.25	U	1.0	0.25	ug/L			04/12/18 11:18	1
Chlorobenzene	**1.4**		1.0	0.24	ug/L			04/12/18 11:18	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/12/18 11:18	1
Styrene	0.17	U	1.0	0.17	ug/L			04/12/18 11:18	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/12/18 11:18	1

Client Sample ID: P-5L(UPA)

Date Collected: 04/06/18 15:10
Date Received: 04/06/18 19:30

Lab Sample ID: 460-153561-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethyl ether	**2.8**		1.0	0.11	ug/L			04/12/18 11:18	1
MTBE	**1.0**		1.0	0.13	ug/L			04/12/18 11:18	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/12/18 11:18	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/12/18 11:18	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/12/18 11:18	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/12/18 11:18	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/12/18 11:18	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/12/18 11:18	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/12/18 11:18	1
Indane	0.12	U	1.0	0.12	ug/L			04/12/18 11:18	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/12/18 11:18	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/12/18 11:18	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/12/18 11:18*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*74 - 132*		*04/12/18 11:18*	*1*
Bromofluorobenzene	*88*		*77 - 124*		*04/12/18 11:18*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*04/12/18 11:18*	*1*
Dibromofluoromethane (Surr)	*100*		*72 - 131*		*04/12/18 11:18*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/11/18 15:18	04/12/18 17:09	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/11/18 15:18	04/12/18 17:09	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/11/18 15:18	04/12/18 17:09	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/11/18 15:18	04/12/18 17:09	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/11/18 15:18	04/12/18 17:09	1
Bis(2-chloroethyl)ether	**0.95**	* J+	0.030	0.026	ug/L		04/11/18 15:18	04/12/18 17:09	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/11/18 15:18	04/12/18 01:52	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/11/18 15:18	04/12/18 01:52	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/11/18 15:18	04/12/18 01:52	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 01:52	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/11/18 15:18	04/12/18 01:52	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 01:52	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/11/18 15:18	04/12/18 01:52	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/11/18 15:18	04/12/18 01:52	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/11/18 15:18	04/12/18 01:52	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/11/18 15:18	04/12/18 01:52	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/11/18 15:18	04/12/18 01:52	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/11/18 15:18	04/12/18 01:52	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/11/18 15:18	04/12/18 01:52	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/11/18 15:18	04/12/18 01:52	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 01:52	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 01:52	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/11/18 15:18	04/12/18 01:52	1

Client Sample ID: P-5L(UPA)

Date Collected: 04/06/18 15:10
Date Received: 04/06/18 19:30

Lab Sample ID: 460-153561-6
Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/11/18 15:18	04/12/18 01:52	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/11/18 15:18	04/12/18 01:52	1
Isophorone	0.80	U	10	0.80	ug/L		04/11/18 15:18	04/12/18 01:52	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 01:52	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/11/18 15:18	04/12/18 01:52	1
Naphthalene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 01:52	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/11/18 15:18	04/12/18 01:52	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/11/18 15:18	04/12/18 01:52	1
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 01:52	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/11/18 15:18	04/12/18 01:52	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/11/18 15:18	04/12/18 01:52	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/11/18 15:18	04/12/18 01:52	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/11/18 15:18	04/12/18 01:52	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/11/18 15:18	04/12/18 01:52	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/11/18 15:18	04/12/18 01:52	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/11/18 15:18	04/12/18 01:52	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 01:52	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 01:52	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/11/18 15:18	04/12/18 01:52	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/11/18 15:18	04/12/18 01:52	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 01:52	1
Fluorene	0.91	U	10	0.91	ug/L		04/11/18 15:18	04/12/18 01:52	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/11/18 15:18	04/12/18 01:52	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/11/18 15:18	04/12/18 01:52	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/11/18 15:18	04/12/18 01:52	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/11/18 15:18	04/12/18 01:52	1
Anthracene	0.63	U	10	0.63	ug/L		04/11/18 15:18	04/12/18 01:52	1
Carbazole	0.68	U	10	0.68	ug/L		04/11/18 15:18	04/12/18 01:52	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/11/18 15:18	04/12/18 01:52	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/11/18 15:18	04/12/18 01:52	1
Pyrene	1.6	U	10	1.6	ug/L		04/11/18 15:18	04/12/18 01:52	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/11/18 15:18	04/12/18 01:52	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/11/18 15:18	04/12/18 01:52	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/11/18 15:18	04/12/18 01:52	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/11/18 15:18	04/12/18 01:52	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/11/18 15:18	04/12/18 01:52	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/11/18 15:18	04/12/18 01:52	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/11/18 15:18	04/12/18 01:52	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/11/18 15:18	04/12/18 01:52	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/11/18 15:18	04/12/18 01:52	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/11/18 15:18	04/12/18 01:52	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/11/18 15:18	04/12/18 01:52	1
Caprolactam	0.68	U	10	0.68	ug/L		04/11/18 15:18	04/12/18 01:52	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/11/18 15:18	04/12/18 01:52	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/11/18 15:18	04/12/18 01:52	1
N-Methylaniline	0.48	U	5.0	0.48	ug/L		04/11/18 15:18	04/12/18 01:52	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane	*7.1*	*J N*	*ug/L*		*1.64*	*123-91-1*	*04/11/18 15:18*	*04/12/18 01:52*	*1*

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G Groundwater

TestAmerica Job ID: 460-153430-1
SDG: 153430

Client Sample ID: P-5L(UPA)

Lab Sample ID: 460-153561-6

Date Collected: 04/06/18 15:10
Date Received: 04/06/18 19:30

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5	85		51 - 108	04/11/18 15:18	04/12/18 01:52	1
Phenol-d5	27		14 - 39	04/11/18 15:18	04/12/18 01:52	1
Terphenyl-d14	86		40 - 148	04/11/18 15:18	04/12/18 01:52	1
2,4,6-Tribromophenol	71		26 - 139	04/11/18 15:18	04/12/18 01:52	1
2-Fluorophenol	42		25 - 58	04/11/18 15:18	04/12/18 01:52	1
2-Fluorobiphenyl	77		45 - 107	04/11/18 15:18	04/12/18 01:52	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**14000**		250	233	ug/L		04/09/18 10:44	04/10/18 02:45	5
Potassium	**3990**		250	143	ug/L		04/09/18 10:44	04/10/18 20:09	5
Magnesium	**4780**		250	155	ug/L		04/09/18 10:44	04/10/18 02:45	5
Sodium	**18200**		250	213	ug/L		04/09/18 10:44	04/10/18 02:45	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/09/18 10:44	04/10/18 20:09	5
Antimony	1.4	U	2.5	1.4	ug/L		04/09/18 10:44	04/10/18 02:45	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/09/18 10:44	04/10/18 20:09	5
Barium	**153**		5.0	3.2	ug/L		04/09/18 10:44	04/10/18 20:09	5
Thallium	0.60	U	1.0	0.60	ug/L		04/09/18 10:44	04/10/18 02:45	5
Iron	**2940**		150	97.8	ug/L		04/09/18 10:44	04/10/18 02:45	5
Nickel	**5.5**		5.0	3.1	ug/L		04/09/18 10:44	04/10/18 02:45	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/09/18 10:44	04/10/18 02:45	5
Silver	3.0	U	5.0	3.0	ug/L		04/09/18 10:44	04/10/18 02:45	5
Arsenic	1.5	U	2.5	1.5	ug/L		04/09/18 10:44	04/10/18 02:45	5
Copper	3.3	U	5.0	3.3	ug/L		04/09/18 10:44	04/10/18 02:45	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/09/18 10:44	04/10/18 02:45	5
Lead	0.93	U	1.5	0.93	ug/L		04/09/18 10:44	04/10/18 02:45	5
Zinc	16.3	U	20.0	16.3	ug/L		04/09/18 10:44	04/10/18 02:45	5
Selenium	1.4	U	2.5	1.4	ug/L		04/09/18 10:44	04/10/18 20:09	5
Manganese	**1250**		10.0	6.1	ug/L		04/09/18 10:44	04/10/18 02:45	5
Chromium	3.1	U	5.0	3.1	ug/L		04/09/18 10:44	04/10/18 02:45	5
Cobalt	**30.8**		5.0	3.1	ug/L		04/09/18 10:44	04/10/18 02:45	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/11/18 11:41	04/11/18 13:39	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**2780**		150	92.1	ug/L		04/10/18 12:05	04/11/18 14:04	1
Manganese, Dissolved	**1260**		15.0	3.1	ug/L		04/10/18 12:05	04/11/18 14:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.77**	J+	0.10	0.045	mg/L		04/12/18 10:27	04/12/18 11:57	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G Groundwater

TestAmerica Job ID: 460-153430-1
SDG: 153430

Client Sample ID: MW-34

Date Collected: 04/06/18 15:15
Date Received: 04/06/18 19:30

Lab Sample ID: 460-153561-7

Matrix: Water

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**17**		0.40	0.20	ug/L			04/10/18 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*72 - 133*		*04/10/18 16:06*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*71 - 144*		*04/10/18 16:06*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/12/18 11:42	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/12/18 11:42	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/12/18 11:42	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/12/18 11:42	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/12/18 11:42	1
Acetone	1.1	U	5.0	1.1	ug/L			04/12/18 11:42	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/12/18 11:42	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/12/18 11:42	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/12/18 11:42	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/12/18 11:42	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/12/18 11:42	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/12/18 11:42	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/12/18 11:42	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/12/18 11:42	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/12/18 11:42	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/12/18 11:42	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/12/18 11:42	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/12/18 11:42	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/12/18 11:42	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/12/18 11:42	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/12/18 11:42	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/12/18 11:42	1
Benzene	0.090	U	1.0	0.090	ug/L			04/12/18 11:42	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/12/18 11:42	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/12/18 11:42	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/12/18 11:42	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/12/18 11:42	1
Tetrachloroethene	**0.42**	**J**	1.0	0.12	ug/L			04/12/18 11:42	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/12/18 11:42	1
Toluene	0.25	U	1.0	0.25	ug/L			04/12/18 11:42	1
Chlorobenzene	**6.7**		1.0	0.24	ug/L			04/12/18 11:42	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/12/18 11:42	1
Styrene	0.17	U	1.0	0.17	ug/L			04/12/18 11:42	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/12/18 11:42	1
Ethyl ether	**8.2**		1.0	0.11	ug/L			04/12/18 11:42	1
MTBE	**0.66**	**J**	1.0	0.13	ug/L			04/12/18 11:42	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/12/18 11:42	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/12/18 11:42	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/12/18 11:42	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/12/18 11:42	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/12/18 11:42	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/12/18 11:42	1

Client Sample ID: MW-34

Lab Sample ID: 460-153561-7

Date Collected: 04/06/18 15:15
Date Received: 04/06/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/12/18 11:42	1
Indane	0.12	U	1.0	0.12	ug/L			04/12/18 11:42	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/12/18 11:42	1
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/12/18 11:42	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/12/18 11:42*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*74 - 132*		*04/12/18 11:42*	*1*
Bromofluorobenzene	*90*		*77 - 124*		*04/12/18 11:42*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*04/12/18 11:42*	*1*
Dibromofluoromethane (Surr)	*97*		*72 - 131*		*04/12/18 11:42*	*1*

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.016	U	0.050	0.016	ug/L		04/11/18 15:18	04/12/18 17:31	1
Benzo[a]pyrene	0.022	U	0.050	0.022	ug/L		04/11/18 15:18	04/12/18 17:31	1
Benzo[b]fluoranthene	0.024	U	0.050	0.024	ug/L		04/11/18 15:18	04/12/18 17:31	1
Hexachlorobenzene	0.013	U	0.020	0.013	ug/L		04/11/18 15:18	04/12/18 17:31	1
Pentachlorophenol	0.15	U	0.20	0.15	ug/L		04/11/18 15:18	04/12/18 17:31	1
Bis(2-chloroethyl)ether	**2.0**	*- J+	0.030	0.026	ug/L		04/11/18 15:18	04/12/18 17:31	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/11/18 15:18	04/12/18 02:13	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/11/18 15:18	04/12/18 02:13	1
2-Methylphenol	0.26	U	10	0.26	ug/L		04/11/18 15:18	04/12/18 02:13	1
4-Methylphenol	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 02:13	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/11/18 15:18	04/12/18 02:13	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 02:13	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/11/18 15:18	04/12/18 02:13	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/11/18 15:18	04/12/18 02:13	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/11/18 15:18	04/12/18 02:13	1
2,4,5-Trichlorophenol	0.28	U	10	0.28	ug/L		04/11/18 15:18	04/12/18 02:13	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/11/18 15:18	04/12/18 02:13	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/11/18 15:18	04/12/18 02:13	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/11/18 15:18	04/12/18 02:13	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/11/18 15:18	04/12/18 02:13	1
1,4-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 02:13	1
1,2-Dichlorobenzene	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 02:13	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/11/18 15:18	04/12/18 02:13	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/11/18 15:18	04/12/18 02:13	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/11/18 15:18	04/12/18 02:13	1
Isophorone	0.80	U	10	0.80	ug/L		04/11/18 15:18	04/12/18 02:13	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/11/18 15:18	04/12/18 02:13	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/11/18 15:18	04/12/18 02:13	1
Naphthalene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 02:13	1
4-Chloroaniline	1.9	U	10	1.9	ug/L		04/11/18 15:18	04/12/18 02:13	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/11/18 15:18	04/12/18 02:13	1

Client Sample ID: MW-34

Date Collected: 04/06/18 15:15
Date Received: 04/06/18 19:30

Lab Sample ID: 460-153561-7

Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 02:13	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/11/18 15:18	04/12/18 02:13	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/11/18 15:18	04/12/18 02:13	1
2-Nitroaniline	0.47	U	10	0.47	ug/L		04/11/18 15:18	04/12/18 02:13	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/11/18 15:18	04/12/18 02:13	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/11/18 15:18	04/12/18 02:13	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/11/18 15:18	04/12/18 02:13	1
3-Nitroaniline	0.96	U	10	0.96	ug/L		04/11/18 15:18	04/12/18 02:13	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 02:13	1
Dibenzofuran	1.1	U	10	1.1	ug/L		04/11/18 15:18	04/12/18 02:13	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/11/18 15:18	04/12/18 02:13	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/11/18 15:18	04/12/18 02:13	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/11/18 15:18	04/12/18 02:13	1
Fluorene	0.91	U	10	0.91	ug/L		04/11/18 15:18	04/12/18 02:13	1
4-Nitroaniline	0.54	U	10	0.54	ug/L		04/11/18 15:18	04/12/18 02:13	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/11/18 15:18	04/12/18 02:13	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/11/18 15:18	04/12/18 02:13	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/11/18 15:18	04/12/18 02:13	1
Anthracene	0.63	U	10	0.63	ug/L		04/11/18 15:18	04/12/18 02:13	1
Carbazole	0.68	U	10	0.68	ug/L		04/11/18 15:18	04/12/18 02:13	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/11/18 15:18	04/12/18 02:13	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/11/18 15:18	04/12/18 02:13	1
Pyrene	1.6	U	10	1.6	ug/L		04/11/18 15:18	04/12/18 02:13	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/11/18 15:18	04/12/18 02:13	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/11/18 15:18	04/12/18 02:13	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/11/18 15:18	04/12/18 02:13	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/11/18 15:18	04/12/18 02:13	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/11/18 15:18	04/12/18 02:13	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/11/18 15:18	04/12/18 02:13	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/11/18 15:18	04/12/18 02:13	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/11/18 15:18	04/12/18 02:13	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/11/18 15:18	04/12/18 02:13	1
Diphenyl ether	1.2	U	10	1.2	ug/L		04/11/18 15:18	04/12/18 02:13	1
n,n'-Dimethylaniline	0.91	U	1.0	0.91	ug/L		04/11/18 15:18	04/12/18 02:13	1
Caprolactam	0.68	U	10	0.68	ug/L		04/11/18 15:18	04/12/18 02:13	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/11/18 15:18	04/12/18 02:13	1
Bisphenol-A	9.9	U	10	9.9	ug/L		04/11/18 15:18	04/12/18 02:13	1
N-Methylaniline	0.48	U	5.0	0.48	ug/L		04/11/18 15:18	04/12/18 02:13	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tricosane	*8.1*	*J N*	*ug/L*		*13.31*	*638-67-5*	*04/11/18 15:18*	*04/12/18 02:13*	*1*
Octacosane	*10*	*J N*	*ug/L*		*13.81*	*630-02-4*	*04/11/18 15:18*	*04/12/18 02:13*	*1*
Heneicosane	*9.3*	*J N*	*ug/L*		*14.32*	*629-94-7*	*04/11/18 15:18*	*04/12/18 02:13*	*1*
Eicosane	*8.7*	*J N*	*ug/L*		*14.90*	*112-95-8*	*04/11/18 15:18*	*04/12/18 02:13*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*86*		*51 - 108*	*04/11/18 15:18*	*04/12/18 02:13*	*1*
Phenol-d5	*26*		*14 - 39*	*04/11/18 15:18*	*04/12/18 02:13*	*1*
Terphenyl-d14	*87*		*40 - 148*	*04/11/18 15:18*	*04/12/18 02:13*	*1*
2,4,6-Tribromophenol	*79*		*26 - 139*	*04/11/18 15:18*	*04/12/18 02:13*	*1*

Client Sample ID: MW-34

Lab Sample ID: 460-153561-7
Date Collected: 04/06/18 15:15
Matrix: Water
Date Received: 04/06/18 19:30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	42		25 - 58	04/11/18 15:18	04/12/18 02:13	1
2-Fluorobiphenyl	78		45 - 107	04/11/18 15:18	04/12/18 02:13	1

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**23300**		250	233	ug/L		04/09/18 10:44	04/10/18 02:48	5
Potassium	**5540**		250	143	ug/L		04/09/18 10:44	04/10/18 20:15	5
Magnesium	**11000**		250	155	ug/L		04/09/18 10:44	04/10/18 02:48	5
Sodium	**23200**		250	213	ug/L		04/09/18 10:44	04/10/18 02:48	5
Cadmium	1.7	U	2.5	1.7	ug/L		04/09/18 10:44	04/10/18 20:15	5
Antimony	1.4	U	2.5	1.4	ug/L		04/09/18 10:44	04/10/18 02:48	5
Beryllium	0.61	U	1.0	0.61	ug/L		04/09/18 10:44	04/10/18 20:15	5
Barium	**339**		5.0	3.2	ug/L		04/09/18 10:44	04/10/18 20:15	5
Thallium	0.60	U	1.0	0.60	ug/L		04/09/18 10:44	04/10/18 02:48	5
Iron	**19200**		150	97.8	ug/L		04/09/18 10:44	04/10/18 02:48	5
Nickel	**3.9**	**J**	5.0	3.1	ug/L		04/09/18 10:44	04/10/18 02:48	5
Vanadium	3.0	U	5.0	3.0	ug/L		04/09/18 10:44	04/10/18 02:48	5
Silver	3.0	U	5.0	3.0	ug/L		04/09/18 10:44	04/10/18 02:48	5
Arsenic	**3.0**		2.5	1.5	ug/L		04/09/18 10:44	04/10/18 02:48	5
Copper	3.3	U	5.0	3.3	ug/L		04/09/18 10:44	04/10/18 02:48	5
Aluminum	28.5	U	50.0	28.5	ug/L		04/09/18 10:44	04/10/18 02:48	5
Lead	0.93	U	1.5	0.93	ug/L		04/09/18 10:44	04/10/18 02:48	5
Zinc	16.3	U	20.0	16.3	ug/L		04/09/18 10:44	04/10/18 02:48	5
Selenium	1.4	U	2.5	1.4	ug/L		04/09/18 10:44	04/10/18 20:15	5
Manganese	**2250**		10.0	6.1	ug/L		04/09/18 10:44	04/10/18 02:48	5
Chromium	3.1	U	5.0	3.1	ug/L		04/09/18 10:44	04/10/18 02:48	5
Cobalt	**20.2**		5.0	3.1	ug/L		04/09/18 10:44	04/10/18 02:48	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/11/18 11:41	04/11/18 13:41	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron, Dissolved	**19900**		150	92.1	ug/L		04/10/18 12:05	04/11/18 14:08	1
Manganese, Dissolved	**2310**		15.0	3.1	ug/L		04/10/18 12:05	04/11/18 14:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.91**	J+	0.10	0.045	mg/L		04/12/18 10:27	04/12/18 11:58	1

Client Sample ID: TBGW_040618

Lab Sample ID: 460-153561-8
Date Collected: 04/06/18 00:00
Matrix: Water
Date Received: 04/06/18 19:30

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.20	U	0.40	0.20	ug/L			04/10/18 12:38	1

Client Sample ID: TBGW_040618

Lab Sample ID: 460-153561-8

Date Collected: 04/06/18 00:00
Date Received: 04/06/18 19:30

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*72 - 133*		*04/10/18 12:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*82*		*71 - 144*		*04/10/18 12:38*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/12/18 09:21	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/12/18 09:21	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/12/18 09:21	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/12/18 09:21	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/12/18 09:21	1
Acetone	1.1	U	5.0	1.1	ug/L			04/12/18 09:21	1
Carbon disulfide	0.22	U	1.0	0.22	ug/L			04/12/18 09:21	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/12/18 09:21	1
1,1-Dichloroethane	0.24	U	1.0	0.24	ug/L			04/12/18 09:21	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/12/18 09:21	1
cis-1,2-Dichloroethene	0.26	U	1.0	0.26	ug/L			04/12/18 09:21	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/12/18 09:21	1
1,2-Dichloroethane	0.25	U	1.0	0.25	ug/L			04/12/18 09:21	1
2-Butanone	2.2	U	5.0	2.2	ug/L			04/12/18 09:21	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/12/18 09:21	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/12/18 09:21	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/12/18 09:21	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/12/18 09:21	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/12/18 09:21	1
Trichloroethene	0.22	U	1.0	0.22	ug/L			04/12/18 09:21	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/12/18 09:21	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/12/18 09:21	1
Benzene	0.090	U	1.0	0.090	ug/L			04/12/18 09:21	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/12/18 09:21	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/12/18 09:21	1
4-Methyl-2-pentanone	0.63	U	5.0	0.63	ug/L			04/12/18 09:21	1
2-Hexanone	0.72	U	5.0	0.72	ug/L			04/12/18 09:21	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/12/18 09:21	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/12/18 09:21	1
Toluene	0.25	U	1.0	0.25	ug/L			04/12/18 09:21	1
Chlorobenzene	0.24	U	1.0	0.24	ug/L			04/12/18 09:21	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			04/12/18 09:21	1
Styrene	0.17	U	1.0	0.17	ug/L			04/12/18 09:21	1
Xylenes, Total	0.28	U	2.0	0.28	ug/L			04/12/18 09:21	1
Ethyl ether	0.11	U	1.0	0.11	ug/L			04/12/18 09:21	1
MTBE	0.13	U	1.0	0.13	ug/L			04/12/18 09:21	1
Tetrahydrofuran	0.36	U	2.0	0.36	ug/L			04/12/18 09:21	1
Cyclohexane	0.26	U	1.0	0.26	ug/L			04/12/18 09:21	1
1,2,4-Trimethylbenzene	0.23	U	1.0	0.23	ug/L			04/12/18 09:21	1
1,3,5-Trimethylbenzene	0.25	U	1.0	0.25	ug/L			04/12/18 09:21	1
Isopropylbenzene	0.32	U	1.0	0.32	ug/L			04/12/18 09:21	1
N-Propylbenzene	0.29	U	1.0	0.29	ug/L			04/12/18 09:21	1
Methylcyclohexane	0.22	U	1.0	0.22	ug/L			04/12/18 09:21	1
Indane	0.12	U	1.0	0.12	ug/L			04/12/18 09:21	1
Dichlorofluoromethane	0.21	U	1.0	0.21	ug/L			04/12/18 09:21	1

Client Sample ID: TBGW_040618

Lab Sample ID: 460-153561-8

Date Collected: 04/06/18 00:00
Date Received: 04/06/18 19:30

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trimethylbenzene	0.11	U	1.0	0.11	ug/L			04/12/18 09:21	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/12/18 09:21*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*74 - 132*		*04/12/18 09:21*	*1*
Bromofluorobenzene	*91*		*77 - 124*		*04/12/18 09:21*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*04/12/18 09:21*	*1*
Dibromofluoromethane (Surr)	*97*		*72 - 131*		*04/12/18 09:21*	*1*

APPENDIX B

Summary of Detected Compounds

APPENDIX B-1

April 2018 Groundwater

Appendix B-1
Summary of Detected Compounds - April 2018 Groundwater
Delaware Sand & Gravel Superfund Site
New Castle County, Delaware

							DDA Extraction Wells																					DDA Monitoring Wells											
						Sample ID	BG-1			B-4DR			C-19D			C-20D			C-2D			C-4D			C-30			B-2D			B-3D			C-1D			C-3D		
						Sample Date	4/13/2018			4/13/2018			4/13/2018			4/13/2018			4/13/2018			4/13/2018			4/13/2018			4/17/2018			4/17/2018			4/18/2018			4/17/2018		
						N=Normal, FD=Field Duplicate	N			N			N			N			N			N			N			N			N			N			N		
Parameter	CAS	Unit	RSL HQ=0.1	RSL HQ=1.0	MCL	RFG	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL
Volatile Organic Compounds																																							
1,1-Dichloroethane	75-34-3	ug/L	2.8	2.8	NE	NE		U	1		U	10	0.91	J	1		U	1		U	1	0.67	J	1		U	5	0.3	J	1	0.68	J	1	0.54	J	1		U	1
1,2,3-Trimethylbenzene	526-73-8	ug/L	5.5	55	NE	NE	7.9		1	100		10	1.9		1	1.4		1	0.72	J	1	47		1	77		5		U	1	6.7		1	4.4		1		U	1
1,2,4-Trimethylbenzene	95-63-6	ug/L	5.6	56	NE	5.7	13		1	98		10	0.94	J	1	0.31	J	1	0.71	J	1	5.2		1	55		5		U	1	1.6		1	20		1		U	1
1,2-Dichloroethane	107-06-2	ug/L	0.17	0.17	5	NE		U	1		U	10		U	1		U	1		U	1		U	1		U	5		U	1	69		1		U	1		U	1
1,3,5-Trimethylbenzene	108-67-8	ug/L	6	60	NE	6.1	6.1		1	370		10	0.95	J	1		U	1	2.5		1	15		1	230		5		U	1	0.37	J	1	3.3		1		U	1
1,4-Dioxane	123-91-1	ug/L	0.46	0.46	NE	4.6							250		50	180		50				72		50				300		50	480		50	130		50			
1,4-Dioxane	123-91-1	ug/L	0.46	0.46	NE	4.6	32		0.4	41	J	0.4							25		0.4				40		0.8										7.3		0.4
4-Methyl-2-pentanone	108-10-1	ug/L	630	6300	NE	NE		U	5		U	50		U	5		U	5		U	5		U	5		U	25		U	5		U	5		U	5		U	5
Acetone	67-64-1	ug/L	1400	14000	NE	NE		U	5		U	50		U	5		U	5		U	5		U	5	9.3	U	25	4.1	U	5	1.4	U	5	2.6	U	5		U	5
Benzene	71-43-2	ug/L	0.46	0.46	5	4.6	18		1	4.3	J	10	24		1	1.8		1	3.7		1	17		1	39		5	9.9		1	11		1	160		1	0.21	J	1
Chlorobenzene	108-90-7	ug/L	7.8	78	100	NE	1.3		1	2600		10	33		1	10		1	10		1	33		1	1900		5	4.8		1	3.6		1	45		1		U	1
Chloroethane	75-00-3	ug/L	2100	21000	NE	NE		U	1		U	10		U	1		U	1		U	1		U	1		U	5		U	1	2.5	J+	1		U	1		U	1
Chloroform	67-66-3	ug/L	0.22	0.22	80.0	NE		U	1		U	10		U	1		U	1		U	1		U	1		U	5		U	1		U	1		U	1		U	1
Chloromethane	74-87-3	ug/L	19	190	NE	NE		U	1		U	10		U	1		U	1		U	1		U	1		U	5		U	1		U	1		U	1		U	1
cis-1,2-Dichloroethene	156-59-2	ug/L	3.6	36	70.0	NE	0.65	J	1		U	10	0.42	J	1	0.36	J	1		U	1	0.33	J	1	4.8	J	5	0.41	J	1	1.2		1		U	1		U	1
Cyclohexane	110-82-7	ug/L	1300	13000	NE	NE	2.5		1	3.5	J	10		U	1	1.1		1	0.76	J	1	30		1	2.9	J	5	0.65	J	1	2.7		1	7		1		U	1
Dichlorofluoromethane	75-43-4	ug/L	NE	NE	NE	NE	0.98	J	1		U	10	0.48	J	1	1		1	0.63	J	1	2.8		1	1.3	J	5	2.1	J+	1	7.5	J+	1	0.56	J	1		U	1
Diethyl Ether	60-29-7	ug/L	390	3900	NE	NE	0.4	J	1	1.1	J	10	2.1		1	1.8		1	0.28	J	1	0.83	J	1	0.78	J	5	2		1	2.3		1	1.1		1		U	1
Ethylbenzene	100-41-4	ug/L	1.5	1.5	700	15	0.84	J	1	22		10		U	1		U	1		U	1	0.72	J	1	53		5		U	1		U	1	1.2		1		U	1
Indane	496-11-7	ug/L	NE	NE	NE	NE	3.4		1	97		10	6.6		1	4		1	20		1	61		1	68		5	1.9		1	18		1	130		1		U	1
Isopropylbenzene	98-82-8	ug/L	45	450	NE	NE	3.9		1	10		10	1.6		1	2.3		1	2		1	43		1	8.6		5	1.4		1	10		1	23		1		U	1
Methyl Cyclohexane	108-87-2	ug/L	NE	NE	NE	NE	3.9		1	3.8	J	10	0.32	J	1	1.5		1	1		1	52		1	4	J	5	0.83	J	1	1.6		1	12		1		U	1
Methyl tert-Butyl Ether	1634-04-4	ug/L	14	14	NE	NE	0.51	J	1		U	10		U	1	0.19	J	1		U	1		U	1		U	5	0.35	J	1	0.18	J	1		U	1	0.47	J	1
Methylene Chloride	75-09-2	ug/L	11	11	5.00	NE		U	1		U	10	0.28	J	1		U	1		U	1		U	1		U	5		U	1	0.34	J	1		U	1		U	1
n-Propylbenzene	103-65-1	ug/L	66	660	NE	NE	4.4		1	8.1	J	10	1.1		1	2.5		1	1.7		1	44		1	10		5		U	1	4.5		1	40		1		U	1
Styrene	100-42-5	ug/L	120	1200	100	NE		U	1		U	10		U	1		U	1		U	1		U	1	0.95	J	5		U	1		U	1		U	1		U	1
Tetrachloroethene	127-18-4	ug/L	4.1	11	5	NE	0.16	J	1		U	10		U	1		U	1		U	1		U	1		U	5		U	1		U	1		U	1	0.16	J	1
Tetrahydrofuran	109-99-9	ug/L	340	3400	NE	NE	1.3	J	2	10	J	20	6.8		2	1.9	J	2	3.1		2	12		2	4.4	J	10	4.1		2	4.8		2	29		2		U	2
Toluene	108-88-3	ug/L	110	1100	1000	NE	11		1	3.7	J	10		U	1		U	1		U	1	0.83	J	1	380		5		U	1		U	1	0.39	J	1		U	1
trans-1,2-Dichloroethene	156-60-5	ug/L	36	360	100	NE		U	1		U	10		U	1		U	1		U	1		U	1		U	5		U	1		U	1	0.21	J	1		U	1
Trichloroethene	79-01-6	ug/L	0.28	0.49	5.00	NE	0.78	J	1		U	10		U	1	0.45	J	1		U	1		U	1		U	5	0.39	J	1	1.6		1		U	1	0.87	J	1
Vinyl Chloride	75-01-4	ug/L	0.019	0.019	2.00	NE	0.12	J	1	1	J	10		U	1		U	1		U	1	0.12	J	1	0.81	J	5		U	1		U	1		U	1		U	1
Xylenes, Total	1330-20-7	ug/L	19	190	10000	21	16		2	150		20	0.66	J	2		U	2	0.48	J	2	14		2	260		10	0.52	J	2	3		2	30		2		U	2
Semivolatile Organic Compounds																																							
1,2,4-Trichlorobenzene	120-82-1	ug/L	0.4	1.2	70	NE		U	2		U	10		U	2		U	2.1		U	2		U	2.1		U	10		U	2		U	2		U	2		U	2
1,2-Dichlorobenzene	95-50-1	ug/L	30	300	600	NE		U	10	24	J	50		U	10		U	10		U	10	6.4	J	10	13	J	52		U	10		U	10	1.3	J	10		U	10
1,3-Dichlorobenzene	541-73-1	ug/L	NE	NE	NE	NE		U	10	16	J	50		U	10		U	10		U	10		U	10		U	52		UJ	10		UJ	10		U	10		UJ	10
1,4-Dichlorobenzene	106-46-7	ug/L	0.48	0.48	75	NE		U	10	71		50	1.4	J	10		U	10		U	10	4.9	J	10	34	J	52		UJ	10		UJ	10	1.8	J	10		UJ	10
2,4-Dichlorophenol	120-83-2	ug/L	4.6	46	NE	NE		U	10		U	50		U	10		U	10		U	10		U	10		U	52		U	10		U	10		U	10		U	10
2,4-Dimethylphenol	105-67-9	ug/L	36	360	NE	NE		U	10		U	50		U	10		U	10		U	10		U	10		U	52		U	10		U	10	0.93	J	10		U	10
2-Chlorophenol	95-57-8	ug/L	9.1	91	NE	NE		U	10		U	50		U	10		U	10		U	10		U	10	2	J	52		U	10		U	10		U	10		U	10
2-Methylnaphthalene	91-57-6	ug/L	3.6	36	NE	NE		U	10		U	50		U	10		U	10		U	10		U	10		U	52		U	10		U	10		U	10		U	10
2-Methylphenol	95-48-7	ug/L	93	930	NE	NE		U	10		U	50		U	10		U	10		U	10		U	10		U	52		U	10		U	10		U	10		U	10
4-Methylphenol	106-44-5	ug/L	190	1900	NE	NE		U	10		U	50		U	10		U	10		U	10		U	10		U	52		U	10		U	10		U	10		U	10
Benzo[a]anthracene	56-55-3	ug/L	0.03	0.03	NE	NE		U	0.051		U	0.05		U	0.051		U	0.052		U	0.05		U	0.052		U	0.051		U	0.05		U	0.05		U	0.05		U	0.05
Benzo[b]fluoranthene	205-99-2	ug/L	0.25	0.25	NE	NE		U	0.051		U	0.05		U	0.051		U	0.052		U	0.05		U	0.052		U	0.051		U	0.05		U	0.05		U	0.05		U	0.05
Bis(2-chloroethyl) Ether	111-44-4	ug/L	0.014	0.014	NE	0.14				120		5	30		1	14		1				36		1	130		5.2	26		1	23		1	9.2		1			
Bis(2-chloroethyl) Ether	111-44-4	ug/L	0.014	0.014	NE	0.14	3.4	J+	0.031										2.1		0.03																0.37		0.03
Bis(2-ethylhexyl) Phthalate	117-81-7	ug/L	5.6	5.6	6.00	NE		U	2		U	10		U	2		U	2.1		U	2		U	2.1		U	10	1.7	J	2	7.8		2		U	2		U	2
Bisphenol A	80-05-7	ug/L	77	770	NE	NE		U	10	280		50	52		10	20		10	9.9	J	10	38	J+	10	270		52	70		10	20		10	100		10		U	10
Butylbenzyl Phthalate	85-68-7	ug/L	16	16	NE	NE		U	10		U	50		U	10		U	10		U	10		U	10		U	52		U	10		U	10		U	10		U	10
Diethyl Phthalate	84-66-2	ug/L	1500	15000	NE	NE		U	10		U	50	1.8	J	10		U	10		U	10		U	10		U	52	1.2	J	10		U	10	3.8	J	10		U	10
Di-n-Butyl Phthalate	84-74-2	ug/L	90	900	NE	NE		U	10		U	50		U	10		U	10		U	10		U	10		U	52		U	10		U	10		U	10		U	10
Diphenyl Ether	101-84-8	ug/L	NE	NE	NE	NE	2	J+	10	140		50	9.4	J	10	2.9	J	10	8.4	J	10	19		10	77		52		U	10	2.3	J	10	19		10		U	10
Hexachlorobenzene	118-74-1	ug/L	0.0098	0.0098	1	NE		U	0.02		U	0.02		U	0.02		U	0.021		U	0.02		U	0.021		U	0.02		U	0.02		U	0.02		U	0.02		U	0.02
N,N-Dimethylaniline	121-69-7	ug/L	2.5	2.5	NE	25		U	1	10		5		U	1		U	1		U	1	3.6		1	8.2		5.2		U	1		U	1		U	1		U	1
Naphthalene	91-20-3	ug/L	0.17	0.17	NE	0.63		U	10	26	J	50		U	10		U	10		U	10	5.6	J	10	16	J	52		U	10		U	10	5.9	J	10		U	10
N-Methylaniline	100-61-8	ug/L	NE	38	NE	NE		U	5.1	8	J	25		U	5.1		U	5.2		U	5	2.6	J	5.2	6	J	26		UJ	5		UJ	5	1.3	J	5		UJ	5
Phenol	108-95-2	ug/L	580	5800	NE	NE		U	10		U	50		U	10		U	10		U	10		U	10		U	52		U	10		U	10	1	J	10		U	10
Total Metals																																							
Aluminum	7429-90-5	ug/L	2000	20000	NE	NE		U	50		U	50		U	50		U	50		U	50		U	50		U	50	205		50	262		50	367		50	445		50
Antimony	7440-36-0	ug/L	0.78	7.8	6.00	NE		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5
Arsenic	7440-38-2	ug/L	0.052	0.052	10.0	0.52	3.5		2.5	5.9		2.5		U	2.5	3.6		2.5	5.4		2.5	3.4		2.5	10.9		2.5	3.6		2.5	3.5		2.5	14.3		2.5	8.1		2.5
Barium	7440-39-3	ug/L	380	3800	2000	NE	472		5	112		5	129		5	293		5	175		5	880		5	145		5	260		5	345		5	80.9		5	385		5
Beryllium	7440-41-7	ug/L	2.5	25	4.00	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Calcium	7440-70-2	ug/L	NE	NE	NE	NE	15900		250	7410		250	18500		250	19400		250	25700		250	12300		250	8370		250	22000		250	23700		250	15300		250	18100		250
Chromium	7440-47-3	ug/L	NE	NE	100	NE		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5	3.3	J	5	6.5		5
Cobalt	7440-48-4	ug/L	0.6	6	NE	6	39.1		5	21.2		5	67.1		5	54.6		5	13		5	17.8		5	54.0		5	23.0		5	18.9		5	5		5	9.7		5
Copper	7440-50-8	ug/L	80	800	1300	NE		U	5		U	5	9.1		5		U	5	9.6		5	8.5		5	343		5	5.6		5	10		5	4.6	J	5	4	J	5
Iron	7439-89-6	ug/L	1400	14000	NE	13939	48000		150	49100		150	26600		150	27600		150	30400		150	26200		150	57400		150	22700		150	8030		150	33200		150	46000		150
Lead	7439-92-1	ug/L	15	15	15.0	NE		U	1.5		U	1.5		U	1.5		U	1.5		U	1.5		U	1.5	12.9		1.5		U	1.5	2.7		1.5	1.1	J	1.5		U	1.5
Magnesium	7439-95-4	ug/L	NE	NE	NE	NE	12300		250	11800		250	20900		250	19200		250	15600		250	25000		250	12700		250	25200		250	42000		250	15200		250	12900		250
Manganese	7439-96-5	ug/L	43	430	NE	260	5340		10	2460		10	5705		10	8580		10	2450		10	1480		10	2450		10	4420		10	9640		10	2505		10	5030		10
Nickel	7440-02-0	ug/L	39	390	NE	NE	20.6		5	69.7		5	15.2		5	8.8		5	3.1	J	5	6.7		5	57.6		5	11.6		5	13.1		5	5.6		5	5.5		5
Potassium	7440-09-7	ug/L	NE	NE	NE	NE	3190		250	3040		250	2390		250	2630		250	1490		250	2880		250	2930		250	2680		250	3060		250	2230		250	3290		250
Selenium	7782-49-2	ug/L	10	100	50.0	NE		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5
Sodium	7440-23-5	ug/L	NE	NE	NE	NE	43100		250	71800		250	16300		250	40500		250	8080		250	49900		250	71900		250	31900		250	37000		250	13900		250	40600		250
Thallium	7440-28-0	ug/L	0.02	0.2	2.00	NE		U	1		U	1	0.6	J	1		U	1		U	1		U	1	2		1		U	1		U	1		U	1		U	1
Vanadium	7440-62-2	ug/L	8.6	86	NE	NE		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5
Zinc	7440-66-6	ug/L	600	6000	NE	NE	21.9		20		U	20		U	20		U	20		U	20		U	20	33.1		20		U	20		U	20		U	20		U	20
Mercury	7439-97-6	ug/L	0.063	0.63	2.00	NE		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2
Dissolved Metals																																							
Iron	7439-89-6	ug/L	1400	14000	NE	13939	52700		150	54300		150	28600		150	30000		150	33400		150	28600		150	65500		150	28600		150	8800		150	26200		150	49900		150
Manganese	7439-96-5	ug/L	43	430	NE	260	5890		15	2800		15	6820		15	5690		15	2780		15	1590		15	2830		15	4940		15	11200		15	2730		15	5830		15
Wet Chemistry																																							
Ammonia	7664-41-7	mg/L	NE	NE	NE	NE	0.84		0.1	3.3		0.1	2.4		0.1	0.69		0.1	1.2		0.1	3		0.1	7.6		0.5	0.42		0.1	0.79		0.1	1.9		0.1	0.26		0.1

GOLDER

Appendix B-1
Summary of Detected Compounds - April 2018 Groundwater
Delaware Sand & Gravel Superfund Site
New Castle County, Delaware

						Sample ID	C-22S			GA-101			MHW-1S			MHW-1S			MHW-1M			P-4D			PZ-4-INTR			PZ-6N			PZ-6S			PZ-11-EXT		
						Sample Date	4/17/2018			4/17/2018			4/18/2018			4/18/2018			4/16/2018			4/17/2018			4/17/2018			4/19/2018			4/18/2018			4/17/2018		
						N=Normal, FD=Field Duplicate	N			N			FD			N			N			N			N			N			N			N		
Parameter	CAS	Unit	RSL HQ=0.1	RSL HQ=1.0	MCL	PRG	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL
Volatile Organic Compounds																																				
1,1-Dichloroethane	75-34-3	ug/L	2.8	2.8	NE	NE		U	1		U	5	0.72	J	1	0.71	J	1	0.35	J	1	0.42	J	1		U	1		U	1	14	J	50		U	10
1,2,3-Trimethylbenzene	526-73-8	ug/L	5.5	55	NE	NE		U	1	300		5		U	1		U	1		U	1	2.2		1	0.76	J	1		U	1	170		50	480		10
1,2,4-Trimethylbenzene	95-63-6	ug/L	5.6	56	NE	5.7		U	1	910		5	0.49	J	1	0.36	J	1	0.38	J	1	3		1	1.3		1		U	1	430		50	1600		10
1,2-Dichloroethane	107-06-2	ug/L	0.17	0.17	5	NE		U	1		U	5		U	1		U	1		U	1		U	1		U	1		U	1		U	50		U	10
1,3,5-Trimethylbenzene	108-67-8	ug/L	6	60	NE	6.1		U	1	240		5		U	1		U	1		U	1	0.97	J	1		U	1		U	1	150		50	420		10
1,4-Dioxane	123-91-1	ug/L	0.46	0.46	NE	4.6							1300		60	1200		60	1100		50															
1,4-Dioxane	123-91-1	ug/L	0.46	0.46	NE	4.6	39		0.4	3.5	J-	0.4							1200		20	16		0.4	2.7		0.4	6.1		0.4	2.5	J	0.4	41	J-	0.4
4-Methyl-2-pentanone	108-10-1	ug/L	630	6300	NE	NE		U	5		U	25		U	5		U	5		U	5		U	5		U	5		U	5		U	250		U	50
Acetone	67-64-1	ug/L	1400	14000	NE	NE	4.4	U	5		U	25	3.1	U	5	3	U	5		U	5		U	5	1.3	U	5		U	5		U	250		U	50
Benzene	71-43-2	ug/L	0.46	0.46	5	4.6		U	1	4.6	J	5	16		1	16		1	76		1	62		1	8.2		1	0.16	J	1	2900		50	240		10
Chlorobenzene	108-90-7	ug/L	7.8	78	100	NE		U	1	7.2		5	13		1	12		1	5		1	7.5		1	1.6		1		U	1	220		50	63		10
Chloroethane	75-00-3	ug/L	2100	21000	NE	NE		U	1		U	5	0.5	J	1	0.64	J	1		U	1		U	1		U	1		U	1		U	50		U	10
Chloroform	67-66-3	ug/L	0.22	0.22	80.0	NE	0.86	J	1		U	5		U	1		U	1		U	1		U	1		U	1		U	1		U	50		U	10
Chloromethane	74-87-3	ug/L	19	190	NE	NE		U	1		U	5	0.41	J	1	0.34	J	1		U	1		U	1		U	1		U	1		U	50		U	10
cis-1,2-Dichloroethene	156-59-2	ug/L	3.6	36	70.0	NE		U	1	5.2		5	0.33	J	1	0.29	J	1	0.46	J	1	0.87	J	1	0.36	J	1		U	1	1200		50		U	10
Cyclohexane	110-82-7	ug/L	1300	13000	NE	NE		U	1	7.8		5	0.31	J	1	0.31	J	1		U	1	0.34	J	1	0.28	J	1		U	1	30	J	50	20		10
Dichlorofluoromethane	75-43-4	ug/L	NE	NE	NE	NE	0.54	J+	1		U	5	0.76	J	1	0.73	J	1	5.1		1		U	1		U	1		U	1		U	50		U	10
Diethyl Ether	60-29-7	ug/L	390	3900	NE	NE		U	1		U	5	11		1	11		1	23		1		U	1		U	1	0.25	J	1		U	50	1.3	J	10
Ethylbenzene	100-41-4	ug/L	1.5	1.5	700	15		U	1	560		5	0.58	J	1	0.55	J	1		U	1	5.9		1	5.6		1		U	1	890		50	24		10
Indane	496-11-7	ug/L	NE	NE	NE	NE		U	1	100		5	6.2		1	5.5		1	0.71	J	1		U	1	2.4		1		U	1	72		50	250		10
Isopropylbenzene	98-82-8	ug/L	45	450	NE	NE		U	1	63		5	2.2		1	1.9		1	2.2		1	0.42	J	1	0.54	J	1		U	1	23	J	50	90		10
Methyl Cyclohexane	108-87-2	ug/L	NE	NE	NE	NE		U	1	30		5	0.38	J	1	0.31	J	1		U	1	0.37	J	1		U	1		U	1	39	J	50	39		10
Methyl tert-Butyl Ether	1634-04-4	ug/L	14	14	NE	NE		U	1		U	5		U	1		U	1		U	1		U	1		U	1		U	1		U	50		U	10
Methylene Chloride	75-09-2	ug/L	11	11	5.00	NE		U	1		U	5		U	1		U	1		U	1	0.24	J	1		U	1	0.36	J	1		U	50		U	10
n-Propylbenzene	103-65-1	ug/L	66	660	NE	NE		U	1	150		5	1.1		1	0.96	J	1	0.43	J	1	0.62	J	1	0.44	J	1		U	1	64		50	230		10
Styrene	100-42-5	ug/L	120	1200	100	NE		U	1		U	5		U	1		U	1		U	1		U	1		U	1		U	1		U	50		U	10
Tetrachloroethene	127-18-4	ug/L	4.1	11	5	NE	1.1		1	3.5	J	5	0.37	J	1	0.39	J	1		U	1	0.27	J	1	0.16	J	1		U	1		U	50		U	10
Tetrahydrofuran	109-99-9	ug/L	340	3400	NE	NE		U	2		U	10	17		2	17		2		U	2	3.4		2		U	2		U	2		U	100		U	20
Toluene	108-88-3	ug/L	110	1100	1000	NE		U	1	450		5		U	1		U	1		U	1	29		1	1.9		1	0.25	J	1	23000		50	9.9	J	10
trans-1,2-Dichloroethene	156-60-5	ug/L	36	360	100	NE		U	1		U	5		U	1		U	1		U	1	0.35	J	1		U	1		U	1		U	50		U	10
Trichloroethene	79-01-6	ug/L	0.28	0.49	5.00	NE	1.5		1	2.1	J	5	0.35	J	1	0.54	J	1	0.34	J	1	1		1	0.34	J	1		U	1		U	50		U	10
Vinyl Chloride	75-01-4	ug/L	0.019	0.019	2.00	NE		U	1		U	5		U	1		U	1	0.46	J	1		U	1	0.1	J	1		U	1	6.6	J	50		U	10
Xylenes, Total	1330-20-7	ug/L	19	190	10000	21		U	2	1700		10	2.5		2	2		2	0.99	J	2	34		2	8.9		2		U	2	3700		100	3100		20
Semivolatile Organic Compounds																																				
1,2,4-Trichlorobenzene	120-82-1	ug/L	0.4	1.2	70	NE		U	2	5.9		2		U	2		U	2		U	2		U	4		U	2		U	2	1.9	J	2		U	2
1,2-Dichlorobenzene	95-50-1	ug/L	30	300	600	NE		U	10		U	10		U	10		U	10		U	10		U	20		U	10		U	10		U	10	3.3	J	10
1,3-Dichlorobenzene	541-73-1	ug/L	NE	NE	NE	NE		UJ	10		UJ	10		U	10		U	10		U	10		UJ	20		UJ	10		U	10		U	10		UJ	10
1,4-Dichlorobenzene	106-46-7	ug/L	0.48	0.48	75	NE		UJ	10		UJ	10		U	10		U	10		U	10		UJ	20		UJ	10		U	10		U	10	2.3	J-	10
2,4-Dichlorophenol	120-83-2	ug/L	4.6	46	NE	NE		U	10		U	10		U	10		U	10		U	10		U	20		U	10		U	10	2.8	J-	10		U	10
2,4-Dimethylphenol	105-67-9	ug/L	36	360	NE	NE		U	10	3.6	J	10		U	10		U	10		U	10		U	20		U	10		U	10	5.1	J-	10	8.1	J	10
2-Chlorophenol	95-57-8	ug/L	9.1	91	NE	NE		U	10		U	10		U	10		U	10		U	10		U	20		U	10		U	10		UJ	10		U	10
2-Methylnaphthalene	91-57-6	ug/L	3.6	36	NE	NE		U	10	3.5	J	10		U	10		U	10		U	10		U	20		U	10		U	10	1.9	J	10	4	J	10
2-Methylphenol	95-48-7	ug/L	93	930	NE	NE		U	10		U	10		U	10		U	10		U	10		U	20		U	10		U	10	24	J-	10		U	10
4-Methylphenol	106-44-5	ug/L	190	1900	NE	NE		U	10	3.3	J	10		U	10		U	10		U	10		U	20		U	10		U	10	31	J-	10		U	10
Benzo[a]anthracene	56-55-3	ug/L	0.03	0.03	NE	NE		U	0.05		U	0.05		U	0.05		U	0.05		U	0.05		U	0.05		U	0.05		U	0.05		U	0.05		U	0.05
Benzo[b]fluoranthene	205-99-2	ug/L	0.25	0.25	NE	NE		U	0.05		U	0.05		U	0.05		U	0.05		U	0.05		U	0.05		U	0.05		U	0.05		U	0.05		U	0.05
Bis(2-chloroethyl) Ether	111-44-4	ug/L	0.014	0.014	NE	0.14							28		1	31		1																9.6		1
Bis(2-chloroethyl) Ether	111-44-4	ug/L	0.014	0.014	NE	0.14	0.86		0.03		U	0.03							6.9	J+	0.03	2.8		0.03	0.11		0.03	0.14		0.03		U	0.03			
Bis(2-ethylhexyl) Phthalate	117-81-7	ug/L	5.6	5.6	6.00	NE		U	2		U	2		U	2		U	2		U	2		U	4		U	2		U	2		U	2		U	2
Bisphenol A	80-05-7	ug/L	77	770	NE	NE		U	10	22		10	36		10	35		10		U	10	210		20	14		10		U	10	66	J-	10	100		10
Butylbenzyl Phthalate	85-68-7	ug/L	16	16	NE	NE		U	10		U	10		U	10		U	10		U	10		U	20		U	10		U	10		U	10		U	10
Diethyl Phthalate	84-66-2	ug/L	1500	15000	NE	NE		U	10	1.1	J	10		U	10		U	10		U	10	19	J	20		U	10		U	10	40		10	9.1	J	10
Di-n-Butyl Phthalate	84-74-2	ug/L	90	900	NE	NE		U	10	9.4	U	10		U	10		U	10		U	10		U	20		U	10		U	10		U	10	3.5	U	10
Diphenyl Ether	101-84-8	ug/L	NE	NE	NE	NE		U	10	64		10		U	10		U	10		U	10		U	20		U	10		U	10	5.3	J	10	52		10
Hexachlorobenzene	118-74-1	ug/L	0.0098	0.0098	1	NE		U	0.02		U	0.02		U	0.02		U	0.02		U	0.02		U	0.02		U	0.02		U	0.02		U	0.02		U	0.02
N,N-Dimethylaniline	121-69-7	ug/L	2.5	2.5	NE	25		U	1		U	1		U	1		U	1		U	1		U	2		U	1		U	1	1.5		1		U	1
Naphthalene	91-20-3	ug/L	0.17	0.17	NE	0.63		U	10	34		10		U	10		U	10		U	10		U	20		U	10		U	10	17		10	55		10
N-Methylaniline	100-61-8	ug/L	NE	38	NE	NE		UJ	5	2	J-	5	1	J	5	0.92	J	5		U	5		UJ	10		UJ	5		U	5		U	5	2.3	J-	5
Phenol	108-95-2	ug/L	580	5800	NE	NE		U	10		U	10		U	10		U	10		U	10		U	20		U	10		U	10		UJ	10		U	10
Total Metals																																				
Aluminum	7429-90-5	ug/L	2000	20000	NE	NE	194		50	54.6		50		U	50		U	50		U	50		U	50		U	50	41	J	50	36.2	J	50	44.3	J	50
Antimony	7440-36-0	ug/L	0.78	7.8	6.00	NE		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5	1.8	J	2.5		U	2.5		U	2.5
Arsenic	7440-38-2	ug/L	0.052	0.052	10.0	0.52		U	2.5	2.9		2.5	1.5	J	2.5	1.7	J	2.5	5.9		2.5	7.9		2.5	1.5	J	2.5		U	2.5	10		2.5	8.4		2.5
Barium	7440-39-3	ug/L	380	3800	2000	NE	209		5	66.7		5	175		5	210		5	254		5	104		5	85.2		5	62.9		5	59		5	168		5
Beryllium	7440-41-7	ug/L	2.5	25	4.00	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Calcium	7440-70-2	ug/L	NE	NE	NE	NE	56200		250	24100		250	9940		250	11200		250	31500		250	44500		250	30100		250	43800		250	50500		250	14900		250
Chromium	7440-47-3	ug/L	NE	NE	100	NE	451		5		U	5	53.2		5	77.9		5		U	5		U	5		U	5		U	5		U	5		U	5
Cobalt	7440-48-4	ug/L	0.6	6	NE	6	8.3		5		U	5	125		5	144		5	19.8		5	23		5	6.4		5		U	5	8		5	20.5		5
Copper	7440-50-8	ug/L	80	800	1300	NE	21.4		5		U	5	4.6	J	5	4.1	J	5		U	5		U	5		U	5		U	5	3.8	J	5		U	5
Iron	7439-89-6	ug/L	1400	14000	NE	13939	3190		150	5390		150	21300		150	24900		150	10800		150	21700		150	17800		150	185		150	55900		150	32700		150
Lead	7439-92-1	ug/L	15	15	15.0	NE	1	J	1.5		U	1.5		U	1.5		U	1.5		U	1.5		U	1.5		U	1.5		U	1.5		U	1.5		U	1.5
Magnesium	7439-95-4	ug/L	NE	NE	NE	NE	59400		250	66400		250	23800		250	27300		250	24000		250	25000		250	20500		250	31700		250	31300		250	10200		250
Manganese	7439-96-5	ug/L	43	430	NE	260	186		10	255		10	26700		10	23300		10	1910		10	1230		10	1760		10	40.9		10	1390		10	120		10
Nickel	7440-02-0	ug/L	39	390	NE	NE	448		5		U	5	91.5		5	110		5	5.2		5	8.1		5		U	5		U	5		U	5	6.8		5
Potassium	7440-09-7	ug/L	NE	NE	NE	NE	5770		250	4390		250	2850		250	3150		250	6680		250	1920		250	1970		250	3990		250	1390		250	2240		250
Selenium	7782-49-2	ug/L	10	100	50.0	NE		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5
Sodium	7440-23-5	ug/L	NE	NE	NE	NE	25300		250	10800		250	46500		250	54000		250	70900		250	15000		250	8300		250	6450		250	7500		250	14800		250
Thallium	7440-28-0	ug/L	0.02	0.2	2.00	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Vanadium	7440-62-2	ug/L	8.6	86	NE	NE		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5
Zinc	7440-66-6	ug/L	600	6000	NE	NE	70.2		20		U	20	53.5		20	53.4		20		U	20		U	20		U	20		U	20		U	20		U	20
Mercury	7439-97-6	ug/L	0.063	0.63	2.00	NE		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2
Dissolved Metals																																				
Iron	7439-89-6	ug/L	1400	14000	NE	13939	3850		150	6170		150	26200		150	25200		150	13400		150	25900		150	21800		150	199		150	66400		150	39700		150
Manganese	7439-96-5	ug/L	43	430	NE	260	231		15	305		15	27700		75	27000		75	2340		15	2150		15	2190		15	42.5		15	1560		15	145		15
Wet Chemistry																																				
Ammonia	7664-41-7	mg/L	NE	NE	NE	NE	0.13		0.1	0.11		0.1	1.7		0.1	1.2		0.1	0.61		0.1	0.88		0.1	0.3		0.1	0.1		0.1	0.67		0.1	1.5		0.1

DDA Monitoring Wells

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8/28/2018

GOLDER

Appendix B-1
Summary of Detected Compounds - April 2018 Groundwater
Delaware Sand & Gravel Superfund Site
New Castle County, Delaware

							DDA Monitoring Wells						PW-1(U) UPCUTZ Monitoring Wells																											
						Sample ID	DGC-7C			DGC-8C			DDA-05			DDA-06			DDA-07-TZ			DDA-08-TZ			DDA-09-TZ			DDA-12-TZ			DDA-14-TZ			DDA-15-TZ			DDA-16-TZ		
						Sample Date	4/12/2018			4/18/2018			4/9/2018			4/10/2018			4/11/2018			4/16/2018			4/12/2018			4/6/2018			4/18/2018			4/16/2018			4/10/2018		
						N=Normal, FD=Field Duplicate	N			N			N			N			N			N			N			N			N			N			N		
Parameter	CAS	Unit	RSL HQ=0.1	RSL HQ=1.0	MCL	PRG	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL
Volatile Organic Compounds																																								
1,1-Dichloroethane	75-34-3	ug/L	2.8	2.8	NE	NE		U	1		U	1	0.49	J	1	0.25	J	1	1.1		1		U	1	0.73	J	1	2.1		1	0.31	J	1	0.84	J	2		U	5
1,2,3-Trimethylbenzene	526-73-8	ug/L	5.5	55	NE	NE		U	1		U	1	10		1		U	1	0.54	J	1		U	1	3.7		1	59		1	2.9		1	110		2	10		5
1,2,4-Trimethylbenzene	95-63-6	ug/L	5.6	56	NE	5.7		U	1		U	1	32		1	0.95	J	1	2.1		1		U	1	54		1	250		1	13		1	470		2	33		5
1,2-Dichloroethane	107-06-2	ug/L	0.17	0.17	5	NE		U	1		U	1		U	1	0.4	J	1		U	1		U	1	4		1	4.3		1		U	1		U	2		U	5
1,3,5-Trimethylbenzene	108-67-8	ug/L	6	60	NE	6.1		U	1		U	1	6.6		1		U	1	0.68	J	1		U	1	6.7		1	60		1	2.3		1	110		2	8		5
1,4-Dioxane	123-91-1	ug/L	0.46	0.46	NE	4.6										72		50				58		50	580		50	1100		50	170		50	250		100	1400		250
1,4-Dioxane	123-91-1	ug/L	0.46	0.46	NE	4.6	1.9		0.4	0.42		0.4	45		0.4				47		0.4																		
4-Methyl-2-pentanone	108-10-1	ug/L	630	6300	NE	NE		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	10		U	25
Acetone	67-64-1	ug/L	1400	14000	NE	NE	13		5	1.5	U	5	2.4	U	5		U	5		U	5		U	5	5.4		5	6.2		5		U	5		U	10	12	J	25
Benzene	71-43-2	ug/L	0.46	0.46	5	4.6	0.46	J	1		U	1	53		1	12		1	17		1	9.1		1	37		1	190		1	180		1	50		2	730		5
Chlorobenzene	108-90-7	ug/L	7.8	78	100	NE	5.9		1		U	1	25		1	2.8		1	48		1	0.31	J	1	5.1		1	40		1	2		1	6.4		2	11		5
Chloroethane	75-00-3	ug/L	2100	21000	NE	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	2		U	5
Chloroform	67-66-3	ug/L	0.22	0.22	80.0	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	2		U	5
Chloromethane	74-87-3	ug/L	19	190	NE	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	2		U	5
cis-1,2-Dichloroethene	156-59-2	ug/L	3.6	36	70.0	NE		U	1		U	1		U	1		U	1		U	1		U	1	1.2		1	0.59	J	1		U	1		U	2		U	5
Cyclohexane	110-82-7	ug/L	1300	13000	NE	NE		U	1		U	1	0.77	J	1	1.2		1	0.72	J	1		U	1	16	J	1	22		1	0.29	J	1	24		2		U	5
Dichlorofluoromethane	75-43-4	ug/L	NE	NE	NE	NE		U	1		U	1		U	1	0.73	J	1	0.5	J	1	0.22	J	1	6.3	J	1	24		1	1.2		1	11	J+	2		U	5
Diethyl Ether	60-29-7	ug/L	390	3900	NE	NE		U	1		U	1	0.27	J	1	0.38	J	1	0.32	J	1	0.51	J	1	2.1	J	1	6.4		1	2.2		1	1.5	J	2	11		5
Ethylbenzene	100-41-4	ug/L	1.5	1.5	700	15		U	1		U	1	1.1		1		U	1	1.5		1		U	1		U	1	3.3		1	14		1	1.5	J	2	64		5
Indane	496-11-7	ug/L	NE	NE	NE	NE		U	1		U	1	38		1	37		1	15		1	0.45	J	1	13		1	40		1	3.4		1	50		2	9		5
Isopropylbenzene	98-82-8	ug/L	45	450	NE	NE		U	1		U	1	10		1	24		1	3.3		1		U	1	18		1	35		1	1.5		1	44		2	4.7	J	5
Methyl Cyclohexane	108-87-2	ug/L	NE	NE	NE	NE		U	1		U	1	1.7		1		U	1	1.3		1		U	1	18		1	55		1	0.61	J	1	64		2		U	5
Methyl tert-Butyl Ether	1634-04-4	ug/L	14	14	NE	NE		U	1		U	1	0.26	J	1	0.16	J	1		U	1	0.71	J	1	0.2	J	1		U	1	0.41	J	1		U	2		UJ	5
Methylene Chloride	75-09-2	ug/L	11	11	5.00	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	2		U	5
n-Propylbenzene	103-65-1	ug/L	66	660	NE	NE		U	1		U	1	9.5		1	18		1	1.8		1		U	1	17		1	63		1	3.7		1	78		2	7.7		5
Styrene	100-42-5	ug/L	120	1200	100	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	2		U	5
Tetrachloroethene	127-18-4	ug/L	4.1	11	5	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	2		U	5
Tetrahydrofuran	109-99-9	ug/L	340	3400	NE	NE		U	2		U	2	4.9		2		U	2		U	2	0.93	J	2	14		2		U	2	27		2	26		4	260		10
Toluene	108-88-3	ug/L	110	1100	1000	NE		U	1		U	1	0.28	J	1		U	1	0.67	J	1		U	1	0.3	J	1	1.2		1	0.36	J	1	1.2	J	2		U	5
trans-1,2-Dichloroethene	156-60-5	ug/L	36	360	100	NE		U	1		U	1		U	1		U	1	0.33	J	1		U	1		U	1		U	1		U	1		U	2		U	5
Trichloroethene	79-01-6	ug/L	0.28	0.49	5.00	NE		U	1		U	1		U	1		U	1		U	1		U	1	1.4		1	1.6		1		U	1		U	2		U	5
Vinyl Chloride	75-01-4	ug/L	0.019	0.019	2.00	NE		U	1		U	1		U	1		U	1		U	1		U	1	0.28	J	1	0.43	J	1		U	1		U	2		U	5
Xylenes, Total	1330-20-7	ug/L	19	190	10000	21		U	2		U	2	16		2		U	2	2.4		2		U	2	9.7		2	91		2	17		2	610		4	77		10
Semivolatile Organic Compounds																																								
1,2,4-Trichlorobenzene	120-82-1	ug/L	0.4	1.2	70	NE		U	2.1		U	2		U	2		U	2		U	2.1		U	2		U	2		U	4		U	2		U	2		U	4
1,2-Dichlorobenzene	95-50-1	ug/L	30	300	600	NE		U	10		U	10		U	10	2.8	J	10		U	10		U	10	2	J+	10	15	J	20		U	10	9.3	J+	10		U	20
1,3-Dichlorobenzene	541-73-1	ug/L	NE	NE	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	20		U	10		U	10		U	20
1,4-Dichlorobenzene	106-46-7	ug/L	0.48	0.48	75	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10	2.5	J	20		U	10	1.6	J+	10		U	20
2,4-Dichlorophenol	120-83-2	ug/L	4.6	46	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	20		U	10		U	10		U	20
2,4-Dimethylphenol	105-67-9	ug/L	36	360	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	20		U	10	1.2	J	10	8.9	J	20
2-Chlorophenol	95-57-8	ug/L	9.1	91	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	20		U	10		U	10		U	20
2-Methylnaphthalene	91-57-6	ug/L	3.6	36	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	20		U	10	1.1	J+	10		U	20
2-Methylphenol	95-48-7	ug/L	93	930	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	20		U	10		U	10		U	20
4-Methylphenol	106-44-5	ug/L	190	1900	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	20		U	10		U	10		U	20
Benzo[a]anthracene	56-55-3	ug/L	0.03	0.03	NE	NE		U	0.052		U	0.05		U	0.05		U	0.05		U	0.052		U	0.05		U	0.051		U	0.05		U	0.05		U	0.05		U	0.05
Benzo[b]fluoranthene	205-99-2	ug/L	0.25	0.25	NE	NE		U	0.052		U	0.05		U	0.05		U	0.05		U	0.052		U	0.05		U	0.051		U	0.05		U	0.05		U	0.05		U	0.05
Bis(2-chloroethyl) Ether	111-44-4	ug/L	0.014	0.014	NE	0.14							8.9		1	12		1	7.1		1				63	J+	1	320		2	17		1	120	J+	1	250		2
Bis(2-chloroethyl) Ether	111-44-4	ug/L	0.014	0.014	NE	0.14		U	0.031		U	0.03										3.9		0.03															
Bis(2-ethylhexyl) Phthalate	117-81-7	ug/L	5.6	5.6	6.00	NE		U	2.1		U	2		U	2		U	2		U	2.1		U	2		U	2		U	4		U	2		U	2		U	4
Bisphenol A	80-05-7	ug/L	77	770	NE	NE		U	10		U	10	52		10		U	10	150		10		U	10	17		10	52		20	11		10	32		10	130		20
Butylbenzyl Phthalate	85-68-7	ug/L	16	16	NE	NE	6.3	J	10		U	10		U	10		U	10		U	10		U	10		U	10		U	20		U	10		U	10		U	20
Diethyl Phthalate	84-66-2	ug/L	1500	15000	NE	NE		U	10		U	10	3.2	J	10		U	10	2.9	J	10		U	10		U	10		U	20		U	10		U	10	4.2	J	20
Di-n-Butyl Phthalate	84-74-2	ug/L	90	900	NE	NE	3.7	J	10		U	10		U	10		U	10	4.2	J	10		U	10		U	10		U	20		U	10		U	10		U	20
Diphenyl Ether	101-84-8	ug/L	NE	NE	NE	NE		U	10		U	10	4.5	J	10	8.2	J	10	2.4	J	10		U	10	4.2	J+	10	12	J	20	1.2	J	10	14	J+	10		U	20
Hexachlorobenzene	118-74-1	ug/L	0.0098	0.0098	1	NE		U	0.021		U	0.02		U	0.02		U	0.02		U	0.021		U	0.02		U	0.02		U	0.02	0.018	J	0.02		U	0.02		U	0.02
N,N-Dimethylaniline	121-69-7	ug/L	2.5	2.5	NE	25		U	1		UJ	1		U	1		U	1		U	1		U	1		U	1	3.1		2		U	1	8.5	J+	1		U	2
Naphthalene	91-20-3	ug/L	0.17	0.17	NE	0.63		U	10		U	10	2.6	J	10		U	10		U	10		U	10		U	10	3.5	J	20		U	10	7.5	J+	10		U	20
N-Methylaniline	100-61-8	ug/L	NE	38	NE	NE		U	5.2		UJ	5		U	5	1.2	J-	5		UJ	5.2		UJ	5	1.5	J+	5.1	4.9	J	10	0.5	J	5	4.4	J+	5	1.4	J-	10
Phenol	108-95-2	ug/L	580	5800	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	20		U	10		U	10		U	20
Total Metals																																								
Aluminum	7429-90-5	ug/L	2000	20000	NE	NE	50.3		50	91.4		50		U	50	153		50	48.9	J	50	71.7		50	183		50	52.2		50	56.7		50	137		50	57.6		50
Antimony	7440-36-0	ug/L	0.78	7.8	6.00	NE		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5
Arsenic	7440-38-2	ug/L	0.052	0.052	10.0	0.52	9.7		2.5	12.2		2.5	8.6		2.5	1.5	J	2.5	14.2		2.5		U	2.5	1.9	J	2.5	11.9		2.5		U	2.5	13.5		2.5	6.4		2.5
Barium	7440-39-3	ug/L	380	3800	2000	NE	1140		5	107		5	224		5	578		5	74.7		5	586		5	611		5	616		5	102		5	619		5	136		5
Beryllium	7440-41-7	ug/L	2.5	25	4.00	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Calcium	7440-70-2	ug/L	NE	NE	NE	NE	13500		250	44800		250	12900		250	12700		250	8980		250	22500		250	19600		250	20900		250	20200		250	11700		250	14800		250
Chromium	7440-47-3	ug/L	NE	NE	100	NE		U	5	3.5	J	5		U	5	5.1		5		U	5	4.4	J	5	7.1	J+	5		U	5		U	5		U	5	3.6	J	5
Cobalt	7440-48-4	ug/L	0.6	6	NE	6	114		5	13.7		5		U	5		U	5		U	5	7		5	78		5	155		5		U	5	37.5		5	3.9	J	5
Copper	7440-50-8	ug/L	80	800	1300	NE		U	5	4	J	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5
Iron	7439-89-6	ug/L	1400	14000	NE	13939	90900		150	3300		150	48900		150	618		150	42200		150	26800		150	20900		150	18600		150	2600		150	25000		150	20400		150
Lead	7439-92-1	ug/L	15	15	15.0	NE	1.1	J	1.5	1.5		1.5		U	1.5		U	1.5		U	1.5		U	1.5		U	1.5		U	1.5		U	1.5		U	1.5		U	1.5
Magnesium	7439-95-4	ug/L	NE	NE	NE	NE	18100		250	79300		250	7420		250	31900		250	5550		250	15900		250	16800		250	10300		250	8820		250	15700		250	7970		250
Manganese	7439-96-5	ug/L	43	430	NE	260	952		10	227		10	1620		10	150		10	5290		10	459		10	1740		10	4090		10	83.2		10	610		10	485		10
Nickel	7440-02-0	ug/L	39	390	NE	NE	22.8		5	6.6		5		U	5	9.1		5	4.1	J	5	3.7	J	5	13.3		5	31.6		5		U	5	10.6		5	3.3	J	5
Potassium	7440-09-7	ug/L	NE	NE	NE	NE	5290		250	6370		250	3530		250	3480		250	4600		250	2870		250	2390		250	2390		250	920		250	2630		250	1420		250
Selenium	7782-49-2	ug/L	10	100	50.0	NE		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5
Sodium	7440-23-5	ug/L	NE	NE	NE	NE	75900		250	4380		250	18000		250	29500		250	16400		250	33300		250	20400		250	30200		250	24000		250	31400		250	13200		250
Thallium	7440-28-0	ug/L	0.02	0.2	2.00	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Vanadium	7440-62-2	ug/L	8.6	86	NE	NE		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5
Zinc	7440-66-6	ug/L	600	6000	NE	NE		U	20		U	20		U	20		U	20		U	20		U	20		U	20		U	20		U	20		U	20		U	20
Mercury	7439-97-6	ug/L	0.063	0.63	2.00	NE		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2
Dissolved Metals																																								
Iron	7439-89-6	ug/L	1400	14000	NE	13939	92600		150	3340		150	52700		150	268		150	47100		150	29400		150	21500		150	21300		150	2340		150	29600		150	35400		150
Manganese	7439-96-5	ug/L	43	430	NE	260	1220		15	343		15	1740		15	181		15	5750		15	475		15	1260		15	4140		15	96.1		15	927		15	697		15
Wet Chemistry																																								
Ammonia	7664-41-7	mg/L	NE	NE	NE	NE	0.71		0.1	0.44		0.1	3.8		0.1	2.3		0.1	9.2		0.25	1.7		0.1	1.5		0.1	1.8	J+	0.1	0.62		0.17	3.2		0.1	1.2		0.25

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8/28/2018

GOLDER

Appendix B-1
Summary of Detected Compounds - April 2018 Groundwater
Delaware Sand & Gravel Superfund Site
New Castle County, Delaware

							PW-1(U) Upper Sand Monitoring Wells																																
						Sample ID	DDA-01			DDA-02			DDA-03			DDA-07-US			DDA-08-US			DDA-10-US			DDA-11-LS			DDA-11-US			DDA-12-US			DDA-15-US			DDA-16-US		
						Sample Date	4/10/2018			4/12/2018			4/9/2018			4/11/2018			4/16/2018			4/11/2018			4/10/2018			4/10/2018			4/6/2018			4/16/2018			4/10/2018		
						N=Normal, FD=Field Duplicate	N			N			N			N			N			N			N			N			N			N			N		
Parameter	CAS	Unit	RSL HQ=0.1	RSL HQ=1.0	MCL	RFG	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL
Volatile Organic Compounds																																							
1,1-Dichloroethane	75-34-3	ug/L	2.8	2.8	NE	NE		U	1		U	1		U	1		U	1		U	1	0.39	J	1		U	1		U	1	0.58	J	2		U	1		U	1
1,2,3-Trimethylbenzene	526-73-8	ug/L	5.5	55	NE	NE		U	1		U	1		U	1		U	1		U	1	0.28	J	1		U	1		U	1	110		2		U	1		U	1
1,2,4-Trimethylbenzene	95-63-6	ug/L	5.6	56	NE	5.7		U	1		U	1		U	1		U	1		U	1	1		1		U	1		U	1	450		2		U	1		U	1
1,2-Dichloroethane	107-06-2	ug/L	0.17	0.17	5	NE		U	1		U	1		U	1		U	1		U	1	0.31	J	1		U	1		U	1		U	2		U	1		U	1
1,3,5-Trimethylbenzene	108-67-8	ug/L	6	60	NE	6.1		U	1		U	1		U	1		U	1		U	1	0.35	J	1		U	1		U	1	110		2		U	1		U	1
1,4-Dioxane	123-91-1	ug/L	0.46	0.46	NE	4.6																110		50							140		100						
1,4-Dioxane	123-91-1	ug/L	0.46	0.46	NE	4.6	5.3		0.4	6.7	J	0.4	0.63		0.4	10		0.4	0.52		0.4				0.51		0.4	2.2		0.4				1.4		0.4	3		0.4
4-Methyl-2-pentanone	108-10-1	ug/L	630	6300	NE	NE		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	10		U	5		U	5
Acetone	67-64-1	ug/L	1400	14000	NE	NE		U	5	3.1	U	5	1.1	U	5		U	5		U	5		U	5	6.9		5		U	5		U	10		U	5		U	5
Benzene	71-43-2	ug/L	0.46	0.46	5	4.6		U	1		U	1		U	1		U	1		U	1	49		1		U	1		U	1	27		2		U	1		U	1
Chlorobenzene	108-90-7	ug/L	7.8	78	100	NE		U	1		U	1		U	1		U	1		U	1	1.6		1		U	1		U	1	3.4		2		U	1		U	1
Chloroethane	75-00-3	ug/L	2100	21000	NE	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	2		U	1		U	1
Chloroform	67-66-3	ug/L	0.22	0.22	80.0	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	2		U	1		U	1
Chloromethane	74-87-3	ug/L	19	190	NE	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	2		U	1		U	1
cis-1,2-Dichloroethene	156-59-2	ug/L	3.6	36	70.0	NE		U	1		U	1		U	1		U	1		U	1	0.52	J	1		U	1		U	1		U	2		U	1		U	1
Cyclohexane	110-82-7	ug/L	1300	13000	NE	NE		U	1		U	1		U	1		U	1		U	1	3.6		1		U	1		U	1	23		2		U	1		U	1
Dichlorofluoromethane	75-43-4	ug/L	NE	NE	NE	NE		U	1		U	1		U	1		U	1		U	1	8.7		1		U	1		U	1	1.2	J	2		U	1		U	1
Diethyl Ether	60-29-7	ug/L	390	3900	NE	NE		U	1	0.19	J	1		U	1	0.25	J	1		U	1	2.4		1		U	1		U	1		U	2		U	1		U	1
Ethylbenzene	100-41-4	ug/L	1.5	1.5	700	15		U	1		U	1		U	1		U	1		U	1	9		1		U	1		U	1	11		2		U	1		U	1
Indane	496-11-7	ug/L	NE	NE	NE	NE	0.13	J	1		U	1		U	1		U	1		U	1	3.3		1		U	1		U	1	54		2		U	1	0.12	J	1
Isopropylbenzene	98-82-8	ug/L	45	450	NE	NE		U	1		U	1		U	1		U	1		U	1	3.6		1		U	1		U	1	38		2		U	1		U	1
Methyl Cyclohexane	108-87-2	ug/L	NE	NE	NE	NE		U	1		U	1		U	1		U	1		U	1	5		1		U	1		U	1	43		2		U	1		U	1
Methyl tert-Butyl Ether	1634-04-4	ug/L	14	14	NE	NE	0.31	J-	1	1.8		1	0.51	J	1	0.84	J	1	0.58	J	1	0.37	J	1	0.32	J	1	0.19	J	1	0.6	J	2	0.47	J	1	0.89	J-	1
Methylene Chloride	75-09-2	ug/L	11	11	5.00	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	2		U	1		U	1
n-Propylbenzene	103-65-1	ug/L	66	660	NE	NE		U	1		U	1		U	1		U	1		U	1	1.8		1		U	1		U	1	73		2		U	1		U	1
Styrene	100-42-5	ug/L	120	1200	100	NE		U	1		UJ	1		U	1		U	1		U	1		U	1		U	1		U	1		U	2		U	1		U	1
Tetrachloroethene	127-18-4	ug/L	4.1	11	5	NE	2.6		1		U	1		U	1		U	1	1.8		1		U	1	4.3		1		U	1		U	2	2.7		1		U	1
Tetrahydrofuran	109-99-9	ug/L	340	3400	NE	NE		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	4		U	2		U	2
Toluene	108-88-3	ug/L	110	1100	1000	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1	0.93	J	2		U	1		U	1
trans-1,2-Dichloroethene	156-60-5	ug/L	36	360	100	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	2		U	1		U	1
Trichloroethene	79-01-6	ug/L	0.28	0.49	5.00	NE	0.28	J	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	2	1.2		1		U	1
Vinyl Chloride	75-01-4	ug/L	0.019	0.019	2.00	NE		U	1		U	1		U	1		U	1		U	1	0.82	J	1		U	1		U	1		U	2		U	1		U	1
Xylenes, Total	1330-20-7	ug/L	19	190	10000	21		U	2		U	2		U	2		U	2		U	2	4.6		2		U	2		U	2	640		4		U	2		U	2
Semivolatile Organic Compounds																																							
1,2,4-Trichlorobenzene	120-82-1	ug/L	0.4	1.2	70	NE		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2
1,2-Dichlorobenzene	95-50-1	ug/L	30	300	600	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10	1.6	J	10		U	10		U	10
1,3-Dichlorobenzene	541-73-1	ug/L	NE	NE	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
1,4-Dichlorobenzene	106-46-7	ug/L	0.48	0.48	75	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
2,4-Dichlorophenol	120-83-2	ug/L	4.6	46	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
2,4-Dimethylphenol	105-67-9	ug/L	36	360	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10	3.1	J	10		U	10		U	10
2-Chlorophenol	95-57-8	ug/L	9.1	91	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
2-Methylnaphthalene	91-57-6	ug/L	3.6	36	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
2-Methylphenol	95-48-7	ug/L	93	930	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
4-Methylphenol	106-44-5	ug/L	190	1900	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
Benzo[a]anthracene	56-55-3	ug/L	0.03	0.03	NE	NE		U	0.05		U	0.051		U	0.05		U	0.05		U	0.051		U	0.05	0.048	J	0.05		U	0.05		U	0.05		U	0.05		U	0.05
Benzo[b]fluoranthene	205-99-2	ug/L	0.25	0.25	NE	NE		U	0.05		U	0.051		U	0.05		U	0.05		U	0.051		U	0.05	0.057		0.05		U	0.05		U	0.05		U	0.05		U	0.05
Bis(2-chloroethyl) Ether	111-44-4	ug/L	0.014	0.014	NE	0.14																25		1															
Bis(2-chloroethyl) Ether	111-44-4	ug/L	0.014	0.014	NE	0.14	0.53		0.03	0.3	J+	0.031	0.06		0.03	0.14		0.03		U	0.03					U	0.03	0.08		0.03	3	J+	0.03	0.092	J+	0.03	0.072		0.03
Bis(2-ethylhexyl) Phthalate	117-81-7	ug/L	5.6	5.6	6.00	NE		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2
Bisphenol A	80-05-7	ug/L	77	770	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
Butylbenzyl Phthalate	85-68-7	ug/L	16	16	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
Diethyl Phthalate	84-66-2	ug/L	1500	15000	NE	NE		U	10		U	10		U	10	1.1	J	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
Di-n-Butyl Phthalate	84-74-2	ug/L	90	900	NE	NE		U	10		U	10		U	10		U	10		U	10	6.9	J	10		U	10		U	10		U	10		U	10		U	10
Diphenyl Ether	101-84-8	ug/L	NE	NE	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10	7	J	10		U	10		U	10
Hexachlorobenzene	118-74-1	ug/L	0.0098	0.0098	1	NE		U	0.02		U	0.02		U	0.02		U	0.02		U	0.02		U	0.02		U	0.02		U	0.02		U	0.02		U	0.02		U	0.02
N,N-Dimethylaniline	121-69-7	ug/L	2.5	2.5	NE	25		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1	3.4		1		U	1		U	1
Naphthalene	91-20-3	ug/L	0.17	0.17	NE	0.63		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10	3.1	J	10		U	10		U	10
N-Methylaniline	100-61-8	ug/L	NE	38	NE	NE		UJ	5		U	5.1		UJ	5		UJ	5		U	5.1	0.89	J-	5		UJ	5		UJ	5	1.4	J	5		U	5		UJ	5
Phenol	108-95-2	ug/L	580	5800	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
Total Metals																																							
Aluminum	7429-90-5	ug/L	2000	20000	NE	NE	253		50	66		50		U	50	96.1		50	70.2		50	53.8		50	34	J	50	34.7	J	50		U	50	145		50		U	50
Antimony	7440-36-0	ug/L	0.78	7.8	6.00	NE		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5
Arsenic	7440-38-2	ug/L	0.052	0.052	10.0	0.52	5.9		2.5		U	2.5		U	2.5		U	2.5	7.4		2.5	6.8		2.5		U	2.5	2.9		2.5	3.7		2.5	6.8		2.5		U	2.5
Barium	7440-39-3	ug/L	380	3800	2000	NE	183		5	182		5	314		5	134		5	263		5	808		5	82.8		5	123		5	545		5	467		5	122		5
Beryllium	7440-41-7	ug/L	2.5	25	4.00	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Calcium	7440-70-2	ug/L	NE	NE	NE	NE	13900		250	12500		250	18500		250	14700		250	16300		250	35000		250	21500		250	10700		250	11500		250	15400		250	13200		250
Chromium	7440-47-3	ug/L	NE	NE	100	NE	8.5		5	7.3	J+	5		U	5		U	5		U	5	3.1	J	5		U	5	5.6		5		U	5		U	5		U	5
Cobalt	7440-48-4	ug/L	0.6	6	NE	6	8.7		5	34.2		5	96.4		5	11.8		5	96.2		5	119		5		U	5		U	5	16.7		5	35		5	3.7	J	5
Copper	7440-50-8	ug/L	80	800	1300	NE		U	5		U	5	5.5		5	5.2		5		U	5		U	5		U	5		U	5		U	5		U	5		U	5
Iron	7439-89-6	ug/L	1400	14000	NE	13939	19000		150	14200		150	5040		150	2890		150	15700		150	53800		150		U	150	38000		150	46600		150	35100		150	6460		150
Lead	7439-92-1	ug/L	15	15	15.0	NE		U	1.5		U	1.5		U	1.5	1.5		1.5		U	1.5		U	1.5		U	1.5		U	1.5		U	1.5		U	1.5		U	1.5
Magnesium	7439-95-4	ug/L	NE	NE	NE	NE	5400		250	6100		250	8800		250	8700		250	7360		250	8480		250	9220		250	5720		250	5200		250	7520		250	6350		250
Manganese	7439-96-5	ug/L	43	430	NE	260	1110		10	1500		10	5010		10	1510		10	6690		10	4600		10		U	10	1150		10	2530		10	5380		10	1130		10
Nickel	7440-02-0	ug/L	39	390	NE	NE	8.2		5	5.3		5	5.9		5	5.4		5	4.1	J	5	4.5	J	5	5.8		5	3.2	J	5	6.4		5		U	5		U	5
Potassium	7440-09-7	ug/L	NE	NE	NE	NE	2160		250	3220		250	3790		250	2590		250	2940		250	3900		250	3160		250	2620		250	3970		250	3110		250	3180		250
Selenium	7782-49-2	ug/L	10	100	50.0	NE		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5
Sodium	7440-23-5	ug/L	NE	NE	NE	NE	17300		250	20800		250	52400		250	24600		250	29200		250	32800		250	19400		250	13900		250	24000		250	31400		250	19300		250
Thallium	7440-28-0	ug/L	0.02	0.2	2.00	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Vanadium	7440-62-2	ug/L	8.6	86	NE	NE		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5
Zinc	7440-66-6	ug/L	600	6000	NE	NE	41.9		20		U	20		U	20	16.6	J	20	30.1		20		U	20		U	20		U	20		U	20		U	20	22.8		20
Mercury	7439-97-6	ug/L	0.063	0.63	2.00	NE		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2
Dissolved Metals																																							
Iron	7439-89-6	ug/L	1400	14000	NE	13939	24400		150	14600		150	5480		150	2580		150	15500		150	59300		150		U	150	44400		150	55100		150	38900		150	8270		150
Manganese	7439-96-5	ug/L	43	430	NE	260	1210		15	1560		15	5400		15	1640		15	7520		15	5000		15		U	15	1170		15	2610		15	5690		15	1140		15
Wet Chemistry																																							
Ammonia	7664-41-7	mg/L	NE	NE	NE	NE	0.21		0.1	0.3		0.1	0.062	U	0.1	0.52		0.1	0.17		0.1	0.65		0.1		U	0.1	0.69		0.1	3	J+	0.1	0.2		0.1	0.17		0.1

GOLDER

Appendix B-1
Summary of Detected Compounds - April 2018 Groundwater
Delaware Sand & Gravel Superfund Site
New Castle County, Delaware

							PW-1(U) Upper Sand Monitoring Wells																		Downgradient UPA Monitoring Wells														
						Sample ID	DDA-17			DGC-2S			DGC-5			DGC-7S			MHW-1D			PW-1(U)			DGC-10D			DGC-10S			DGC-11D			DGC-11S			RT-1-UP		
						Sample Date	4/10/2018			4/11/2018			4/11/2018			4/12/2018			4/16/2018			4/12/2018			4/5/2018			4/5/2018			4/3/2018			4/3/2018			4/3/2018		
						N=Normal, FD=Field Duplicate	N			N			N			N			N			N			N			N			N			N			N		
Parameter	CAS	Unit	RSL HQ=0.1	RSL HQ=1.0	MCL	RFG	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL
Volatile Organic Compounds																																							
1,1-Dichloroethane	75-34-3	ug/L	2.8	2.8	NE	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
1,2,3-Trimethylbenzene	526-73-8	ug/L	5.5	55	NE	NE		U	1		U	1		U	1		U	1		U	1	2.5		1		U	1		U	1		U	1		U	1		U	1
1,2,4-Trimethylbenzene	95-63-6	ug/L	5.6	56	NE	5.7		U	1		UJ	1		U	1		U	1		U	1	19		1		U	1		U	1		U	1		U	1		U	1
1,2-Dichloroethane	107-06-2	ug/L	0.17	0.17	5	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
1,3,5-Trimethylbenzene	108-67-8	ug/L	6	60	NE	6.1		U	1		UJ	1		U	1		U	1		U	1	2.4		1		U	1		U	1		U	1		U	1		U	1
1,4-Dioxane	123-91-1	ug/L	0.46	0.46	NE	4.6																73		50													56		50
1,4-Dioxane	123-91-1	ug/L	0.46	0.46	NE	4.6	0.98		0.4	2.6		0.4	8		0.8	6.4		0.4	6.2		0.4				0.67		0.4	2.1		0.4	0.55		0.4		U	0.4			
4-Methyl-2-pentanone	108-10-1	ug/L	630	6300	NE	NE		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5
Acetone	67-64-1	ug/L	1400	14000	NE	NE		U	5		U	5		U	5		U	5		U	5		U	5		U	5	4.8	U	5	1.6	U	5	2.7	U	5	2	U	5
Benzene	71-43-2	ug/L	0.46	0.46	5	4.6		U	1		U	1		U	1		U	1		U	1	11		1		U	1		U	1		U	1		U	1	0.17	J	1
Chlorobenzene	108-90-7	ug/L	7.8	78	100	NE		U	1		U	1		U	1		U	1		U	1	1.8		1		U	1		U	1		U	1		U	1	1.6		1
Chloroethane	75-00-3	ug/L	2100	21000	NE	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Chloroform	67-66-3	ug/L	0.22	0.22	80.0	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Chloromethane	74-87-3	ug/L	19	190	NE	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
cis-1,2-Dichloroethene	156-59-2	ug/L	3.6	36	70.0	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Cyclohexane	110-82-7	ug/L	1300	13000	NE	NE		U	1		U	1		U	1		U	1		U	1	0.85	J	1		U	1		U	1		U	1		U	1		U	1
Dichlorofluoromethane	75-43-4	ug/L	NE	NE	NE	NE		U	1		U	1		U	1		U	1		U	1	0.58	J	1		U	1		U	1		U	1		U	1	0.22	J	1
Diethyl Ether	60-29-7	ug/L	390	3900	NE	NE		U	1		U	1	0.12	J	1	0.17	J	1	0.2	J	1	0.78	J	1		U	1		U	1		U	1		U	1		U	1
Ethylbenzene	100-41-4	ug/L	1.5	1.5	700	15		U	1		U	1		U	1		U	1		U	1	2.8		1		U	1		U	1		U	1		U	1		U	1
Indane	496-11-7	ug/L	NE	NE	NE	NE		U	1		U	1		U	1	0.13	J	1		U	1	3.1		1		U	1		U	1		U	1		U	1		U	1
Isopropylbenzene	98-82-8	ug/L	45	450	NE	NE		U	1		U	1		U	1		U	1		U	1	1.7		1		U	1		U	1		U	1		U	1		U	1
Methyl Cyclohexane	108-87-2	ug/L	NE	NE	NE	NE		U	1		U	1		U	1		U	1		U	1	1.5		1		U	1		U	1		U	1		U	1		U	1
Methyl tert-Butyl Ether	1634-04-4	ug/L	14	14	NE	NE	0.41	J	1	0.37	J	1	0.15	J	1	0.41	J	1	0.21	J	1	0.41	J	1		U	1		U	1		U	1		U	1		U	1
Methylene Chloride	75-09-2	ug/L	11	11	5.00	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1	0.24	J	1		U	1		U	1	0.22	J	1
n-Propylbenzene	103-65-1	ug/L	66	660	NE	NE		U	1		UJ	1		U	1		U	1		U	1	1.9		1		U	1		U	1		U	1		U	1		U	1
Styrene	100-42-5	ug/L	120	1200	100	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Tetrachloroethene	127-18-4	ug/L	4.1	11	5	NE		U	1		U	1		U	1		U	1		U	1	2.6		1	0.25	J	1		U	1		U	1		U	1		U	1
Tetrahydrofuran	109-99-9	ug/L	340	3400	NE	NE		U	2		U	2		U	2		U	2		U	2	1.4	J	2		U	2		U	2		U	2		U	2	1.2	J+	2
Toluene	108-88-3	ug/L	110	1100	1000	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
trans-1,2-Dichloroethene	156-60-5	ug/L	36	360	100	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Trichloroethene	79-01-6	ug/L	0.28	0.49	5.00	NE		U	1		U	1		U	1		U	1		U	1	0.24	J	1	0.23	J	1	0.32	J	1		U	1		U	1		U	1
Vinyl Chloride	75-01-4	ug/L	0.019	0.019	2.00	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Xylenes, Total	1330-20-7	ug/L	19	190	10000	21		U	2		U	2		U	2		U	2		U	2	15		2		U	2		U	2		U	2		U	2		U	2
Semivolatile Organic Compounds																																							
1,2,4-Trichlorobenzene	120-82-1	ug/L	0.4	1.2	70	NE		U	2		U	2		U	2		U	2		U	2		U	2.1		U	2		U	2		U	2		U	2		U	2.1
1,2-Dichlorobenzene	95-50-1	ug/L	30	300	600	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
1,3-Dichlorobenzene	541-73-1	ug/L	NE	NE	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
1,4-Dichlorobenzene	106-46-7	ug/L	0.48	0.48	75	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
2,4-Dichlorophenol	120-83-2	ug/L	4.6	46	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
2,4-Dimethylphenol	105-67-9	ug/L	36	360	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
2-Chlorophenol	95-57-8	ug/L	9.1	91	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
2-Methylnaphthalene	91-57-6	ug/L	3.6	36	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
2-Methylphenol	95-48-7	ug/L	93	930	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
4-Methylphenol	106-44-5	ug/L	190	1900	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
Benzo[a]anthracene	56-55-3	ug/L	0.03	0.03	NE	NE		U	0.05		U	0.05		U	0.05		U	0.051		U	0.05		U	0.052		U	0.05		U	0.05	0.019	J	0.05		U	0.05		U	0.052
Benzo[b]fluoranthene	205-99-2	ug/L	0.25	0.25	NE	NE		U	0.05		U	0.05		U	0.05		U	0.051		U	0.05		U	0.052		U	0.05		U	0.05		U	0.05		U	0.05		U	0.052
Bis(2-chloroethyl) Ether	111-44-4	ug/L	0.014	0.014	NE	0.14																2.4	J+	1															
Bis(2-chloroethyl) Ether	111-44-4	ug/L	0.014	0.014	NE	0.14		U	0.03	0.075	J+	0.03	0.67		0.03	0.69	J+	0.031	0.12	J+	0.03					U	0.03	0.13		0.03		U	0.03		U	0.03	1.4		0.031
Bis(2-ethylhexyl) Phthalate	117-81-7	ug/L	5.6	5.6	6.00	NE		U	2		U	2		U	2		U	2		U	2		U	2.1		U	2		U	2		U	2		U	2		U	2.1
Bisphenol A	80-05-7	ug/L	77	770	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
Butylbenzyl Phthalate	85-68-7	ug/L	16	16	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
Diethyl Phthalate	84-66-2	ug/L	1500	15000	NE	NE		U	10		U	10	1	J	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
Di-n-Butyl Phthalate	84-74-2	ug/L	90	900	NE	NE		U	10		U	10	2.7	J	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
Diphenyl Ether	101-84-8	ug/L	NE	NE	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
Hexachlorobenzene	118-74-1	ug/L	0.0098	0.0098	1	NE		U	0.02		U	0.02		U	0.02		U	0.02		U	0.02		U	0.021		U	0.02		U	0.02		U	0.02	0.024		0.02		U	0.021
N,N-Dimethylaniline	121-69-7	ug/L	2.5	2.5	NE	25		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Naphthalene	91-20-3	ug/L	0.17	0.17	NE	0.63		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
N-Methylaniline	100-61-8	ug/L	NE	38	NE	NE		UJ	5		UJ	5		UJ	5		U	5.1		U	5		U	5.2		U	5		U	5		U	5		U	5		U	5.2
Phenol	108-95-2	ug/L	580	5800	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
Total Metals																																							
Aluminum	7429-90-5	ug/L	2000	20000	NE	NE	135		50		U	50		U	50	109		50	39.4	J	50		U	50	60.8		50	61		50		U	50	166		50	228		50
Antimony	7440-36-0	ug/L	0.78	7.8	6.00	NE		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5
Arsenic	7440-38-2	ug/L	0.052	0.052	10.0	0.52	2.6		2.5	2.7		2.5	1.6	J	2.5	3.2		2.5	4.7		2.5	1.7	J	2.5		U	2.5		U	2.5		U	2.5	2.4	J	2.5		U	2.5
Barium	7440-39-3	ug/L	380	3800	2000	NE	1480		5	102		5	219		5	158		5	249		5	365		5	71.8		5	61.8		5	118		5	35.3		5	55.5		5
Beryllium	7440-41-7	ug/L	2.5	25	4.00	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Calcium	7440-70-2	ug/L	NE	NE	NE	NE	11100		250	14000		250	18000		250	10600		250	13400		250	15000		250	13400		250	43100		250	15500		250	8740		250	11300		250
Chromium	7440-47-3	ug/L	NE	NE	100	NE		U	5		U	5		U	5	3.9	U	5	9.4		5		U	5	7.2		5	4.9	J	5		U	5		U	5		U	5
Cobalt	7440-48-4	ug/L	0.6	6	NE	6	18		5	18.2		5	51.6		5	4.9	J	5	78.5		5	25.5		5	6.1		5	5.5		5		U	5		U	5	24		5
Copper	7440-50-8	ug/L	80	800	1300	NE		U	5		U	5		U	5		U	5		U	5		U	5	10.9		5		U	5	13.4		5	3.6	J	5		U	5
Iron	7439-89-6	ug/L	1400	14000	NE	13939	50900		150	1490		150	15900		150	41500		150	21900		150	25200		150	412		150	2490		150		U	150	6030		150	7560		150
Lead	7439-92-1	ug/L	15	15	15.0	NE		U	1.5		U	1.5		U	1.5	0.95	J	1.5		U	1.5		U	1.5	1.5		1.5		U	1.5	1.4	J	1.5		U	1.5		U	1.5
Magnesium	7439-95-4	ug/L	NE	NE	NE	NE	12500		250	6290		250	12000		250	5700		250	6420		250	8650		250	4190		250	7940		250	9130		250	2800		250	3310		250
Manganese	7439-96-5	ug/L	43	430	NE	260	653		10	1285		10	1420		10	1670		10	3540		10	2150		10	118		10	122		10		U	10	105		10	234		10
Nickel	7440-02-0	ug/L	39	390	NE	NE		U	5	4.3	J	5	25		5	3.3	U	5	15.3		5	3.2	U	5	12		5	8.4		5	6.4		5	4.1	J	5	14		5
Potassium	7440-09-7	ug/L	NE	NE	NE	NE	2710		250	2790		250	4210		250	2290		250	2660		250	3070		250	2700		250	4530		250	2110		250	2570		250	1900		250
Selenium	7782-49-2	ug/L	10	100	50.0	NE		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		UJ	2.5		UJ	2.5		UJ	2.5
Sodium	7440-23-5	ug/L	NE	NE	NE	NE	35200		250	17200		250	20900		250	13900		250	23900		250	26400		250	15900		250	7830		250	7170		250	4760		250	6470		250
Thallium	7440-28-0	ug/L	0.02	0.2	2.00	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Vanadium	7440-62-2	ug/L	8.6	86	NE	NE		U	5		U	5		U	5		U	5		U	5		U	5	3.3	J	5		U	5		U	5		U	5		U	5
Zinc	7440-66-6	ug/L	600	6000	NE	NE		U	20		U	20		U	20		U	20	23.3		20	38.2		20	29.9		20	30.3		20	53.8		20		U	20		U	20
Mercury	7439-97-6	ug/L	0.063	0.63	2.00	NE		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2
Dissolved Metals																																							
Iron	7439-89-6	ug/L	1400	14000	NE	13939	52400		150	1540		150	17800		150	45000		150	24800		150	26500		150		U	150	628		150		U	150	4510		150	8650		150
Manganese	7439-96-5	ug/L	43	430	NE	260	690		15	1440		15	1590		15	1830		15	3640		15	2140		15	103		15	133		15	3.7	J	15	102		15	254		15
Wet Chemistry																																							
Ammonia	7664-41-7	mg/L	NE	NE	NE	NE	0.75		0.25	0.39		0.1	0.3		0.1	0.81		0.1	0.3		0.1	0.43		0.1	0.072	J	0.1	0.091	J	0.1		U	0.1	0.078	J	0.1	0.064	J	0.1

GOLDER

Appendix B-1
Summary of Detected Compounds - April 2018 Groundwater
Delaware Sand & Gravel Superfund Site
New Castle County, Delaware

							Downgradient UPA Monitoring Wells															Downgradient UPA Monitoring Wells									NCC UPA Monitoring Wells and P-6 Vicinity								
						Sample ID	UPA-01			UPA-02D			UPA-02S			UPA-03D			AWC-E1			AWC-E1			AWC-E2			AWC-E2			BW-1			BW-1			BW-2		
						Sample Date	4/11/2018			4/5/2018			4/3/2018			4/5/2018			4/4/2018			4/4/2018			4/4/2018			4/4/2018			4/9/2018			4/9/2018			4/9/2018		
						N=Normal, FD=Field Duplicate	N			N			N			N			N			N			N			N			FD			N			N		
Parameter	CAS	Unit	RSL HQ=0.1	RSL HQ=1.0	MCL	RFG	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL
Volatile Organic Compounds																																							
1,1-Dichloroethane	75-34-3	ug/L	2.8	2.8	NE	NE	1.6		1		U	1		U	1		U	1		U	1		U	1	0.92	J	1	0.93	J	1		U	1		U	1		U	1
1,2,3-Trimethylbenzene	526-73-8	ug/L	5.5	55	NE	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
1,2,4-Trimethylbenzene	95-63-6	ug/L	5.6	56	NE	5.7		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
1,2-Dichloroethane	107-06-2	ug/L	0.17	0.17	5	NE	0.5	J	1		U	1		U	1		U	1		U	1		U	1	1.4		1	1.4		1		U	1		U	1		U	1
1,3,5-Trimethylbenzene	108-67-8	ug/L	6	60	NE	6.1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
1,4-Dioxane	123-91-1	ug/L	0.46	0.46	NE	4.6	180		50																130		50	130		50							120		50
1,4-Dioxane	123-91-1	ug/L	0.46	0.46	NE	4.6				41		0.8	0.24	J	0.4	67		0.8	11		0.4	16		0.4							7		0.4	6.4		0.4			
4-Methyl-2-pentanone	108-10-1	ug/L	630	6300	NE	NE		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5
Acetone	67-64-1	ug/L	1400	14000	NE	NE		U	5		U	5	2.1	U	5		U	5		U	5		U	5	1.3	U	5		U	5	2.2	U	5	1.8	U	5		U	5
Benzene	71-43-2	ug/L	0.46	0.46	5	4.6	140		1	0.22	J	1		U	1	0.18	J	1		U	1		U	1	1.7		1	1.5		1	0.23	J	1	0.19	J	1	0.12	J	1
Chlorobenzene	108-90-7	ug/L	7.8	78	100	NE	4.2		1	7.1		1		U	1	3.7		1	2.6		1	2.5		1	8.6		1	9.2		1	8		1	8		1	2.9		1
Chloroethane	75-00-3	ug/L	2100	21000	NE	NE	0.44	J	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Chloroform	67-66-3	ug/L	0.22	0.22	80.0	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Chloromethane	74-87-3	ug/L	19	190	NE	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
cis-1,2-Dichloroethene	156-59-2	ug/L	3.6	36	70.0	NE	0.59	J	1		U	1		U	1		U	1		U	1		U	1	0.62	J	1	0.52	J	1		U	1		U	1		U	1
Cyclohexane	110-82-7	ug/L	1300	13000	NE	NE	0.31	J	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Dichlorofluoromethane	75-43-4	ug/L	NE	NE	NE	NE	14		1	0.43	J	1		U	1	0.73	J	1		U	1		U	1	8.4		1	7.5		1		U	1		U	1		U	1
Diethyl Ether	60-29-7	ug/L	390	3900	NE	NE	3.2		1	4		1		U	1	0.72	J	1	4.5		1	5.1		1	4.5		1	4.2		1	12		1	13		1	9.1		1
Ethylbenzene	100-41-4	ug/L	1.5	1.5	700	15	13		1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Indane	496-11-7	ug/L	NE	NE	NE	NE	9		1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Isopropylbenzene	98-82-8	ug/L	45	450	NE	NE	9.2		1		U	1		U	1		U	1		U	1		U	1	0.46	J	1	0.4	J	1		U	1		U	1		U	1
Methyl Cyclohexane	108-87-2	ug/L	NE	NE	NE	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Methyl tert-Butyl Ether	1634-04-4	ug/L	14	14	NE	NE	0.36	J	1	3.1		1		U	1	0.94	J	1	0.46	J	1	0.43	J	1	0.91	J	1	1		1	0.26	J	1	0.27	J	1	0.39	J	1
Methylene Chloride	75-09-2	ug/L	11	11	5.00	NE		U	1	0.29	J	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
n-Propylbenzene	103-65-1	ug/L	66	660	NE	NE	9.6		1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Styrene	100-42-5	ug/L	120	1200	100	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Tetrachloroethene	127-18-4	ug/L	4.1	11	5	NE	0.24	J	1	0.33	J	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Tetrahydrofuran	109-99-9	ug/L	340	3400	NE	NE		U	2		U	2		U	2		U	2	0.65	J	2	0.51	J	2	12		2	12		2		U	2		U	2		U	2
Toluene	108-88-3	ug/L	110	1100	1000	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
trans-1,2-Dichloroethene	156-60-5	ug/L	36	360	100	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Trichloroethene	79-01-6	ug/L	0.28	0.49	5.00	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1	0.24	J	1
Vinyl Chloride	75-01-4	ug/L	0.019	0.019	2.00	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Xylenes, Total	1330-20-7	ug/L	19	190	10000	21		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2
Semivolatile Organic Compounds																																							
1,2,4-Trichlorobenzene	120-82-1	ug/L	0.4	1.2	70	NE		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2
1,2-Dichlorobenzene	95-50-1	ug/L	30	300	600	NE	1.4	J+	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
1,3-Dichlorobenzene	541-73-1	ug/L	NE	NE	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
1,4-Dichlorobenzene	106-46-7	ug/L	0.48	0.48	75	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
2,4-Dichlorophenol	120-83-2	ug/L	4.6	46	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
2,4-Dimethylphenol	105-67-9	ug/L	36	360	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
2-Chlorophenol	95-57-8	ug/L	9.1	91	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
2-Methylnaphthalene	91-57-6	ug/L	3.6	36	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
2-Methylphenol	95-48-7	ug/L	93	930	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
4-Methylphenol	106-44-5	ug/L	190	1900	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
Benzo[a]anthracene	56-55-3	ug/L	0.03	0.03	NE	NE		U	0.05		U	0.05		U	0.05		U	0.05		U	0.05		U	0.05		U	0.051	0.017	J	0.05		U	0.05		U	0.05		U	0.05
Benzo[b]fluoranthene	205-99-2	ug/L	0.25	0.25	NE	NE		U	0.05		U	0.05		U	0.05		U	0.05		U	0.05		U	0.05		U	0.051		U	0.05		U	0.05		U	0.05		U	0.05
Bis(2-chloroethyl) Ether	111-44-4	ug/L	0.014	0.014	NE	0.14	81	J+	1							11	J+	1							24		1	28		1									
Bis(2-chloroethyl) Ether	111-44-4	ug/L	0.014	0.014	NE	0.14				6.6		0.03		U	0.03				1		0.03	0.98		0.03							0.42		0.03	0.42		0.03	0.24		0.03
Bis(2-ethylhexyl) Phthalate	117-81-7	ug/L	5.6	5.6	6.00	NE		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2
Bisphenol A	80-05-7	ug/L	77	770	NE	NE	37		10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
Butylbenzyl Phthalate	85-68-7	ug/L	16	16	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
Diethyl Phthalate	84-66-2	ug/L	1500	15000	NE	NE	1.2	J+	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
Di-n-Butyl Phthalate	84-74-2	ug/L	90	900	NE	NE	5.3	J+	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
Diphenyl Ether	101-84-8	ug/L	NE	NE	NE	NE	2.5	J+	10	3.1	J	10		U	10		U	10		U	10		U	10		U	10	1.4	J	10		U	10		U	10		U	10
Hexachlorobenzene	118-74-1	ug/L	0.0098	0.0098	1	NE		U	0.02		U	0.02		U	0.02		U	0.02		U	0.02		U	0.02		U	0.02		U	0.02		U	0.02		U	0.02		U	0.02
N,N-Dimethylaniline	121-69-7	ug/L	2.5	2.5	NE	25	8.5	J+	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Naphthalene	91-20-3	ug/L	0.17	0.17	NE	0.63		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
N-Methylaniline	100-61-8	ug/L	NE	38	NE	NE	4.4	J	5		U	5		U	5		U	5		U	5		U	5	0.72	J	5.1		U	5		U	5		U	5		U	5
Phenol	108-95-2	ug/L	580	5800	NE	NE	0.57	J	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
Total Metals																																							
Aluminum	7429-90-5	ug/L	2000	20000	NE	NE	115		50	42.6	J	50	47.1	J	50	173		50		U	50		U	50		U	50		U	50	47.4	J	50	67		50		U	50
Antimony	7440-36-0	ug/L	0.78	7.8	6.00	NE		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5
Arsenic	7440-38-2	ug/L	0.052	0.052	10.0	0.52	6.3		2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5
Barium	7440-39-3	ug/L	380	3800	2000	NE	413		5	152		5	123		5	81.7		5	116		5	115		5	98.3		5	111		5	166		5	160		5	223		5
Beryllium	7440-41-7	ug/L	2.5	25	4.00	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Calcium	7440-70-2	ug/L	NE	NE	NE	NE	19700		250	22800		250	13500		250	12400		250	26200		250	25900		250	19300		250	22100		250	33400		250	32800		250	22600		250
Chromium	7440-47-3	ug/L	NE	NE	100	NE	4	J	5	8.2		5	30.6		5	12.7		5		U	5	3.3	U	5		U	5		U	5	3.4	J	5	4.7	J	5		U	5
Cobalt	7440-48-4	ug/L	0.6	6	NE	6	32.2		5	13.4		5		U	5		U	5	11.5		5	9		5	14.2		5	13.5		5	35		5	34.9		5	18.6		5
Copper	7440-50-8	ug/L	80	800	1300	NE		U	5		U	5	11.1		5	4.5	J	5		U	5		U	5		U	5	3.5	U	5		U	5	3.3	J	5		U	5
Iron	7439-89-6	ug/L	1400	14000	NE	13939	25200		150	3530		150	258		150	617		150	3450		150	7740		150	2120		150	2670		150	15800		150	15600		150	4540		150
Lead	7439-92-1	ug/L	15	15	15.0	NE		U	1.5		U	1.5		U	1.5		U	1.5		U	1.5		U	1.5		U	1.5		U	1.5		UJ	1.5	5.2	J	1.5		U	1.5
Magnesium	7439-95-4	ug/L	NE	NE	NE	NE	5730		250	11800		250	7970		250	5070		250	12000		250	11900		250	7900		250	9130		250	15300		250	15000		250	9900		250
Manganese	7439-96-5	ug/L	43	430	NE	260	5410		10	1100		10	40.4		10	12.3		10	1430		10	1210		10	982		10	865		10	3760		10	3670		10	1790		10
Nickel	7440-02-0	ug/L	39	390	NE	NE	6.5		5	10		5	25.8		5	16.9		5	5.8		5	5.8		5	13		5	16		5	8.2		5	8.7		5	5.4		5
Potassium	7440-09-7	ug/L	NE	NE	NE	NE	3230		250	5250		250	1810		250	2250		250	3820		250	3900		250	2180		250	2460		250	10900		250	10700		250	8620		250
Selenium	7782-49-2	ug/L	10	100	50.0	NE		U	2.5		U	2.5	1.7	J-	2.5		U	2.5		UJ	2.5		UJ	2.5		UJ	2.5		UJ	2.5		U	2.5		U	2.5		U	2.5
Sodium	7440-23-5	ug/L	NE	NE	NE	NE	23900		250	23300		250	30200		250	17500		250	25600		250	26800		250	18600		250	22700		250	32000		250	31400		250	25300		250
Thallium	7440-28-0	ug/L	0.02	0.2	2.00	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Vanadium	7440-62-2	ug/L	8.6	86	NE	NE		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5
Zinc	7440-66-6	ug/L	600	6000	NE	NE		U	20		U	20	47.3		20	56.6		20		U	20		U	20		U	20	17.6	J	20	26.8		20	33.7		20		U	20
Mercury	7439-97-6	ug/L	0.063	0.63	2.00	NE		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2
Dissolved Metals																																							
Iron	7439-89-6	ug/L	1400	14000	NE	13939	26300		150	3710		150		U	150	213		150	3250		150	6190		150	1840		150	804		150	15900		150	15600		150	4470		150
Manganese	7439-96-5	ug/L	43	430	NE	260	5480		15	1120		15	39.9		15	12.7	J	15	1338		15	1080		15	930		15	733		15	3820		15	3790		15	1970		15
Wet Chemistry																																							
Ammonia	7664-41-7	mg/L	NE	NE	NE	NE	0.11		0.1	1.2		0.1	0.089	J	0.1	0.13		0.1	1.1		0.1	1.3		0.1	0.18		0.1	0.18		0.1	11.1		1	9.7		1	6.2		0.5

GOLDER

Appendix B-1
Summary of Detected Compounds - April 2018 Groundwater
Delaware Sand & Gravel Superfund Site
New Castle County, Delaware

							NCC UPA Monitoring Wells and P-6 Vicinity																													
						Sample ID	MW-18			MW-26N			MW-26N			MW-28			MW-29			MW-31			MW-34			MW-40			P-4_UPA			P-5L		
						Sample Date	4/6/2018			4/4/2018			4/4/2018			4/6/2018			4/3/2018			4/4/2018			4/6/2018			4/4/2018			4/6/2018			4/6/2018		
						N=Normal, FD=Field Duplicate	N			FD			N			N			N			N			N			N			N			N		
Parameter	CAS	Unit	RSL HQ=0.1	RSL HQ=1.0	MCL	FRG	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL
Volatile Organic Compounds																																				
1,1-Dichloroethane	75-34-3	ug/L	2.8	2.8	NE	NE		U	1	0.52	J	1	0.44	J	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
1,2,3-Trimethylbenzene	526-73-8	ug/L	5.5	55	NE	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
1,2,4-Trimethylbenzene	95-63-6	ug/L	5.6	56	NE	5.7		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
1,2-Dichloroethane	107-06-2	ug/L	0.17	0.17	5	NE		U	1	1.4		1	1.1		1		U	1		U	1		U	1		U	1		U	1	1.9		1		U	1
1,3,5-Trimethylbenzene	108-67-8	ug/L	6	60	NE	6.1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
1,4-Dioxane	123-91-1	ug/L	0.46	0.46	NE	4.6				110		50	100		50																					
1,4-Dioxane	123-91-1	ug/L	0.46	0.46	NE	4.6	13		0.4							5.4		0.4	1.5		0.4	0.24	J	0.4	17		0.4	0.48		0.4	0.37	J	0.4	13		0.4
4-Methyl-2-pentanone	108-10-1	ug/L	630	6300	NE	NE		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5
Acetone	67-64-1	ug/L	1400	14000	NE	NE		U	5		U	5		U	5		U	5	2.8	U	5		U	5		U	5		U	5		U	5		U	5
Benzene	71-43-2	ug/L	0.46	0.46	5	4.6	0.16	J	1	0.53	J	1	0.5	J	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Chlorobenzene	108-90-7	ug/L	7.8	78	100	NE	8.6		1	15		1	13		1	0.43	J	1	3.8		1	0.59	J	1	6.7		1		U	1	0.47	J	1	1.4		1
Chloroethane	75-00-3	ug/L	2100	21000	NE	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Chloroform	67-66-3	ug/L	0.22	0.22	80.0	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1	0.86	J	1		U	1		U	1
Chloromethane	74-87-3	ug/L	19	190	NE	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
cis-1,2-Dichloroethene	156-59-2	ug/L	3.6	36	70.0	NE		U	1	0.59	J	1	0.52	J	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Cyclohexane	110-82-7	ug/L	1300	13000	NE	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Dichlorofluoromethane	75-43-4	ug/L	NE	NE	NE	NE		U	1	3.8		1	3.5		1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Diethyl Ether	60-29-7	ug/L	390	3900	NE	NE	13		1	3.1		1	2.5		1	3.2		1	6.3		1	0.66	J	1	8.2		1		U	1		U	1	2.8		1
Ethylbenzene	100-41-4	ug/L	1.5	1.5	700	15		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Indane	496-11-7	ug/L	NE	NE	NE	NE	0.22	J	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Isopropylbenzene	98-82-8	ug/L	45	450	NE	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Methyl Cyclohexane	108-87-2	ug/L	NE	NE	NE	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Methyl tert-Butyl Ether	1634-04-4	ug/L	14	14	NE	NE	0.67	J	1	2.7		1	2.3		1		U	1	0.16	J	1		U	1	0.66	J	1	0.21	J	1	0.98	J	1	1		1
Methylene Chloride	75-09-2	ug/L	11	11	5.00	NE		U	1	0.23	J	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
n-Propylbenzene	103-65-1	ug/L	66	660	NE	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Styrene	100-42-5	ug/L	120	1200	100	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Tetrachloroethene	127-18-4	ug/L	4.1	11	5	NE	0.33	J	1	0.68	J	1	0.58	J	1		U	1		U	1	2		1	0.42	J	1	5.8	J	1		U	1	1.3		1
Tetrahydrofuran	109-99-9	ug/L	340	3400	NE	NE		U	2	9.2		2	7		2		U	2	3.4	J+	2		U	2		U	2		U	2		U	2		U	2
Toluene	108-88-3	ug/L	110	1100	1000	NE		U	1		U	1		U	1		U	1	0.61	J	1		U	1		U	1		U	1		U	1		U	1
trans-1,2-Dichloroethene	156-60-5	ug/L	36	360	100	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Trichloroethene	79-01-6	ug/L	0.28	0.49	5.00	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Vinyl Chloride	75-01-4	ug/L	0.019	0.019	2.00	NE		U	1		U	1		U	1		U	1	0.64	J	1		U	1		U	1		U	1		U	1		U	1
Xylenes, Total	1330-20-7	ug/L	19	190	10000	21		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2
Semivolatile Organic Compounds																																				
1,2,4-Trichlorobenzene	120-82-1	ug/L	0.4	1.2	70	NE		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2
1,2-Dichlorobenzene	95-50-1	ug/L	30	300	600	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
1,3-Dichlorobenzene	541-73-1	ug/L	NE	NE	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
1,4-Dichlorobenzene	106-46-7	ug/L	0.48	0.48	75	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
2,4-Dichlorophenol	120-83-2	ug/L	4.6	46	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
2,4-Dimethylphenol	105-67-9	ug/L	36	360	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
2-Chlorophenol	95-57-8	ug/L	9.1	91	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
2-Methylnaphthalene	91-57-6	ug/L	3.6	36	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
2-Methylphenol	95-48-7	ug/L	93	930	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
4-Methylphenol	106-44-5	ug/L	190	1900	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
Benzo[a]anthracene	56-55-3	ug/L	0.03	0.03	NE	NE		U	0.05		U	0.05		U	0.05		U	0.05		U	0.05		U	0.05		U	0.05		U	0.051		U	0.05		U	0.05
Benzo[b]fluoranthene	205-99-2	ug/L	0.25	0.25	NE	NE		U	0.05		U	0.05		U	0.05		U	0.05		U	0.05		U	0.05		U	0.05		U	0.051		U	0.05		U	0.05
Bis(2-chloroethyl) Ether	111-44-4	ug/L	0.014	0.014	NE	0.14				16		1	16		1																					
Bis(2-chloroethyl) Ether	111-44-4	ug/L	0.014	0.014	NE	0.14	1.2	J+	0.03							0.14	J+	0.03		U	0.03		U	0.03	2	J+	0.03		U	0.031		U	0.03	0.85	J+	0.03
Bis(2-ethylhexyl) Phthalate	117-81-7	ug/L	5.6	5.6	6.00	NE		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2		U	2
Bisphenol A	80-05-7	ug/L	77	770	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
Butylbenzyl Phthalate	85-68-7	ug/L	16	16	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
Diethyl Phthalate	84-66-2	ug/L	1500	15000	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
Di-n-Butyl Phthalate	84-74-2	ug/L	90	900	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
Diphenyl Ether	101-84-8	ug/L	NE	NE	NE	NE		U	10	1.4	J	10	1.4	J	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
Hexachlorobenzene	118-74-1	ug/L	0.0098	0.0098	1	NE		U	0.02		U	0.02	0.023		0.02		U	0.02		U	0.02		U	0.02		U	0.02		U	0.02		U	0.02		U	0.02
N,N-Dimethylaniline	121-69-7	ug/L	2.5	2.5	NE	25		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Naphthalene	91-20-3	ug/L	0.17	0.17	NE	0.63		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
N-Methylaniline	100-61-8	ug/L	NE	38	NE	NE		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5.1		U	5		U	5
Phenol	108-95-2	ug/L	580	5800	NE	NE		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10		U	10
Total Metals																																				
Aluminum	7429-90-5	ug/L	2000	20000	NE	NE		U	50		U	50		U	50		U	50		U	50		U	50		U	50		U	50		U	50		U	50
Antimony	7440-36-0	ug/L	0.78	7.8	6.00	NE		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5
Arsenic	7440-38-2	ug/L	0.052	0.052	10.0	0.52	4.8		2.5		U	2.5		U	2.5	6.1		2.5	2	J	2.5		U	2.5	3		2.5		U	2.5		U	2.5		U	2.5
Barium	7440-39-3	ug/L	380	3800	2000	NE	395		5	61.6		5	59.7		5	184		5	178		5	157		5	339		5	99.4		5	232		5	153		5
Beryllium	7440-41-7	ug/L	2.5	25	4.00	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Calcium	7440-70-2	ug/L	NE	NE	NE	NE	27400		250	27500		250	26700		250	19900		250	10400		250	15500		250	23300		250	16500		250	66100		250	14000		250
Chromium	7440-47-3	ug/L	NE	NE	100	NE		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5
Cobalt	7440-48-4	ug/L	0.6	6	NE	6	35		5	18.4		5	19		5	45.1		5		U	5		U	5	20.2		5		U	5	201		5	30.8		5
Copper	7440-50-8	ug/L	80	800	1300	NE		U	5	5.6		5	5.2		5	4	J	5		U	5		U	5		U	5	4.4	U	5		U	5		U	5
Iron	7439-89-6	ug/L	1400	14000	NE	13939	42400		150		U	150		U	150	18400		150	34500		150	20500		150	19200		150		U	150	62800		150	2940		150
Lead	7439-92-1	ug/L	15	15	15.0	NE		U	1.5		U	1.5		U	1.5		U	1.5		U	1.5	1.4	J	1.5		U	1.5	4.7		1.5		U	1.5		U	1.5
Magnesium	7439-95-4	ug/L	NE	NE	NE	NE	13500		250	12400		250	12200		250	9110		250	5090		250	7760		250	11000		250	7260		250	32200		250	4780		250
Manganese	7439-96-5	ug/L	43	430	NE	260	3450		10	1830		10	1800		10	1320		10	611		10	80.6		10	2250		10		U	10	5200		10	1250		10
Nickel	7440-02-0	ug/L	39	390	NE	NE	4	J	5	9.7		5	9.4		5	7.6		5	3.5	J	5	6.2		5	3.9	J	5	3.5	U	5	7.5		5	5.5		5
Potassium	7440-09-7	ug/L	NE	NE	NE	NE	10400		250	4110		250	4060		250	5280		250	16600		250	5150		250	5540		250	2660		250	11900		250	3990		250
Selenium	7782-49-2	ug/L	10	100	50.0	NE		U	2.5		UJ	2.5		UJ	2.5		U	2.5		UJ	2.5	2.3	J-	2.5		U	2.5	2	J-	2.5		U	2.5		U	2.5
Sodium	7440-23-5	ug/L	NE	NE	NE	NE	30400		250	26100		250	25700		250	33600		250	23000		250	17700		250	23200		250	20500		250	783000		250	18200		250
Thallium	7440-28-0	ug/L	0.02	0.2	2.00	NE		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1		U	1
Vanadium	7440-62-2	ug/L	8.6	86	NE	NE		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5		U	5
Zinc	7440-66-6	ug/L	600	6000	NE	NE		U	20		U	20	16.7	J	20	38.9		20		U	20		U	20		U	20		U	20	28.7		20		U	20
Mercury	7439-97-6	ug/L	0.063	0.63	2.00	NE		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2		U	0.2
Dissolved Metals																																				
Iron	7439-89-6	ug/L	1400	14000	NE	13939	49700		150	97	J	150		U	150	20700		150	36500		150	803		150	19900		150		U	150	73200		150	2780		150
Manganese	7439-96-5	ug/L	43	430	NE	260	3540		15	1700	J	15		UJ	15	1350		15	634		15	52.3	J+	15	2310		15		U	15	5320		15	1260		15
Wet Chemistry																																				
Ammonia	7664-41-7	mg/L	NE	NE	NE	NE	6.8	J+	0.5	0.9		0.1	1		0.1	0.74	J+	0.1	24.9		2.5	2.6		0.25	0.91	J+	0.1	0.071	U	0.1	0.9	J+	0.1	0.77	J+	0.1

GOLDER

Appendix B-1
Summary of Detected Compounds - April 2018 Groundwater
Delaware Sand & Gravel Superfund Site
New Castle County, Delaware

							NCC UPA Monitoring Wells and P-6 Vicinity														
						Sample ID	P-5U			P-6_UPA			UPA-101-TZ			UPA-101-US			RW-10		
						Sample Date	4/9/2018			4/5/2018			4/5/2018			4/5/2018			4/3/2018		
						N=Normal, FD=Field Duplicate	N			N			N			N			N		
Parameter	CAS	Unit	RSL HQ=0.1	RSL HQ=1.0	MCL	FRG	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL
Volatile Organic Compounds																					
1,1-Dichloroethane	75-34-3	ug/L	2.8	2.8	NE	NE		U	1	0.41	J	1	1		1	7.8		1		U	1
1,2,3-Trimethylbenzene	526-73-8	ug/L	5.5	55	NE	NE		U	1	12		1	19		1	17		1		U	1
1,2,4-Trimethylbenzene	95-63-6	ug/L	5.6	56	NE	5.7		U	1	17		1	6		1	0.87	J	1		U	1
1,2-Dichloroethane	107-06-2	ug/L	0.17	0.17	5	NE		U	1		U	1		U	1	36		1		U	1
1,3,5-Trimethylbenzene	108-67-8	ug/L	6	60	NE	6.1		U	1	5.8		1	2.8		1		U	1		U	1
1,4-Dioxane	123-91-1	ug/L	0.46	0.46	NE	4.6				310		50	300		50	700		50			
1,4-Dioxane	123-91-1	ug/L	0.46	0.46	NE	4.6	2.6		0.4											U	0.4
4-Methyl-2-pentanone	108-10-1	ug/L	630	6300	NE	NE		U	5		U	5		U	5	3.4	J	5		U	5
Acetone	67-64-1	ug/L	1400	14000	NE	NE		U	5	6.3	U	6.3	6.1	U	6.1	6.6	U	6.6	1.9	U	5
Benzene	71-43-2	ug/L	0.46	0.46	5	4.6		U	1	140		1	240		1	430		1		U	1
Chlorobenzene	108-90-7	ug/L	7.8	78	100	NE		U	1	6		1	7.4		1	12		1		U	1
Chloroethane	75-00-3	ug/L	2100	21000	NE	NE		U	1		U	1	4		1		U	1		U	1
Chloroform	67-66-3	ug/L	0.22	0.22	80.0	NE		U	1		U	1		U	1		U	1		U	1
Chloromethane	74-87-3	ug/L	19	190	NE	NE		U	1		U	1		U	1		U	1		U	1
cis-1,2-Dichloroethene	156-59-2	ug/L	3.6	36	70.0	NE		U	1		U	1		U	1	22		1		U	1
Cyclohexane	110-82-7	ug/L	1300	13000	NE	NE		U	1	3.8		1	6.7		1	13		1		U	1
Dichlorofluoromethane	75-43-4	ug/L	NE	NE	NE	NE		U	1	15		1	26		1	100		1		U	1
Diethyl Ether	60-29-7	ug/L	390	3900	NE	NE		U	1	4.1		1	7.3		1	18		1		U	1
Ethylbenzene	100-41-4	ug/L	1.5	1.5	700	15		U	1	4.7		1	46		1	50		1		U	1
Indane	496-11-7	ug/L	NE	NE	NE	NE		U	1	6.4		1	9.4		1	4.9		1		U	1
Isopropylbenzene	98-82-8	ug/L	45	450	NE	NE		U	1	5.8		1	8.3		1	14		1		U	1
Methyl Cyclohexane	108-87-2	ug/L	NE	NE	NE	NE		U	1	3.8		1	4.8		1	9.9		1		U	1
Methyl tert-Butyl Ether	1634-04-4	ug/L	14	14	NE	NE		U	1		U	1		U	1		U	1		U	1
Methylene Chloride	75-09-2	ug/L	11	11	5.00	NE		U	1		U	1		U	1	7		1		U	1
n-Propylbenzene	103-65-1	ug/L	66	660	NE	NE		U	1	9.2		1	11		1	8.2		1		U	1
Styrene	100-42-5	ug/L	120	1200	100	NE		U	1		U	1		U	1		U	1		U	1
Tetrachloroethene	127-18-4	ug/L	4.1	11	5	NE		U	1		U	1		U	1	0.28	J	1	0.13	J	1
Tetrahydrofuran	109-99-9	ug/L	340	3400	NE	NE		U	2	76		2	130		2	330		2	2	J+	2
Toluene	108-88-3	ug/L	110	1100	1000	NE		U	1	0.93	J	1	2.4		1	0.51	J	1		U	1
trans-1,2-Dichloroethene	156-60-5	ug/L	36	360	100	NE		U	1		U	1		U	1	0.62	J	1		U	1
Trichloroethene	79-01-6	ug/L	0.28	0.49	5.00	NE		U	1		U	1		U	1	9.4		1		U	1
Vinyl Chloride	75-01-4	ug/L	0.019	0.019	2.00	NE		U	1		U	1		U	1	7.1		1		U	1
Xylenes, Total	1330-20-7	ug/L	19	190	10000	21		U	2	21		2	21		2	48		2		U	2
Semivolatile Organic Compounds																					
1,2,4-Trichlorobenzene	120-82-1	ug/L	0.4	1.2	70	NE		U	2		U	2		U	2		U	2		U	2
1,2-Dichlorobenzene	95-50-1	ug/L	30	300	600	NE		U	10		U	10	2.2	J+	10		U	10		U	10
1,3-Dichlorobenzene	541-73-1	ug/L	NE	NE	NE	NE		U	10		U	10		U	10		U	10		U	10
1,4-Dichlorobenzene	106-46-7	ug/L	0.48	0.48	75	NE		U	10		U	10		U	10		U	10		U	10
2,4-Dichlorophenol	120-83-2	ug/L	4.6	46	NE	NE		U	10		U	10		U	10		U	10		U	10
2,4-Dimethylphenol	105-67-9	ug/L	36	360	NE	NE		U	10		U	10	1.4	J	10		U	10		U	10
2-Chlorophenol	95-57-8	ug/L	9.1	91	NE	NE		U	10		U	10		U	10		U	10		U	10
2-Methylnaphthalene	91-57-6	ug/L	3.6	36	NE	NE		U	10		U	10		U	10		U	10		U	10
2-Methylphenol	95-48-7	ug/L	93	930	NE	NE		U	10		U	10		U	10		U	10		U	10
4-Methylphenol	106-44-5	ug/L	190	1900	NE	NE		U	10		U	10		U	10		U	10		U	10
Benzo[a]anthracene	56-55-3	ug/L	0.03	0.03	NE	NE		U	0.05		U	0.05		U	0.05		U	0.05		U	0.05
Benzo[b]fluoranthene	205-99-2	ug/L	0.25	0.25	NE	NE		U	0.05		U	0.05		U	0.05		U	0.05		U	0.05
Bis(2-chloroethyl) Ether	111-44-4	ug/L	0.014	0.014	NE	0.14				54		1	140	J+	1	110		1			
Bis(2-chloroethyl) Ether	111-44-4	ug/L	0.014	0.014	NE	0.14		U	0.03											U	0.03
Bis(2-ethylhexyl) Phthalate	117-81-7	ug/L	5.6	5.6	6.00	NE		U	2		U	2		U	2		U	2		U	2
Bisphenol A	80-05-7	ug/L	77	770	NE	NE		U	10	59		10	74		10	49		10		U	10
Butylbenzyl Phthalate	85-68-7	ug/L	16	16	NE	NE		U	10		U	10		U	10		U	10		U	10
Diethyl Phthalate	84-66-2	ug/L	1500	15000	NE	NE		U	10		U	10	1.8	J+	10		U	10		U	10
Di-n-Butyl Phthalate	84-74-2	ug/L	90	900	NE	NE		U	10		U	10		U	10		U	10		U	10
Diphenyl Ether	101-84-8	ug/L	NE	NE	NE	NE		U	10	1.4	J	10	2.6	J+	10		U	10		U	10
Hexachlorobenzene	118-74-1	ug/L	0.0098	0.0098	1	NE		U	0.02		U	0.02		U	0.02		U	0.02	0.014	J	0.02
N,N-Dimethylaniline	121-69-7	ug/L	2.5	2.5	NE	25		U	1	11		1		U	1	17		1		U	1
Naphthalene	91-20-3	ug/L	0.17	0.17	NE	0.63		U	10		U	10	2.4	J+	10		U	10		U	10
N-Methylaniline	100-61-8	ug/L	NE	38	NE	NE		U	5	7.5		5	11	J+	5	9.7		5		U	5
Phenol	108-95-2	ug/L	580	5800	NE	NE		U	10		U	10		U	10		U	10		U	10
Total Metals																					
Aluminum	7429-90-5	ug/L	2000	20000	NE	NE		U	50	156		50	180		50	34.3	J	50		U	50
Antimony	7440-36-0	ug/L	0.78	7.8	6.00	NE		U	2.5		U	2.5		U	2.5		U	2.5		U	2.5
Arsenic	7440-38-2	ug/L	0.052	0.052	10.0	0.52		U	2.5	5.7		2.5	4.2		2.5	5.8		2.5		U	2.5
Barium	7440-39-3	ug/L	380	3800	2000	NE	115		5	46.2		5	137		5	77		5	80.5		5
Beryllium	7440-41-7	ug/L	2.5	25	4.00	NE		U	1		U	1	2.4		1		U	1		U	1
Calcium	7440-70-2	ug/L	NE	NE	NE	NE	25100		250	31200		250	20000		250	33100		250	16300		250
Chromium	7440-47-3	ug/L	NE	NE	100	NE		U	5	3.1	J	5	6.9		5	4.1	J	5		U	5
Cobalt	7440-48-4	ug/L	0.6	6	NE	6	13.5		5	12.9		5	331		5	14.8		5	12		5
Copper	7440-50-8	ug/L	80	800	1300	NE		U	5		U	5	33.3		5		U	5		U	5
Iron	7439-89-6	ug/L	1400	14000	NE	13939		U	150	12900		150	9900		150	18100		150	36100		150
Lead	7439-92-1	ug/L	15	15	15.0	NE		U	1.5	1.1	J	1.5	4.1		1.5		U	1.5	1.5		1.5
Magnesium	7439-95-4	ug/L	NE	NE	NE	NE	11200		250	16200		250	7250		250	14100		250	9090		250
Manganese	7439-96-5	ug/L	43	430	NE	260	814		10	752		10	458		10	1290		10	1130		10
Nickel	7440-02-0	ug/L	39	390	NE	NE		U	5	13.8		5	281		5	14.7		5	4.3	J	5
Potassium	7440-09-7	ug/L	NE	NE	NE	NE	3060		250	1500		250	3120		250	984		250	3830		250
Selenium	7782-49-2	ug/L	10	100	50.0	NE		U	2.5		U	2.5		U	2.5		U	2.5		UJ	2.5
Sodium	7440-23-5	ug/L	NE	NE	NE	NE	28800		250	55400		250	52000		250	41300		250	23500		250
Thallium	7440-28-0	ug/L	0.02	0.2	2.00	NE		U	1		U	1		U	1		U	1		U	1
Vanadium	7440-62-2	ug/L	8.6	86	NE	NE		U	5		U	5	7.1		5		U	5		U	5
Zinc	7440-66-6	ug/L	600	6000	NE	NE		U	20		U	20	712		20		U	20	950		20
Mercury	7439-97-6	ug/L	0.063	0.63	2.00	NE	0.22		0.2		U	0.2		U	0.2		U	0.2		U	0.2
Dissolved Metals																					
Iron	7439-89-6	ug/L	1400	14000	NE	13939		U	150	13200		150	10300		150	19500		150	21900		150
Manganese	7439-96-5	ug/L	43	430	NE	260	821		15	752		15	478		15	1360		15	1080		15
Wet Chemistry																					
Ammonia	7664-41-7	mg/L	NE	NE	NE	NE	0.25		0.1	0.3		0.25	0.095	J	0.1	0.6		0.25	0.3		0.1

GOLDER

Summary of Detected Compounds - April 2018 Groundwater
Delaware Sand and Gravel
New Castle, Delaware

Notes:

Red highlight =	Concentration exceeds PRG
Orange highlight =	Concentration exceeds MCL
Yellow highlight =	Concentration exceeds RSL HQ=1.0
Green highlight =	Concentration exceeds RSL HQ=0.1

Abbreviations:
VOC = Volitale Organic Compounds
SVOC = Semi-Volitale Organic Compounds
PRG = Site Specific Preliminary Remediation Goals for Delaware Sand & Gravel Landfill, provided to the United States Environmental Protection Agency (USEPA) by the Trust in October 2017
MCL = USEPA Maximum Contaminant Level, updated June 2017
RSL = Regional Screening Level for tapwater, updated June 2017
ug/L = micrograms per liter
mg/L = milligrams per liter
Qual = interpreted qualifier
RDL = reporting detection limit
HQ = Hazard Quotient
NE = Standard does not exist

Qualifiers:
J - estimated result
J+ - The result is an estimated quantity, but the result may be biased high.
J- - The result is an estimated quantity, but the result may be biased low.
U - not detected above RDL
UJ - not detected above RDL, RDL is estimated

APPENDIX B-2

Summary of PRG/MC/RSL Screening - April 2018

Appendix B-2A
Summary of PRG Screening - April 2018
Delaware Sand & Gravel Superfund Site
New Castle County, Delaware

		VOCs												SVOCs				Metals							
	Compound	1,2,4-Trimethylbenzene		1,3,5-Trimethylbenzene		1,4-Dioxane		Benzene		Ethylbenzene		Xylenes, Total		Bis(2-chloroethyl) Ether		Naphthalene		Arsenic		Cobalt		Iron		Manganese	
	PRG	5.7		6.1		4.6		4.6		15		21		0.14		0.63		0.52		6		13939		260	
All results in ug/L	Depth (ft bgs)	Maximum Result	PRG Exceedance	Maximum Result	PRG Exceedance	Maximum Result	PRG Exceedance	Maximum Result	PRG Exceedance	Maximum Result	PRG Exceedance	Maximum Result	PRG Exceedance	Maximum Result	PRG Exceedance	Maximum Result	PRG Exceedance	Maximum Result	PRG Exceedance	Maximum Result	PRG Exceedance	Maximum Result	PRG Exceedance	Maximum Result	PRG Exceedance
DDA Extract Wells																									
B-4DR	NA	88	Yes	370	Yes	41	Yes	4.3	No	22	Yes	150	Yes	120	Yes	26	Yes	5.9	Yes	21.2	Yes	54300	Yes	2800	Yes
BG-1	NA	13	Yes	6.1	Yes	32	Yes	10	Yes	0.84	No	16	No	3.4	Yes	< 10	(ND)	3.5	Yes	39.1	Yes	52700	Yes	5890	Yes
C-19D	NA	0.94	No	0.95	No	250	Yes	24	Yes	< 1	(ND)	0.66	No	30	Yes	< 10	(ND)	< 2.5	(ND)	67.1	Yes	29500	Yes	6820	Yes
C-20D	NA	0.31	No	< 1	(ND)	180	Yes	1.8	No	< 1	(ND)	< 2	(ND)	14	Yes	< 10	(ND)	3.8	Yes	54.6	Yes	30000	Yes	9660	Yes
C-2D	NA	0.71	No	2.5	No	25	Yes	3.7	No	< 1	(ND)	0.48	No	2.1	Yes	< 10	(ND)	9.4	Yes	13	Yes	33400	Yes	2780	Yes
C-30	NA	95	Yes	230	Yes	40	Yes	39	Yes	50	Yes	260	Yes	130	Yes	16	Yes	10.9	Yes	54.6	Yes	65500	Yes	2830	Yes
C-4D	NA	5.2	No	15	Yes	72	Yes	17	Yes	0.72	No	14	No	36	Yes	3.6	Yes	3.4	Yes	17.8	Yes	28800	Yes	1590	Yes
DDA Monitoring Wells																									
B-2D	NA	< 1	(ND)	< 1	(ND)	300	Yes	9.9	Yes	< 1	(ND)	0.52	No	26	Yes	< 10	(ND)	3.6	Yes	23.6	Yes	26600	Yes	4940	Yes
B-3D	NA	1.6	No	0.37	No	480	Yes	11	Yes	< 1	(ND)	3	No	23	Yes	< 10	(ND)	3.5	Yes	18.9	Yes	8800	No	11200	Yes
C-1D	NA	20	Yes	3.3	No	130	Yes	160	Yes	1.2	No	30	Yes	9.2	Yes	5.9	Yes	14.3	Yes	7	Yes	28200	Yes	2730	Yes
C-22S	NA	< 1	(ND)	< 1	(ND)	39	Yes	< 1	(ND)	< 1	(ND)	< 2	(ND)	0.86	Yes	< 10	(ND)	< 2.5	(ND)	8.3	Yes	3850	No	231	No
C-3D	NA	< 1	(ND)	< 1	(ND)	7.3	Yes	0.21	No	< 1	(ND)	< 2	(ND)	0.37	Yes	< 10	(ND)	8.1	Yes	9.7	Yes	49900	Yes	5630	Yes
DGC-7C	NA	< 1	(ND)	< 1	(ND)	1.9	No	0.46	No	< 1	(ND)	< 2	(ND)	< 0.031	(ND)	< 10	(ND)	9.7	Yes	114	Yes	92500	Yes	1220	Yes
DGC-8C	NA	< 1	(ND)	< 1	(ND)	0.42	No	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 0.03	(ND)	< 10	(ND)	12.2	Yes	13.7	Yes	3340	No	343	Yes
GA-101	NA	910	Yes	240	Yes	3.5	No	4.8	Yes	560	Yes	1700	Yes	< 0.03	(ND)	34	Yes	2.9	Yes	< 5	(ND)	6170	No	305	Yes
MHW-1M	NA	0.38	No	< 1	(ND)	1200	Yes	76	Yes	< 1	(ND)	0.99	No	6.9	Yes	< 10	(ND)	5.9	Yes	19.8	Yes	13400	No	2340	Yes
MHW-1S	NA	0.49	No	< 1	(ND)	1300	Yes	16	Yes	0.58	No	2.5	No	31	Yes	< 10	(ND)	1.7	Yes	144	Yes	26200	Yes	27700	Yes
P-4D	NA	3	No	0.97	No	16	Yes	62	Yes	5.9	No	34	Yes	2.8	Yes	< 20	(ND)	7.9	Yes	23	Yes	25900	Yes	2150	Yes
PZ-11-EXT	NA	1600	Yes	420	Yes	41	Yes	240	Yes	24	Yes	3100	Yes	9.6	Yes	55	Yes	8.4	Yes	20.5	Yes	39700	Yes	145	No
PZ-4-INTR	NA	1.3	No	< 1	(ND)	2.7	No	6.2	Yes	5.6	No	8.9	No	0.11	No	< 10	(ND)	1.5	Yes	6.4	Yes	21800	Yes	2190	Yes
PZ-6N	NA	< 1	(ND)	< 1	(ND)	6.1	Yes	0.16	No	< 1	(ND)	< 2	(ND)	0.14	Yes	< 10	(ND)	< 2.5	(ND)	< 5	(ND)	199	No	42.5	No
PZ-6S	NA	430	Yes	150	Yes	2.5	No	2900	Yes	890	Yes	3700	Yes	< 0.03	(ND)	17	Yes	10	Yes	8	Yes	66400	Yes	1580	Yes
PW-1(U) Monitoring Wells - TZ																									
DDA-05	NA	32	Yes	6.6	Yes	45	Yes	53	Yes	1.1	No	16	No	8.9	Yes	2.6	Yes	8.6	Yes	< 5	(ND)	52700	Yes	1740	Yes
DDA-06	NA	0.95	No	< 1	(ND)	72	Yes	12	Yes	< 1	(ND)	< 2	(ND)	12	Yes	< 10	(ND)	1.5	Yes	< 5	(ND)	618	No	181	No
DDA-07-TZ	NA	2.1	No	0.68	No	47	Yes	17	Yes	1.5	No	2.4	No	7.1	Yes	< 10	(ND)	14.2	Yes	< 5	(ND)	47100	Yes	5750	Yes
DDA-08-TZ	NA	< 1	(ND)	< 1	(ND)	58	Yes	9.1	Yes	< 1	(ND)	< 2	(ND)	3.9	Yes	< 10	(ND)	< 2.5	(ND)	7	Yes	29400	Yes	475	Yes
DDA-09-TZ	NA	54	Yes	8.7	Yes	580	Yes	97	Yes	< 1	(ND)	9.7	No	63	Yes	< 10	(ND)	1.9	Yes	78	Yes	21500	Yes	1860	Yes
DDA-12-TZ	NA	250	Yes	60	Yes	1100	Yes	190	Yes	3.3	No	91	Yes	320	Yes	3.5	Yes	11.9	Yes	155	Yes	21300	Yes	4140	Yes
DDA-14-TZ	NA	13	Yes	2.3	No	170	Yes	180	Yes	14	No	17	No	17	Yes	< 10	(ND)	< 2.5	(ND)	< 5	(ND)	2600	No	96.1	No
DDA-15-TZ	NA	470	Yes	110	Yes	250	Yes	50	Yes	1.5	No	610	Yes	120	Yes	7.5	Yes	13.5	Yes	37.5	Yes	29600	Yes	927	Yes
DDA-16-TZ	NA	33	Yes	8	Yes	1400	Yes	730	Yes	64	Yes	77	Yes	250	Yes	< 20	(ND)	6.4	Yes	3.9	No	35400	Yes	697	Yes
PW-1(U) Monitoring Wells - US																									
DDA-01	NA	< 1	(ND)	< 1	(ND)	5.3	Yes	< 1	(ND)	< 1	(ND)	< 2	(ND)	0.53	Yes	< 10	(ND)	5.9	Yes	8.7	Yes	24400	Yes	1210	Yes
DDA-02	NA	< 1	(ND)	< 1	(ND)	6.7	Yes	< 1	(ND)	< 1	(ND)	< 2	(ND)	0.3	Yes	< 10	(ND)	< 2.5	(ND)	34.2	Yes	14500	Yes	1560	Yes
DDA-03	NA	< 1	(ND)	< 1	(ND)	0.63	No	< 1	(ND)	< 1	(ND)	< 2	(ND)	0.06	No	< 10	(ND)	< 2.5	(ND)	96.4	Yes	5480	No	5400	Yes
DDA-07-US	NA	< 1	(ND)	< 1	(ND)	10	Yes	< 1	(ND)	< 1	(ND)	< 2	(ND)	0.14	Yes	< 10	(ND)	< 2.5	(ND)	11.8	Yes	2890	No	1640	Yes
DDA-08-US	NA	< 1	(ND)	< 1	(ND)	0.52	No	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 0.03	(ND)	< 10	(ND)	7.4	Yes	96.2	Yes	15700	Yes	7520	Yes
DDA-10-US	NA	1	No	0.35	No	110	Yes	49	Yes	9	No	4.6	No	35	Yes	< 10	(ND)	8.8	Yes	119	Yes	59300	Yes	5000	Yes
DDA-11-LS	NA	< 1	(ND)	< 1	(ND)	0.51	No	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 0.03	(ND)	< 10	(ND)	< 2.5	(ND)	< 5	(ND)	< 150	(ND)	< 15	(ND)
DDA-11-US	NA	< 1	(ND)	< 1	(ND)	2.2	No	< 1	(ND)	< 1	(ND)	< 2	(ND)	0.08	No	< 10	(ND)	2.9	Yes	< 5	(ND)	44400	Yes	1180	Yes
DDA-12-US	NA	460	Yes	110	Yes	140	Yes	27	Yes	11	No	640	Yes	3	Yes	5.1	Yes	3.7	Yes	16.7	Yes	55100	Yes	2610	Yes
DDA-15-US	NA	< 1	(ND)	< 1	(ND)	1.4	No	< 1	(ND)	< 1	(ND)	< 2	(ND)	0.092	No	< 10	(ND)	6.8	Yes	35	Yes	38900	Yes	5690	Yes
DDA-16-US	NA	< 1	(ND)	< 1	(ND)	3	No	< 1	(ND)	< 1	(ND)	< 2	(ND)	0.072	No	< 10	(ND)	< 2.5	(ND)	3.7	No	8270	No	1140	Yes
DDA-17	NA	< 1	(ND)	< 1	(ND)	0.98	No	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 0.03	(ND)	< 10	(ND)	2.6	Yes	16	Yes	58400	Yes	696	Yes
DGC-2S	NA	< 1	(ND)	< 1	(ND)	2.6	No	< 1	(ND)	< 1	(ND)	< 2	(ND)	0.075	No	< 10	(ND)	2.7	Yes	18.2	Yes	1540	No	1440	Yes
DGC-5	NA	< 1	(ND)	< 1	(ND)	8	Yes	< 1	(ND)	< 1	(ND)	< 2	(ND)	0.67	Yes	< 10	(ND)	1.6	Yes	51.6	Yes	17800	Yes	1550	Yes
DGC-7S	NA	< 1	(ND)	< 1	(ND)	8.4	Yes	< 1	(ND)	< 1	(ND)	< 2	(ND)	0.69	Yes	< 10	(ND)	3.2	Yes	4.9	No	45000	Yes	1830	Yes
MHW-1D	NA	< 1	(ND)	< 1	(ND)	6.2	Yes	< 1	(ND)	< 1	(ND)	< 2	(ND)	0.12	No	< 10	(ND)	4.7	Yes	76.5	Yes	24800	Yes	3640	Yes
PW-1(U)	NA	10	Yes	2.4	No	73	Yes	11	Yes	2.8	No	15	No	8.4	Yes	< 10	(ND)	1.7	Yes	25.5	Yes	25500	Yes	2150	Yes
Downgradient UPA Wells																									
AWC-E1	132	< 1	(ND)	< 1	(ND)	11	Yes	< 1	(ND)	< 1	(ND)	< 2	(ND)	1	Yes	< 10	(ND)	< 2.5	(ND)	11.5	Yes	3450	No	1430	Yes
AWC-E1	156	< 1	(ND)	< 1	(ND)	16	Yes	< 1	(ND)	< 1	(ND)	< 2	(ND)	0.98	Yes	< 10	(ND)	< 2.5	(ND)	9	Yes	7740	No	1210	Yes
AWC-E2	140	< 1	(ND)	< 1	(ND)	130	Yes	1.7	No	< 1	(ND)	< 2	(ND)	24	Yes	< 10	(ND)	< 2.5	(ND)	14.2	Yes	2120	No	982	Yes
AWC-E2	165	< 1	(ND)	< 1	(ND)	130	Yes	1.5	No	< 1	(ND)	< 2	(ND)	28	Yes	< 10	(ND)	< 2.5	(ND)	13.5	Yes	2670	No	865	Yes
DGC-10D	NA	< 1	(ND)	< 1	(ND)	0.67	No	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 0.03	(ND)	< 10	(ND)	< 2.5	(ND)	6.1	Yes	412	No	118	No
DGC-10S	NA	< 1	(ND)	< 1	(ND)	2.1	No	< 1	(ND)	< 1	(ND)	< 2	(ND)	0.13	No	< 10	(ND)	< 2.5	(ND)	5.5	No	2490	No	133	No
DGC-11D	NA	< 1	(ND)	< 1	(ND)	0.55	No	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 0.03	(ND)	< 10	(ND)	< 2.5	(ND)	< 5	(ND)	< 150	(ND)	< 10	(ND)
DGC-11S	NA	< 1	(ND)	< 1	(ND)	< 0.4	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 0.03	(ND)	< 10	(ND)	2.1	Yes	< 5	(ND)	6030	No	105	No
RT-1-UP	NA	< 1	(ND)	< 1	(ND)	56	Yes	0.17	No	< 1	(ND)	< 2	(ND)	1.4	Yes	< 10	(ND)	< 2.5	(ND)	24	Yes	8650	No	254	No
UPA-01	NA	< 1	(ND)	< 1	(ND)	180	Yes	140	Yes	13	No	< 2	(ND)	81	Yes	< 10	(ND)	6.3	Yes	32.2	Yes	26300	Yes	3480	Yes
UPA-02D	NA	< 1	(ND)	< 1	(ND)	41	Yes	0.22	No	< 1	(ND)	< 2	(ND)	6.8	Yes	< 10	(ND)	< 2.5	(ND)	13.4	Yes	3710	No	1180	Yes
UPA-02S	NA	< 1	(ND)	< 1	(ND)	0.24	No	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 0.03	(ND)	< 10	(ND)	< 2.5	(ND)	< 5	(ND)	258	No	40.4	No
UPA-03D	NA	< 1	(ND)	< 1	(ND)	67	Yes	0.18	No	< 1	(ND)	< 2	(ND)	11	Yes	< 10	(ND)	< 2.5	(ND)	< 5	(ND)	617	No	12.7	No
NCC UPA Monitoring Wells																									
BW-1	NA	< 1	(ND)	< 1	(ND)	7	Yes	0.23	No	< 1	(ND)	< 2	(ND)	0.42	Yes	< 10	(ND)	< 2.5	(ND)	35	Yes	15900	Yes	3820	Yes
BW-2	NA	< 1	(ND)	< 1	(ND)	120	Yes	0.12	No	< 1	(ND)	< 2	(ND)	0.24	Yes	< 10	(ND)	< 2.5	(ND)	18.6	Yes	4540	No	1970	Yes
MW-18	NA	< 1	(ND)	< 1	(ND)	13	Yes	0.16	No	< 1	(ND)	< 2	(ND)	1.2	Yes	< 10	(ND)	4.8	Yes	35	Yes	49700	Yes	3560	Yes
MW-26N	NA	< 1	(ND)	< 1	(ND)	110	Yes	0.53	No	< 1	(ND)	< 2	(ND)	16	Yes	< 10	(ND)	< 2.5	(ND)	18.4	Yes	< 150	No	1830	Yes
MW-28	NA	< 1	(ND)	< 1	(ND)	5.4	Yes	< 1	(ND)	< 1	(ND)	< 2	(ND)	0.14	Yes	< 10	(ND)	6.1	Yes	45.1	Yes	20700	Yes	1350	Yes
MW-29	NA	< 1	(ND)	< 1	(ND)	1.5	No	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 0.03	(ND)	< 10	(ND)	2	Yes	< 5	(ND)	38500	Yes	634	Yes
MW-31	NA	< 1	(ND)	< 1	(ND)	0.24	No	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 0.03	(ND)	< 10	(ND)	< 2.5	(ND)	< 5	(ND)	20500	Yes	80.6	No
MW-34	NA	< 1	(ND)	< 1	(ND)	17	Yes	< 1	(ND)	< 1	(ND)	< 2	(ND)	2	Yes	< 10	(ND)	3	Yes	20.2	Yes	19900	Yes	2310	Yes
MW-40	NA	< 1	(ND)	< 1	(ND)	0.48	No	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 0.031	(ND)	< 10	(ND)	< 2.5	(ND)	< 5	(ND)	< 150	(ND)	< 15	(ND)
P-4_UPA	NA	< 1	(ND)	< 1	(ND)	0.37	No	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 0.03	(ND)	< 10	(ND)	< 2.5	(ND)	201	Yes	73200	Yes	3520	Yes
P-5L	NA	< 1	(ND)	< 1	(ND)	18	Yes	< 1	(ND)	< 1	(ND)	< 2	(ND)	0.95	Yes	< 10	(ND)	< 2.5	(ND)	30.8	Yes	2940	No	1260	Yes
P-5U	NA	< 1	(ND)	< 1	(ND)	2.6	No	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 0.03	(ND)	< 10	(ND)	< 2.5	(ND)	13.5	Yes	< 150	(ND)	621	Yes
P-6_UPA	NA	17	Yes	5.8	No	310	Yes	140	Yes	4.7	No	21	Yes	54	Yes	< 10	(ND)	5.7	Yes	12.9	Yes	13200	No	752	Yes
RW-10	NA	< 1	(ND)	< 1	(ND)	< 0.4	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 0.03	(ND)	< 10	(ND)	< 2.5	(ND)	12	Yes	36100	Yes	1130	Yes
UPA-101-TZ	NA	6	Yes	2.8	No	300	Yes	240	Yes	46	Yes	21	Yes	140	Yes	2.4	Yes	4.2	Yes	331	Yes	10300	No	478	Yes
UPA-101-US	NA	0.87	No	< 1	(ND)	700	Yes	490	Yes	60	Yes	48	Yes	110	Yes	< 10	(ND)	5.6	Yes	14.8	Yes	19500	Yes	1360	Yes

Prepared by: AMZ
Checked by: WE
Approved by: TAM
GOLDER

Appendix B-2B
Summary of MCL Screening - April 2018
Delaware Sand & Gravel Superfund Site
New Castle County, Delaware

		VOCs														VOCs						SVOCs		Metals					
	Compound	1,2-Dichloroethane		Benzene		Chlorobenzene		cis-1,2-Dichloroethene		Ethylbenzene		Methylene Chloride		Tetrachloroethene		Toluene		Trichloroethene		Vinyl Chloride		Bis(2-ethylhexyl) Phthalate		Arsenic		Chromium		Thallium	
	MCL	5		5		100		70.0		700		5.00		5		1000		5.00		2.00		6.00		10.0		100		2.00	
All results in ug/L	Depth (ft bgs)	Maximum Result	MCL Exceedance	Maximum Result	MCL Exceedance	Maximum Result	MCL Exceedance	Maximum Result	MCL Exceedance	Maximum Result	MCL Exceedance	Maximum Result	MCL Exceedance	Maximum Result	MCL Exceedance	Maximum Result	MCL Exceedance	Maximum Result	MCL Exceedance	Maximum Result	MCL Exceedance	Maximum Result	MCL Exceedance	Maximum Result	MCL Exceedance	Maximum Result	MCL Exceedance	Maximum Result	MCL Exceedance
DDA Extraction Wells																													
B-4DR	NA	< 10	(ND)	4.3	No	2600	Yes	< 10	(ND)	22	No	< 10	(ND)	< 10	(ND)	3.7	No	< 10	(ND)	1	No	< 10	(ND)	5.9	No	< 5	(ND)	< 1	(ND)
BG-1	NA	< 1	(ND)	10	Yes	1.3	No	0.65	No	0.84	No	< 1	(ND)	0.16	No	11	No	0.78	No	0.12	No	< 2	(ND)	3.5	No	< 5	(ND)	< 1	(ND)
C-19D	NA	< 1	(ND)	24	Yes	33	No	0.42	No	< 1	(ND)	0.28	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	< 5	(ND)	0.6	No
C-20D	NA	< 1	(ND)	1.8	No	10	No	0.36	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.45	No	< 1	(ND)	< 2.1	(ND)	3.8	No	< 5	(ND)	< 1	(ND)
C-2D	NA	< 1	(ND)	3.7	No	10	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	9.4	No	< 5	(ND)	< 1	(ND)
C-30	NA	< 5	(ND)	39	Yes	1900	Yes	4.8	No	50	No	< 5	(ND)	< 5	(ND)	380	No	< 5	(ND)	0.81	No	< 10	(ND)	10.9	Yes	< 5	(ND)	2	Yes
C-4D	NA	< 1	(ND)	17	Yes	33	No	0.33	No	0.72	No	< 1	(ND)	< 1	(ND)	0.83	No	< 1	(ND)	0.12	No	< 2.1	(ND)	3.4	No	< 5	(ND)	< 1	(ND)
DDA Monitoring Wells																													
B-2D	NA	< 1	(ND)	9.9	Yes	4.8	No	0.41	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.39	No	< 1	(ND)	1.7	No	3.6	No	< 5	(ND)	< 1	(ND)
B-3D	NA	69	Yes	11	Yes	3.6	No	1.2	No	< 1	(ND)	0.34	No	< 1	(ND)	< 1	(ND)	1.6	No	< 1	(ND)	7.8	Yes	3.5	No	< 5	(ND)	< 1	(ND)
C-1D	NA	< 1	(ND)	160	Yes	45	No	< 1	(ND)	1.2	No	< 1	(ND)	< 1	(ND)	0.39	No	< 1	(ND)	< 1	(ND)	< 2	(ND)	14.3	Yes	3.3	No	< 1	(ND)
C-22S	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	1.1	No	< 1	(ND)	1.5	No	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	451	Yes	< 1	(ND)
C-3D	NA	< 1	(ND)	0.21	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.16	No	< 1	(ND)	0.87	No	< 1	(ND)	< 2	(ND)	8.1	No	6.5	No	< 1	(ND)
DGC-7C	NA	< 1	(ND)	0.46	No	5.9	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2.1	(ND)	9.7	No	< 5	(ND)	< 1	(ND)
DGC-8C	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	12.2	Yes	3.5	No	< 1	(ND)
GA-101	NA	< 5	(ND)	4.8	No	7.2	No	5.2	No	560	No	< 5	(ND)	3.5	No	450	No	2.1	No	< 5	(ND)	< 2	(ND)	2.9	No	< 5	(ND)	< 1	(ND)
MHW-1M	NA	< 1	(ND)	76	Yes	5	No	0.46	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.34	No	0.46	No	< 2	(ND)	5.9	No	< 5	(ND)	< 1	(ND)
MHW-1S	NA	< 1	(ND)	16	Yes	13	No	0.33	No	0.58	No	< 1	(ND)	0.39	No	< 1	(ND)	0.54	No	< 1	(ND)	< 2	(ND)	1.7	No	77.9	No	< 1	(ND)
P-4D	NA	< 1	(ND)	62	Yes	7.5	No	0.87	No	5.9	No	0.24	No	0.27	No	29	No	1	No	< 1	(ND)	< 4	(ND)	7.9	No	< 5	(ND)	< 1	(ND)
PZ-11-EXT	NA	< 10	(ND)	240	Yes	63	No	< 10	(ND)	24	No	< 10	(ND)	< 10	(ND)	9.9	No	< 10	(ND)	< 10	(ND)	< 2	(ND)	8.4	No	< 5	(ND)	< 1	(ND)
PZ-4-INTR	NA	< 1	(ND)	6.2	Yes	1.6	No	0.36	No	5.6	No	< 1	(ND)	0.16	No	1.9	No	0.34	No	0.1	No	< 2	(ND)	1.5	No	< 5	(ND)	< 1	(ND)
PZ-6N	NA	< 1	(ND)	0.16	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.36	No	< 1	(ND)	0.25	No	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	< 5	(ND)	< 1	(ND)
PZ-6S	NA	< 50	(ND)	2900	Yes	220	Yes	1200	Yes	890	Yes	< 50	(ND)	< 50	(ND)	23000	Yes	< 50	(ND)	6.6	Yes	< 2	(ND)	10	Yes	< 5	(ND)	< 1	(ND)
PW-1(U) Monitoring Wells - TZ																													
DDA-05	NA	< 1	(ND)	53	Yes	25	No	< 1	(ND)	1.1	No	< 1	(ND)	< 1	(ND)	0.28	No	< 1	(ND)	< 1	(ND)	< 2	(ND)	8.6	No	< 5	(ND)	< 1	(ND)
DDA-06	NA	0.4	No	12	Yes	2.8	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	1.5	No	5.1	No	< 1	(ND)
DDA-07-TZ	NA	< 1	(ND)	17	Yes	48	No	< 1	(ND)	1.5	No	< 1	(ND)	< 1	(ND)	0.67	No	< 1	(ND)	< 1	(ND)	< 2.1	(ND)	14.2	Yes	< 5	(ND)	< 1	(ND)
DDA-08-TZ	NA	< 1	(ND)	9.1	Yes	0.31	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	4.4	No	< 1	(ND)
DDA-09-TZ	NA	4	No	97	Yes	5.1	No	1.2	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.3	No	1.4	No	0.28	No	< 2	(ND)	1.9	No	7.1	No	< 1	(ND)
DDA-12-TZ	NA	4.3	No	190	Yes	40	No	0.59	No	3.3	No	< 1	(ND)	< 1	(ND)	1.2	No	1.6	No	0.43	No	< 4	(ND)	11.9	Yes	< 5	(ND)	< 1	(ND)
DDA-14-TZ	NA	< 1	(ND)	180	Yes	2	No	< 1	(ND)	14	No	< 1	(ND)	< 1	(ND)	0.36	No	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	< 5	(ND)	< 1	(ND)
DDA-15-TZ	NA	< 2	(ND)	50	Yes	6.4	No	< 2	(ND)	1.5	No	< 2	(ND)	< 2	(ND)	1.2	No	< 2	(ND)	< 2	(ND)	< 2	(ND)	13.5	Yes	< 5	(ND)	< 1	(ND)
DDA-16-TZ	NA	< 5	(ND)	730	Yes	11	No	< 5	(ND)	64	No	< 5	(ND)	< 5	(ND)	< 5	(ND)	< 5	(ND)	< 5	(ND)	< 4	(ND)	6.4	No	3.6	No	< 1	(ND)
PW-1(U) Monitoring Wells - US																													
DDA-01	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	2.6	No	< 1	(ND)	0.28	No	< 1	(ND)	< 2	(ND)	5.9	No	8.5	No	< 1	(ND)
DDA-02	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	7.3	No	< 1	(ND)
DDA-03	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	< 5	(ND)	< 1	(ND)
DDA-07-US	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	< 5	(ND)	< 1	(ND)
DDA-08-US	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	1.8	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	7.4	No	< 5	(ND)	< 1	(ND)
DDA-10-US	NA	0.31	No	49	Yes	1.6	No	0.52	No	9	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.82	No	< 2	(ND)	8.8	No	3.1	No	< 1	(ND)
DDA-11-LS	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	4.3	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	< 5	(ND)	< 1	(ND)
DDA-11-US	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	2.9	No	5.6	No	< 1	(ND)
DDA-12-US	NA	< 2	(ND)	27	Yes	3.4	No	< 2	(ND)	11	No	< 2	(ND)	< 2	(ND)	0.93	No	< 2	(ND)	< 2	(ND)	< 2	(ND)	3.7	No	< 5	(ND)	< 1	(ND)
DDA-15-US	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	2.7	No	< 1	(ND)	1.2	No	< 1	(ND)	< 2	(ND)	6.8	No	< 5	(ND)	< 1	(ND)
DDA-16-US	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	< 5	(ND)	< 1	(ND)
DDA-17	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	2.6	No	< 5	(ND)	< 1	(ND)
DGC-2S	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	2.7	No	< 5	(ND)	< 1	(ND)
DGC-5	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	1.6	No	< 5	(ND)	< 1	(ND)
DGC-7S	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	3.2	No	< 5	(ND)	< 1	(ND)
MHW-1D	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	4.7	No	9.4	No	< 1	(ND)
PW-1(U)	NA	< 1	(ND)	11	Yes	1.8	No	< 1	(ND)	2.8	No	< 1	(ND)	2.6	No	< 1	(ND)	0.24	No	< 1	(ND)	< 2.1	(ND)	1.7	No	< 5	(ND)	< 1	(ND)
Downgradient UPA Wells																													
AWC-E1	132	< 1	(ND)	< 1	(ND)	2.6	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	< 5	(ND)	< 1	(ND)
AWC-E1	156	< 1	(ND)	< 1	(ND)	2.5	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	< 5	(ND)	< 1	(ND)
AWC-E2	140	1.4	No	1.7	No	8.6	No	0.62	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	< 5	(ND)	< 1	(ND)
AWC-E2	165	1.4	No	1.5	No	9.2	No	0.52	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	< 5	(ND)	< 1	(ND)
DGC-10D	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.25	No	< 1	(ND)	0.23	No	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	7.2	No	< 1	(ND)
DGC-10S	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.24	No	< 1	(ND)	< 1	(ND)	0.32	No	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	4.9	No	< 1	(ND)
DGC-11D	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	< 5	(ND)	< 1	(ND)
DGC-11S	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	2.1	No	< 5	(ND)	< 1	(ND)
RT-1-UP	NA	< 1	(ND)	0.17	No	1.6	No	< 1	(ND)	< 1	(ND)	0.22	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2.1	(ND)	< 2.5	(ND)	< 5	(ND)	< 1	(ND)
UPA-01	NA	0.5	No	140	Yes	4.2	No	0.59	No	13	No	< 1	(ND)	0.24	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	6.3	No	4	No	< 1	(ND)
UPA-02D	NA	< 1	(ND)	0.22	No	7.1	No	< 1	(ND)	< 1	(ND)	0.29	No	0.33	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	8.2	No	< 1	(ND)
UPA-02S	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	30.6	No	< 1	(ND)
UPA-03D	NA	< 1	(ND)	0.18	No	3.7	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	12.7	No	< 1	(ND)
NCC UPA Monitoring Wells																													
BW-1	NA	< 1	(ND)	0.23	No	8	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	4.7	No	< 1	(ND)
BW-2	NA	< 1	(ND)	0.12	No	2.9	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.24	No	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	< 5	(ND)	< 1	(ND)
MW-18	NA	< 1	(ND)	0.16	No	8.8	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.33	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	4.8	No	< 5	(ND)	< 1	(ND)
MW-26N	NA	1.4	No	0.53	No	15	No	0.59	No	< 1	(ND)	< 1	(ND)	0.68	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	< 5	(ND)	< 1	(ND)
MW-28	NA	< 1	(ND)	< 1	(ND)	0.43	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	6.1	No	< 5	(ND)	< 1	(ND)
MW-29	NA	< 1	(ND)	< 1	(ND)	3.8	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.61	No	< 1	(ND)	0.64	No	< 2	(ND)	2	No	< 5	(ND)	< 1	(ND)
MW-31	NA	< 1	(ND)	< 1	(ND)	0.59	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	2	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	< 5	(ND)	< 1	(ND)
MW-34	NA	< 1	(ND)	< 1	(ND)	6.7	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.42	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	3	No	< 5	(ND)	< 1	(ND)
MW-40	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	5.8	Yes	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	< 5	(ND)	< 1	(ND)
P-4_UPA	NA	1.9	No	< 1	(ND)	0.47	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	< 5	(ND)	< 1	(ND)
P-5L	NA	< 1	(ND)	< 1	(ND)	1.4	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	1.3	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	< 5	(ND)	< 1	(ND)
P-5U	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	< 5	(ND)	< 1	(ND)
P-6_UPA	NA	< 1	(ND)	140	Yes	6	No	< 1	(ND)	4.7	No	< 1	(ND)	< 1	(ND)	0.93	No	< 1	(ND)	< 1	(ND)	< 2	(ND)	5.7	No	3.1	No	< 1	(ND)
RW-10	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.13	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.5	(ND)	< 5	(ND)	< 1	(ND)
UPA-101-TZ	NA	< 1	(ND)	240	Yes	7.4	No	< 1	(ND)	46	No	< 1	(ND)	< 1	(ND)	2.4	No	< 1	(ND)	< 1	(ND)	< 2	(ND)	4.2	No	6.9	No	< 1	(ND)
UPA-101-US	NA	36	Yes	490	Yes	12	No	22	No	60	No	7	Yes	0.28	No	0.51	No	9.4	Yes	7.1	Yes	< 2	(ND)	5.6	No	4.1	No	< 1	(ND)

Prepared by: AMZ
Checked by: YS
Approved by: TAM
GOLDER

Appendix B-2C
Summary of RSL THQ=0.1 Screening - April 2018
Delaware Sand & Gravel Superfund Site
New Castle County, Delaware

		VOCs														VOCs													
Compound		1,1-Dichloroethane		1,2,3-Trimethylbenzene		1,2,4-Trimethylbenzene		1,2-Dichloroethane		1,3,5-Trimethylbenzene		1,4-Dioxane		Benzene		Chlorobenzene		Chloroform		cis-1,2-Dichloroethene		Ethylbenzene		Isopropylbenzene		n-Propylbenzene		Tetrachloroethene	
RSL (HQ = 0.1)		2.8		0.02		5.6		0.17		6		0.46		0.46		7.8		0.22		3.6		1.5		45		66		4.1	
All results in ug/L	Depth (ft bgs)	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance
DDA Extraction Wells																													
B-4DR	NA	< 10	(ND)	100	Yes	88	Yes	< 10	(ND)	370	Yes	41	Yes	4.3	Yes	2600	Yes	< 10	(ND)	< 10	(ND)	22	Yes	10	No	8.1	No	< 10	(ND)
BG-1	NA	< 1	(ND)	7.9	Yes	13	Yes	< 1	(ND)	6.1	Yes	32	Yes	10	Yes	1.3	No	< 1	(ND)	0.65	No	0.84	No	3.9	No	4.4	No	0.16	No
C-19D	NA	0.91	No	1.9	Yes	0.94	No	< 1	(ND)	0.95	No	250	Yes	24	Yes	33	Yes	< 1	(ND)	0.42	No	< 1	(ND)	1.6	No	1.1	No	< 1	(ND)
C-20D	NA	< 1	(ND)	1.4	Yes	0.31	No	< 1	(ND)	< 1	(ND)	180	Yes	1.8	Yes	10	Yes	< 1	(ND)	0.36	No	< 1	(ND)	2.3	No	2.5	No	< 1	(ND)
C-2D	NA	< 1	(ND)	0.72	Yes	0.71	No	< 1	(ND)	2.5	No	25	Yes	3.7	Yes	10	Yes	< 1	(ND)	< 1	(ND)	< 1	(ND)	2	No	1.7	No	< 1	(ND)
C-30	NA	< 5	(ND)	77	Yes	95	Yes	< 5	(ND)	230	Yes	40	Yes	39	Yes	1900	Yes	< 5	(ND)	4.8	Yes	50	Yes	8.6	No	10	No	< 5	(ND)
C-4D	NA	0.67	No	47	Yes	5.2	No	< 1	(ND)	15	Yes	72	Yes	17	Yes	33	Yes	< 1	(ND)	0.33	No	0.72	No	43	No	44	No	< 1	(ND)
DDA Monitoring Wells																													
B-2D	NA	0.3	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	300	Yes	9.9	Yes	4.8	No	< 1	(ND)	0.41	No	< 1	(ND)	1.4	No	< 1	(ND)	< 1	(ND)
B-3D	NA	0.68	No	6.7	Yes	1.6	No	69	Yes	0.37	No	480	Yes	11	Yes	3.6	No	< 1	(ND)	1.2	No	< 1	(ND)	10	No	4.5	No	< 1	(ND)
C-1D	NA	0.54	No	4.4	Yes	20	Yes	< 1	(ND)	3.3	No	130	Yes	160	Yes	45	Yes	< 1	(ND)	< 1	(ND)	1.2	No	23	No	40	No	< 1	(ND)
C-22S	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	39	Yes	< 1	(ND)	< 1	(ND)	0.86	Yes	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	1.1	No
C-3D	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	7.3	Yes	0.21	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.16	No
DGC-7C	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	1.9	Yes	0.46	Yes	5.9	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
DGC-8C	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.42	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
GA-101	NA	< 5	(ND)	300	Yes	910	Yes	< 5	(ND)	240	Yes	3.5	Yes	4.8	Yes	7.2	No	< 5	(ND)	5.2	Yes	560	Yes	63	Yes	150	Yes	3.5	No
MHW-1M	NA	0.35	No	< 1	(ND)	0.38	No	< 1	(ND)	< 1	(ND)	1200	Yes	76	Yes	5	No	< 1	(ND)	0.46	No	< 1	(ND)	2.2	No	0.43	No	< 1	(ND)
MHW-1S	NA	0.72	No	< 1	(ND)	0.49	No	< 1	(ND)	< 1	(ND)	1300	Yes	16	Yes	13	Yes	< 1	(ND)	0.33	No	0.58	No	2.2	No	1.1	No	0.39	No
P-4D	NA	0.42	No	2.2	Yes	3	No	< 1	(ND)	0.97	No	16	Yes	62	Yes	7.5	No	< 1	(ND)	0.87	No	5.9	Yes	0.42	No	0.62	No	0.27	No
PZ-11-EXT	NA	< 10	(ND)	480	Yes	1600	Yes	< 10	(ND)	420	Yes	41	Yes	240	Yes	63	Yes	< 10	(ND)	< 10	(ND)	24	Yes	90	Yes	230	Yes	< 10	(ND)
PZ-4-INTR	NA	< 1	(ND)	0.76	Yes	1.3	No	< 1	(ND)	< 1	(ND)	2.7	Yes	6.2	Yes	1.6	No	< 1	(ND)	0.36	No	5.6	Yes	0.54	No	0.44	No	0.16	No
PZ-6N	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	6.1	Yes	0.16	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
PZ-6S	NA	14	Yes	170	Yes	430	Yes	< 50	(ND)	150	Yes	2.5	Yes	2900	Yes	220	Yes	< 50	(ND)	1200	Yes	890	Yes	23	No	64	No	< 50	(ND)
PW-1(U) Monitoring Wells - TZ																													
DDA-05	NA	0.49	No	10	Yes	32	Yes	< 1	(ND)	6.6	Yes	45	Yes	53	Yes	25	Yes	< 1	(ND)	< 1	(ND)	1.1	No	10	No	9.5	No	< 1	(ND)
DDA-06	NA	0.25	No	< 1	(ND)	0.95	No	0.4	Yes	< 1	(ND)	72	Yes	12	Yes	2.8	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	24	No	18	No	< 1	(ND)
DDA-07-TZ	NA	1.1	No	0.54	Yes	2.1	No	< 1	(ND)	0.68	No	47	Yes	17	Yes	48	Yes	< 1	(ND)	< 1	(ND)	1.5	Yes	3.3	No	1.8	No	< 1	(ND)
DDA-08-TZ	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	58	Yes	9.1	Yes	0.31	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
DDA-09-TZ	NA	0.73	No	3.7	Yes	54	Yes	4	Yes	8.7	Yes	580	Yes	97	Yes	5.1	No	< 1	(ND)	1.2	No	< 1	(ND)	18	No	17	No	< 1	(ND)
DDA-12-TZ	NA	2.1	No	59	Yes	250	Yes	4.3	Yes	60	Yes	1100	Yes	190	Yes	40	Yes	< 1	(ND)	0.59	No	3.3	Yes	35	No	63	No	< 1	(ND)
DDA-14-TZ	NA	0.31	No	2.9	Yes	13	Yes	< 1	(ND)	2.3	No	170	Yes	180	Yes	2	No	< 1	(ND)	< 1	(ND)	14	Yes	1.5	No	3.7	No	< 1	(ND)
DDA-15-TZ	NA	0.84	No	110	Yes	470	Yes	< 2	(ND)	110	Yes	250	Yes	50	Yes	6.4	No	< 2	(ND)	< 2	(ND)	1.5	Yes	44	No	78	Yes	< 2	(ND)
DDA-16-TZ	NA	< 5	(ND)	10	Yes	33	Yes	< 5	(ND)	8	Yes	1400	Yes	730	Yes	11	Yes	< 5	(ND)	< 5	(ND)	64	Yes	4.7	No	7.7	No	< 5	(ND)
PW-1(U) Monitoring Wells - US																													
DDA-01	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	5.3	Yes	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	2.6	No
DDA-02	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	6.7	Yes	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
DDA-03	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.63	Yes	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
DDA-07-US	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	10	Yes	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
DDA-08-US	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.52	Yes	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	1.8	No
DDA-10-US	NA	0.39	No	0.28	Yes	1	No	0.31	Yes	0.35	No	110	Yes	49	Yes	1.6	No	< 1	(ND)	0.52	No	9	Yes	3.6	No	1.8	No	< 1	(ND)
DDA-11-LS	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.51	Yes	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	4.3	Yes
DDA-11-US	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	2.2	Yes	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
DDA-12-US	NA	0.58	No	110	Yes	460	Yes	< 2	(ND)	110	Yes	140	Yes	27	Yes	3.4	No	< 2	(ND)	< 2	(ND)	11	Yes	38	No	73	Yes	< 2	(ND)
DDA-15-US	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	1.4	Yes	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	2.7	No
DDA-16-US	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	3	Yes	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
DDA-17	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.98	Yes	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
DGC-2S	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	2.6	Yes	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
DGC-5	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	8	Yes	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
DGC-7S	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	8.4	Yes	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
MHW-1D	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	6.2	Yes	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
PW-1(U)	NA	< 1	(ND)	2.5	Yes	10	Yes	< 1	(ND)	2.4	No	73	Yes	11	Yes	1.8	No	< 1	(ND)	< 1	(ND)	2.8	Yes	1.7	No	1.9	No	2.6	No
Downgradient UPA Wells																													
AWC-E1	132	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	11	Yes	< 1	(ND)	2.6	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
AWC-E1	156	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	16	Yes	< 1	(ND)	2.5	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
AWC-E2	140	0.92	No	< 1	(ND)	< 1	(ND)	1.4	Yes	< 1	(ND)	130	Yes	1.7	Yes	8.6	Yes	< 1	(ND)	0.62	No	< 1	(ND)	0.46	No	< 1	(ND)	< 1	(ND)
AWC-E2	165	0.93	No	< 1	(ND)	< 1	(ND)	1.4	Yes	< 1	(ND)	130	Yes	1.5	Yes	9.2	Yes	< 1	(ND)	0.52	No	< 1	(ND)	0.4	No	< 1	(ND)	< 1	(ND)
DGC-10D	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.67	Yes	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.25	No
DGC-10S	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	2.1	Yes	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
DGC-11D	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.55	Yes	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
DGC-11S	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 0.4	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
RT-1-UP	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	56	Yes	0.17	No	1.6	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
UPA-01	NA	1.6	No	< 1	(ND)	< 1	(ND)	0.5	Yes	< 1	(ND)	180	Yes	140	Yes	4.2	No	< 1	(ND)	0.59	No	13	Yes	9.2	No	9.6	No	0.24	No
UPA-02D	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	41	Yes	0.22	No	7.1	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.33	No
UPA-02S	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.24	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
UPA-03D	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	67	Yes	0.18	No	3.7	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
NCC UPA Monitoring Wells																													
BW-1	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	7	Yes	0.23	No	8	Yes	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
BW-2	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	120	Yes	0.12	No	2.9	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
MW-18	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	13	Yes	0.16	No	8.8	Yes	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.33	No
MW-26N	NA	0.52	No	< 1	(ND)	< 1	(ND)	1.4	Yes	< 1	(ND)	110	Yes	0.53	Yes	15	Yes	< 1	(ND)	0.59	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.68	No
MW-28	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	5.4	Yes	< 1	(ND)	0.43	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
MW-29	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	1.5	Yes	< 1	(ND)	3.8	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
MW-31	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.24	No	< 1	(ND)	0.59	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	2	No
MW-34	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	17	Yes	< 1	(ND)	6.7	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.42	No
MW-40	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.48	Yes	< 1	(ND)	< 1	(ND)	0.86	Yes	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	5.8	Yes
P-4_UPA	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	1.9	Yes	< 1	(ND)	0.37	No	< 1	(ND)	0.47	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
P-5L	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	18	Yes	< 1	(ND)	1.4	No	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	1.3	No
P-5U	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	2.6	Yes	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)
P-6_UPA	NA	0.41	No	12	Yes	17	Yes	< 1	(ND)	5.8	No	310	Yes	140	Yes	6	No	< 1	(ND)	< 1	(ND)	4.7	Yes	5.8	No	9.2	No	< 1	(ND)
RW-10	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 0.4	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.13	No
UPA-101-TZ	NA	1	No	19	Yes	6	Yes	< 1	(ND)	2.8	No	300	Yes	240	Yes	7.4	No	< 1	(ND)	< 1	(ND)	46	Yes	8.3	No	11	No	< 1	(ND)
UPA-101-US	NA	7.8	Yes	17	Yes	0.87	No	36	Yes	< 1	(ND)	700	Yes	490	Yes	12	Yes	< 1	(ND)	22	Yes	60	Yes	14	No	8.2	No	0.28	No

Prepared by: AMZ
Checked by: YS
Approved by: TAM
GOLDER

Appendix B-2C
Summary of RSL THQ=0.1 Screening - April 2018
Delaware Sand & Gravel Superfund Site
New Castle County, Delaware

		VOCs								SVOCs						SVOCs													
	Compound	Toluene		Trichloroethene		Vinyl Chloride		Xylenes, Total		1,2,4-Trichlorobenzene		1,4-Dichlorobenzene		2-Methylnaphthalene		Benzo[a]anthracene		Bis(2-chloroethyl) Ether		Bis(2-ethylhexyl) Phthalate		Bisphenol A		Hexachlorobenzene		N,N-Dimethylaniline		Naphthalene	
	RSL (HQ = 0.1)	110		0.28		0.019		19		0.4		0.48		3.6		0.03		0.014		5.6		77		0.0098		2.5		0.17	
All results in ug/L	Depth (ft bgs)	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance
DDA Extraction Wells																													
B-4DR	NA	3.7	No	< 10	(ND)	1	Yes	150	Yes	< 10	(ND)	71	Yes	< 50	(ND)	< 0.05	(ND)	120	Yes	< 10	(ND)	280	Yes	< 0.02	(ND)	10	Yes	26	Yes
BG-1	NA	11	No	0.78	Yes	0.12	Yes	16	No	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.051	(ND)	3.4	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
C-19D	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.66	No	< 2	(ND)	1.4	Yes	< 10	(ND)	< 0.051	(ND)	30	Yes	< 2	(ND)	52	No	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
C-20D	NA	< 1	(ND)	0.45	Yes	< 1	(ND)	< 2	(ND)	< 2.1	(ND)	< 10	(ND)	< 10	(ND)	< 0.052	(ND)	14	Yes	< 2.1	(ND)	20	No	< 0.021	(ND)	< 1	(ND)	< 10	(ND)
C-2D	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	0.48	No	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	2.1	Yes	< 2	(ND)	9.9	No	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
C-30	NA	380	Yes	< 5	(ND)	0.81	Yes	260	Yes	< 10	(ND)	34	Yes	< 52	(ND)	< 0.051	(ND)	130	Yes	< 10	(ND)	270	Yes	< 0.02	(ND)	8.2	Yes	16	Yes
C-4D	NA	0.83	No	< 1	(ND)	0.12	Yes	14	No	< 2.1	(ND)	4.9	Yes	< 10	(ND)	< 0.052	(ND)	36	Yes	< 2.1	(ND)	38	No	< 0.021	(ND)	3.6	Yes	3.6	Yes
DDA Monitoring Wells																													
B-2D	NA	< 1	(ND)	0.39	Yes	< 1	(ND)	0.52	No	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	26	Yes	1.7	No	70	No	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
B-3D	NA	< 1	(ND)	1.6	Yes	< 1	(ND)	3	No	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	23	Yes	7.8	Yes	20	No	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
C-1D	NA	0.39	No	< 1	(ND)	< 1	(ND)	30	Yes	< 2	(ND)	1.8	Yes	< 10	(ND)	< 0.05	(ND)	9.2	Yes	< 2	(ND)	100	Yes	< 0.02	(ND)	< 1	(ND)	5.9	Yes
C-22S	NA	< 1	(ND)	1.5	Yes	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	0.86	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
C-3D	NA	< 1	(ND)	0.87	Yes	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	0.37	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
DGC-7C	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.1	(ND)	< 10	(ND)	< 10	(ND)	< 0.052	(ND)	< 0.031	(ND)	< 2.1	(ND)	< 10	(ND)	< 0.021	(ND)	< 1	(ND)	< 10	(ND)
DGC-8C	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	< 0.03	(ND)	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
GA-101	NA	450	Yes	2.1	Yes	< 5	(ND)	1700	Yes	5.9	Yes	< 10	(ND)	3.5	No	< 0.05	(ND)	< 0.03	(ND)	< 2	(ND)	22	No	< 0.02	(ND)	< 1	(ND)	34	Yes
MHW-1M	NA	< 1	(ND)	0.34	Yes	0.46	Yes	0.99	No	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	6.9	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
MHW-1S	NA	< 1	(ND)	0.54	Yes	< 1	(ND)	2.5	No	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	31	Yes	< 2	(ND)	36	No	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
P-4D	NA	29	No	1	Yes	< 1	(ND)	34	Yes	< 4	(ND)	< 20	(ND)	< 20	(ND)	< 0.05	(ND)	2.8	Yes	< 4	(ND)	210	Yes	< 0.02	(ND)	< 2	(ND)	< 20	(ND)
PZ-11-EXT	NA	9.9	No	< 10	(ND)	< 10	(ND)	3100	Yes	< 2	(ND)	2.3	Yes	4	Yes	< 0.05	(ND)	9.6	Yes	< 2	(ND)	100	Yes	< 0.02	(ND)	< 1	(ND)	55	Yes
PZ-4-INTR	NA	1.9	No	0.34	Yes	0.1	Yes	8.9	No	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	0.11	Yes	< 2	(ND)	14	No	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
PZ-6N	NA	0.25	No	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	0.14	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
PZ-6S	NA	23000	Yes	< 50	(ND)	6.6	Yes	3700	Yes	1.9	Yes	< 10	(ND)	1.9	No	< 0.05	(ND)	< 0.03	(ND)	< 2	(ND)	66	No	< 0.02	(ND)	1.5	No	17	Yes
PW-1(U) Monitoring Wells - TZ																													
DDA-05	NA	0.28	No	< 1	(ND)	< 1	(ND)	16	No	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	8.9	Yes	< 2	(ND)	52	No	< 0.02	(ND)	< 1	(ND)	2.6	Yes
DDA-06	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	12	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
DDA-07-TZ	NA	0.67	No	< 1	(ND)	< 1	(ND)	2.4	No	< 2.1	(ND)	< 10	(ND)	< 10	(ND)	< 0.052	(ND)	7.1	Yes	< 2.1	(ND)	150	Yes	< 0.021	(ND)	< 1	(ND)	< 10	(ND)
DDA-08-TZ	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	3.9	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
DDA-09-TZ	NA	0.3	No	1.4	Yes	0.28	Yes	9.7	No	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.051	(ND)	63	Yes	< 2	(ND)	17	No	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
DDA-12-TZ	NA	1.2	No	1.6	Yes	0.43	Yes	91	Yes	< 4	(ND)	2.5	Yes	< 20	(ND)	< 0.05	(ND)	320	Yes	< 4	(ND)	52	No	< 0.02	(ND)	3.1	Yes	3.5	Yes
DDA-14-TZ	NA	0.36	No	< 1	(ND)	< 1	(ND)	17	No	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	17	Yes	< 2	(ND)	11	No	0.018	Yes	< 1	(ND)	< 10	(ND)
DDA-15-TZ	NA	1.2	No	< 2	(ND)	< 2	(ND)	610	Yes	< 2	(ND)	1.6	Yes	1.1	No	< 0.05	(ND)	120	Yes	< 2	(ND)	32	No	< 0.02	(ND)	8.5	Yes	7.5	Yes
DDA-16-TZ	NA	< 5	(ND)	< 5	(ND)	< 5	(ND)	77	Yes	< 4	(ND)	< 20	(ND)	< 20	(ND)	< 0.05	(ND)	250	Yes	< 4	(ND)	130	Yes	< 0.02	(ND)	< 2	(ND)	< 20	(ND)
PW-1(U) Monitoring Wells - US																													
DDA-01	NA	< 1	(ND)	0.28	Yes	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	0.53	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
DDA-02	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.051	(ND)	0.3	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
DDA-03	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	0.06	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
DDA-07-US	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	0.14	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
DDA-08-US	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.051	(ND)	< 0.03	(ND)	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
DDA-10-US	NA	< 1	(ND)	< 1	(ND)	0.82	Yes	4.6	No	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	35	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
DDA-11-LS	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	0.048	Yes	< 0.03	(ND)	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
DDA-11-US	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	0.08	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
DDA-12-US	NA	0.93	No	< 2	(ND)	< 2	(ND)	640	Yes	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	3	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	3.4	Yes	5.1	Yes
DDA-15-US	NA	< 1	(ND)	1.2	Yes	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	0.092	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
DDA-16-US	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	0.072	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
DDA-17	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	< 0.03	(ND)	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
DGC-2S	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	0.075	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
DGC-5	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	0.67	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
DGC-7S	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.051	(ND)	0.69	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
MHW-1D	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	0.12	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
PW-1(U)	NA	< 1	(ND)	0.24	No	< 1	(ND)	15	No	< 2.1	(ND)	< 10	(ND)	< 10	(ND)	< 0.052	(ND)	8.4	Yes	< 2.1	(ND)	< 10	(ND)	< 0.021	(ND)	< 1	(ND)	< 10	(ND)
Downgradient UPA Wells																													
AWC-E1	132	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	1	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
AWC-E1	156	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	0.98	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
AWC-E2	140	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.051	(ND)	24	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
AWC-E2	165	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	0.017	No	28	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
DGC-10D	NA	< 1	(ND)	0.23	No	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	< 0.03	(ND)	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
DGC-10S	NA	< 1	(ND)	0.32	Yes	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	0.13	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
DGC-11D	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	0.019	No	< 0.03	(ND)	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
DGC-11S	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	< 0.03	(ND)	< 2	(ND)	< 10	(ND)	0.024	Yes	< 1	(ND)	< 10	(ND)
RT-1-UP	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2.1	(ND)	< 10	(ND)	< 10	(ND)	< 0.052	(ND)	1.4	Yes	< 2.1	(ND)	< 10	(ND)	< 0.021	(ND)	< 1	(ND)	< 10	(ND)
UPA-01	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	81	Yes	< 2	(ND)	37	No	< 0.02	(ND)	8.5	Yes	< 10	(ND)
UPA-02D	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	6.8	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
UPA-02S	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	< 0.03	(ND)	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
UPA-03D	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	11	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
NCC UPA Monitoring Wells																													
BW-1	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	0.42	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
BW-2	NA	< 1	(ND)	0.24	No	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	0.24	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
MW-18	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	1.2	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
MW-26N	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	16	Yes	< 2	(ND)	< 10	(ND)	0.023	Yes	< 1	(ND)	< 10	(ND)
MW-28	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	0.14	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
MW-29	NA	0.61	No	< 1	(ND)	0.64	Yes	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	< 0.03	(ND)	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
MW-31	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	< 0.03	(ND)	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
MW-34	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	2	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
MW-40	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.051	(ND)	< 0.031	(ND)	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
P-4_UPA	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	< 0.03	(ND)	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
P-5L	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	0.95	Yes	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
P-5U	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	< 0.03	(ND)	< 2	(ND)	< 10	(ND)	< 0.02	(ND)	< 1	(ND)	< 10	(ND)
P-6_UPA	NA	0.93	No	< 1	(ND)	< 1	(ND)	21	Yes	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	54	Yes	< 2	(ND)	59	No	< 0.02	(ND)	11	Yes	< 10	(ND)
RW-10	NA	< 1	(ND)	< 1	(ND)	< 1	(ND)	< 2	(ND)	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	< 0.03	(ND)	< 2	(ND)	< 10	(ND)	0.014	Yes	< 1	(ND)	< 10	(ND)
UPA-101-TZ	NA	2.4	No	< 1	(ND)	< 1	(ND)	21	Yes	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	140	Yes	< 2	(ND)	74	No	< 0.02	(ND)	< 1	(ND)	2.4	Yes
UPA-101-US	NA	0.51	No	9.4	Yes	7.1	Yes	48	Yes	< 2	(ND)	< 10	(ND)	< 10	(ND)	< 0.05	(ND)	110	Yes	< 2	(ND)	49	No	< 0.02	(ND)	17	Yes	< 10	(ND)

Prepared by: AMZ
Checked by: YS
Approved by: TAM
GOLDER

Appendix B-2C
Summary of RSL THQ=0.1 Screening - April 2018
Delaware Sand & Gravel Superfund Site
New Castle County, Delaware

		Metals														Metals									
	Compound	Antimony		Arsenic		Barium		Chromium		Cobalt		Copper		Iron		Manganese		Mercury		Nickel		Thallium		Zinc	
	RSL (HQ = 0.1)	0.78		0.052		380		0.035		0.6		80		1400		43		0.063		39		0.02		600	
All results in ug/L	Depth (ft bgs)	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance	Maximum Result	RSL Exceedance
DDA Extraction Wells																									
B-4DR	NA	< 2.5	(ND)	5.9	Yes	112	No	< 5	(ND)	21.2	Yes	< 5	(ND)	54300	Yes	2800	Yes	< 0.2	(ND)	69.7	Yes	< 1	(ND)	< 20	(ND)
BG-1	NA	< 2.5	(ND)	3.5	Yes	472	Yes	< 5	(ND)	39.1	Yes	< 5	(ND)	52700	Yes	5890	Yes	< 0.2	(ND)	20.6	No	< 1	(ND)	21.9	No
C-19D	NA	< 2.5	(ND)	< 2.5	(ND)	129	No	< 5	(ND)	67.1	Yes	9.1	No	29500	Yes	6820	Yes	< 0.2	(ND)	15.2	No	0.6	Yes	< 20	(ND)
C-20D	NA	< 2.5	(ND)	3.8	Yes	293	No	< 5	(ND)	54.6	Yes	< 5	(ND)	30000	Yes	9660	Yes	< 0.2	(ND)	8.8	No	< 1	(ND)	< 20	(ND)
C-2D	NA	< 2.5	(ND)	9.4	Yes	175	No	< 5	(ND)	13	Yes	9.6	No	33400	Yes	2780	Yes	< 0.2	(ND)	3.1	No	< 1	(ND)	< 20	(ND)
C-30	NA	< 2.5	(ND)	10.9	Yes	145	No	< 5	(ND)	54.6	Yes	343	Yes	65500	Yes	2830	Yes	< 0.2	(ND)	57.6	Yes	2	Yes	33.1	No
C-4D	NA	< 2.5	(ND)	3.4	Yes	880	Yes	< 5	(ND)	17.8	Yes	8.5	No	28800	Yes	1590	Yes	< 0.2	(ND)	6.7	No	< 1	(ND)	< 20	(ND)
DDA Monitoring Wells																									
B-2D	NA	< 2.5	(ND)	3.6	Yes	260	No	< 5	(ND)	23.6	Yes	5.6	No	26600	Yes	4940	Yes	< 0.2	(ND)	11.6	No	< 1	(ND)	< 20	(ND)
B-3D	NA	< 2.5	(ND)	3.5	Yes	345	No	< 5	(ND)	18.9	Yes	10	No	8800	Yes	11200	Yes	< 0.2	(ND)	13.1	No	< 1	(ND)	< 20	(ND)
C-1D	NA	< 2.5	(ND)	14.3	Yes	80.9	No	3.3	Yes	7	Yes	4.6	No	28200	Yes	2730	Yes	< 0.2	(ND)	5.6	No	< 1	(ND)	< 20	(ND)
C-22S	NA	< 2.5	(ND)	< 2.5	(ND)	209	No	451	Yes	8.3	Yes	21.4	No	3850	Yes	231	Yes	< 0.2	(ND)	448	Yes	< 1	(ND)	70.2	No
C-3D	NA	< 2.5	(ND)	8.1	Yes	385	Yes	6.5	Yes	9.7	Yes	4	No	49900	Yes	5630	Yes	< 0.2	(ND)	5.5	No	< 1	(ND)	< 20	(ND)
DGC-7C	NA	< 2.5	(ND)	9.7	Yes	1140	Yes	< 5	(ND)	114	Yes	< 5	(ND)	92500	Yes	1220	Yes	< 0.2	(ND)	22.8	No	< 1	(ND)	< 20	(ND)
DGC-8C	NA	< 2.5	(ND)	12.2	Yes	107	No	3.5	Yes	13.7	Yes	4	No	3340	Yes	343	Yes	< 0.2	(ND)	6.6	No	< 1	(ND)	< 20	(ND)
GA-101	NA	< 2.5	(ND)	2.9	Yes	66.7	No	< 5	(ND)	< 5	(ND)	< 5	(ND)	6170	Yes	305	Yes	< 0.2	(ND)	< 5	(ND)	< 1	(ND)	< 20	(ND)
MHW-1M	NA	< 2.5	(ND)	5.9	Yes	254	No	< 5	(ND)	19.8	Yes	< 5	(ND)	13400	Yes	2340	Yes	< 0.2	(ND)	5.2	No	< 1	(ND)	< 20	(ND)
MHW-1S	NA	< 2.5	(ND)	1.7	Yes	210	No	77.9	Yes	144	Yes	4.6	No	26200	Yes	27700	Yes	< 0.2	(ND)	110	Yes	< 1	(ND)	53.5	No
P-4D	NA	< 2.5	(ND)	7.9	Yes	104	No	< 5	(ND)	23	Yes	< 5	(ND)	25900	Yes	2150	Yes	< 0.2	(ND)	8.1	No	< 1	(ND)	< 20	(ND)
PZ-11-EXT	NA	< 2.5	(ND)	8.4	Yes	168	No	< 5	(ND)	20.5	Yes	< 5	(ND)	39700	Yes	145	Yes	< 0.2	(ND)	6.8	No	< 1	(ND)	< 20	(ND)
PZ-4-INTR	NA	< 2.5	(ND)	1.5	Yes	85.2	No	< 5	(ND)	6.4	Yes	< 5	(ND)	21800	Yes	2190	Yes	< 0.2	(ND)	< 5	(ND)	< 1	(ND)	< 20	(ND)
PZ-6N	NA	1.8	Yes	< 2.5	(ND)	62.9	No	< 5	(ND)	< 5	(ND)	< 5	(ND)	199	No	42.5	No	< 0.2	(ND)	< 5	(ND)	< 1	(ND)	< 20	(ND)
PZ-6S	NA	< 2.5	(ND)	10	Yes	59	No	< 5	(ND)	8	Yes	3.8	No	66400	Yes	1580	Yes	< 0.2	(ND)	< 5	(ND)	< 1	(ND)	< 20	(ND)
PW-1(U) Monitoring Wells - TZ																									
DDA-05	NA	< 2.5	(ND)	8.6	Yes	224	No	< 5	(ND)	< 5	(ND)	< 5	(ND)	52700	Yes	1740	Yes	< 0.2	(ND)	< 5	(ND)	< 1	(ND)	< 20	(ND)
DDA-06	NA	< 2.5	(ND)	1.5	Yes	578	Yes	5.1	Yes	< 5	(ND)	< 5	(ND)	618	No	181	Yes	< 0.2	(ND)	9.1	No	< 1	(ND)	< 20	(ND)
DDA-07-TZ	NA	< 2.5	(ND)	14.2	Yes	74.7	No	< 5	(ND)	< 5	(ND)	< 5	(ND)	47100	Yes	5750	Yes	< 0.2	(ND)	4.1	No	< 1	(ND)	< 20	(ND)
DDA-08-TZ	NA	< 2.5	(ND)	< 2.5	(ND)	586	Yes	4.4	Yes	7	Yes	< 5	(ND)	29400	Yes	475	Yes	< 0.2	(ND)	3.7	No	< 1	(ND)	< 20	(ND)
DDA-09-TZ	NA	< 2.5	(ND)	1.9	Yes	611	Yes	7.1	Yes	78	Yes	< 5	(ND)	21500	Yes	1860	Yes	< 0.2	(ND)	13.3	No	< 1	(ND)	< 20	(ND)
DDA-12-TZ	NA	< 2.5	(ND)	11.9	Yes	616	Yes	< 5	(ND)	155	Yes	< 5	(ND)	21300	Yes	4140	Yes	< 0.2	(ND)	31.6	No	< 1	(ND)	< 20	(ND)
DDA-14-TZ	NA	< 2.5	(ND)	< 2.5	(ND)	102	No	< 5	(ND)	< 5	(ND)	< 5	(ND)	2600	Yes	96.1	Yes	< 0.2	(ND)	< 5	(ND)	< 1	(ND)	< 20	(ND)
DDA-15-TZ	NA	< 2.5	(ND)	13.5	Yes	619	Yes	< 5	(ND)	37.5	Yes	< 5	(ND)	29600	Yes	927	Yes	< 0.2	(ND)	10.6	No	< 1	(ND)	< 20	(ND)
DDA-16-TZ	NA	< 2.5	(ND)	6.4	Yes	136	No	3.6	Yes	3.9	Yes	< 5	(ND)	35400	Yes	697	Yes	< 0.2	(ND)	3.3	No	< 1	(ND)	< 20	(ND)
PW-1(U) Monitoring Wells - US																									
DDA-01	NA	< 2.5	(ND)	5.9	Yes	183	No	8.5	Yes	8.7	Yes	< 5	(ND)	24400	Yes	1210	Yes	< 0.2	(ND)	8.2	No	< 1	(ND)	41.9	No
DDA-02	NA	< 2.5	(ND)	< 2.5	(ND)	182	No	7.3	Yes	34.2	Yes	< 5	(ND)	14500	Yes	1560	Yes	< 0.2	(ND)	5.3	No	< 1	(ND)	< 20	(ND)
DDA-03	NA	< 2.5	(ND)	< 2.5	(ND)	314	No	< 5	(ND)	96.4	Yes	5.5	No	5480	Yes	5400	Yes	< 0.2	(ND)	5.9	No	< 1	(ND)	< 20	(ND)
DDA-07-US	NA	< 2.5	(ND)	< 2.5	(ND)	134	No	< 5	(ND)	11.8	Yes	5.2	No	2890	Yes	1640	Yes	< 0.2	(ND)	5.4	No	< 1	(ND)	16.6	No
DDA-08-US	NA	< 2.5	(ND)	7.4	Yes	263	No	< 5	(ND)	96.2	Yes	< 5	(ND)	15700	Yes	7520	Yes	< 0.2	(ND)	4.1	No	< 1	(ND)	30.1	No
DDA-10-US	NA	< 2.5	(ND)	8.8	Yes	808	Yes	3.1	Yes	119	Yes	< 5	(ND)	59300	Yes	5000	Yes	< 0.2	(ND)	4.5	No	< 1	(ND)	< 20	(ND)
DDA-11-LS	NA	< 2.5	(ND)	< 2.5	(ND)	82.8	No	< 5	(ND)	< 5	(ND)	< 5	(ND)	< 150	(ND)	< 15	(ND)	< 0.2	(ND)	5.8	No	< 1	(ND)	< 20	(ND)
DDA-11-US	NA	< 2.5	(ND)	2.9	Yes	123	No	5.6	Yes	< 5	(ND)	< 5	(ND)	44400	Yes	1180	Yes	< 0.2	(ND)	3.2	No	< 1	(ND)	< 20	(ND)
DDA-12-US	NA	< 2.5	(ND)	3.7	Yes	545	Yes	< 5	(ND)	16.7	Yes	< 5	(ND)	55100	Yes	2610	Yes	< 0.2	(ND)	6.4	No	< 1	(ND)	< 20	(ND)
DDA-15-US	NA	< 2.5	(ND)	6.8	Yes	467	Yes	< 5	(ND)	35	Yes	< 5	(ND)	38900	Yes	5690	Yes	< 0.2	(ND)	< 5	(ND)	< 1	(ND)	< 20	(ND)
DDA-16-US	NA	< 2.5	(ND)	< 2.5	(ND)	122	No	< 5	(ND)	3.7	Yes	< 5	(ND)	8270	Yes	1140	Yes	< 0.2	(ND)	< 5	(ND)	< 1	(ND)	22.8	No
DDA-17	NA	< 2.5	(ND)	2.6	Yes	1480	Yes	< 5	(ND)	16	Yes	< 5	(ND)	58400	Yes	696	Yes	< 0.2	(ND)	< 5	(ND)	< 1	(ND)	< 20	(ND)
DGC-2S	NA	< 2.5	(ND)	2.7	Yes	102	No	< 5	(ND)	18.2	Yes	< 5	(ND)	1540	Yes	1440	Yes	< 0.2	(ND)	4.3	No	< 1	(ND)	< 20	(ND)
DGC-5	NA	< 2.5	(ND)	1.6	Yes	219	No	< 5	(ND)	51.6	Yes	< 5	(ND)	17800	Yes	1550	Yes	< 0.2	(ND)	25	No	< 1	(ND)	< 20	(ND)
DGC-7S	NA	< 2.5	(ND)	3.2	Yes	158	No	< 5	(ND)	4.9	Yes	< 5	(ND)	45000	Yes	1830	Yes	< 0.2	(ND)	< 5	(ND)	< 1	(ND)	< 20	(ND)
MHW-1D	NA	< 2.5	(ND)	4.7	Yes	249	No	9.4	Yes	76.5	Yes	< 5	(ND)	24800	Yes	3640	Yes	< 0.2	(ND)	15.3	No	< 1	(ND)	23.3	No
PW-1(U)	NA	< 2.5	(ND)	1.7	Yes	365	No	< 5	(ND)	25.5	Yes	< 5	(ND)	25500	Yes	2150	Yes	< 0.2	(ND)	< 5	(ND)	< 1	(ND)	38.2	No
Downgradient UPA Wells																									
AWC-E1	132	< 2.5	(ND)	< 2.5	(ND)	116	No	< 5	(ND)	11.5	Yes	< 5	(ND)	3450	Yes	1430	Yes	< 0.2	(ND)	5.8	No	< 1	(ND)	< 20	(ND)
AWC-E1	156	< 2.5	(ND)	< 2.5	(ND)	115	No	< 5	(ND)	9	Yes	< 5	(ND)	7740	Yes	1210	Yes	< 0.2	(ND)	5.8	No	< 1	(ND)	< 20	(ND)
AWC-E2	140	< 2.5	(ND)	< 2.5	(ND)	98.3	No	< 5	(ND)	14.2	Yes	< 5	(ND)	2120	Yes	982	Yes	< 0.2	(ND)	13	No	< 1	(ND)	< 20	(ND)
AWC-E2	165	< 2.5	(ND)	< 2.5	(ND)	111	No	< 5	(ND)	13.5	Yes	< 5	(ND)	2670	Yes	865	Yes	< 0.2	(ND)	16	No	< 1	(ND)	17.6	No
DGC-10D	NA	< 2.5	(ND)	< 2.5	(ND)	71.8	No	7.2	Yes	6.1	Yes	10.9	No	412	No	118	Yes	< 0.2	(ND)	12	No	< 1	(ND)	29.9	No
DGC-10S	NA	< 2.5	(ND)	< 2.5	(ND)	61.8	No	4.9	Yes	5.5	Yes	< 5	(ND)	2490	Yes	133	Yes	< 0.2	(ND)	8.4	No	< 1	(ND)	30.3	No
DGC-11D	NA	< 2.5	(ND)	< 2.5	(ND)	118	No	< 5	(ND)	< 5	(ND)	13.4	No	< 150	(ND)	< 10	(ND)	< 0.2	(ND)	6.4	No	< 1	(ND)	53.8	No
DGC-11S	NA	< 2.5	(ND)	2.1	Yes	35.3	No	< 5	(ND)	< 5	(ND)	3.6	No	6030	Yes	105	Yes	< 0.2	(ND)	4.1	No	< 1	(ND)	< 20	(ND)
RT-1-UP	NA	< 2.5	(ND)	< 2.5	(ND)	55.5	No	< 5	(ND)	24	Yes	< 5	(ND)	8650	Yes	254	Yes	< 0.2	(ND)	14	No	< 1	(ND)	< 20	(ND)
UPA-01	NA	< 2.5	(ND)	6.3	Yes	413	Yes	4	Yes	32.2	Yes	< 5	(ND)	26300	Yes	3480	Yes	< 0.2	(ND)	6.5	No	< 1	(ND)	< 20	(ND)
UPA-02D	NA	< 2.5	(ND)	< 2.5	(ND)	152	No	8.2	Yes	13.4	Yes	< 5	(ND)	3710	Yes	1180	Yes	< 0.2	(ND)	10	No	< 1	(ND)	< 20	(ND)
UPA-02S	NA	< 2.5	(ND)	< 2.5	(ND)	123	No	30.6	Yes	< 5	(ND)	11.1	No	258	No	40.4	No	< 0.2	(ND)	25.8	No	< 1	(ND)	47.3	No
UPA-03D	NA	< 2.5	(ND)	< 2.5	(ND)	81.7	No	12.7	Yes	< 5	(ND)	4.5	No	617	No	12.7	No	< 0.2	(ND)	16.9	No	< 1	(ND)	56.6	No
NCC UPA Monitoring Wells																									
BW-1	NA	< 2.5	(ND)	< 2.5	(ND)	166	No	4.7	Yes	35	Yes	< 5	(ND)	15900	Yes	3820	Yes	< 0.2	(ND)	8.7	No	< 1	(ND)	33.7	No
BW-2	NA	< 2.5	(ND)	< 2.5	(ND)	223	No	< 5	(ND)	18.6	Yes	< 5	(ND)	4540	Yes	1970	Yes	< 0.2	(ND)	5.4	No	< 1	(ND)	< 20	(ND)
MW-18	NA	< 2.5	(ND)	4.8	Yes	395	Yes	< 5	(ND)	35	Yes	< 5	(ND)	49700	Yes	3560	Yes	< 0.2	(ND)	4	No	< 1	(ND)	< 20	(ND)
MW-26N	NA	< 2.5	(ND)	< 2.5	(ND)	61.6	No	< 5	(ND)	18.4	Yes	5.6	No	< 150	(ND)	1830	Yes	< 0.2	(ND)	9.7	No	< 1	(ND)	< 20	(ND)
MW-28	NA	< 2.5	(ND)	6.1	Yes	184	No	< 5	(ND)	45.1	Yes	4	No	20700	Yes	1350	Yes	< 0.2	(ND)	7.6	No	< 1	(ND)	38.9	No
MW-29	NA	< 2.5	(ND)	2	Yes	178	No	< 5	(ND)	< 5	(ND)	< 5	(ND)	38500	Yes	634	Yes	< 0.2	(ND)	3.5	No	< 1	(ND)	< 20	(ND)
MW-31	NA	< 2.5	(ND)	< 2.5	(ND)	157	No	< 5	(ND)	< 5	(ND)	< 5	(ND)	20500	Yes	80.6	Yes	< 0.2	(ND)	6.2	No	< 1	(ND)	< 20	(ND)
MW-34	NA	< 2.5	(ND)	3	Yes	339	No	< 5	(ND)	20.2	Yes	< 5	(ND)	19900	Yes	2310	Yes	< 0.2	(ND)	3.9	No	< 1	(ND)	< 20	(ND)
MW-40	NA	< 2.5	(ND)	< 2.5	(ND)	99.4	No	< 5	(ND)	< 5	(ND)	< 5	(ND)	< 150	(ND)	< 15	(ND)	< 0.2	(ND)	< 5	(ND)	< 1	(ND)	< 20	(ND)
P-4_UPA	NA	< 2.5	(ND)	< 2.5	(ND)	232	No	< 5	(ND)	201	Yes	< 5	(ND)	73200	Yes	3520	Yes	< 0.2	(ND)	7.5	No	< 1	(ND)	28.7	No
P-5L	NA	< 2.5	(ND)	< 2.5	(ND)	153	No	< 5	(ND)	30.8	Yes	< 5	(ND)	2940	Yes	1260	Yes	< 0.2	(ND)	5.5	No	< 1	(ND)	< 20	(ND)
P-5U	NA	< 2.5	(ND)	< 2.5	(ND)	115	No	< 5	(ND)	13.5	Yes	< 5	(ND)	< 150	(ND)	621	Yes	0.22	Yes	< 5	(ND)	< 1	(ND)	< 20	(ND)
P-6_UPA	NA	< 2.5	(ND)	5.7	Yes	46.2	No	3.1	Yes	12.9	Yes	< 5	(ND)	13200	Yes	752	Yes	< 0.2	(ND)	13.8	No	< 1	(ND)	< 20	(ND)
RW-10	NA	< 2.5	(ND)	< 2.5	(ND)	80.5	No	< 5	(ND)	12	Yes	< 5	(ND)	36100	Yes	1130	Yes	< 0.2	(ND)	4.3	No	< 1	(ND)	950	Yes
UPA-101-TZ	NA	< 2.5	(ND)	4.2	Yes	137	No	6.9	Yes	331	Yes	33.3	No	10300	Yes	478	Yes	< 0.2	(ND)	281	Yes	< 1	(ND)	712	Yes
UPA-101-US	NA	< 2.5	(ND)	5.6	Yes	77	No	4.1	Yes	14.8	Yes	< 5	(ND)	19500	Yes	1360	Yes	< 0.2	(ND)	14.7	No	< 1	(ND)	< 20	(ND)

Prepared by: AMZ
Checked by: YS
Approved by: TAM
GOLDER

APPENDIX B-3

2018 Bimonthly Groundwater

Appendix B-3
Summary of Detected Compounds - February 2018 - June 2018 Bimonthly Groundwater
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

							Downgradient UPA Wells																								Downgradient UPA Wells								
						Sample ID	AWC-E1			AWC-E1			AWC-E1			AWC-E1			AWC-E1			AWC-E1			AWC-E2			AWC-E2			AWC-E2			AWC-E2			AWC-E2		
						Sample Depth	132			132			132			132			156			156			156			140			140			140			165			165			165		
						Sample Date	2/14/2018			2/14/2018			4/4/2018			6/14/2018			2/14/2018			4/4/2018			6/14/2018			2/14/2018			4/4/2018			6/14/2018			2/14/2018			4/4/2018			6/14/2018		
						N=Normal, FD=Field Duplicate	FD			N			N			N			N			N			N			N			N			N			N			N			N		
Parameter	CAS	Unit	PRG	MCL	RSL HQ=1.0	RSL HQ= 0.1	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL
Total Metals																																													
Cobalt	7440-48-4	ug/L	6	NE	6	0.6							11.5		5	14.6	J	50				9		5	12.8	J	50				14.2		5	15.5	J	50				13.5		5	17.1	J	50
Dissolved Metals																																													
Cobalt	7440-48-4	ug/L	6	NE	6	0.6										11.3	J	50							9.4	J	50							15.9	J	50							12.5	J	50
Iron	7439-89-6	ug/L	13939	NE	14000	1400	5320		150	5360		150	3250		150	3350		150	8690		150	6190		150	7140		150	2150		150	1840		150	2440		150	1360		150	804		150	1040		150
Manganese	7439-96-5	ug/L	260	NE	430	43	1620		15	1600		15	1330		15	1380		15	1370		15	1080		15	1260		15	642		15	938		15	1370		15	590		15	753		15	1070		15

GOLDER

Appendix B-3
Summary of Detected Compounds - February 2018 - June 2018 Bimonthly Groundwater
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

							NCC UPA Monitoring Wells and P-6 Vicinity															Downgradient UPA Wells								
						Sample ID	MW-26N			MW-26N			MW-26N			MW-26N			MW-26N			UPA-03D			UPA-03D			UPA-03D		
						Sample Depth																								
						Sample Date	2/14/2018			4/4/2018			4/4/2018			6/14/2018			6/14/2018			2/14/2018			4/5/2018			6/14/2018		
						N=Normal, FD=Field Duplicate	N			FD			N			FD			N			N			N			N		
Parameter	CAS	Unit	PRG	MCL	RSL HQ=1.0	RSL HQ= 0.1	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL	Result	Qual	RDL
Total Metals																														
Cobalt	7440-48-4	ug/L	6	NE	6	0.6				18.4		5	18		5	21.4	J	50	21.3	J	50					U	5	2.8	J	50
Dissolved Metals																														
Cobalt	7440-48-4	ug/L	6	NE	6	0.6										21.1	J	50	20.5	J	50							2.8	J	50
Iron	7439-89-6	ug/L	13939	NE	14000	1400		U	150	97	J	150		U	150		J	150		U	150	921		150	213		150	322		150
Manganese	7439-96-5	ug/L	260	NE	430	43	2440		15	1760	J	15		UJ	15	2540		15	2430		15	13.1	J	15	12.7	J	15	12	J	15

GOLDER

Appendix B - Notes
Summary of Detected Compounds - April 2018 Groundwater
Delaware Sand and Gravel
New Castle, Delaware

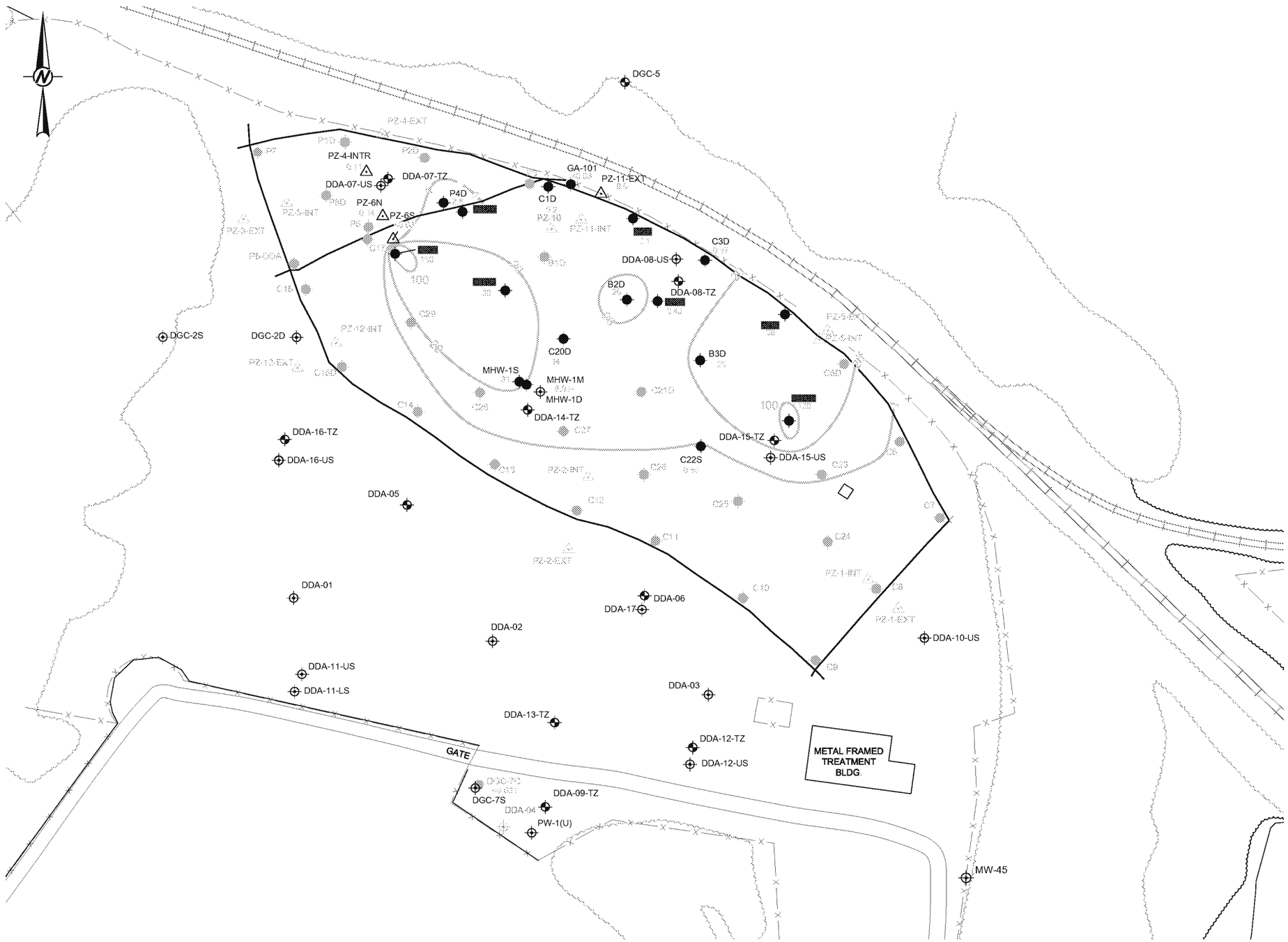
Notes:

Red highlight =	Concentration exceeds PRG
Orange highlight =	Concentration exceeds MCL
Yellow highlight =	Concentration exceeds RSL HQ=1.0
Green highlight =	Concentration exceeds RSL HQ=0.1

Abbreviations:
VOC = Volitale Organic Compounds
SVOC = Semi-Volitale Organic Compounds
PRG = Site Specific Preliminary Remediation Goals for Delaware Sand & Gravel Landfill, provided to the United States Environmental Protection Agency (USEPA) by the Trust in October 2017
MCL = USEPA Maximum Contaminant Level, updated June 2017
RSL = Regional Screening Level for tapwater, updated June 2017
ug/L = micrograms per liter
mg/L = milligrams per liter
Qual = interpreted qualifier
RDL = reporting detection limit
HQ = Hazard Quotient
NE = Standard does not exist
Qualifiers:
J - estimated result
J+ - The result is an estimated quantity, but the result may be biased high.
J- - The result is an estimated quantity, but the result may be biased low.
U - not detected above RDL
UJ - not detected above RDL, RDL is estimated

APPENDIX C

Isoconcentration Maps



LEGEND

--X--X--X--X	FENCELINE
	CENTERLINE OF SLURRY WALL AROUND DRUM DISPOSAL AREA
	RAILROAD
	DDA LOW-FLOW EXTRACTION SYSTEM (LFExS) WELL
DGC-2S	MONITORING WELL SCREENED IN UPPER POTOMAC AQUIFER
DDA-05	UPPER POTOMAC CONFINING UNIT TRANSITION ZONE MONITORING WELLS
PZ-10	DDA PIEZOMETERS
C1D	COLUMBIA MONITORING WELLS
	BCEE ISOCONCENTRATION CONTOURS (ug/l)
	BCEE ISOCONCENTRATION CONTOURS (INFERRED)
22	BCEE CONCENTRATION (ug/l)

NOTE(S)

1. LOCATIONS OF WELLS AND BORING ARE BASED ON SURVEY BY TAYLOR WISEMAN & TAYLOR (REVISED 2012)
2. BASED ON APRIL 2018 GROUNDWATER DATA
3. DASHED LINES REPRESENT INFERRED ISOCONCENTRATION CONTOURS
4. BCEE = BIS(2-CHLOROETHYL)ETHER
5. UG/L = MICROGRAMS PER LITER

REFERENCE(S)

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CLIENT
DELAWARE SAND & GRAVEL SUPERFUND SITE
NEW CASTLE COUNTY, DELAWARE

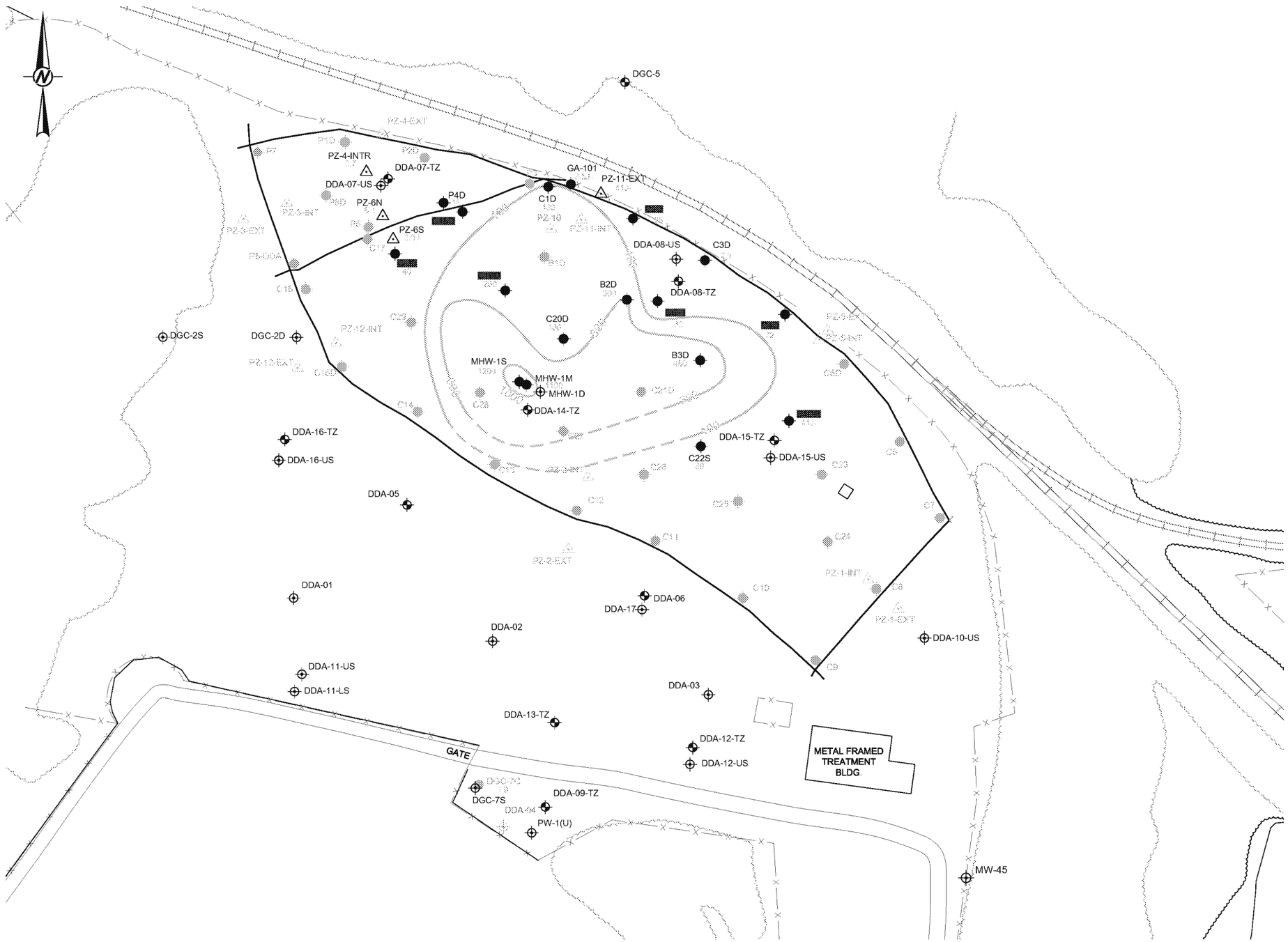
PROJECT
SEMI-ANNUAL REPORT

CONSULTANT
GOLDER

YYYY-MM-DD	2018-08-30
DESIGNED	MBS
PREPARED	GLS
REVIEWED	JAS
APPROVED	TAM

TITLE
BCEE
DDA - COLUMBIA
APRIL 2018

PROJECT NO.	CONTROL	REV.	FIGURE
0136052.14	0001-010	0	C-1



LEGEND

--X-------X-------X-------X	FENCELINE
	CENTERLINE OF SLURRY WALL AROUND DRUM DISPOSAL AREA
	RAILROAD
	DDA LOW-FLOW EXTRACTION SYSTEM (LFExS) WELL
DGC-2S	MONITORING WELL SCREENED IN UPPER POTOMAC AQUIFER
DDA-05	UPPER POTOMAC CONFINING UNIT TRANSITION ZONE MONITORING WELLS
PZ-10	DDA PIEZOMETERS
C1D	COLUMBIA MONITORING WELLS
	1,4-DIOXANE ISOCONCENTRATION CONTOURS (ug/l)
	1,4-DIOXANE ISOCONCENTRATION CONTOURS (INFERRED)
22	1,4-DIOXANE CONCENTRATION (ug/l)

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0 40 80
1" = 40' FEET

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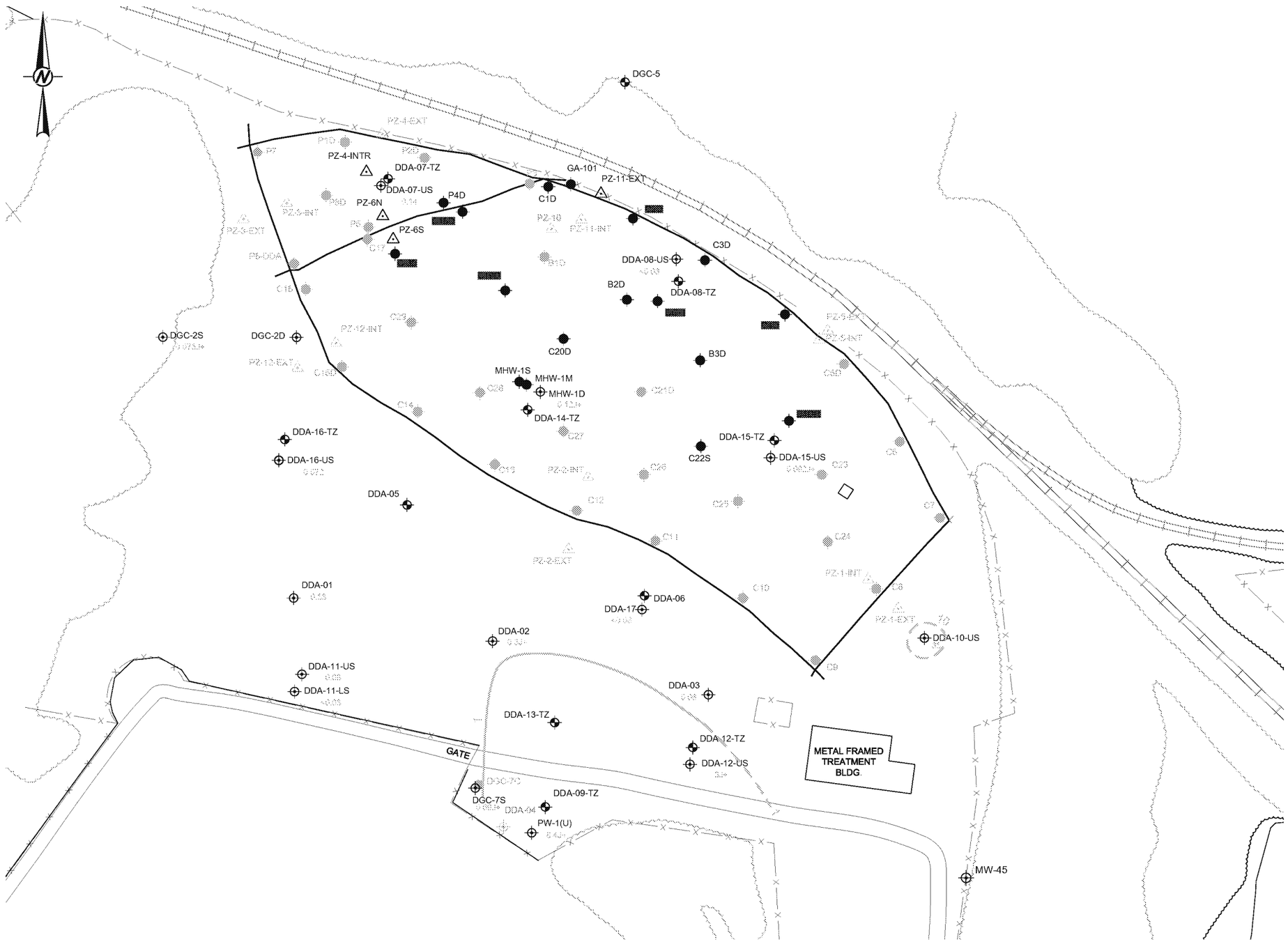
PREPARED	GLS
REVIEWED	JAS
APPROVED	TAM

TITLE
1,4-DIOXANE
DDA - COLUMBIA
APRIL 2018

PROJECT NO.	CONTROL	REV.	FIGURE
0136052.14	0001-011	0	C-2



LEGEND

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	DDA LOW-FLOW EXTRACTION SYSTEM (LFExS) WELL
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	BCEE ISOCONCENTRATION CONTOURS (ug/l)
	BCEE ISOCONCENTRATION CONTOURS (INFERRED)
22	BCEE CONCENTRATION (ug/l)

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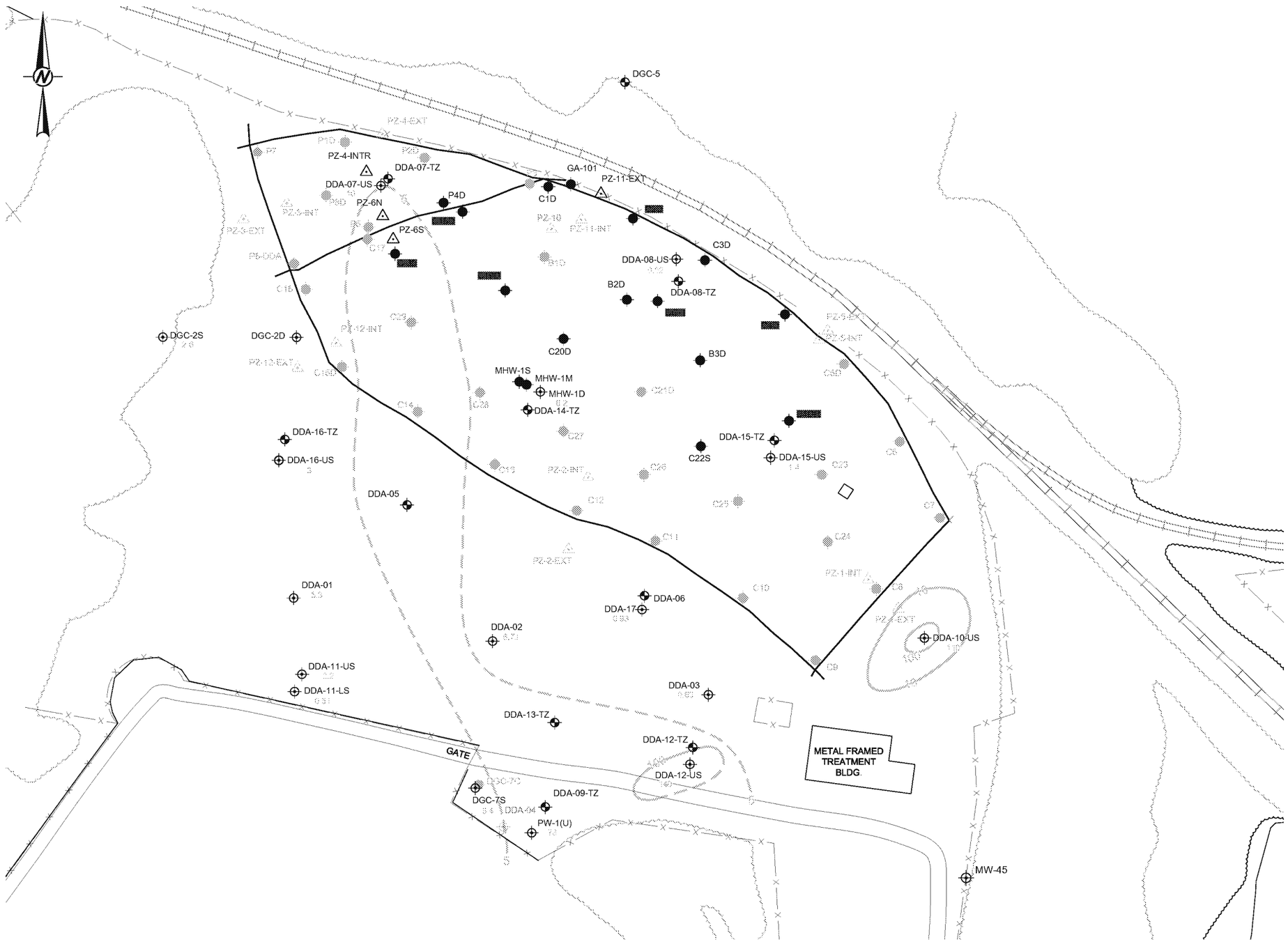
DESIGNED	MBS
PREPARED	GLS
REVIEWED	JAS
APPROVED	TAM

TITLE
BCEE
DDA TO WELL PW-1(U) - UPA
APRIL 2018

PROJECT NO.	CONTROL	REV.	FIGURE
0136052.14	0001-012	0	C-3



LEGEND

--X------X------X------X	FENCELINE
	CENTERLINE OF SLURRY WALL AROUND DRUM DISPOSAL AREA
	RAILROAD
	DDA LOW-FLOW EXTRACTION SYSTEM (LFExS) WELL
DGC-2S	MONITORING WELL SCREENED IN UPPER POTOMAC AQUIFER
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	1,4-DIOXANE ISOCONCENTRATION CONTOURS (ug/l)
	1,4-DIOXANE ISOCONCENTRATION CONTOURS (INFERRED)
	1,4-DIOXANE CONCENTRATION (ug/l)

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YYYY-MM-DD	2018-08-30
DESIGNED	MBS
PREPARED	GLS
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APPROVED	TAM

TITLE
1,4-DIOXANE
DDA TO WELL PW-1(U) - UPA
APRIL 2018

PROJECT NO.	CONTROL	REV.	FIGURE
0136052.14	0001-013	0	C-4

APPENDIX D

System Performance Data

Appendix D-1
LFExS Monthly and Semi-Annual Average Extraction Rates
Delaware Sand & Gravel Superfund Site
New Castle County, Delaware

Dates	Monthly Extraction Volumes (Gallons)[1]	Monthly Average Extraction Rates (GPM)[1]	Semi-Annual Average Extraction Rates (GPM)	Notes
5/4/2009	NA	NA		LFExS temporary system began operation on May 4, 2009
5/31/2009	31724	0.82		
6/16/2009	46665	2.03		
7/31/2009	149386	2.31		
8/31/2009	151869	3.40		
9/30/2009	118197	2.74		
10/31/2009	132050	2.96		
5/4/2009 - 10/31/2009			2.43	
11/30/2009	105245	2.44		
12/31/2009	224591	5.03		LFExS shut down to construct the permanent system.
1/31/2010	0	0.00		
2/28/2010	59178	0.10		LFExS permanent system start-up. February 23, 2010
3/31/2010	213738	4.79		
4/30/2010	166205	3.85		
11/1/2009 - 4/30/2010			2.97	
5/31/2010	274434	5.98		
6/30/2010	257468	6.44		
7/31/2010	199135	4.55		
8/31/2010	299923	6.91		
9/30/2010	163175	3.78		
10/31/2010	86140	1.94		C-30 connected to LFExS.
5/1/2010 - 10/31/2010			4.86	
11/30/2010	168538	4.04		
12/31/2010	236487	5.31		
1/31/2011	275673	7.41		
2/28/2011	212994	6.08		
3/31/2011	176161	6.08		
4/30/2011	222325	9.46		
11/1/2010 - 4/30/2011			4.99	
5/31/2011	347392	9.12		
6/30/2011	312375	8.60		
7/31/2011	218072	7.50		
8/31/2011	274225	6.24		
9/30/2011	297546	6.15		
10/31/2011	291446	7.37		
5/1/2011 - 10/31/2011			6.61	
11/30/2011	354352	8.23		
12/31/2011	364276	8.24		
1/31/2012	392999	8.80		
2/28/2012	281290	6.74		
3/31/2012	279983	6.27		System off for maintenance and B-4DR connection: March 2-6, 2012
4/30/2012	320849	7.45		
11/1/2011 - 4/30/2012			7.65	
5/31/2012	379904	8.53		
6/30/2012	343060	7.96		
7/31/2012	299653	6.72		
8/31/2012	191801	4.30		System off for NCC sewer force main connection (August 23, 2012 - August 27, 2012)
9/30/2012	258732	5.96		System off intermittently for quarterly maintenance (September 9, 2012 - September 13, 2012)
10/31/2012	323007	7.25		
5/1/2012 - 10/31/2012			6.82	
11/30/2012	344910	8.00		
12/31/2012	415726	9.32		C-20D connected to LFExS
1/31/2013	436650	10.10		
2/28/2013	388316	9.66		
3/31/2013	448131	10.06		
4/30/2013	364156	8.45		System off for quarterly maintenance (April 9-11, 2013) and running at reduced flow rate until discharge pump repair on April 15, 2013.
11/1/2012 - 4/30/2013			9.25	
5/31/2013	503926	11.32		
6/30/2013	417369	9.67		
7/31/2013	450647	10.10		
8/31/2013	302058	6.77		System off for maintenance (August 14-15, 2013) and tank cleaning (August 19, 2013).
9/30/2013	447631	10.58		
10/31/2013	470859	10.58		
5/1/2013 - 10/31/2013			9.84	
11/30/2013	403331	9.37		
12/31/2013	394852	9.17		
1/31/2014	382307	8.90		
2/28/2014	361010	9.18		
3/31/2014	397578	9.26		
4/30/2014	401701	9.65		

LFExS Monthly and Semi-Annual Average Extraction Rates
Delaware Sand & Gravel Superfund Site
New Castle County, Delaware

Dates	Monthly Extraction Volumes (Gallons)[1]	Monthly Average Extraction Rates (GPM)[1]	Semi-Annual Average Extraction Rates (GPM)	Notes
11/1/2013 - 4/30/2014			8.98	
5/31/2014	425265	9.56		
6/30/2014	413594	9.60		
7/31/2014	431964	10.41		Addition of Redux to pumping wells C-2D and B-4DR and the LFExS discharge line via the balancing tank (July 10, 2014)
8/31/2014	415076	9.33		
9/30/2014	449710	10.45		
10/31/2014	503838	11.33		
5/1/2014 - 10/31/2014			10.08	
11/30/2014	280901	6.54		
12/31/2014	347712	8.09		
1/31/2015	437655	10.21		
2/28/2015	443212	11.44		
3/31/2015	476093	11.11		
4/30/2015	394217	9.45		
11/1/2014 - 4/30/2015			9.13	
5/31/2015	413658	9.45		
6/30/2015	424735	9.85		
7/31/2015	398855	8.97		
8/31/2015	429371	9.64		
9/30/2015	433035	10.08		
10/31/2015	386982	8.71		
5/1/2015 - 10/31/2015			9.38	
11/30/2015	378248	8.80		
12/31/2015	331836	7.47		
1/31/2016	282746	6.57		
2/28/2016	266160	6.68		New discharge pump
3/31/2016	317796	7.35		
4/30/2016	338733	8.16		
11/1/2015 - 4/30/2016			7.31	
5/31/2016	363227	8.17		
6/30/2016	418203	9.73		
7/31/2016	466965	10.48		
8/31/2016	464731	10.41		
9/30/2016	292499	6.78		
10/31/2016	276538	5.92		
5/1/2016 - 10/31/2016			8.61	
11/30/2016	225580	5.27		
12/31/2016	220075	4.98		
1/31/2017	236819	5.36		
2/28/2017	214236	5.39		
3/31/2017	414023	9.31		
4/30/2017	419863	9.75		
11/1/2016 - 4/30/2017			6.64	
5/31/2017	531609	11.97		
6/30/2017	469086	10.89		
7/31/2017	478549	10.72		
8/31/2017	429469	9.62		
9/30/2017	445807	10.32		
10/31/2017	405644	9.10		
5/1/2017 - 10/31/2017			10.42	
11/30/2017	379685	8.85		
12/31/2017	377895	8.79		
1/31/2018	396787	8.93		
2/28/2018	378123	9.43		
3/31/2018	478585	10.75		
4/30/2018	443009	10.64		
11/1/2017 - 4/30/2018			9.42	
5/31/2018	409684	9.25		
6/30/2018	466062	10.83		

Notes:

(1) Monthly flow volumes and average rates based on totalizer volume spreadsheets provided by DS&G Remedial Trust
(2) LFExS = Low flow extraction system
(3) GPM = gallons per minute
(4) NCC = New Castle County

Prepared by: MBS
Checked by: VRR

Appendix D-2
Well PW-1(U) Operational History - December 2011 to Present
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

Date and Time	Flow Meas. Date	Flow Meas. Time	Instantaneous Flow Reading (gpm)	Totalizer Reading (gal)	Flow since last reading (gal)	Calculated Flow Rate (gpm)	Notes
12/1/11 14:14	12/1/2011	14:14	24.80	43941008	518144	25.4	
12/8/11 14:12	12/8/2011	14:12	25.43	44177772	236764	23.5	
12/15/11 11:03	12/15/2011	11:03	24.11	44422508	244736	24.7	
12/22/11 10:04	12/22/2011	10:04	22.87	44658616	236108	23.6	
12/28/11 10:50	12/28/2011	10:50	21.46	44853416	194800	22.4	
1/5/12 13:50	1/5/2012	13:50	20.62	45101928	248512	21.2	
1/18/12 10:00	1/18/2012	10:00	18.73	45466288	164332	19.2	
1/19/12 10:08	1/19/2012	10:08	18.55	45493344	27056	18.7	
1/30/12 10:58	1/30/2012	10:58	16.92	45776524	283180	17.8	
2/1/12 10:19	2/1/2012	10:19	16.63	45824268	47744	16.8	Pump cleaned
2/13/12 14:10	2/13/2012	14:10	29.55	46229676	405408	23.2	
2/16/12 10:53	2/16/2012	10:53	29.35	46351520	121844	29.6	
2/22/12 14:33	2/22/2012	14:33	29.01	46609408	257888	29.1	
2/23/12 9:41	2/23/2012	9:41	29.10	46642656	33248	29.0	
3/12/12 11:50	3/12/2012	11:50	28.02	47381468	163088	27.8	
3/15/12 11:07	3/15/2012	11:07	27.95	47501308	119840	28.0	
3/22/12 10:41	3/22/2012	10:41	27.59	47781580	280272	27.9	
3/29/12 9:25	3/29/2012	9:25	25.88	48049700	268120	26.8	
4/4/12 10:00	4/4/2012	10:00	23.72	48266516	216816	25.0	
4/12/12 10:17	4/12/2012	10:17	20.72	48523840	257324	22.3	
4/19/12 10:05	4/19/2012	10:05	18.18	48719980	196140	19.5	
4/24/12 14:00	4/24/2012	14:00	16.28	48848272	128292	17.3	
4/26/12 10:45	4/26/2012	10:45	15.61	48891236	42964	16.0	
5/3/12 11:10	5/3/2012	11:10	13.25	49037620	146384	14.5	
5/7/12 11:55	5/7/2012	11:55	12.99	49115072	77452	13.3	
5/10/12 10:36	5/10/2012	10:36	11.92	49168192	53120	12.5	
5/16/12 13:45	5/16/2012	13:45	10.00	49265948	97756	11.1	
5/21/12 11:06	5/21/2012	11:06	8.57	49331484	65536	9.3	
5/24/12 10:19	5/24/2012	10:19	7.75	49366460	34976	8.2	
5/29/12 10:11	5/29/2012	10:11	6.54	49417796	51336	7.1	
5/31/12 11:20	5/31/2012	11:20	6.09	49436456	18660	6.3	
6/4/12 13:23	6/4/2012	13:23	5.27	49469944	33488	5.7	
6/7/12 11:58	6/7/2012	11:58	4.69	49491100	21156	5.0	Pump replaced
6/11/12 10:58	6/11/2012	10:58	4.09	49532636	41536	7.3	
6/21/12 11:45	6/21/2012	11:45	26.21	49800584	116724	26.3	
6/25/12 14:18	6/25/2012	14:18	25.83	49954900	154316	26.1	
6/28/12 15:15	6/28/2012	15:15	29.64	50079944	125044	28.6	
7/2/12 10:52	7/2/2012	10:52	26.80	50235632	155688	28.3	
7/5/12 10:13	7/5/2012	10:13	24.10	50344268	108636	25.4	
7/12/12 12:18	7/12/2012	12:18	21.00	50568548	224280	22.0	
7/16/12 14:29	7/16/2012	14:29	19.55	50688432	119884	20.4	
7/19/12 11:16	7/19/2012	11:16	18.32	50766740	78308	19.0	
7/23/12 10:10	7/23/2012	10:10	17.24	50868829	102089	17.9	
7/26/12 10:05	7/26/2012	10:05	16.89	50943120	74291	17.2	Pump cleaned
7/30/12 10:39	7/30/2012	10:39	23.20	51073720	130600	22.5	
8/2/12 9:33	8/2/2012	9:33	23.97	51175588	101868	23.9	
8/6/12 10:49	8/6/2012	10:49	24.77	51318468	142880	24.5	
8/8/12 10:21	8/8/2012	10:21	24.68	51389340	70872	24.8	
8/13/12 10:34	8/13/2012	10:34	25.02	51569176	179836	24.9	
8/16/12 11:12	8/16/2012	11:12	24.88	51677648	108472	24.9	
8/20/12 10:42	8/20/2012	10:42	24.02	51817704	140056	24.4	
8/22/12 15:25	8/22/2012	15:25	23.71	51893756	76052	24.0	
8/28/12 14:14	8/28/2012	14:14	25.73	51936988	43232	5.0	
8/30/12 14:30	8/30/2012	14:30	25.25	52011200	74212	25.6	
9/4/12 15:05	9/4/2012	15:05	24.00	52189544	178344	24.7	
9/6/12 11:46	9/6/2012	11:46	23.68	52253640	64096	23.9	
9/10/12 9:11	9/10/2012	9:11	21.82	30431	30431	21.8	
9/13/12 10:55	9/13/2012	10:55	21.78	101450	71020	16.1	
9/24/12 15:51	9/24/2012	15:51	21.62	449693	348243	21.6	
9/27/12 10:30	9/27/2012	10:30	21.66	536007	86314	21.6	
10/1/12 10:50	10/1/2012	10:50	21.25	660726	124719	21.6	
10/4/12 10:59	10/4/2012	10:59	21.18	753247	92521	21.4	
10/8/12 10:46	10/8/2012	10:46	20.06	873138	119891	20.9	
10/11/12 10:07	10/11/2012	10:07	19.94	959426	86289	20.2	
10/15/12 11:04	10/15/2012	11:04	19.37	1073659	114233	19.6	DS&G began well PW-1(U) OM&M
10/18/12 11:16	10/18/2012	11:16	18.78	1156491	82832	19.1	
10/22/12 11:45	10/22/2012	11:45	17.71	1262836	106345	18.4	
10/25/12 13:56	10/25/2012	13:56	16.93	1341029	78193	17.6	
11/5/12 10:16	11/5/2012	10:16	16.72	1570723	100468	17.3	
11/8/12 11:32	11/8/2012	11:32	15.76	1641843	71120	16.2	
11/12/12 13:15	11/12/2012	13:15	15.00	1731802	89959	15.3	
11/15/12 14:25	11/15/2012	14:25	14.09	1795415	63613	14.5	
11/29/12 15:45	11/29/2012	15:45	21.70	2005974	5957	1.1	Pump cleaned
11/30/12 10:42	11/30/2012	10:42	21.80	2030748	24774	21.8	
12/3/12 14:35	12/3/2012	14:35	21.12	2128688	97940	21.5	
12/5/12 11:16	12/5/2012	11:16	21.21	2184820	56132	20.9	
12/6/12 8:56	12/6/2012	8:56	21.01	2212205	27385	21.1	
12/10/12 11:06	12/10/2012	11:06	20.27	2334399	122194	20.7	
12/13/12 10:20	12/13/2012	10:20	20.11	2419496	85097	19.9	
12/17/12 10:10	12/17/2012	10:10	19.29	2532359	112863	19.6	
12/18/12 13:18	12/18/2012	13:18	18.56	2562919	30560	18.8	
12/20/12 10:00	12/20/2012	10:00	18.01	2612129	49210	18.3	
12/24/12 11:20	12/24/2012	11:20	17.10	2714640	102511	17.6	
12/27/12 10:45	12/27/2012	10:45	16.46	2786666	72026	16.8	
12/31/12 11:12	12/31/2012	11:12	16.04	2879942	93276	16.1	
1/3/13 12:01	1/3/2013	12:01	15.23	2947670	67728	15.5	
1/7/13 11:19	1/7/2013	11:19	14.61	3033103	85433	14.9	
1/8/13 8:30	1/8/2013	8:30	N/A	3051304	18201	14.3	Chemical scrub of well screen, vacuumed debris from base, surge block, redevelopment, and cleaned pump
1/15/13 10:00	1/15/2013	10:00	27.21	3176009	34376	23.5	
1/17/13 9:35	1/17/2013	9:35	28.40	3257062	81053	28.4	

Appendix D-2
Well PW-1(U) Operational History - December 2011 to Present
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

Date and Time	Flow Meas. Date	Flow Meas. Time	Instantaneous Flow Reading (gpm)	Totalizer Reading (gal)	Flow since last reading (gal)	Calculated Flow Rate (gpm)	Notes
1/22/13 9:34	1/22/2013	9:34	30.25	3467102	210040	29.2	
1/24/13 9:24	1/24/2013	9:24	30.34	3553534	86432	30.1	
1/31/13 15:15	1/31/2013	15:15	31.01	3874812	321278	30.8	
2/4/13 10:35	2/4/2013	10:35	30.51	4043808	168996	30.8	
2/5/13 9:27	2/5/2013	9:27	30.71	4085899	42091	30.7	
2/6/13 9:12	2/6/2013	9:12	30.54	4129698	43799	30.7	
2/7/13 11:09	2/7/2013	11:09	30.88	4177215	47517	30.5	
2/11/13 10:18	2/11/2013	10:18	29.12	4348943	171728	30.1	
2/12/13 10:50	2/12/2013	10:50	29.24	4392166	43223	29.4	
2/13/13 10:03	2/13/2013	10:03	28.87	4432776	40610	29.2	
2/14/13 10:43	2/14/2013	10:43	28.73	4475344	42568	28.8	
2/18/13 10:40	2/18/2013	10:40	27.14	4635839	160495	27.9	
2/19/13 10:00	2/19/2013	10:00	26.85	4673724	37885	27.1	
2/21/13 11:56	2/21/2013	11:56	26.01	4753407	79683	26.6	
2/25/13 11:30	2/25/2013	11:30	24.70	4899380	145973	25.5	
2/26/13 13:27	2/26/2013	13:27	29.40	4931168	31788	20.4	Pump cleaned
2/27/13 14:04	2/27/2013	14:04	30.05	4974441	43273	29.3	
2/28/13 14:48	2/28/2013	14:48	29.87	5018925	44484	30.0	
3/4/13 11:38	3/4/2013	11:38	28.32	5181224	162299	29.1	
3/5/13 10:47	3/5/2013	10:47	27.92	5220224	39000	28.1	
3/7/13 10:12	3/7/2013	10:12	27.60	5298671	78447	27.6	
3/11/13 10:54	3/11/2013	10:54	25.60	5450464	151793	26.2	
3/12/13 10:18	3/12/2013	10:18	25.56	5486345	35881	25.6	
3/14/13 9:14	3/14/2013	9:14	25.08	5557381	71036	25.2	Buildup in discharge line to sewer jetted out
3/18/13 9:16	3/18/2013	9:16	40.42	5783225	225844	39.2	
3/20/13 11:36	3/20/2013	11:36	40.18	5903470	120245	39.8	
3/21/13 11:10	3/21/2013	11:10	39.49	5959114	55644	39.4	
3/25/13 9:28	3/25/2013	9:28	39.08	6178809	219695	38.8	
3/27/13 10:45	3/27/2013	10:45	38.05	6291760	112951	38.2	
3/28/13 11:24	3/28/2013	11:24	37.76	6347526	55766	37.7	
4/2/13 11:22	4/2/2013	11:22	36.61	6613416	265890	36.9	
4/4/13 10:51	4/4/2013	10:51	36.34	6716499	103083	36.2	
4/8/13 11:54	4/8/2013	11:54	35.83	6925704	209205	35.9	
4/9/13 13:35	4/9/2013	13:35	35.92	6980797	55093	35.8	
4/11/13 13:24	4/11/2013	13:24	37.71	7083932	103135	35.9	
4/15/13 9:12	4/15/2013	9:12	36.95	7287186	203254	36.9	
4/16/13 8:46	4/16/2013	8:46	37.70	7336665	49479	35.0	
4/17/13 10:03	4/17/2013	10:03	0.00	7393803	57138	37.7	Pump off for aquifer testing
5/22/13 12:20	5/22/2013	12:20	47.00	7634146	240343	4.8	Pump off for aquifer testing, pump cleaned and check valve replaced
5/23/13 14:49	5/23/2013	14:49	40.98	7700402	66256	41.7	
5/24/13 9:10	5/24/2013	9:10	40.40	7745302	44900	40.8	
5/28/13 10:23	5/28/2013	10:23	38.80	7976031	230729	39.6	
5/29/13 9:56	5/29/2013	9:56	38.30	8030610	54579	38.6	
5/30/13 12:55	5/30/2013	12:55	38.10	8092659	62049	38.3	
6/3/13 9:41	6/3/2013	9:41	37.08	8302281	209622	37.7	
6/4/13 15:00	6/4/2013	15:00	36.68	8367111	64830	36.9	
6/5/13 10:19	6/5/2013	10:19	36.58	8409780	42669	36.8	
6/6/13 10:38	6/6/2013	10:38	36.75	8463462	53682	36.8	
6/10/13 9:36	6/10/2013	9:36	36.55	8673312	209850	36.8	
6/13/13 9:03	6/13/2013	9:03	35.67	8828999	155687	36.3	
6/17/13 10:02	6/17/2013	10:02	33.20	9029387	200388	34.4	
6/18/13 11:27	6/18/2013	11:27	32.86	9079726	50339	33.0	
6/19/13 10:35	6/19/2013	10:35	32.51	9125080	45354	32.7	
6/20/13 15:45	6/20/2013	15:45	31.83	9181524	56444	32.3	
6/24/13 13:48	6/24/2013	13:48	29.85	9356358	174834	31.0	
6/25/13 10:22	6/25/2013	10:22	29.66	9393034	36676	29.7	
6/27/13 13:43	6/27/2013	13:43	28.21	9481880	88846	28.8	
7/1/13 11:09	7/1/2013	11:09	26.16	9634846	152966	27.3	
7/2/13 8:46	7/2/2013	8:46	25.84	9668490	33644	25.9	Pump cleaned
7/8/13 9:00	7/8/2013	9:00	33.59	9957520	247080	34.6	
7/16/13 10:44	7/16/2013	10:44	34.25	10350580	53966	34.6	
7/17/13 9:26	7/17/2013	9:26	34.29	10397129	46549	34.2	
7/18/13 10:18	7/18/2013	10:18	33.95	10447140	50011	33.5	
7/23/13 9:32	7/23/2013	9:32	31.77	10677757	230617	32.2	
7/24/13 11:44	7/24/2013	11:44	31.13	10727194	49437	31.4	
7/25/13 12:07	7/25/2013	12:07	31.24	10772560	45366	31.0	
7/29/13 11:07	7/29/2013	11:07	28.97	10943931	171371	30.1	
7/30/13 15:49	7/30/2013	15:49	28.25	10993221	49290	28.6	
7/31/13 10:06	7/31/2013	10:06	28.23	11024181	30960	28.2	
8/1/13 12:23	8/1/2013	12:23	27.42	11068483	44302	28.1	
8/5/13 9:03	8/5/2013	9:03	26.42	11218719	150236	27.0	
8/6/13 13:26	8/6/2013	13:26	33.01	11259475	40756	23.9	Pump cleaned
8/7/13 9:25	8/7/2013	9:25	33.11	11300637	41162	34.3	
8/8/13 11:08	8/8/2013	11:08	32.53	11351202	50565	32.8	
8/12/13 11:07	8/12/2013	11:07	31.21	11533093	181891	31.6	
8/13/13 11:26	8/13/2013	11:26	30.61	11578161	45068	30.9	
8/14/13 8:54	8/14/2013	8:54	30.53	11617528	39367	30.6	
8/15/13 9:06	8/15/2013	9:06	29.88	11661412	43884	30.2	
8/16/13 14:00	8/16/2013	14:00	41.61	11669814	8402	4.8	Line jetted and cleaned and well screen cleaned
8/19/13 8:31	8/19/2013	8:31	40.25	11832183	162369	40.7	
8/20/13 8:45	8/20/2013	8:45	40.00	11890747	58564	40.3	
8/26/13 11:25	8/26/2013	11:25	38.20	12232119	341372	38.8	
8/27/13 10:43	8/27/2013	10:43	38.99	12284302	52183	37.3	
8/28/13 10:09	8/28/2013	10:09	38.43	12338475	54173	38.5	
8/29/13 9:50	8/29/2013	9:50	38.01	12392544	54069	38.0	
9/3/13 11:12	9/3/2013	11:12	35.88	12661045	268501	36.9	
9/4/13 10:01	9/4/2013	10:01	35.12	12709679	48634	35.5	
9/5/13 15:10	9/5/2013	15:10	34.56	12770850	61171	35.0	
9/9/13 10:33	9/9/2013	10:33	32.63	12955225	184375	33.6	
9/10/13 14:45	9/10/2013	14:45	31.99	13009853	54628	32.3	
9/11/13 10:03	9/11/2013	10:03	31.68	13046597	36744	31.7	

Appendix D-2
Well PW-1(U) Operational History - December 2011 to Present
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

Date and Time	Flow Meas. Date	Flow Meas. Time	Instantaneous Flow Reading (gpm)	Totalizer Reading (gal)	Flow since last reading (gal)	Calculated Flow Rate (gpm)	Notes
9/12/13 12:23	9/12/2013	12:23	31.45	13096776	50179	31.8	
9/16/13 11:05	9/16/2013	11:05	30.43	13270999	174223	30.7	
9/17/13 14:38	9/17/2013	14:38	29.48	13320242	49243	29.8	
9/19/13 9:06	9/19/2013	9:06	28.87	13394917	74675	29.3	
9/19/13 14:15	9/19/2013	14:15	32.57	13395545	628	2.0	Pump and pipe cleaned
9/23/13 8:21	9/23/2013	8:21	31.79	13571261	175716	32.5	
9/24/13 11:08	9/24/2013	11:08	31.66	13621860	50599	31.5	
9/25/13 13:00	9/25/2013	13:00	31.35	13670142	48282	31.1	
9/26/2013	9/26/2013	N/A	N/A	N/A	N/A	N/A	The power to the well PW-1(U) pump and totalizer were interrupted
10/3/2013	10/3/2013	N/A	N/A	N/A	N/A	N/A	Redux 620 application began
10/17/2013	10/17/2013	N/A	N/A	N/A	N/A	N/A	The totalizer was reset and the equipment was restarted
10/21/13 9:57	10/21/2013	9:57	40.39	231527	231527	41.3	
10/22/13 12:35	10/22/2013	12:35	40.87	296845	65318	40.9	
10/23/13 9:55	10/23/2013	9:55	40.83	349169	52324	40.9	
10/24/13 9:23	10/24/2013	9:23	40.70	406795	57626	40.9	
10/28/13 9:58	10/28/2013	9:58	40.98	644233	237438	41.0	
10/29/13 10:57	10/29/2013	10:57	40.90	705619	61386	41.0	
10/30/13 14:50	10/30/2013	14:50	40.94	774271	68652	41.0	
11/5/13 9:44	11/5/2013	9:44	40.95	1118489	56509	40.9	
11/11/13 10:58	11/11/2013	10:58	40.78	1474968	356479	40.9	
11/12/13 10:25	11/12/2013	10:25	40.74	1532332	57364	40.8	
11/13/13 10:57	11/13/2013	10:57	40.65	1592450	60118	40.8	
11/14/13 10:33	11/14/2013	10:33	40.87	1650175	57725	40.8	
11/18/13 11:03	11/18/2013	11:03	41.35	1885748	235573	40.7	
11/19/13 10:18	11/19/2013	10:18	40.16	1942334	56586	40.6	
11/20/13 10:51	11/20/2013	10:51	40.34	2002025	59691	40.5	
11/21/13 11:03	11/21/2013	11:03	40.20	2060772	58747	40.5	
11/25/13 11:05	11/25/2013	11:05	38.90	2290468	229696	39.9	
12/2/13 10:39	12/2/2013	10:39	39.05	2681887	391419	38.9	
12/3/13 13:52	12/3/2013	13:52	38.96	2745430	63543	38.9	
12/4/13 13:34	12/4/2013	13:34	38.80	2800674	55244	38.8	
12/5/13 15:30	12/5/2013	15:30	38.83	2867833	67159	43.2	
12/10/13 9:44	12/10/2013	9:44	38.56	3125810	257977	37.6	
12/12/13 9:58	12/12/2013	9:58 AM	38.63	3237624	111814	38.6	
12/16/13 11:08	12/16/2013	11:08 AM	39.87	3459456	221832	38.1	
12/17/13 11:56	12/17/2013	11:56 AM	37.55	3518131	58675	39.4	
12/18/13 10:07	12/18/2013	10:07 AM	39.89	3569188	51057	38.4	
12/19/13 14:50	12/19/2013	2:50 PM	37.74	3636376	67188	39.0	
12/23/13 11:37	12/23/2013	11:37 AM	38.10	3850296	213920	38.4	
12/27/13 12:52	12/27/2013	12:52 PM	38.11	4076687	226391	38.8	
12/30/13 13:55	12/30/2013	1:55 PM	39.95	4246201	169514	38.7	
12/31/13 10:39	12/31/2013	10:39 AM	40.11	4294399	48198	38.7	
1/2/14 10:29	1/2/2014	10:29 AM	38.27	4405620	111221	38.8	
1/6/14 10:02	1/6/2014	10:02 AM	38.45	4627777	222157	38.8	
1/7/14 11:27	1/7/2014	11:27 AM	38.51	4687029	59252	38.9	
1/8/14 9:37	1/8/2014	9:37 AM	38.54	4738802	51773	38.9	
1/9/14 10:27	1/9/2014	10:27 AM	38.55	4796733	57931	38.9	
1/13/14 10:29	1/13/2014	10:29 AM	38.57	5021113	224380	38.9	
1/14/14 11:58	1/14/2014	11:58 AM	38.66	5080694	59581	39.0	
1/15/14 9:18	1/15/2014	9:18 AM	38.61	5130754	50060	39.1	
1/16/14 9:49	1/16/2014	9:49 AM	38.70	5188199	57445	39.1	
1/20/14 12:04	1/20/2014	12:04 PM	38.67	5417964	229765	39.0	
1/21/14 9:30	1/21/2014	9:30 AM	40.37	5468126	50162	39.0	
1/23/14 11:28	1/23/2014	11:28 AM	38.81	5584450	116324	38.8	
1/27/14 11:00	1/27/2014	11:00 AM	38.82	5806907	222457	38.8	
1/28/14 11:56	1/28/2014	11:56 AM	38.75	5864968	58061	38.8	
1/29/14 9:39	1/29/2014	9:39 AM	38.92	5915567	50599	38.8	
1/30/14 11:37	1/30/2014	11:37 AM	38.78	5976642	61075	39.2	
2/3/14 10:33	2/3/2014	10:33 AM	39.54	6198556	221914	39.0	
2/4/14 9:52	2/4/2014	9:52 AM	40.59	6253263	54707	39.1	
2/5/14 9:15	2/5/2014	9:15 AM	40.10	6308888	55625	39.6	
2/6/14 12:49	2/6/2014	12:49 PM	38.26	6373982	65094	39.4	
2/10/14 10:50	2/10/2014	10:50 AM	40.28	6592399	218417	38.7	
2/11/14 9:15	2/11/2014	9:15 AM	40.19	6644565	52166	38.8	
2/12/14 10:30	2/12/2014	10:30 AM	40.15	6703349	58784	38.8	
2/17/14 11:53	2/17/2014	11:53 AM	38.22	6983823	280474	38.5	
2/18/14 11:30	2/18/2014	11:30 AM	39.61	7037971	54148	38.2	
2/20/14 10:40	2/20/2014	10:40 AM	42.05	7155784	117813	41.6	
2/24/14 9:16	2/24/2014	9:16 AM	37.86	7392670	236886	41.7	
2/25/14 15:09	2/25/2014	3:09 PM	39.94	7459970	67300	37.5	
2/26/14 14:58	2/26/2014	2:58 PM	37.83	7514576	54606	38.2	
2/27/14 13:50	2/27/2014	1:50 PM	37.99	7567221	52645	38.4	
3/4/14 10:56	3/4/2014	10:56 AM	38.05	7834047	266826	38.0	
3/5/14 9:15	3/5/2014	9:15 AM	37.94	7884924	50877	38.0	
3/6/14 10:06	3/6/2014	10:06 AM	39.66	7941640	56716	38.0	
3/10/14 10:28	3/10/2014	10:28 AM	39.50	8159329	217689	37.6	
3/11/14 13:10	3/11/2014	1:10 PM	40.01	8213332	54003	33.7	
3/12/14 10:33	3/12/2014	10:33 AM	40.04	8262043	48711	38.0	
3/13/14 11:55	3/13/2014	11:55 AM	40.05	8320124	58081	38.2	
3/19/14 8:40	3/19/2014	8:40 AM	37.54	8640577	320453	37.9	
3/20/14 13:17	3/20/2014	1:17 PM	40.21	8700552	59975	34.9	
3/24/14 10:19	3/24/2014	10:19 AM	39.10	8923381	222829	39.9	
3/25/14 12:38	3/25/2014	12:38 PM	39.52	8986129	62748	39.7	
3/26/14 11:20	3/26/2014	11:20 AM	39.64	9040096	53967	39.6	
3/27/14 10:41	3/27/2014	10:41 AM	39.66	9096017	55921	39.9	
3/31/14 10:40	3/31/2014	10:40 AM	38.11	9324439	228422	39.7	
4/1/14 15:20	4/1/2014	3:20 PM	39.28	9392266	67827	39.4	
4/2/14 10:48	4/2/2014	10:48 AM	40.18	9439024	46758	40.0	
4/3/14 14:17	4/3/2014	2:17 PM	39.01	9504550	65526	39.7	
4/7/14 10:48	4/7/2014	10:48 AM	39.12	9723859	219309	39.5	
4/8/14 11:43	4/8/2014	11:43 AM	39.22	9782930	59071	39.5	

Appendix D-2
Well PW-1(U) Operational History - December 2011 to Present
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

Date and Time	Flow Meas. Date	Flow Meas. Time	Instantaneous Flow Reading (gpm)	Totalizer Reading (gal)	Flow since last reading (gal)	Calculated Flow Rate (gpm)	Notes
4/9/14 11:05	4/9/2014	11:05 AM	38.54	9838222	55292	39.4	
4/10/14 9:51	4/10/2014	9:51 AM	39.04	9892063	53841	39.4	
4/14/14 12:29	4/14/2014	12:29 PM	39.10	10124712	232649	39.3	
4/15/14 11:52	4/15/2014	11:52 AM	39.01	10179859	55147	39.3	
4/16/14 9:23	4/16/2014	9:23 AM	38.54	10230650	50791	39.3	
4/17/14 9:52	4/17/2014	9:52 AM	38.95	10288289	57639	39.2	
4/22/14 10:40	4/22/2014	10:40 AM	40.16	10572132	283843	39.2	
4/23/14 10:26	4/23/2014	10:26 AM	38.88	10627997	55865	39.2	
4/24/14 10:04	4/24/2014	10:04 AM	38.66	10683481	55484	39.1	
4/28/14 10:12	4/28/2014	10:12 AM	38.20	10907768	224287	38.9	
4/29/14 11:52	4/29/2014	11:52 AM	38.77	10967574	59806	38.8	
4/30/14 10:33	4/30/2014	10:33 AM	38.36	11020130	52556	38.6	
5/1/14 12:16	5/1/2014	12:16 PM	38.71	11080264	60134	39.0	
5/5/14 10:46	5/5/2014	10:46 AM	38.58	11300269	220005	38.8	
5/6/14 9:14	5/6/2014	9:14 AM	39.77	11352657	52388	38.9	
5/7/14 10:07	5/7/2014	10:07 AM	38.61	11410252	57595	38.6	
5/8/14 10:07	5/8/2014	10:07 AM	38.69	11466157	55905	38.8	
5/12/14 11:05	5/12/2014	11:05 AM	38.21	11690468	224311	38.6	
5/13/14 15:54	5/13/2014	3:54 PM	38.17	11756906	66438	38.4	
5/14/14 11:20	5/14/2014	11:20 AM	39.60	11801790	44884	38.5	
5/15/14 14:53	5/15/2014	2:53 PM	39.48	11865227	63437	38.4	
5/19/14 14:10	5/19/2014	2:10 PM	38.20	12084782	219555	38.4	
5/20/14 10:25	5/20/2014	10:25 AM	39.30	12131867	47085	38.8	
5/21/14 14:12	5/21/2014	2:12 PM	40.21	12195010	63143	37.9	
5/22/14 13:14	5/22/2014	1:14 PM	38.66	12249297	54287	39.3	
5/27/14 11:44	5/27/2014	11:44 AM	38.61	12525261	275964	38.8	
5/28/14 10:55	5/28/2014	10:55 AM	38.57	12579307	54046	38.9	
5/29/14 12:21	5/29/2014	12:21 PM	38.41	12638102	58795	38.5	
6/2/14 11:59	6/2/2014	11:59 AM	39.47	12859832	221730	38.6	
6/3/14 11:06	6/3/2014	11:06 AM	38.04	12913121	53289	38.4	
6/4/14 9:20	6/4/2014	9:20 AM	38.42	12964693	51572	38.7	
6/5/14 10:35	6/5/2014	10:35 AM	38.28	13022755	58062	38.3	
6/9/14 10:26	6/9/2014	10:26 AM	38.11	13243957	221202	38.5	
6/10/14 14:14	6/10/2014	2:14 PM	39.35	13307735	63778	38.2	
6/12/14 10:02	6/12/2014	10:02 AM	38.04	13408815	101080	38.5	
6/17/14 10:56	6/17/2014	10:56 AM	37.96	13686403	277588	38.3	
6/18/14 9:14	6/18/2014	9:14 AM	37.90	13737620	51217	38.3	
6/19/14 10:13	6/19/2014	10:13 AM	37.95	13794915	57295	38.2	
6/23/14 9:57	6/23/2014	9:57 AM	37.97	14015128	220213	38.3	
6/24/14 10:17	6/24/2014	10:17 AM	39.20	14070741	55613	38.1	
6/25/14 11:40	6/25/2014	11:40 AM	39.15	14128608	57867	38.0	
6/26/14 9:32	6/26/2014	9:32 AM	37.94	14178630	50022	38.1	
6/30/14 10:18	6/30/2014	10:18 AM	37.94	14400204	221574	38.2	
7/1/14 10:35	7/1/2014	10:35 AM	37.46	14455552	55348	38.0	
7/2/14 9:08	7/2/2014	9:08 AM	37.61	14506927	51375	38.0	
7/3/14 14:08	7/3/2014	2:08 PM	37.48	14572799	65872	37.9	
7/7/14 14:47	7/7/2014	2:47 PM	37.44	14793344	220545	38.0	
7/8/14 9:17	7/8/2014	9:17 AM	39.11	14835540	42196	38.0	
7/9/14 9:00	7/9/2014	9:00 AM	39.17	14889356	53816	37.8	
7/10/14 8:47	7/10/2014	8:47 AM	37.66	14943220	53864	37.7	
7/14/14 9:24	7/14/2014	9:24 AM	39.31	15163430	220210	38.0	
7/15/14 10:18	7/15/2014	10:18 AM	39.15	15220037	56607	37.9	
7/16/14 9:03	7/16/2014	9:03 AM	37.46	15271668	51631	37.8	
7/17/14 9:40	7/17/2014	9:40 AM	37.57	15327733	56065	38.0	
7/24/14 9:04	7/24/2014	9:04 AM	37.73	15707438	379705	37.8	
7/28/14 10:44	7/28/2014	10:44 AM	37.88	15929110	221672	37.8	
7/29/14 10:02	7/29/2014	10:02 AM	37.64	15982234	53124	38.0	
7/30/14 9:21	7/30/2014	9:21 AM	37.57	16034882	52648	37.6	
7/31/14 10:38	7/31/2014	10:38 AM	37.66	16092427	57545	37.9	
8/4/14 11:07	8/4/2014	11:07 AM	37.75	16312057	219630	37.9	
8/5/14 8:54	8/5/2014	8:54 AM	37.85	16361549	49492	37.9	
8/6/14 8:30	8/6/2014	8:30 AM	N/A	16416387	54838	38.7	
8/7/14 9:57	8/7/2014	9:57 AM	40.50	16424879	8492	5.6	Pump and pipe cleaned
8/11/14 9:11	8/11/2014	9:11 AM	40.23	16648389	223510	39.1	
8/12/14 9:40	8/12/2014	9:40 AM	37.59	16704361	55972	38.1	
8/13/14 10:46	8/13/2014	10:46 AM	37.43	16761184	56823	37.7	
8/14/14 10:12	8/14/2014	10:12 AM	37.24	16813998	52814	37.6	
8/18/14 9:32	8/18/2014	9:32 AM	38.29	17026754	212756	37.2	
8/27/14 13:05	8/27/2014	1:05 PM	36.95	17514018	487264	37.0	
8/28/14 11:45	8/28/2014	11:45 AM	36.82	17564135	50117	36.9	
9/2/14 9:53	9/2/2014	9:53 AM	36.93	17825314	261179	36.8	
9/3/14 10:31	9/3/2014	10:31 AM	37.02	17880058	54744	37.0	
9/4/14 9:27	9/4/2014	9:27 AM	38.01	17931488	51430	37.4	
9/8/14 10:44	9/8/2014	10:44 AM	36.37	18146297	214809	36.8	
9/9/14 9:35	9/9/2014	9:35 AM	36.57	18196651	50354	36.7	
9/10/14 9:10	9/10/2014	9:10 AM	36.36	18248250	51599	36.5	
9/11/14 10:45	9/11/2014	10:45 AM	36.21	18304064	55814	36.4	
9/15/14 10:19	9/15/2014	10:19 AM	36.08	18512492	208428	36.3	
9/16/14 9:45	9/16/2014	9:45 AM	35.93	18563477	50985	36.3	
9/17/14 11:40	9/17/2014	11:40 AM	36.06	18619926	56449	36.3	
9/18/14 10:56	9/18/2014	10:56 AM	36.13	18670684	50758	36.4	
9/22/14 10:27	9/22/2014	10:27 AM	35.90	18876168	205484	35.9	
9/23/14 9:48	9/23/2014	9:48 AM	35.77	18926129	49961	35.7	
9/24/14 9:45	9/24/2014	9:45 AM	35.79	18977409	51280	35.7	
9/25/14 14:47	9/25/2014	2:47 PM	35.88	19039622	62213	35.7	
9/29/14 9:44	9/29/2014	9:44 AM	36.11	19235091	195469	35.8	
9/30/14 9:42	9/30/2014	9:42 AM	37.31	19286181	51090	35.5	
10/1/14 10:36	10/1/2014	10:36 AM	37.43	19339914	53733	36.0	
10/2/14 15:32	10/2/2014	3:32 PM	35.08	19402131	62217	35.8	
10/6/14 9:49	10/6/2014	9:49 AM	35.68	19595340	193209	35.7	
10/7/14 10:27	10/7/2014	10:27 AM	35.67	19648015	52675	35.6	

Appendix D-2
Well PW-1(U) Operational History - December 2011 to Present
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

Date and Time	Flow Meas. Date	Flow Meas. Time	Instantaneous Flow Reading (gpm)	Totalizer Reading (gal)	Flow since last reading (gal)	Calculated Flow Rate (gpm)	Notes
10/8/14 11:38	10/8/2014	11:38 AM	35.61	19701790	53775	35.6	
10/9/14 10:41	10/9/2014	10:41 AM	35.48	19750717	48927	35.4	
10/13/14 9:50	10/13/2014	9:50 AM	35.40	19953165	202448	35.5	
10/14/14 14:51	10/14/2014	2:51 PM	35.61	20014687	61522	35.3	
10/15/14 9:54	10/15/2014	9:54 AM	35.24	20055140	40453	35.4	
10/16/14 15:04	10/16/2014	3:04 PM	35.40	20116684	61544	35.2	
10/20/14 11:13	10/20/2014	11:13 AM	35.53	20311858	195174	35.3	
10/21/14 10:40	10/21/2014	10:40 AM	35.35	20361490	49632	35.3	
10/22/14 10:01	10/22/2014	10:01 AM	35.31	20410995	49505	35.3	
10/23/14 10:51	10/23/2014	10:51 AM	35.41	20463689	52694	35.4	
10/27/14 10:21	10/27/2014	10:21 AM	35.41	20666408	202719	35.4	
10/28/14 8:57	10/28/2014	8:57 AM	35.40	20714396	47988	35.4	
10/29/14 11:14	10/29/2014	11:14 AM	36.75	20770182	55786	35.4	
10/30/14 11:00	10/30/2014	11:00 AM	36.76	20820861	50679	35.5	
11/3/14 11:27	11/3/2014	11:27 AM	34.77	21026079	205218	35.5	
11/4/14 10:55	11/4/2014	10:55 AM	36.69	21075586	49507	35.2	
11/5/14 9:34	11/5/2014	9:34 AM	36.71	21125454	49868	36.7	
11/6/14 11:42	11/6/2014	11:42 AM	36.73	21180745	55291	35.3	
11/10/14 11:22	11/10/2014	11:22 AM	34.69	21381634	200889	35.0	
11/11/14 10:05	11/11/2014	10:05 AM	36.55	21429468	47834	35.1	
11/12/14 9:32	11/12/2014	9:32 AM	34.68	21478765	49297	35.0	
11/18/14 10:40	11/18/2014	10:40 AM	37.11	21773543	294778	33.9	
11/19/14 10:28	11/19/2014	10:28 AM	36.98	21824032	50489	35.4	
11/20/14 10:38	11/20/2014	10:38 AM	34.29	21875802	51770	35.7	
11/24/14 9:47	11/24/2014	9:47 AM	34.10	22078430	202628	35.5	
11/25/14 11:10	11/25/2014	11:10 AM	34.34	22132781	54351	35.7	
11/26/14 9:47	11/26/2014	9:47 AM	34.46	22181431	48650	35.9	
11/28/14 10:51	11/28/2014	10:51 AM	38.01	22287367	105936	36.0	
12/1/14 10:20	12/1/2014	10:20 AM	37.85	22441361	153994	35.9	
12/2/14 10:55	12/2/2014	10:55 AM	34.29	22494226	52865	35.8	
12/3/14 14:42	12/3/2014	2:42 PM	34.49	22553451	59225	35.5	
12/4/14 15:19	12/4/2014	3:19 PM	34.40	22606008	52557	35.6	
12/8/14 14:27	12/8/2014	2:27 PM	37.20	22808869	202861	35.5	
12/9/14 10:08	12/9/2014	10:08 AM	34.50	22851275	42406	35.9	
12/11/14 9:18	12/11/2014	9:18 AM	34.38	22952204	100929	35.7	
12/12/14 10:16	12/12/2014	10:16 AM	34.69	23005957	53753	35.9	
12/15/14 10:30	12/15/2014	10:30 AM	34.48	23160175	154218	35.6	
12/16/14 12:52	12/16/2014	12:52 PM	35.20	23213345	53170	33.6	
12/17/14 9:13	12/17/2014	9:13 AM	34.78	23256480	43135	35.3	
12/18/14 14:33	12/18/2014	2:33 PM	34.17	23318933	62453	35.5	
12/22/14 11:30	12/22/2014	11:30 AM	34.15	23515187	196254	35.2	
12/23/14 10:41	12/23/2014	10:41 AM	36.63	23563658	48471	34.8	
12/24/14 14:45	12/24/2014	2:45 PM	34.55	23622854	59196	35.2	
12/29/14 11:27	12/29/2014	11:27 AM	34.04	23868972	246118	35.1	
12/30/14 10:43	12/30/2014	10:43 AM	34.46	23917705	48733	34.9	
12/31/14 9:39	12/31/2014	9:39 AM	37.45	23966364	48659	35.4	
1/5/15 10:50	1/5/2015	10:50 AM	37.24	24226491	260127	35.8	
1/6/15 10:49	1/6/2015	10:49 AM	37.37	24278038	51547	35.8	
1/7/15 10:36	1/7/2015	10:36 AM	34.88	24328743	50705	35.5	
1/8/15 11:33	1/8/2015	11:33 AM	34.74	24381581	52838	35.3	
1/12/15 9:30	1/12/2015	9:30 AM	34.66	24580270	198689	35.2	
1/16/15 15:30	1/16/2015	3:30 PM	34.56	24794901	214631	35.1	
1/19/15 10:50	1/19/2015	10:50 AM	34.68	24936811	141910	35.1	
1/20/15 10:28	1/20/2015	10:28 AM	34.57	24986513	49702	35.1	
1/21/15 10:25	1/21/2015	10:25 AM	34.85	25036398	49885	34.7	
1/22/15 9:45	1/22/2015	9:45 AM	34.70	25085635	49237	35.2	
1/26/15 10:54	1/26/2015	10:54 AM	34.05	25288090	202455	34.7	
1/27/15 10:31	1/27/2015	10:31 AM	34.06	25337879	49789	35.1	
1/28/15 9:26	1/28/2015	9:26 AM	34.11	25385425	47546	34.6	
1/29/15 10:57	1/29/2015	10:57 AM	33.60	25439086	53661	35.0	
2/2/15 11:25	2/2/2015	11:25 AM	33.99	25640374	201288	34.8	
2/3/15 11:29	2/3/2015	11:29 AM	33.81	25690064	49690	34.4	
2/4/15 11:31	2/4/2015	11:31 AM	36.41	25740262	50198	34.8	
2/5/15 11:46	2/5/2015	11:46 AM	34.02	25790509	50247	34.5	
2/9/15 11:27	2/9/2015	11:27 AM	36.11	25987967	197458	34.4	
2/10/15 10:55	2/10/2015	10:55 AM	33.95	26036533	48566	34.5	
2/11/15 9:38	2/11/2015	9:38 AM	33.49	26083313	46780	34.3	
2/12/15 10:57	2/12/2015	10:57 AM	33.97	26135438	52125	34.3	
2/17/15 10:13	2/17/2015	10:13 AM	34.14	26381175	245737	34.3	
2/18/15 10:00	2/18/2015	10:00 AM	34.19	26430248	49073	34.4	
2/19/15 10:45	2/19/2015	10:45 AM	34.11	26480822	50574	34.1	
2/23/15 10:42	2/23/2015	10:42 AM	34.15	26677671	196849	34.2	
2/24/15 10:43	2/24/2015	10:43 AM	34.22	26728054	50383	35.0	
2/26/15 10:51	2/26/2015	10:51 AM	34.12	26826573	98519	34.1	
3/2/15 11:36	3/2/2015	11:36 AM	34.64	27026572	199999	34.5	
3/3/15 12:25	3/3/2015	12:25 PM	34.74	27078153	51581	34.6	
3/4/15 11:02	3/4/2015	11:02 AM	35.03	27125544	47391	34.9	
3/9/15 9:49	3/9/2015	9:49 AM	37.58	27377276	251732	35.3	
3/10/15 11:28	3/10/2015	11:28 AM	35.11	27425105	47829	31.1	
3/11/15 14:59	3/11/2015	2:59 PM	34.93	27483467	58362	35.3	
3/12/15 11:38	3/12/2015	11:38 AM	37.27	27528030	44563	36.0	
3/16/15 11:18	3/16/2015	11:18 AM	37.61	27732039	204009	35.5	
3/17/15 9:53	3/17/2015	9:53 AM	35.16	27781057	49018	36.2	
3/18/15 15:38	3/18/2015	3:38 PM	37.64	27844690	63633	35.6	
3/19/15 11:49	3/19/2015	11:49 AM	37.50	27888384	43694	36.1	
3/23/15 10:53	3/23/2015	10:53 AM	35.40	28093130	204746	35.9	
3/24/15 10:02	3/24/2015	10:02 AM	35.45	28143122	49992	36.0	
3/25/15 13:37	3/25/2015	1:37 PM	34.85	28203235	60113	36.3	
3/26/15 11:47	3/26/2015	11:47 AM	35.39	28251143	47908	36.0	
3/30/15 15:36	3/30/2015	3:36 PM	37.94	28467313	216170	36.1	
3/31/15 11:17	3/31/2015	11:17 AM	37.91	28509735	42422	35.9	

Appendix D-2
Well PW-1(U) Operational History - December 2011 to Present
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

Date and Time	Flow Meas. Date	Flow Meas. Time	Instantaneous Flow Reading (gpm)	Totalizer Reading (gal)	Flow since last reading (gal)	Calculated Flow Rate (gpm)	Notes
4/1/15 10:18	4/1/2015	10:18 AM	35.26	28559836	50101	36.3	
4/2/15 11:54	4/2/2015	11:54 AM	37.91	28615463	55627	36.2	
4/6/15 15:13	4/6/2015	3:13 PM	35.31	28830722	215259	36.1	
4/7/15 15:06	4/7/2015	3:06 PM	35.49	28882358	51636	36.0	
4/8/15 15:26	4/8/2015	3:26 PM	38.21	28935631	53273	36.5	
4/9/15 11:50	4/9/2015	11:50 AM	35.32	28979979	44348	36.2	
4/13/15 10:14	4/13/2015	10:14 AM	35.60	29185112	205133	36.2	
4/14/15 11:06	4/14/2015	11:06 AM	35.71	29239191	54079	36.2	
4/15/15 10:08	4/15/2015	10:08 AM	37.73	29289838	50647	36.6	
4/16/15 9:45	4/16/2015	9:45 AM	35.75	29341821	51983	36.7	
4/20/15 12:04	4/20/2015	12:04 PM	36.36	29556435	214614	36.4	
4/21/15 10:28	4/21/2015	10:28 AM	36.33	29605887	49452	36.8	
4/22/15 10:34	4/22/2015	10:34 AM	35.80	29658392	52505	36.3	
4/23/15 10:33	4/23/2015	10:33 AM	36.45	29711430	53038	36.9	
4/27/15 10:32	4/27/2015	10:32 AM	38.61	29923990	212560	36.9	
4/28/15 9:15	4/28/2015	9:15 AM	38.68	29974789	50799	37.3	
4/29/15 11:31	4/29/2015	11:31 AM	36.04	30032589	57800	36.7	
4/30/15 11:38	4/30/2015	11:38 AM	36.10	30085511	52922	36.6	
5/4/15 10:02	5/4/2015	10:02 AM	35.88	30293164	207653	36.7	
5/5/15 10:23	5/5/2015	10:23 AM	38.32	30346257	53093	36.3	
5/6/15 10:09	5/6/2015	10:09 AM	38.46	30398147	51890	36.4	
5/7/15 10:03	5/7/2015	10:03 AM	36.03	30450695	52548	36.6	
5/9/15 12:46	5/9/2015	12:46 PM	36.00	30563401	112706	37.0	
5/11/15 11:39	5/11/2015	11:39 AM	38.45	30670645	107244	38.1	
5/12/15 9:40	5/12/2015	9:40 AM	36.19	30719137	48492	36.7	
5/13/15 15:21	5/13/2015	3:21 PM	36.26	30784588	65451	36.7	
5/14/15 10:34	5/14/2015	10:34 AM	36.42	30827325	42737	37.1	
5/18/15 10:41	5/18/2015	10:41 AM	38.35	31037937	210612	36.5	
5/19/15 9:35	5/19/2015	9:35 AM	38.95	31088572	50635	36.9	
5/20/15 10:51	5/20/2015	10:51 AM	35.68	31136908	48336	31.9	
5/21/15 11:55	5/21/2015	11:55 AM	38.89	31192450	55542	36.9	
5/26/15 10:19	5/26/2015	10:19 AM	38.81	31454231	261781	36.8	
5/27/15 12:58	5/27/2015	12:58 PM	36.03	31513420	59189	37.0	
5/28/15 10:00	5/28/2015	10:00 AM	36.07	31559744	46324	36.7	
6/2/15 13:38	6/2/2015	1:38 PM	38.54	31831649	271905	36.7	
6/8/15 10:03	6/8/2015	10:03 AM	36.83	32142004	310355	36.8	
6/9/15 9:28	6/9/2015	9:28 AM	36.45	32193707	51703	36.8	
6/10/15 9:00	6/10/2015	9:00 AM	37.13	32245837	52130	36.9	
6/11/15 10:58	6/11/2015	10:58 AM	36.45	32302942	57105	36.7	
6/15/15 13:38	6/15/2015	1:38 PM	36.90	32521237	218295	36.9	
6/16/15 12:16	6/16/2015	12:16 PM	36.92	32571201	49964	36.8	
6/17/15 9:56	6/17/2015	9:56 AM	36.87	32619090	47889	36.8	
6/18/15 10:30	6/18/2015	10:30 AM	36.66	32673981	54891	37.2	
6/22/15 10:45	6/22/2015	10:45 AM	36.64	32887066	213085	36.9	
6/23/15 9:48	6/23/2015	9:48 AM	39.07	32938272	51206	37.0	
6/24/15 10:29	6/24/2015	10:29 AM	37.41	32994129	55857	37.7	
6/25/15 10:18	6/25/2015	10:18 AM	37.09	33047865	53736	37.6	
6/29/15 9:58	6/29/2015	9:58 AM	37.41	33261684	213819	37.3	
6/30/15 10:01	6/30/2015	10:01 AM	37.22	33315719	54035	37.4	
7/1/15 10:01	7/1/2015	10:01 AM	37.02	33369507	53788	37.4	
7/2/15 8:30	7/2/2015	8:30 AM	37.36	33419969	50462	37.4	Off while jetting tank discharge line
7/6/15 10:24	7/6/2015	10:24 AM	36.20	33621713	201744	34.3	
7/7/15 15:13	7/7/2015	3:13 PM	38.71	33685486	63773	36.9	
7/8/15 9:54	7/8/2015	9:54 AM	36.52	33727175	41689	37.2	
7/9/15 10:22	7/9/2015	10:22 AM	36.71	33781662	54487	37.1	
7/13/15 9:40	7/13/2015	9:40 AM	37.00	33992564	210902	36.9	
7/14/15 9:48	7/14/2015	9:48 AM	37.21	34046629	54065	37.3	
7/15/15 10:36	7/15/2015	10:36 AM	38.72	34103745	57116	38.4	
7/16/15 11:07	7/16/2015	11:07 AM	38.87	34160747	57002	38.8	
7/20/15 9:46	7/20/2015	9:46 AM	39.01	34369491	208744	36.8	
7/21/15 9:44	7/21/2015	9:44 AM	38.77	34422329	52838	36.7	
7/23/15 9:57	7/23/2015	9:57 AM	35.18	34528292	105963	36.6	
7/27/15 15:26	7/27/2015	3:26 PM	38.87	34753001	224709	36.9	
7/28/15 10:21	7/28/2015	10:21 AM	38.87	34796211	43210	38.1	
7/29/15 9:45	7/29/2015	9:45 AM	38.90	34848928	52717	37.5	
7/30/15 9:45	7/30/2015	9:45 AM	38.90	34902790	53862	37.4	
8/3/15 10:10	8/3/2015	10:10 AM	35.83	35116180	213390	36.9	
8/4/15 9:45	8/4/2015	9:45 AM	35.78	35168126	51946	36.7	
8/5/15 15:22	8/5/2015	3:22 PM	35.91	35233086	64960	36.6	
8/6/15 10:45	8/6/2015	10:45 AM	36.15	35275986	42900	36.9	
8/10/15 13:03	8/10/2015	1:03 PM	38.31	35491938	215952	36.6	
8/11/15 9:13	8/11/2015	9:13 AM	36.11	35535906	43968	36.3	
8/12/15 10:00	8/12/2015	10:00 AM	35.87	35589593	53687	36.1	
8/13/15 10:18	8/13/2015	10:18 AM	36.11	35643210	53617	36.8	
8/17/15 9:27	8/17/2015	9:27 AM	36.65	35851098	207888	36.4	
8/18/15 10:17	8/18/2015	10:17 AM	36.39	35905369	54271	36.4	
8/19/15 10:26	8/19/2015	10:26 AM	36.24	35959089	53720	37.1	
8/20/15 9:37	8/20/2015	9:37 AM	36.65	36010139	51050	36.7	
8/25/15 8:38	8/25/2015	8:38 AM	36.98	36275819	265680	37.2	PW-1 pump replaced
8/27/15 8:22	8/27/2015	8:22 AM	42.55	36324750	48931	17.1	
8/28/15 9:11	8/28/2015	9:11 AM	43.39	36375183	50433	33.9	
8/31/15 11:53	8/31/2015	11:53 AM	37.33	36543455	168272	37.5	
9/1/15 10:33	9/1/2015	10:33 AM	36.86	36593838	50383	37.0	
9/2/15 10:06	9/2/2015	10:06 AM	36.80	36646144	52306	37.0	
9/3/15 10:21	9/3/2015	10:21 AM	36.77	36699870	53726	36.9	
9/8/15 10:13	9/8/2015	10:13 AM	36.54	36964956	265086	36.9	
9/9/15 13:37	9/9/2015	1:37 PM	36.62	37025455	60499	36.8	
9/10/15 10:13	9/10/2015	10:13 AM	36.49	37070909	45454	36.8	
9/14/15 10:07	9/14/2015	10:07 AM	36.73	37283058	212149	36.9	
9/15/15 11:54	9/15/2015	11:54 AM	36.91	37336030	52972	34.2	
9/16/15 13:45	9/16/2015	1:45 PM	36.85	37393244	57214	36.9	
9/17/15 10:08	9/17/2015	10:08 AM	36.93	37438333	45089	36.9	

Appendix D-2
Well PW-1(U) Operational History - December 2011 to Present
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

Date and Time	Flow Meas. Date	Flow Meas. Time	Instantaneous Flow Reading (gpm)	Totalizer Reading (gal)	Flow since last reading (gal)	Calculated Flow Rate (gpm)	Notes
9/21/15 11:01	9/21/2015	11:01 AM	36.50	37652438	214105	36.8	
9/22/15 11:42	9/22/2015	11:42 AM	35.79	37702424	49986	33.8	
9/23/15 8:55	9/23/2015	8:55 AM	35.29	37748350	45926	36.1	
9/24/15 8:55	9/24/2015	8:55 AM	37.74	37799696	51346	35.7	
9/28/15 12:47	9/28/2015	12:47 PM	37.70	38013099	213403	35.6	
9/29/15 10:53	9/29/2015	10:53 AM	34.73	38059833	46734	35.2	
9/30/15 9:08	9/30/2015	9:08 AM	34.86	38107233	47400	35.5	
10/1/15 9:53	10/1/2015	9:53 AM	37.76	38159277	52044	35.0	
10/5/15 9:47	10/5/2015	9:47 AM	37.32	38366920	207643	36.1	
10/6/15 12:29	10/6/2015	12:29 PM	37.34	38422907	55987	34.9	
10/7/15 10:34	10/7/2015	10:34 AM	34.06	38469018	46111	34.8	
10/8/15 11:20	10/8/2015	11:20 AM	34.00	38520708	51690	34.8	
10/12/15 10:01	10/12/2015	10:01 AM	33.70	38718885	198177	34.9	
10/13/15 9:48	10/13/2015	9:48 AM	33.81	38768698	49813	34.9	
10/14/15 13:39	10/14/2015	1:39 PM	36.83	38827200	58502	35.0	
10/15/15 11:01	10/15/2015	11:01 AM	36.25	38871338	44138	34.4	
10/19/15 10:47	10/19/2015	10:47 AM	36.90	39071131	199793	34.8	
10/20/15 14:08	10/20/2015	2:08 PM	36.89	39128777	57646	35.1	
10/21/15 9:24	10/21/2015	9:24 AM	33.74	39168213	39436	34.1	
10/22/15 10:21	10/22/2015	10:21 AM	37.88	39215662	47449	31.7	
10/26/15 13:25	10/26/2015	1:25 PM	37.64	39426981	211319	35.6	
10/27/15 12:02	10/27/2015	12:02 PM	33.77	39474720	47739	35.2	
10/28/15 10:15	10/28/2015	10:15 AM	37.54	39521420	46700	35.0	
10/29/15 10:10	10/29/2015	10:10 AM	33.62	39572531	51111	35.6	
11/2/15 9:40	11/2/2015	9:40 AM	37.15	39774479	201948	35.2	
11/3/15 9:15	11/3/2015	9:15 AM	33.40	39823982	49503	35.0	
11/4/15 9:33	11/4/2015	9:33 AM	33.02	39873931	49949	34.3	
11/5/15 12:54	11/5/2015	12:54 PM	33.32	39931665	57734	35.2	
11/9/15 10:07	11/9/2015	10:07 AM	33.50	40125771	194106	34.7	
11/10/15 9:52	11/10/2015	9:52 AM	37.15	40176222	50451	35.4	
11/11/15 9:52	11/11/2015	9:52 AM	33.26	40225767	49545	34.4	
11/12/15 10:25	11/12/2015	10:25 AM	37.12	40276947	51180	34.7	
11/16/15 10:37	11/16/2015	10:37 AM	33.12	40476953	200006	34.7	
11/17/15 12:14	11/17/2015	12:14 PM	37.61	40531350	54397	35.4	
11/18/15 9:58	11/18/2015	9:58 AM	33.78	40577470	46120	35.4	
11/19/15 9:26	11/19/2015	9:26 AM	33.91	40626602	49132	34.9	
11/22/15 12:08	11/22/2015	12:08 PM	37.59	40785070	158468	35.4	
11/30/15 10:44	11/30/2015	10:44 AM	37.52	41187433	402363	35.2	
12/1/15 9:20	12/1/2015	9:20 AM	33.67	41234902	47469	35.0	
12/2/15 9:32	12/2/2015	9:32 AM	37.48	41286194	51292	35.3	
12/3/15 11:18	12/3/2015	11:18 AM	33.51	41339815	53621	34.7	
12/7/15 13:43	12/7/2015	1:43 PM	37.66	41547951	208136	35.2	
12/8/15 9:42	12/8/2015	9:42 AM	37.54	41590001	42050	35.1	
12/9/15 9:36	12/9/2015	9:36 AM	33.60	41640072	50071	34.9	
12/10/15 14:54	12/10/2015	2:54 PM	37.55	41702410	62338	35.5	
12/14/15 12:50	12/14/2015	12:50 PM	33.90	41901459	199049	35.3	
12/15/15 15:40	12/15/2015	3:40 PM	37.13	41957629	56170	34.9	
12/16/15 9:55	12/16/2015	9:55 AM	37.20	41996513	38884	35.5	
12/17/15 11:07	12/17/2015	11:07 AM	33.94	42050670	54157	35.8	
12/21/15 11:33	12/21/2015	11:33 AM	33.54	42254108	203438	35.2	
12/23/15 9:21	12/23/2015	9:21 AM	37.37	42350091	95983	34.9	
12/28/15 15:15	12/28/2015	3:15 PM	37.16	42613652	263561	34.9	
12/29/15 11:27	12/29/2015	11:27 AM	37.22	42655985	42333	34.9	
12/30/15 14:20	12/30/2015	2:20 PM	33.66	42712447	56462	35.0	
1/4/16 10:47	1/4/2016	10:47 AM	33.77	42957837	245390	35.1	
1/5/16 10:37	1/5/2016	10:37 AM	33.80	43007908	50071	35.0	
1/6/16 15:53	1/6/2016	3:53 PM	37.32	43069007	61099	34.8	
1/7/16 10:15	1/7/2016	10:15 AM	33.90	43107537	38530	35.0	
1/11/16 10:15	1/11/2016	10:15 AM	33.91	43309310	201773	35.0	
1/12/16 10:22	1/12/2016	10:22 AM	37.41	43359933	50623	35.0	
1/13/16 10:29	1/13/2016	10:29 AM	33.51	43410841	50908	35.2	
1/14/16 9:19	1/14/2016	9:19 AM	33.80	43458830	47989	35.0	
1/21/16 10:38	1/21/2016	10:38 AM	38.11	43816402	357572	35.2	
1/25/16 14:55	1/25/2016	2:55 PM	37.85	44031899	215497	35.8	
1/27/16 10:26	1/27/2016	10:26 AM	33.84	44124910	93011	35.6	
1/28/16 13:45	1/28/2016	1:45 PM	37.66	44183560	58650	35.8	
2/1/16 14:00	2/1/2016	2:00 PM	33.67	44388058	204498	35.4	
2/4/16 9:49	2/4/2016	9:49 AM	33.70	44530830	142772	35.1	
2/8/16 14:36	2/8/2016	2:36 PM	37.83	44744831	214001	35.4	
2/9/16 10:04	2/9/2016	10:04 AM	33.71	44786232	41401	35.4	
2/11/16 11:30	2/11/2016	11:30 AM	38.22	44892085	105853	35.7	
2/15/16 9:46	2/15/2016	9:46 AM	37.78	45092743	200658	35.5	
2/18/16 9:45	2/18/2016	9:45 AM	37.62	45245890	153147	35.5	
2/22/16 9:47	2/22/2016	9:47 AM	33.01	45450470	204580	35.5	
2/25/16 9:26	2/25/2016	9:26 AM	33.17	45603124	152654	35.5	
2/29/16 10:43	2/29/2016	10:43 AM	37.69	45809108	205984	35.3	
3/1/16 9:12	3/1/2016	9:12 AM	33.17	45855901	46793	34.7	
3/3/16 10:29	3/3/2016	10:29 AM	37.80	45959344	103443	35.0	
3/7/16 9:20	3/7/2016	9:20 AM	37.44	46159475	200131	35.2	
3/8/16 9:17	3/8/2016	9:17 AM	39.82	46211727	52252	36.4	
3/10/16 9:52	3/10/2016	9:52 AM	39.62	46321612	109885	37.7	
3/14/16 10:11	3/14/2016	10:11 AM	34.56	46535844	214232	37.1	
3/17/16 15:06	3/17/2016	3:06 PM	34.81	46704215	168371	36.5	
3/21/16 9:14	3/21/2016	9:14 AM	38.72	46904909	200694	37.1	
3/22/16 11:09	3/22/2016	11:09 AM	34.86	46960528	55619	35.8	
3/23/16 8:45	3/23/2016	8:45 AM	34.44	47006689	46161	35.6	On March 23, 2016; NCC cleaned the 2" piping and the check valve at the railroad
3/24/16 10:47	3/24/2016	10:47 AM	40.16	47060823	54134	34.7	
3/28/16 14:13	3/28/2016	2:13 PM	35.81	47282472	221649	37.2	
3/31/16 9:50	3/31/2016	9:50 AM	38.99	47430026	147554	36.4	
4/4/16 10:10	4/4/2016	10:10 AM	35.49	47640200	210174	36.4	
4/5/16 9:59	4/5/2016	9:59 AM	35.16	47691840	51640	36.1	
4/6/16 9:03	4/6/2016	9:03 AM	34.98	47741784	49944	36.1	

Appendix D-2
Well PW-1(U) Operational History - December 2011 to Present
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

Date and Time	Flow Meas. Date	Flow Meas. Time	Instantaneous Flow Reading (gpm)	Totalizer Reading (gal)	Flow since last reading (gal)	Calculated Flow Rate (gpm)	Notes
4/7/16 10:55	4/7/2016	10:55 AM	38.40	47798444	56660	36.5	
4/11/16 12:03	4/11/2016	12:03 PM	34.57	48008592	210148	36.1	
4/13/16 15:18	4/13/2016	3:18 PM	34.90	48118210	109618	35.6	
4/14/16 10:19	4/14/2016	10:19 AM	34.74	48159183	40973	35.9	
4/18/16 10:03	4/18/2016	10:03 AM	37.57	48364840	205657	35.8	
4/19/16 9:46	4/19/2016	9:46 AM	37.99	48415869	51029	35.9	
4/20/16 9:58	4/20/2016	9:58 AM	37.92	48467428	51559	35.5	
4/21/16 11:41	4/21/2016	11:41 AM	37.90	48522407	54979	35.6	
4/25/16 9:56	4/25/2016	9:56 AM	37.93	48723626	201219	35.6	
4/28/16 10:50	4/28/2016	10:50 AM	34.66	48879027	155401	35.5	
5/2/16 10:12	5/2/2016	10:12 AM	37.88	49082973	203946	35.6	
5/3/16 9:30	5/3/2016	9:30 AM	37.72	49132788	49815	35.6	
5/4/16 16:10	5/4/2016	4:10 PM	39.67	49187089	54301	29.5	
5/9/16 9:15	5/9/2016	9:15 AM	33.07	49439550	252461	37.2	
5/10/16 8:58	5/10/2016	8:58 AM	32.89	49491611	52061	36.6	On May 10, 2016; the 4" ductile iron line between the PW-1/LFExS connection and the tie-in at the NCC force main was flushed using NCC equipment and personnel.
5/11/16 9:20	5/11/2016	9:20 AM	40.65	49544064	52453	35.9	
5/12/16 9:19	5/12/2016	9:19 AM	34.22	49592527	48463	33.7	To meet discharge permit flow limitations, the Trust decreased the discharge from well PW-1(U) slightly following clean out of the discharge line on March 23 and May
5/16/16 10:40	5/16/2016	10:40 AM	33.83	49780776	188249	32.2	
5/19/16 10:58	5/19/2016	10:58 AM	29.50	49918344	137568	31.7	
5/23/16 11:18	5/23/2016	11:18 AM	33.50	50101800	183456	31.7	
5/26/16 10:22	5/26/2016	10:22 AM	33.08	50238299	136499	32.0	
5/31/16 9:40	5/31/2016	9:40 AM	33.08	50466047	227748	31.8	
6/1/16 9:46	6/1/2016	9:46 AM	33.13	50512070	46023	31.8	
6/2/16 11:08	6/2/2016	11:08 AM	29.06	50560328	48258	31.7	
6/6/16 9:20	6/6/2016	9:20 AM	29.07	50739549	179221	31.7	
6/7/16 9:44	6/7/2016	9:44 AM	33.06	50784475	44926	30.7	
6/8/16 9:54	6/8/2016	9:54 AM	32.78	50829416	44941	31.0	
6/9/16 11:59	6/9/2016	11:59 AM	28.73	50877889	48473	31.0	
6/13/16 14:48	6/13/2016	2:48 PM	28.58	51059798	181909	30.7	
6/14/16 10:00	6/14/2016	10:00 AM	28.62	51095345	35547	30.9	
6/16/16 10:38	6/16/2016	10:38 AM	29.10	51185344	89999	30.8	
6/20/16 9:04	6/20/2016	9:04 AM	29.20	51362004	176660	31.2	
6/23/16 9:26	6/23/2016	9:26 AM	33.17	51496513	134509	31.0	
6/27/16 10:14	6/27/2016	10:14 AM	32.57	51676457	179944	31.0	
6/30/16 12:07	6/30/2016	12:07 PM	28.76	51813586	137129	30.9	
7/5/16 11:49	7/5/2016	11:49 AM	33.45	52035254	221668	30.9	
7/6/16 9:15	7/6/2016	9:15 AM	33.13	52075081	39827	31.0	
7/7/16 9:58	7/7/2016	9:58 AM	32.96	52121310	46229	31.2	
7/8/16 8:58	7/8/2016	8:58 AM	32.90	52164002	42692	30.9	
7/11/16 8:41	7/11/2016	8:41 AM	29.09	52296857	132855	30.9	
7/12/16 8:44	7/12/2016	8:44 AM	28.87	52341246	44389	30.8	
7/13/16 9:17	7/13/2016	9:17 AM	28.92	52386408	45162	30.7	
7/14/16 9:01	7/14/2016	9:01 AM	28.87	52429928	43520	30.6	
7/18/16 11:21	7/18/2016	11:21 AM	28.79	52610724	180796	30.6	
7/19/16 9:07	7/19/2016	9:07 AM	28.79	52650703	39979	30.6	
7/21/16 9:15	7/21/2016	9:15 AM	28.86	52738848	88145	30.5	
7/25/16 9:16	7/25/2016	9:16 AM	28.80	52915030	176182	30.6	
7/26/16 8:55	7/26/2016	8:55 AM	28.66	52958451	43421	30.6	
7/27/16 13:31	7/27/2016	1:31 PM	33.22	53012738	54287	31.6	
8/1/16 8:53	8/1/2016	8:53 AM	32.55	53236534	223796	32.3	
8/2/16 9:22	8/2/2016	9:22 AM	32.42	53286038	49504	33.7	
8/3/16 8:52	8/3/2016	8:52 AM	32.34	53334043	48005	34.0	
8/4/16 11:10	8/4/2016	11:10 AM	32.46	53387881	53838	34.1	
8/10/16 11:01	8/10/2016	11:01 AM	36.26	53681719	293838	34.0	
8/11/16 9:12	8/11/2016	9:12 AM	32.20	53726164	44445	33.4	
8/15/16 9:40	8/15/2016	9:40 AM	31.98	53921659	195495	33.8	
8/18/16 9:35	8/18/2016	9:35 AM	31.90	54065421	143762	33.3	
8/24/16 13:21	8/24/2016	1:21 PM	31.89	54364456	299035	33.7	
8/25/16 9:47	8/25/2016	9:47 AM	31.80	54406184	41728	34.0	
8/29/16 14:32	8/29/2016	2:32 PM	31.92	54609506	203322	33.6	
8/31/16 10:34	8/31/2016	10:34 AM	35.62	54697554	88048	33.3	
9/6/16 9:30	9/6/2016	9:30 AM	31.82	54987242	289688	33.8	
9/8/16 12:20	9/8/2016	12:20 PM	31.54	55089263	102021	33.4	
9/12/16 10:00	9/12/2016	10:00 AM	32.77	55270106	180843	32.2	
9/13/16 10:41	9/13/2016	10:41 AM	32.46	55321903	51797	35.0	
9/15/16 10:35	9/15/2016	10:35 AM	32.43	55422879	100976	35.1	
9/19/16 13:14	9/19/2016	1:14 PM	36.38	55627729	204850	34.6	
9/22/16 10:33	9/22/2016	10:33 AM	36.10	55768958	141229	34.0	
9/26/16 9:05	9/26/2016	9:05 AM	31.99	55967590	198632	35.0	
9/27/16 9:25	9/27/2016	9:25 AM	36.29	56004873	37283	25.5	
9/28/16 8:47	9/28/2016	8:47 AM	36.57	56055073	50200	35.8	
9/29/16 12:50	9/29/2016	12:50 PM	36.38	56115498	60425	35.9	
10/3/16 11:24	10/3/2016	11:24 AM	32.31	56313182	197684	34.8	
10/6/16 10:30	10/6/2016	10:30 AM	31.94	56460277	147095	34.5	
10/13/16 9:29	10/13/2016	9:29 AM	31.77	56800299	340022	33.9	
10/17/16 10:34	10/17/2016	10:34 AM	34.86	56998158	197859	34.0	
10/18/16 8:58	10/18/2016	8:58 AM	35.27	57042272	44114	32.8	
10/19/16 8:25	10/19/2016	8:25 AM	35.24	57091907	49635	35.3	
10/20/16 11:04	10/20/2016	11:04 AM	36.35	57097033	5126	3.2	
10/24/16 9:28	10/24/2016	9:28 AM	32.81	57296764	199731	35.3	
10/26/16 9:51	10/26/2016	9:51 AM	36.43	57399078	102314	35.2	
10/27/16 10:54	10/27/2016	10:54 AM	36.33	57452635	53557	35.6	
10/31/16 10:49	10/31/2016	10:49 AM	35.67	57655232	202597	35.2	
11/1/16 13:06	11/1/2016	1:06 PM	32.88	57710440	55208	35.0	
11/2/16 9:05	11/2/2016	9:05 AM	32.82	57751415	40975	34.2	
11/3/16 10:22	11/3/2016	10:22 AM	32.83	57804244	52829	34.8	
11/7/16 13:49	11/7/2016	1:49 PM	35.05	58014023	209779	35.2	
11/9/16 11:00	11/9/2016	11:00 AM	36.11	58107147	93124	34.4	
11/10/16 11:58	11/10/2016	11:58 AM	35.36	58159330	52183	34.8	
11/14/16 11:44	11/14/2016	11:44 AM	32.90	58359757	200427	34.9	
11/17/16 11:07	11/17/2016	11:07 AM	32.82	58506368	146611	34.2	
11/21/16 11:13	11/21/2016	11:13 AM	35.76	58704904	198536	34.4	

Appendix D-2
Well PW-1(U) Operational History - December 2011 to Present
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

Date and Time	Flow Meas. Date	Flow Meas. Time	Instantaneous Flow Reading (gpm)	Totalizer Reading (gal)	Flow since last reading (gal)	Calculated Flow Rate (gpm)	Notes
11/23/16 10:24	11/23/2016	10:24 AM	32.67	58801516	96612	34.1	
11/28/16 11:34	11/28/2016	11:34 AM	35.17	59051578	250062	34.4	
11/29/16 9:50	11/29/2016	9:50 AM	35.01	59097150	45572	34.1	
12/1/16 11:30	12/1/2016	11:30 AM	35.09	59198939	101789	34.2	
12/5/16 9:16	12/5/2016	9:16 AM	31.30	59391312	192373	34.2	
12/8/16 10:48	12/8/2016	10:48 AM	30.73	59541287	149975	34.0	
12/12/16 9:00	12/12/2016	9:00 AM	34.72	59733517	192230	34.0	
12/14/16 10:00	12/14/2016	10:00 AM	34.09	59832546	99029	33.7	
12/15/16 9:40	12/15/2016	9:40 AM	34.84	59879867	47321	33.3	
12/19/16 15:05	12/19/2016	3:05 PM	35.24	60084195	204328	33.6	
12/21/16 9:42	12/21/2016	9:42 AM	34.67	60168288	84093	32.9	
12/23/16 11:33	12/23/2016	11:33 AM	34.10	60267435	99147	33.1	
12/27/16 10:24	12/27/2016	10:24 AM	34.17	60455226	187791	33.0	
1/3/17 10:50	1/3/2017	10:50 AM	33.85	60787783	332557	32.9	
1/5/17 10:18	1/5/2017	10:18 AM	33.15	60880150	92367	32.4	
1/9/17 11:08	1/9/2017	11:08 AM	33.73	61069694	189544	32.6	
1/11/17 9:27	1/11/2017	9:27 AM	34.18	61160600	90906	32.7	
1/12/17 8:47	1/12/2017	8:47 AM	33.89	61206844	46244	33.0	
1/16/17 9:58	1/16/2017	9:58 AM	34.13	61395783	188939	32.4	
1/19/17 10:15	1/19/2017	10:15 AM	30.18	61537428	141645	32.7	
1/23/17 10:03	1/23/2017	10:03 AM	33.77	61724689	187261	32.6	
1/25/17 12:24	1/25/2017	12:24 PM	31.50	61822697	98008	32.4	
1/26/17 11:48	1/26/2017	11:48 AM	34.03	61867848	45151	32.2	
1/30/17 11:04	1/30/2017	11:04 AM	34.18	62053829	185981	32.5	
1/31/17 9:20	1/31/2017	9:20 AM	29.88	62097631	43802	32.8	
2/2/17 10:34	2/2/2017	10:34 AM	33.74	62193515	95884	32.5	
2/6/17 10:19	2/6/2017	10:19 AM	33.51	62381002	187487	32.6	
2/8/17 13:04	2/8/2017	1:04 PM	34.70	62478280	97278	31.9	
2/9/17 12:20	2/9/2017	12:20 PM	33.55	62522961	44681	32.0	
2/13/17 9:36	2/13/2017	9:36 AM	29.93	62706304	183343	32.8	
2/16/17 10:26	2/16/2017	10:26 AM	30.01	62847604	141300	32.3	
2/20/17 9:51	2/20/2017	9:51 AM	31.79	63037961	190357	33.3	
2/23/17 9:25	2/23/2017	9:25 AM	30.34	63178377	140416	32.7	
2/27/17 10:25	2/27/2017	10:25 AM	35.63	63371664	193287	33.2	
2/28/17 13:19	2/28/2017	1:19 PM	32.95	63426182	54518	33.8	
3/1/17 9:00	3/1/2017	9:00 AM	30.67	63465795	39613	33.5	
3/2/17 10:32	3/2/2017	10:32 AM	31.06	63514996	49201	32.1	
3/6/17 11:05	3/6/2017	11:05 AM	30.52	63704952	189956	32.8	
3/9/17 9:10	3/9/2017	9:10 AM	30.96	63841045	136093	32.4	
3/13/17 9:38	3/13/2017	9:38 AM	36.93	64026700	185655	32.1	
3/15/17 9:37	3/15/2017	9:37 AM	35.18	64124969	98269	34.1	
3/16/17 9:45	3/16/2017	9:45 AM	35.18	64174897	49928	34.5	
3/20/17 9:33	3/20/2017	9:33 AM	35.15	64375863	200966	35.0	
3/21/17 9:34	3/21/2017	9:34 AM	35.09	64426433	50570	35.1	
3/22/17 9:54	3/22/2017	9:54 AM	35.04	64477562	51129	35.0	
3/23/17 10:39	3/23/2017	10:39 AM	35.20	64529412	51850	34.9	
3/27/17 9:31	3/27/2017	9:31 AM	35.04	64728222	198810	34.9	
4/3/17 10:58	4/3/2017	10:58 AM	35.19	65084109	355887	35.0	
4/4/17 13:34	4/4/2017	1:34 PM	35.00	65139862	55753	34.9	
4/5/17 11:27	4/5/2017	11:27 AM	35.10	65185540	45678	34.8	
4/10/17 9:40	4/10/2017	9:40 AM	35.18	65431332	245792	34.7	
4/11/17 10:29	4/11/2017	10:29 AM	35.77	65482679	51347	34.5	
4/12/17 9:55	4/12/2017	9:55 AM	34.76	65531160	48481	34.5	
4/13/17 12:44	4/13/2017	12:44 PM	35.00	65586700	55540	34.5	
4/17/17 9:15	4/17/2017	9:15 AM	34.74	65779660	192960	34.8	
4/18/17 11:52	4/18/2017	11:52 AM	35.83	65835041	55381	34.7	
4/19/17 10:40	4/19/2017	10:40 AM	34.16	65882763	47722	34.9	
4/20/17 11:30	4/20/2017	11:30 AM	34.48	65934135	51372	34.5	
4/24/17 9:26	4/24/2017	9:26 AM	34.45	66129131	194996	34.6	
4/27/17 11:25	4/27/2017	11:25 AM	36.22	66282757	153626	34.6	
5/1/17 9:14	5/1/2017	9:14 AM	34.63	66476953	194196	34.5	
5/3/17 10:33	5/3/2017	10:33 AM	34.32	66578725	101772	34.4	
5/8/17 12:56	5/8/2017	12:56 PM	34.21	66831694	252969	34.5	
5/9/17 10:02	5/9/2017	10:02 AM	35.65	66875207	43513	34.4	
5/10/17 9:15	5/10/2017	9:15 AM	35.63	66923283	48076	34.5	
5/11/17 11:47	5/11/2017	11:47 AM	34.33	66978100	54817	34.4	
5/15/17 9:45	5/15/2017	9:45 AM	35.04	67172391	194291	34.5	
5/17/17 10:57	5/17/2017	10:57 AM	33.78	67272753	100362	34.0	
5/18/17 11:51	5/18/2017	11:51 AM	33.66	67323849	51096	34.2	
5/22/17 12:59	5/22/2017	12:59 PM	33.85	67522105	198256	34.0	
5/25/17 9:42	5/25/2017	9:42 AM	35.28	67662861	140756	34.1	
5/30/17 14:46	5/30/2017	2:46 PM	33.51	67918964	256103	34.1	
6/1/17 9:43	6/1/2017	9:43 AM	33.61	68006328	87364	33.9	
6/5/17 9:00	6/5/2017	9:00 AM	33.67	68200702	194374	34.0	
6/6/17 9:44	6/6/2017	9:44 AM	34.19	68250968	50266	33.9	
6/7/17 11:32	6/7/2017	11:32 AM	33.88	68303751	52783	34.1	
6/8/17 10:32	6/8/2017	10:32 AM	34.07	68350852	47101	34.1	
6/13/17 9:36	6/13/2017	9:36 AM	34.12	68593467	242615	34.0	
6/14/17 9:46	6/14/2017	9:46 AM	35.18	68642658	49191	33.9	
6/15/17 15:34	6/15/2017	3:34 PM	36.70	68647326	4668	2.6	
6/19/17 9:27	6/19/2017	9:27 AM	36.63	68842707	195381	36.2	
6/20/17 10:48	6/20/2017	10:48 AM	35.82	68897211	54504	35.8	
6/21/17 9:09	6/21/2017	9:09 AM	35.32	68945374	48163	35.9	
6/22/17 12:46	6/22/2017	12:46 PM	36.02	69004560	59186	35.7	
6/26/17 9:54	6/26/2017	9:54 AM	36.21	69204160	199600	35.7	
6/27/17 10:22	6/27/2017	10:22 AM	36.18	69256223	52063	35.5	
6/29/17 9:28	6/29/2017	9:28 AM	35.47	69356066	99843	35.3	
7/6/17 10:32	7/6/2017	10:32 AM	34.58	69712851	356785	35.2	
7/10/17 10:53	7/10/2017	10:53 AM	35.17	69915147	202296	35.0	
7/12/17 10:15	7/12/2017	10:15 AM	34.03	70013566	98419	34.6	
7/13/17 9:57	7/13/2017	9:57 AM	34.15	70062390	48824	34.3	
7/17/17 9:41	7/17/2017	9:41 AM	34.49	70258075	195685	34.1	
7/19/17 14:56	7/19/2017	2:56 PM	36.21	70366892	108817	34.1	

Appendix D-2
Well PW-1(U) Operational History - December 2011 to Present
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

Date and Time	Flow Meas. Date	Flow Meas. Time	Instantaneous Flow Reading (gpm)	Totalizer Reading (gal)	Flow since last reading (gal)	Calculated Flow Rate (gpm)	Notes
7/20/17 9:34	7/20/2017	9:34 AM	34.26	70404697	37805	33.8	
7/24/17 9:08	7/24/2017	9:08 AM	35.20	70596464	191767	33.4	
7/25/17 10:10	7/25/2017	10:10 AM	33.70	70646728	50264	33.5	
7/27/17 9:45	7/27/2017	9:45 AM	33.15	70742261	95533	33.5	
7/31/17 9:29	7/31/2017	9:29 AM	33.59	70934032	191771	33.4	
8/1/17 9:18	8/1/2017	9:18 AM	34.43	70981541	47509	33.2	
8/2/17 13:10	8/2/2017	1:10 PM	33.65	71037018	55477	33.2	
8/3/17 9:28	8/3/2017	9:28 AM	33.58	71077375	40357	33.1	
8/7/17 9:46	8/7/2017	9:46 AM	35.51	71268576	191201	33.1	
8/8/17 10:27	8/8/2017	10:27 AM	34.11	71311463	42887	29.0	
8/9/17 9:32	8/9/2017	9:32 AM	33.44	71363002	51539	37.2	
8/10/17 8:57	8/10/2017	8:57 AM	33.03	71408952	45950	32.7	
8/14/17 11:26	8/14/2017	11:26 AM	34.30	71601121	192169	32.5	
8/15/17 9:26	8/15/2017	9:26 AM	32.77	71643712	42591	32.3	
8/16/17 14:13	8/16/2017	2:13 PM	35.21	71699571	55859	32.3	
8/17/17 10:47	8/17/2017	10:47 AM	32.14	71739188	39617	32.1	
8/21/17 10:27	8/21/2017	10:27 AM	33.34	71923180	183992	32.1	
8/22/17 8:38	8/22/2017	8:38 AM	32.14	71965536	42356	31.8	
8/23/17 10:22	8/23/2017	10:22 AM	36.39	72005752	40216	26.0	
8/24/17 13:28	8/24/2017	1:28 PM	34.16	72060261	54509	33.5	
8/28/17 9:36	8/28/2017	9:36 AM	33.18	72240784	180523	32.7	
8/30/17 10:53	8/30/2017	10:53 AM	32.44	72336600	95816	32.4	
8/31/17 9:31	8/31/2017	9:31 AM	32.67	72380644	44044	32.4	
9/5/17 9:42	9/5/2017	9:42 AM	32.01	72612043	231399	32.1	
9/6/17 9:32	9/6/2017	9:32 AM	32.03	72657641	45598	31.9	
9/7/17 13:26	9/7/2017	1:26 PM	31.96	72710860	53219	31.8	
9/11/17 9:57	9/11/2017	9:57 AM	33.10	72885719	174859	31.5	
9/12/17 8:36	9/12/2017	8:36 AM	31.52	72928468	42749	31.5	
9/13/17 10:13	9/13/2017	10:13 AM	31.68	72976956	48488	31.5	
9/14/17 9:32	9/14/2017	9:32 AM	31.37	73021037	44081	31.5	
9/18/17 9:42	9/18/2017	9:42 AM	30.68	73199413	178376	30.9	
9/19/17 10:43	9/19/2017	10:43 AM	31.73	73245194	45781	30.5	
9/21/17 9:40	9/21/2017	9:40 AM	30.65	73331240	86046	30.5	
9/25/17 9:50	9/25/2017	9:50 AM	31.19	73507310	176070	30.5	
9/26/17 10:14	9/26/2017	10:14 AM	30.19	73551853	44543	30.4	
9/27/17 9:39	9/27/2017	9:39 AM	33.60	73594478	42625	30.3	
9/28/17 10:00	9/28/2017	10:00 AM	30.54	73638621	44143	30.2	
10/2/17 10:50	10/2/2017	10:50 AM	30.88	73813230	174609	30.1	
10/3/17 9:49	10/3/2017	9:49 AM	31.77	73854401	41171	29.9	
10/5/17 9:43	10/5/2017	9:43 AM	31.21	73940315	85914	29.9	
10/9/17 10:43	10/9/2017	10:43 AM	29.96	74114433	174118	29.9	
10/10/17 10:00	10/10/2017	10:00 AM	32.60	74156080	41647	29.8	
10/11/17 13:20	10/11/2017	1:20 PM	30.36	74204894	48814	29.8	
10/12/17 12:46	10/12/2017	12:46 PM	29.81	74246823	41929	29.8	
10/16/17 9:30	10/16/2017	9:30 AM	29.99	74412035	165212	29.7	
10/18/17 9:20	10/18/2017	9:20 AM	30.83	74496929	84894	29.6	
10/19/17 10:54	10/19/2017	10:54 AM	30.59	74542243	45314	29.5	
10/23/17 9:28	10/23/2017	9:28 AM	30.30	74710161	167918	29.6	
10/25/17 10:26	10/25/2017	10:26 AM	29.96	74797315	87154	29.7	
10/26/17 10:20	10/26/2017	10:20 AM	30.12	74839622	42307	29.5	
10/30/17 10:20	10/30/2017	10:20 AM	30.52	75010611	170989	29.7	
10/31/17 10:07	10/31/2017	10:07 AM	31.11	75053084	42473	29.8	
11/2/17 10:35	11/2/2017	10:35 AM	30.01	75139900	86816	29.9	
11/6/17 9:45	11/6/2017	9:45 AM	30.60	75312031	172131	30.1	
11/7/17 10:03	11/7/2017	10:03 AM	30.19	75355510	43479	29.8	
11/9/17 11:50	11/9/2017	11:50 AM	30.08	75444980	89470	30.0	
11/13/17 11:16	11/13/2017	11:16 AM	31.40	75616822	171842	30.0	
11/14/17 8:13	11/14/2017	8:13 AM	30.35	75654748	37926	30.2	
11/15/17 11:10	11/15/2017	11:10 AM	30.21	75703295	48547	30.0	
11/16/17 9:51	11/16/2017	9:51 AM	30.08	75744166	40871	30.0	
11/20/17 9:57	11/20/2017	9:57 AM	29.68	75945252	201086	34.9	
11/21/17 9:33	11/21/2017	9:33 AM	29.63	75956900	11648	8.2	
11/27/17 10:50	11/27/2017	10:50 AM	30.13	76214600	257700	29.6	
11/28/17 9:40	11/28/2017	9:40 AM	29.95	76254940	40340	29.4	
11/30/17 9:57	11/30/2017	9:57 AM	29.90	76340620	85680	29.6	
12/4/17 13:09	12/4/2017	1:09 PM	29.28	76515552	174932	29.4	
12/6/17 9:27	12/6/2017	9:27 AM	29.30	76593752	78200	29.4	
12/7/17 9:58	12/7/2017	9:58 AM	32.73	76629508	35756	24.3	
12/11/17 10:03	12/11/2017	10:03 AM	31.03	76805984	176476	30.6	
12/12/17 10:17	12/12/2017	10:17 AM	30.96	76850512	44528	30.6	
12/13/17 9:28	12/13/2017	9:28 AM	30.16	76892349	41837	30.1	
12/14/17 12:50	12/14/2017	12:50 PM	30.59	76941606	49257	30.0	
12/18/17 9:55	12/18/2017	9:55 AM	30.77	77110916	169310	30.3	
12/19/17 9:30	12/19/2017	9:30 AM	30.71	77154215	43299	30.6	
12/21/17 10:10	12/21/2017	10:10 AM	30.51	77243546	89331	30.6	
12/27/17 10:10	12/27/2017	10:10 AM	30.34	77507792	264246	30.6	
12/28/17 10:26	12/28/2017	10:26 AM	30.51	77552199	44407	30.5	
1/2/18 10:29	1/2/2018	10:29 AM	31.16	77773360	221161	30.7	
1/3/18 9:22	1/3/2018	9:22 AM	31.12	77815436	42076	30.6	
1/8/18 9:20	1/8/2018	9:20 AM	31.28	78033026	217590	30.2	
1/9/18 11:20	1/9/2018	11:20 AM	31.38	78080271	47245	30.3	
1/11/18 10:46	1/11/2018	10:46 AM	31.12	78165804	85533	30.1	
1/15/18 14:21	1/15/2018	2:21 PM	30.56	78344858	179054	30.0	
1/18/18 10:18	1/18/2018	10:18 AM	30.52	78468540	123682	30.3	
1/22/18 12:54	1/22/2018	12:54 PM	30.84	78648869	180329	30.5	
1/25/18 10:26	1/25/2018	10:26 AM	31.25	78776504	127635	30.6	
1/29/18 9:44	1/29/2018	9:44 AM	30.85	78949999	173495	30.3	
1/31/18 10:20	1/31/2018	10:20 AM	29.57	79037293	87294	29.9	
2/1/18 8:52	2/1/2018	8:52 AM	29.85	79077641	40348	29.8	
2/5/18 12:06	2/5/2018	12:06 PM	30.09	79253787	176146	29.6	
2/8/18 11:13	2/8/2018	11:13 AM	29.51	79379857	126070	29.5	
2/12/18 9:52	2/12/2018	9:52 AM	29.94	79549664	169807	29.9	
2/14/18 10:25	2/14/2018	10:25 AM	30.83	79636642	86978	29.9	

Appendix D-2
Well PW-1(U) Operational History - December 2011 to Present
Delaware Sand and Gravel Superfund Site
New Castle, Delaware

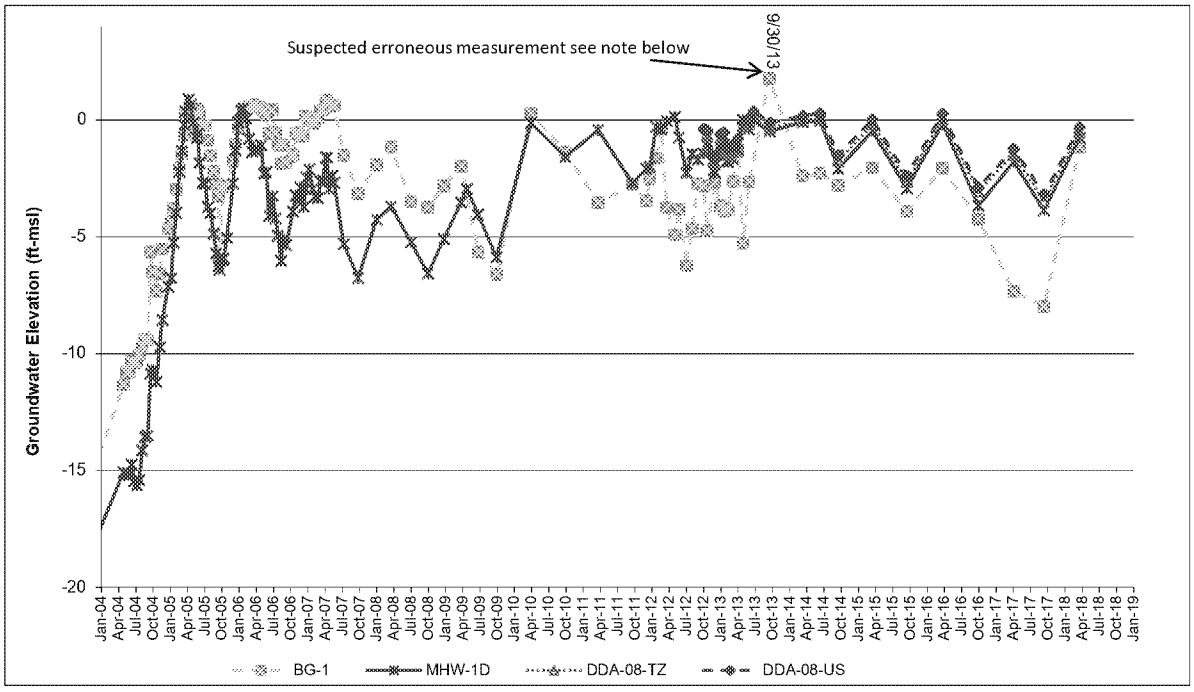
Date and Time	Flow Meas. Date	Flow Meas. Time	Instantaneous Flow Reading (gpm)	Totalizer Reading (gal)	Flow since last reading (gal)	Calculated Flow Rate (gpm)	Notes
2/15/18 9:42	2/15/2018	9:42 AM	30.90	79678593	41951	30.0	
2/19/18 9:47	2/19/2018	9:47 AM	30.02	79851710	173117	30.0	
2/20/18 9:42	2/20/2018	9:42 AM	30.13	79894827	43117	30.0	
2/22/18 10:48	2/22/2018	10:48 AM	30.31	79983569	88742	30.1	
2/26/18 10:14	2/26/2018	10:14 AM	30.64	80156123	172554	30.1	
2/27/18 11:24	2/27/2018	11:24 AM	30.10	80201746	45623	30.2	
2/28/18 8:56	2/28/2018	8:56 AM	31.24	80240669	38923	30.1	
3/1/18 14:23	3/1/2018	2:23 PM	33.53	80292222	51553	29.2	
3/5/18 9:58	3/5/2018	9:58 AM	34.02	80471872	179650	32.7	
3/8/18 10:26	3/8/2018	10:26 AM	34.23	80614387	142515	32.8	
3/12/18 13:30	3/12/2018	1:30 PM	32.21	80805125	190738	32.1	
3/13/18 9:53	3/13/2018	9:53 AM	32.18	80844585	39460	32.3	
3/15/18 15:39	3/15/2018	3:39 PM	35.28	80848038	3453	1.1	
3/19/18 9:45	3/19/2018	9:45 AM	34.32	81037103	189065	35.0	
3/20/18 11:11	3/20/2018	11:11 AM	34.44	81089575	52472	34.4	
3/22/18 11:48	3/22/2018	11:48 AM	34.12	81190181	100606	34.5	
3/26/18 10:09	3/26/2018	10:09 AM	33.53	81383665	193484	34.2	
3/29/18 10:10	3/29/2018	10:10 AM	34.17	81529217	145552	33.7	
4/2/18 9:30	4/2/2018	9:30 AM	33.60	81721559	192342	33.6	
4/3/18 9:32	4/3/2018	9:32 AM	35.01	81770138	48579	33.7	
4/4/18 10:18	4/4/2018	10:18 AM	33.48	81819958	49820	33.5	
4/5/18 9:49	4/5/2018	9:49 AM	33.42	81867083	47125	33.4	
4/9/18 9:51	4/9/2018	9:51 AM	35.03	82059300	192217	33.4	
4/11/18 11:08	4/11/2018	11:08 AM	32.50	82156800	97500	33.0	
4/12/18 12:08	4/12/2018	12:08 PM	35.20	82206929	50129	33.4	
4/16/18 10:07	4/16/2018	10:07 AM	32.92	82394154	187225	33.2	
4/17/18 9:32	4/17/2018	9:32 AM	32.48	82440052	45898	32.7	
4/18/18 9:30	4/18/2018	9:30 AM	35.09	82487183	47131	32.8	
4/19/18 8:57	4/19/2018	8:57 AM	35.40	82532855	45672	32.5	
4/23/18 10:03	4/23/2018	10:03 AM	32.77	82724180	191325	32.8	
4/26/18 13:53	4/26/2018	1:53 PM	35.18	82874029	149849	32.9	
4/30/18 9:35	4/30/2018	9:35 AM	32.12	83054078	180049	32.7	
5/3/18 10:50	5/3/2018	10:50 AM	32.27	83197348	143270	32.6	
5/7/18 9:58	5/7/2018	9:58 AM	35.10	83384682	187334	32.8	
5/9/18 9:47	5/9/2018	9:47 AM	32.05	83477710	93028	32.4	
5/10/18 9:27	5/10/2018	9:27 AM	32.06	83523581	45871	32.3	
5/14/18 10:30	5/14/2018	10:30 AM	35.65	83720709	197128	33.9	
5/15/18 13:17	5/15/2018	1:17 PM	32.54	83772591	51882	32.3	
5/16/18 10:43	5/16/2018	10:43 AM	32.55	83814507	41916	32.6	
5/17/18 11:04	5/17/2018	11:04 AM	35.18	83862724	48217	33.0	
5/21/18 9:32	5/21/2018	9:32 AM	32.60	84048622	185898	32.8	
5/22/18 9:03	5/22/2018	9:03 AM	37.54	84091206	42584	30.2	
5/23/18 9:46	5/23/2018	9:46 AM	36.33	84144985	53779	36.3	
5/24/18 9:30	5/24/2018	9:30 AM	36.16	84194414	49429	34.7	
5/29/18 9:17	5/29/2018	9:17 AM	32.60	84436235	241821	33.6	
5/30/18 9:15	5/30/2018	9:15 AM	35.61	84484541	48306	33.6	
5/31/18 9:27	5/31/2018	9:27 AM	33.17	84533613	49072	33.8	
6/4/18 9:57	6/4/2018	9:57 AM	35.90	84731156	197543	34.1	
6/5/18 13:42	6/5/2018	1:42 PM	32.61	84786947	55791	33.5	
6/6/18 10:30	6/6/2018	10:30 AM	32.69	84829296	42349	33.9	
6/11/18 10:53	6/11/2018	10:53 AM	32.45	85070396	241100	33.4	
6/14/18 9:13	6/14/2018	9:13 AM	34.72	85209311	138915	32.9	
6/18/18 9:30	6/18/2018	9:30 AM	35.25	85400764	191453	33.1	
6/21/18 10:50	6/21/2018	10:50 AM	34.53	85546760	145996	33.2	
6/25/18 9:32	6/25/2018	9:32 AM	34.20	85734817	188057	33.1	
6/26/18 9:18	6/26/2018	9:18 AM	32.87	85781469	46652	32.7	
6/28/18 9:35	6/28/2018	9:35 AM	33.08	85876578	95109	32.8	

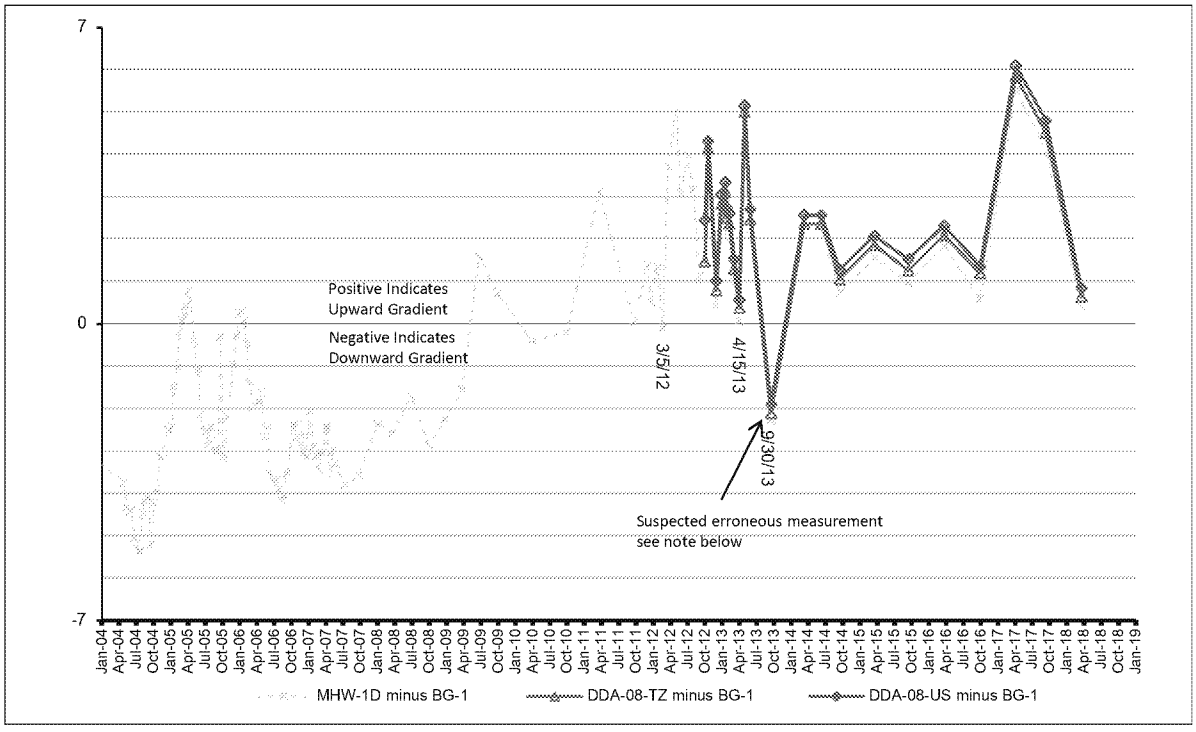
1) Flow readings and rates based on flow logs provided by DS&G Remedial Trust
2) gpm = gallons per minute
3) gal = gallons
4) OM&M = Operating, Maintenance, and Monitoring

Prepared by: MBS
Checked by: VRR
Reviewed by: TAM

APPENDIX E

Groundwater Gradient Trend Plots





Notes:

Elevations revised based on December 2012 re-survey

Reduced positive gradients or slightly negative gradients are generally associated with water level events conducted:

- During brief well, pump, or system performance declines between quarterly events due to iron fouling. The duration of these issues has been reduced due to routine, quarterly maintenance, addition of Redux 620 to wells B-4DR and C-2D, and maintaining spare parts for pumps.
- Before, during, or soon after routine, quarterly maintenance of the LFExS.

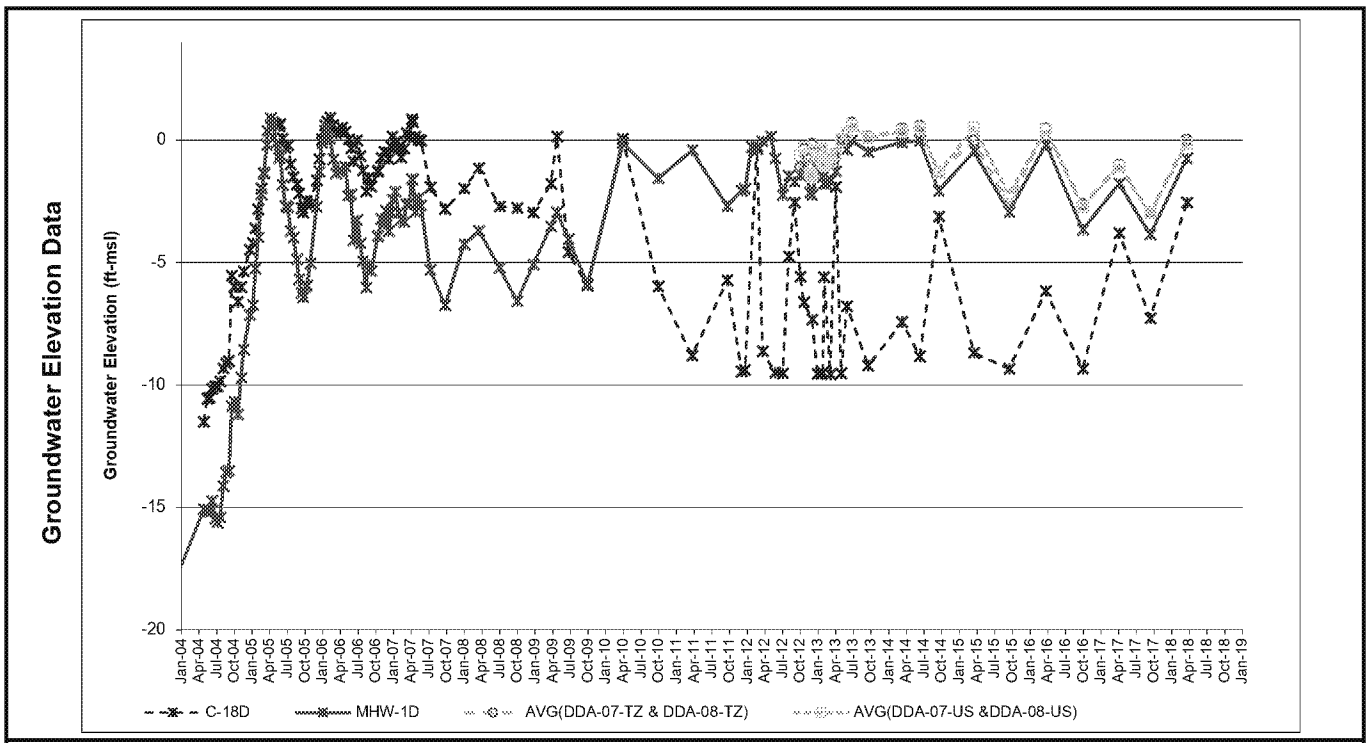
Specific events with reduced positive gradients or slightly negative gradients include:

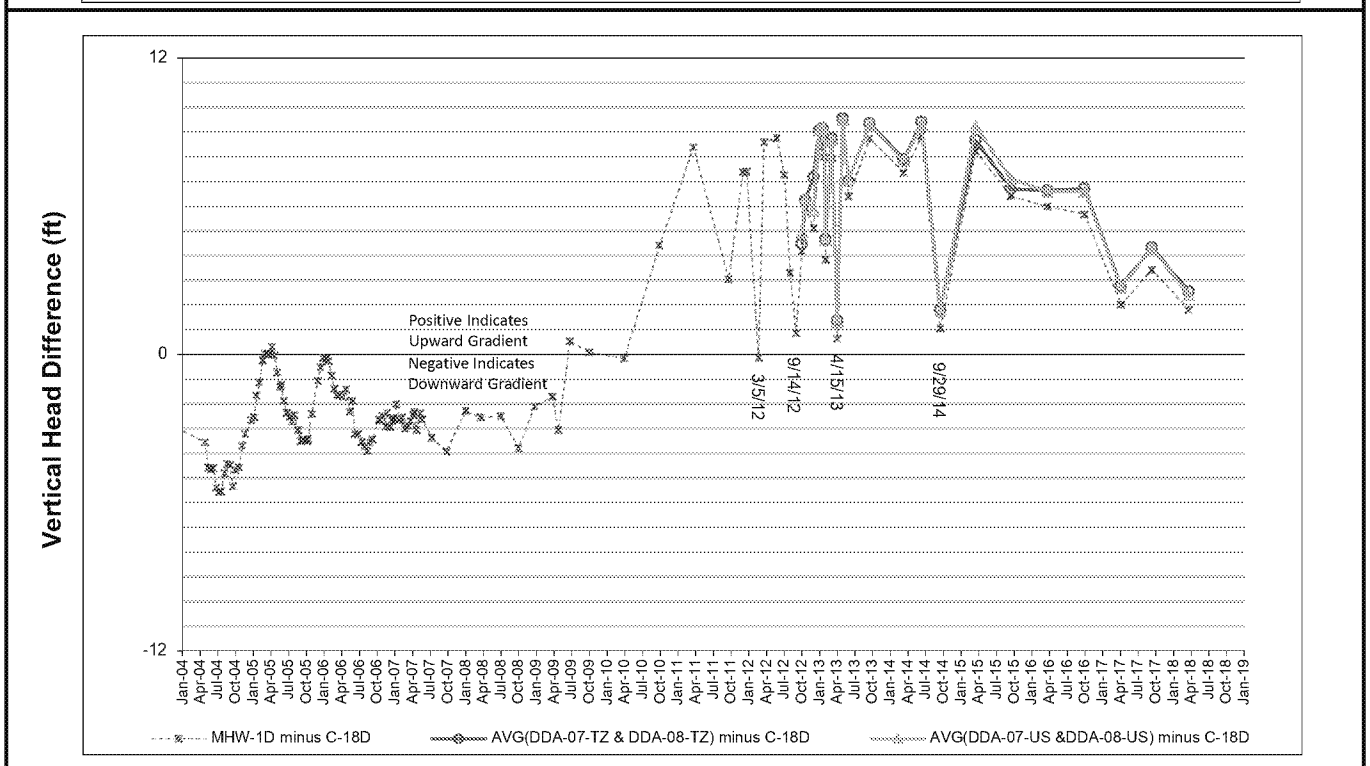
- March 5, 2012: System off for maintenance and well B-4DR connection (March 2-6, 2012)
- April 15, 2013: System off for quarterly maintenance (April 9-11, 2013) and running at reduced rates until discharge pump repair on April 15, 2013.
- September 30, 2013: Suspected erroneous measurement. Well BG-1 extracting at the time of measurement and the calculated groundwater elevation in well BG-1 (+1.78 ft-msl) was several feet higher than the groundwater elevations observed in nearby DDA monitoring wells (-1.57 to -1.82 ft-msl in wells B-2D, B-3D, and C-3D).

Vertical Head Difference - BG-1

Golder Associates	Project Number:	013-6052		FIGURE E-1
	Prepared by:	RWB	04/02/18	
	Checked by:	BPC	08/29/18	Notes:
	Reviewed by:	TAM	08/29/18	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx
8/29/2018





Notes:

Elevations revised based on December 2012 re-survey

Reduced positive gradients or slightly negative gradients are generally associated with water level events conducted:

- During brief well, pump, or system performance declines between quarterly events due to iron fouling. The duration of these issues has been reduced due to routine, quarterly maintenance, addition of Redux 620 to wells B-4DR and C-2D, and maintaining spare parts for pumps.
- Before, during, or soon after routine, quarterly maintenance of the LFExS.

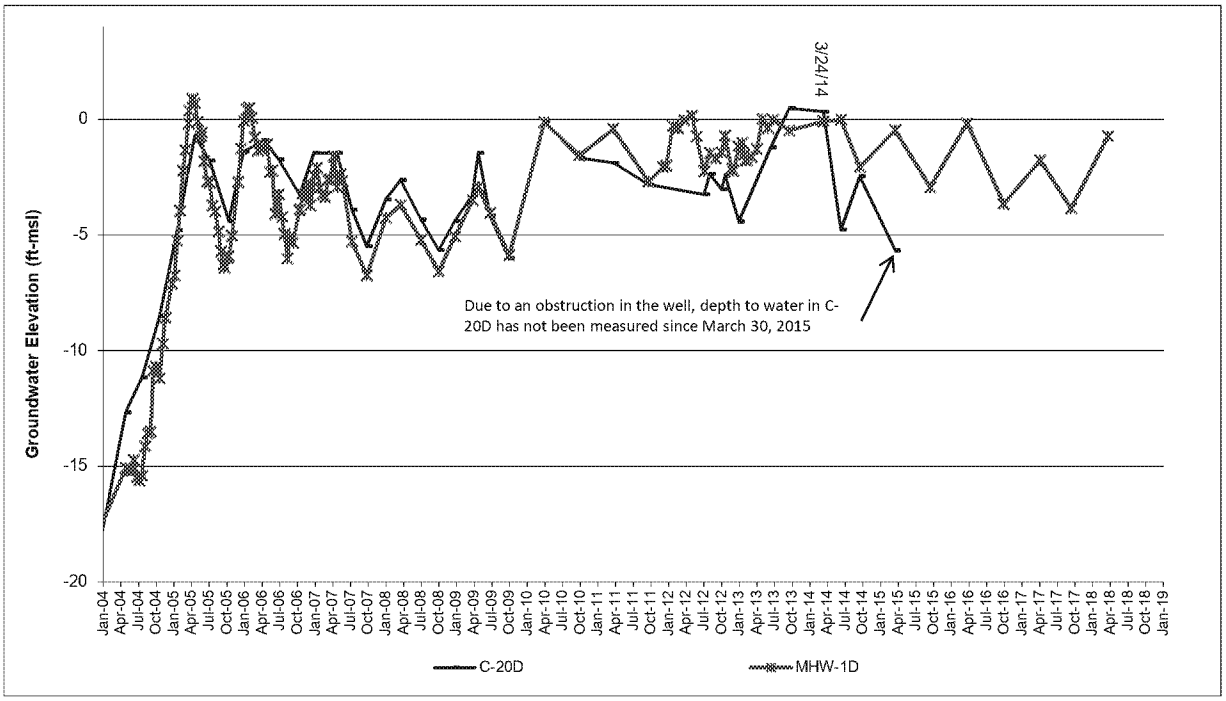
Specific events with reduced positive gradients or slightly negative gradients include:

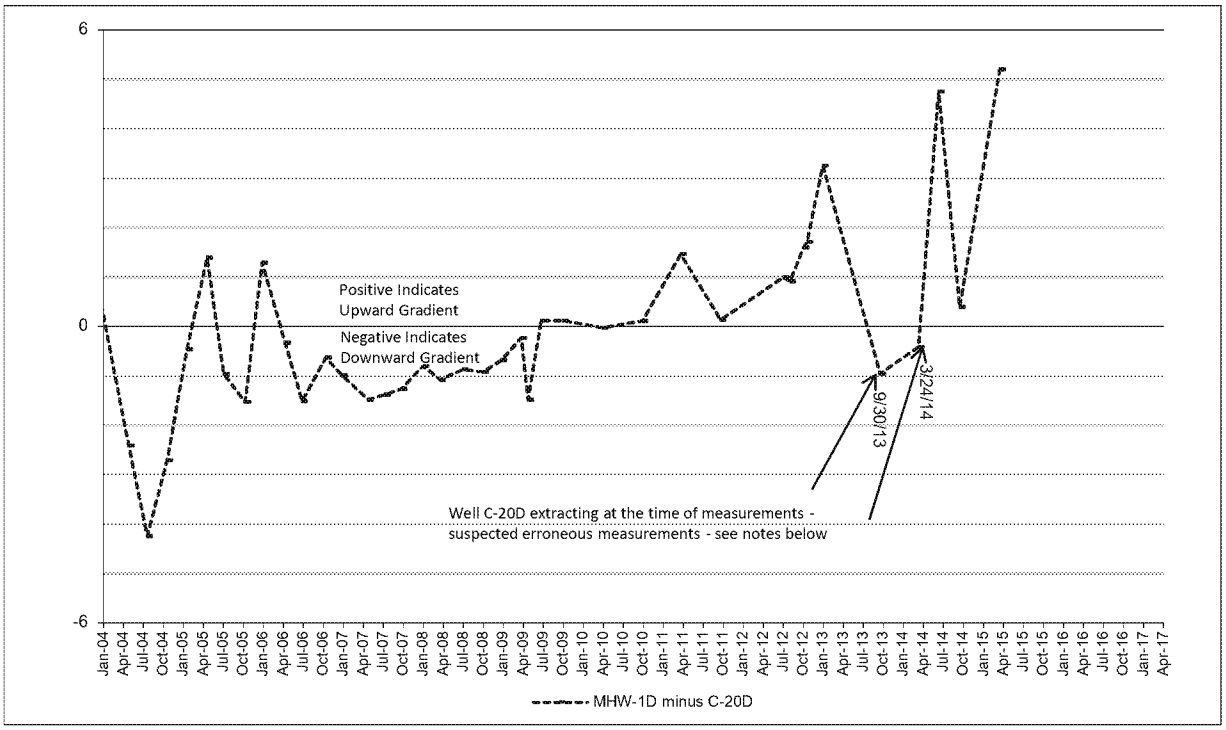
- March 5, 2012: System off for maintenance and well B-4DR connection (March 2-6, 2012)
- September 14, 2012: System off intermittently for quarterly maintenance (September 9, 2012 - September 13, 2012)
- April 15, 2013: System off for quarterly maintenance (April 9-11, 2013) and running at reduced rates until discharge pump repair on April 15, 2013.

Vertical Head Difference - C-18D

Golder Associates	Project Number:	013-6052		FIGURE E-2
	Prepared by:	RWB	04/02/18	
	Checked by:	BPC	08/29/18	Notes:
	Reviewed by:	TAM	08/29/18	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx
9/29/2018





Notes:

Elevations revised based on December 2012 re-survey

Reduced positive gradients or slightly negative gradients are generally associated with water level events conducted:

- During brief well, pump, or system performance declines between quarterly events due to iron fouling. The duration of these issues has been reduced due to routine, quarterly maintenance, addition of Redux 620 to wells B-4DR and C-2D, and maintaining spare parts for pumps.
- Before, during, or soon after routine, quarterly maintenance of the LFExS.

C-20D connected to LFExS in December 2012

Specific events with reduced positive gradients or slightly negative gradients include:

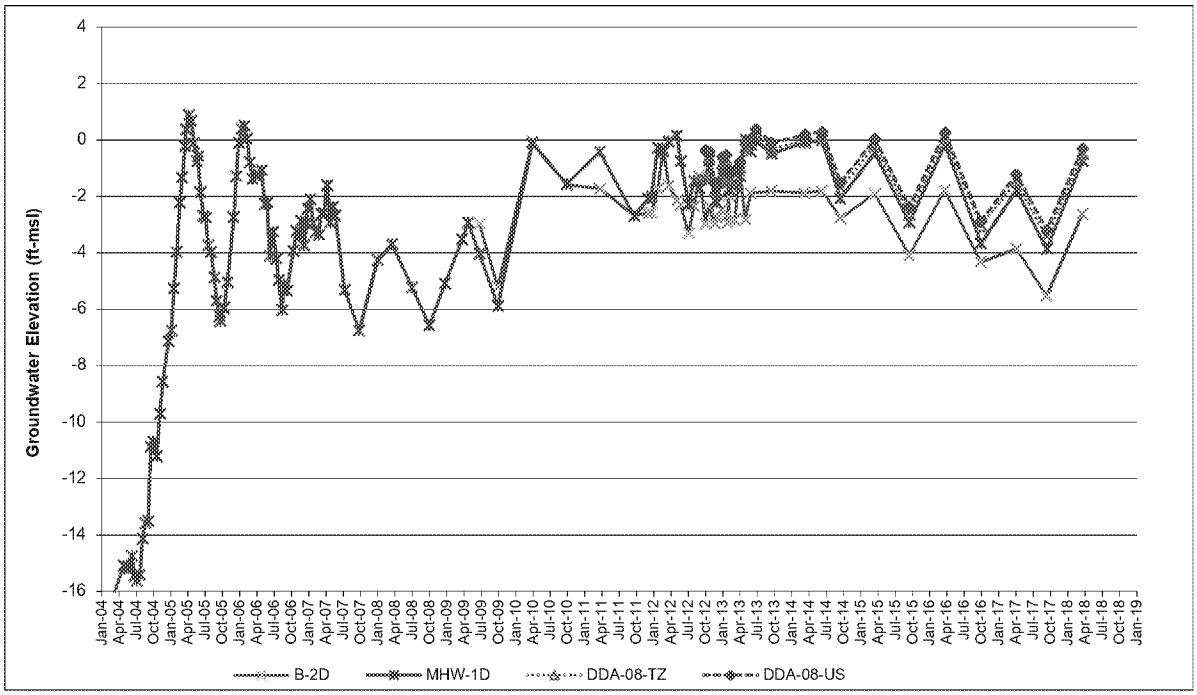
September 30,2013: Suspected erroneous measurement. Well C-20D extracting at the time of measurement and the calculated groundwater elevation in well C-20D (+0.47 ft-msl) was over one foot higher than the groundwater elevations observed in nearby DDA monitoring wells (-0.97 to -2.00 ft-msl in wells B-2D, C-21D, MHW-1S, or MHW-1M).

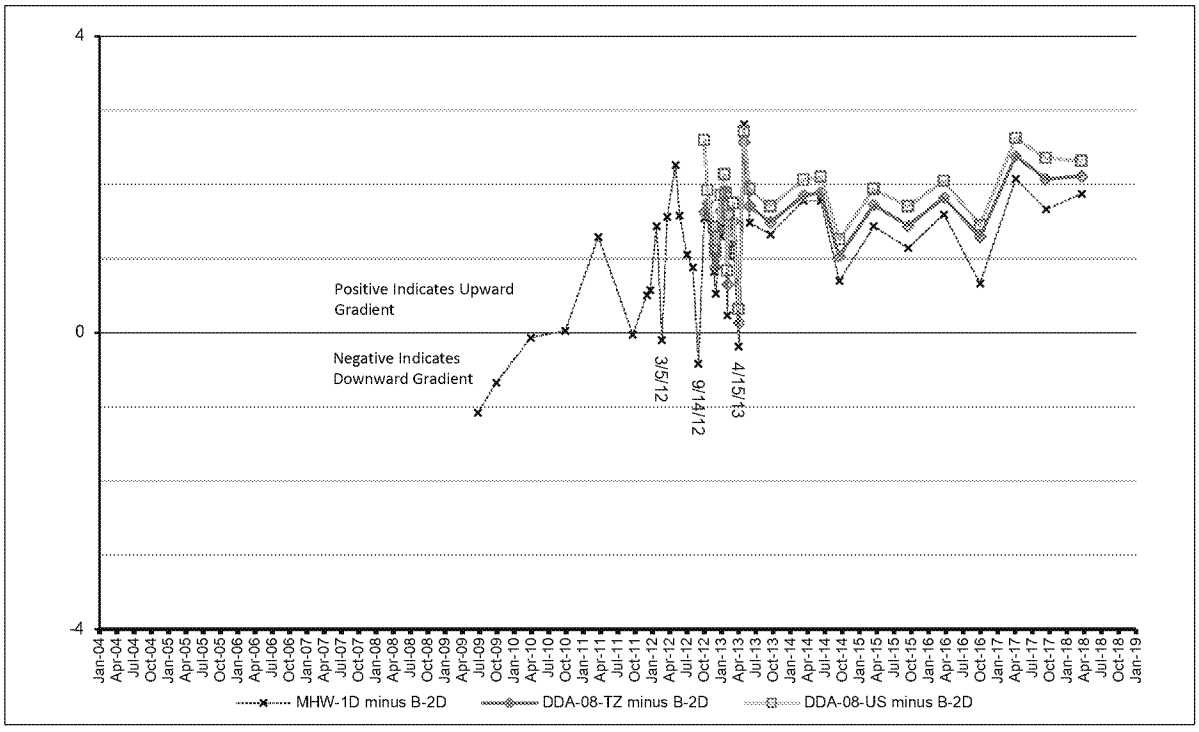
March 24, 2014: Suspected erroneous measurement. Well C-20D extracting at the time of measurement and the calculated groundwater elevation in well C-20D (+0.32 ft-msl) was almost one foot higher than the groundwater elevations observed in nearby DDA monitoring wells (-0.49 to -2.14 ft-msl in wells B-2D, C-21D, MHW-1S, or MHW-1M).

Vertical Head Difference - C-20D

Golder Associates	Project Number:	013-6052		FIGURE E-3
	Prepared by:	RWB	04/02/18	
	Checked by:	BPC	08/29/18	Notes:
	Reviewed by:	TAM	08/29/18	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx
9/29/2018





Notes:

Elevations revised based on December 2012 re-survey

Reduced positive gradients or slightly negative gradients are generally associated with water level events conducted:

- During brief well, pump, or system performance declines between quarterly events due to iron fouling. The duration of these issues has been reduced due to routine, quarterly maintenance, addition of Redux 620 to wells B-4DR and C-2D, and maintaining spare parts for pumps.
- Before, during, or soon after routine, quarterly maintenance of the LFExS.

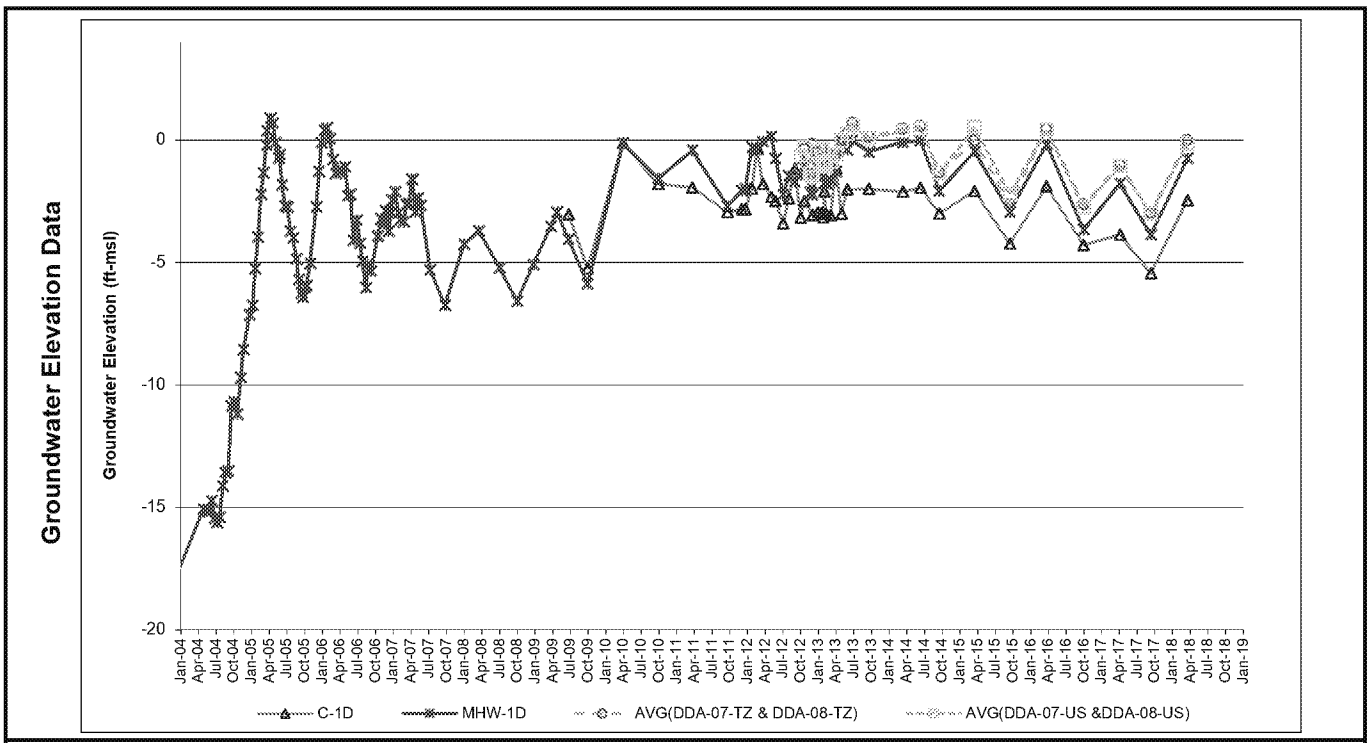
Specific events with reduced positive gradients or slightly negative gradients include:

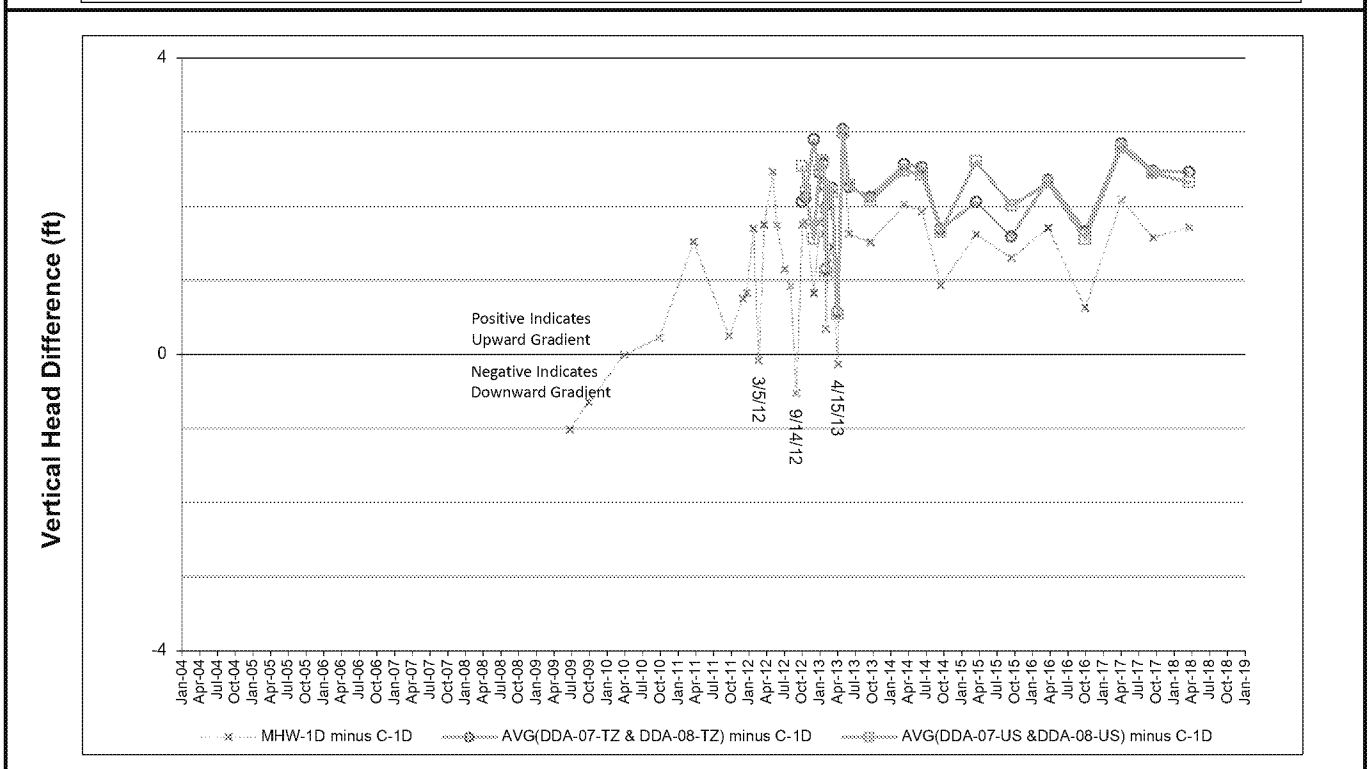
- March 5, 2012: System off for maintenance and well B-4DR connection (March 2-6, 2012)
- September 14, 2012: System off intermittently for quarterly maintenance (September 9, 2012 - September 13, 2012)
- April 15, 2013: System off for quarterly maintenance (April 9-11, 2013) and running at reduced rates until discharge pump repair on April 15, 2013.

Vertical Head Difference - B-2D

Golder Associates	Project Number:	013-6052		FIGURE E-4
	Prepared by:	RWB	04/02/18	
	Checked by:	BPC	08/29/18	Notes:
	Reviewed by:	TAM	08/29/18	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx
8/29/2018





Notes:

Elevations revised based on December 2012 re-survey

Reduced positive gradients or slightly negative gradients are generally associated with water level events conducted:

- During brief well, pump, or system performance declines between quarterly events due to iron fouling. The duration of these issues has been reduced due to routine, quarterly maintenance, addition of Redux 620 to wells B-4DR and C-2D, and maintaining spare parts for pumps.
- Before, during, or soon after routine, quarterly maintenance of the LFExS.

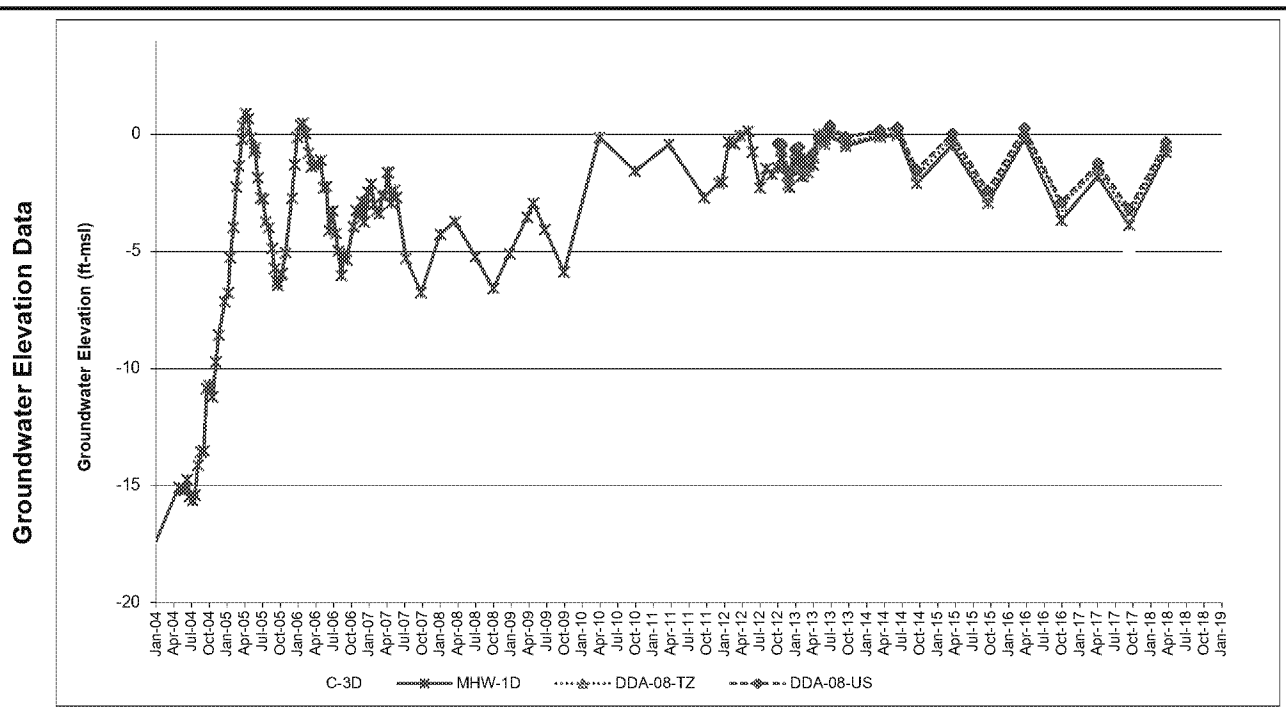
Specific events with reduced positive gradients or slightly negative gradients include:

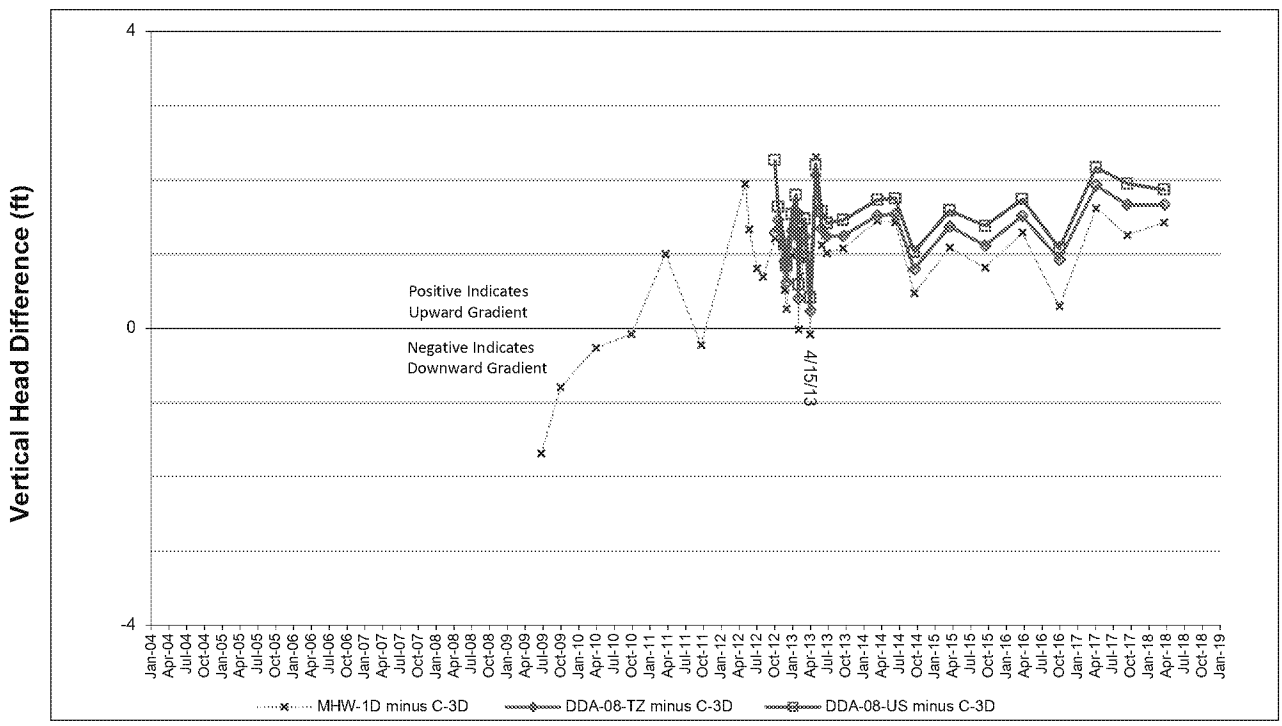
- March 5, 2012: System off for maintenance and well B-4DR connection (March 2-6, 2012)
- September 15, 2012: System off intermittently for quarterly maintenance (September 9, 2012 - September 13, 2012)
- April 15, 2013: System off for quarterly maintenance (April 9-11, 2013) and running at reduced rates until discharge pump repair on April 15, 2013.

Vertical Head Difference - C-1D

Golder Associates	Project Number:	013-6052		FIGURE E-5
	Prepared by:	RWB	04/02/18	
	Checked by:	BPC	08/29/18	Notes:
	Reviewed by:	TAM	08/29/18	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx
8/29/2018





Notes:

Elevations revised based on December 2012 re-survey

Reduced positive gradients or slightly negative gradients are generally associated with water level events conducted:

- During brief well, pump, or system performance declines between quarterly events due to iron fouling. The duration of these issues has been reduced due to routine, quarterly maintenance, addition of Redux 620 to wells B-4DR and C-2D, and maintaining spare parts for pumps.
- Before, during, or soon after routine, quarterly maintenance of the LFExS.

Specific events with reduced positive gradients or slightly negative gradients include:

- April 15, 2013: System off for quarterly maintenance (April 9-11, 2013) and running at reduced rates until discharge pump repair on April 15, 2013.

Vertical Head Difference - C-3D

Golder Associates	Project Number:	013-6052		FIGURE E-6
	Prepared by:	RWB	04/02/18	
	Checked by:	BPC	08/29/18	Notes:
	Reviewed by:	TAM	08/29/18	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx
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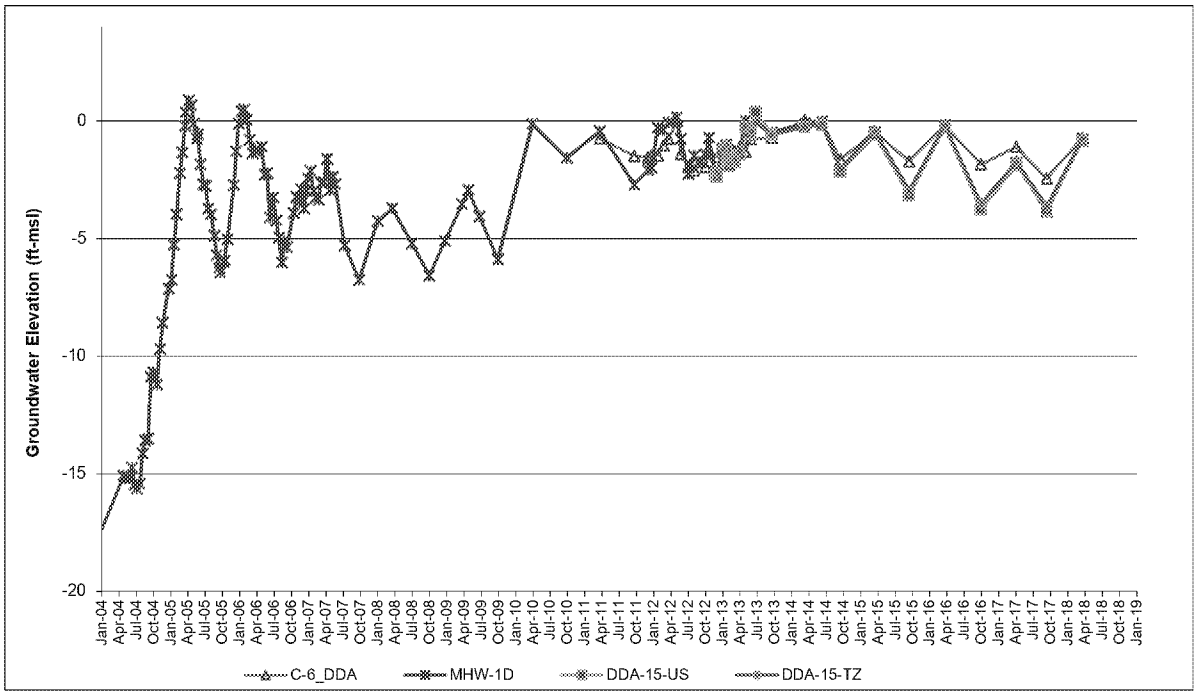
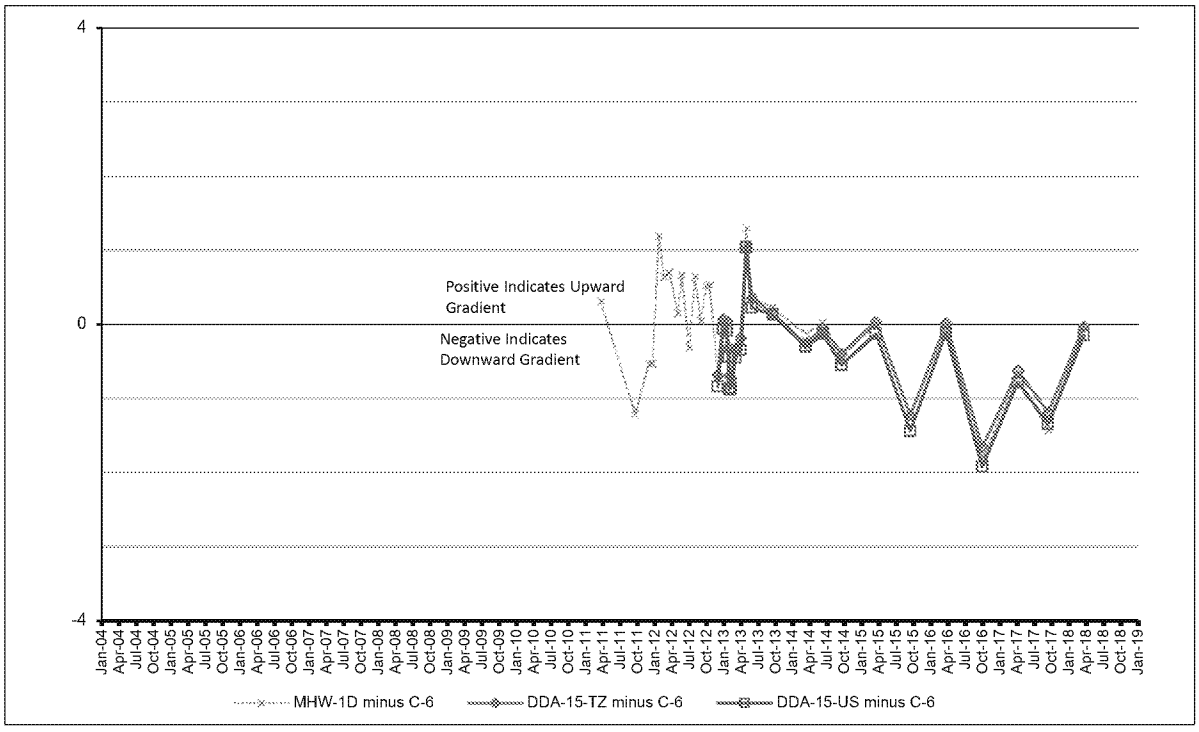




Notes:

Elevations revised based on December 2012 re-survey

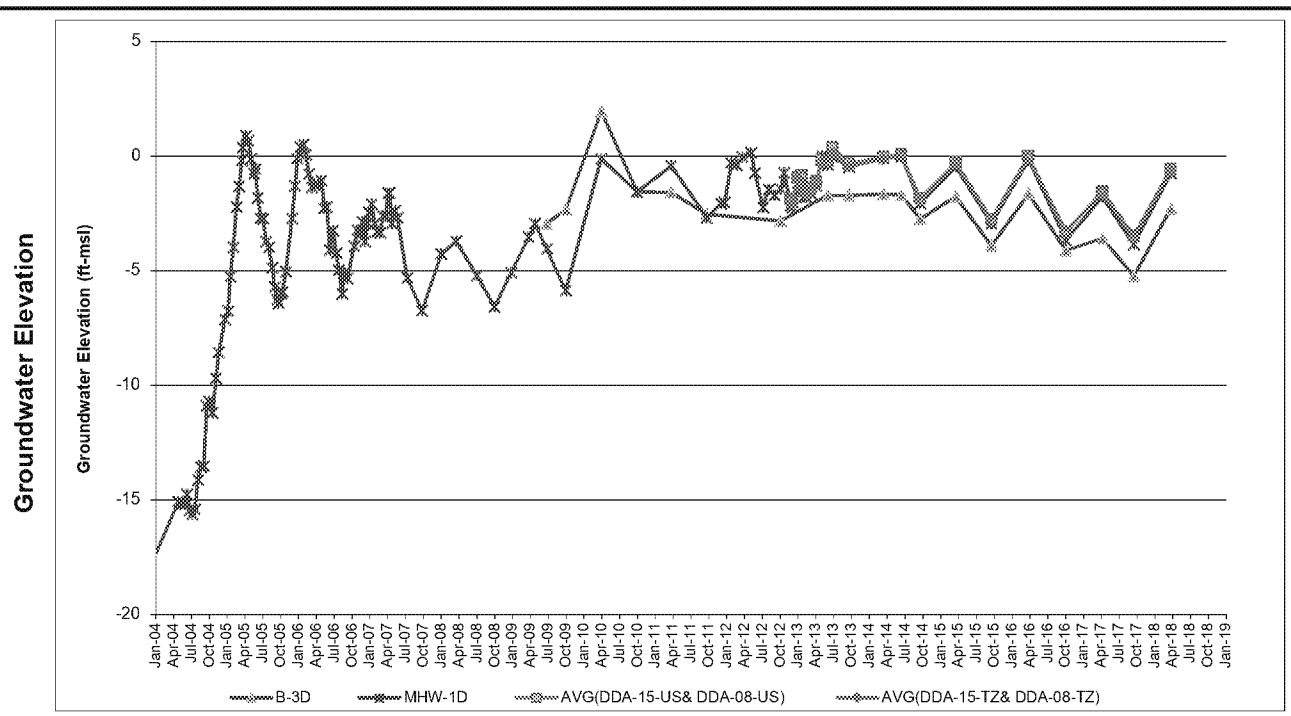
Reduced positive gradients or slightly negative gradients are generally associated with water level events conducted:

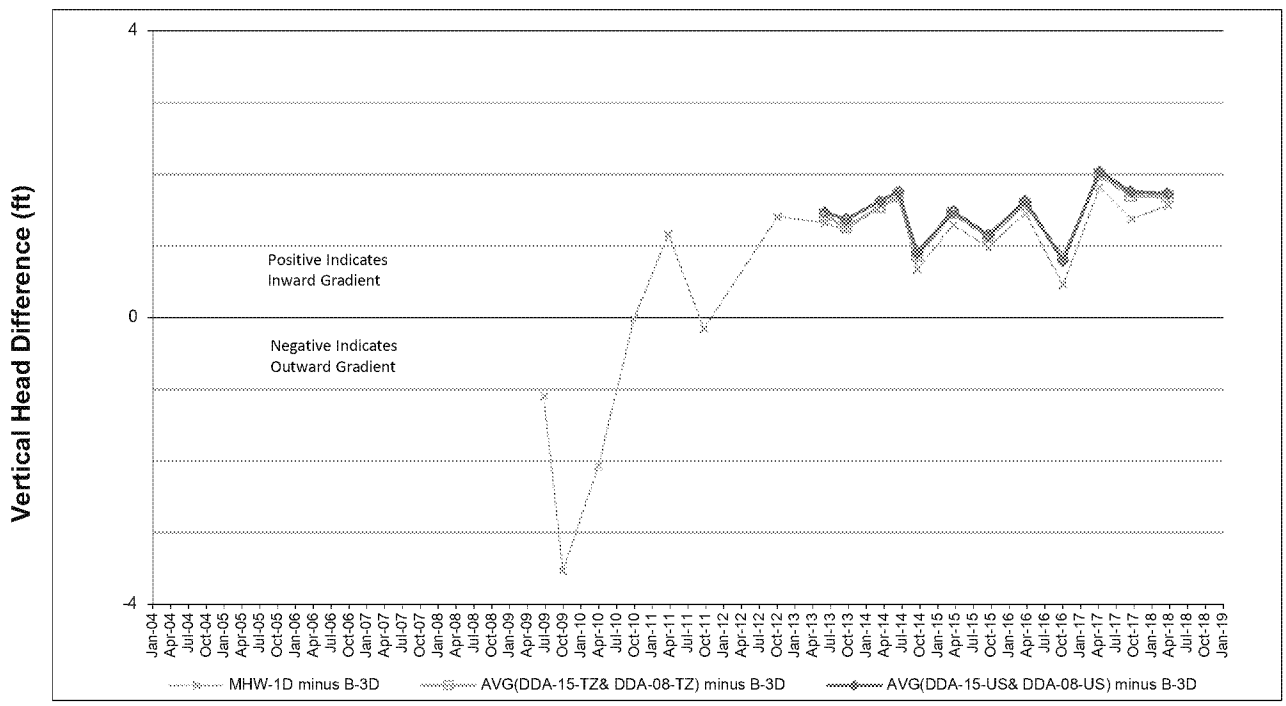
- During brief well, pump, or system performance declines between quarterly events due to iron fouling. The duration of these issues has been reduced due to routine, quarterly maintenance, addition of Redux 620 to wells B-4DR and C-2D, and maintaining spare parts for pumps.
- Before, during, or soon after routine, quarterly maintenance of the LFExS.
- The fluctuating vertical head differences calculated for well C-6 since 2011 are related to performance/operational issues associated with extraction well B-4DR, and indicate that well C-6 is at the eastern periphery of the well B-4DR and LFExS influence. Well C-6 is located in a portion of the containment area where thick UPCU is present and VOC and SVOC concentrations are low (e.g., BCEE was detected at 0.021 micrograms per liter [ug/l] in 2008, prior to LFExS startup).

Vertical Head Difference - C-6

Golder Associates	Project Number:	013-6052		FIGURE E-7
	Prepared by:	RWB	04/02/18	
	Checked by:	BPC	08/29/18	Notes:
	Reviewed by:	TAM	08/29/18	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx
8/29/2018





Notes:

Elevations revised based on December 2012 re-survey

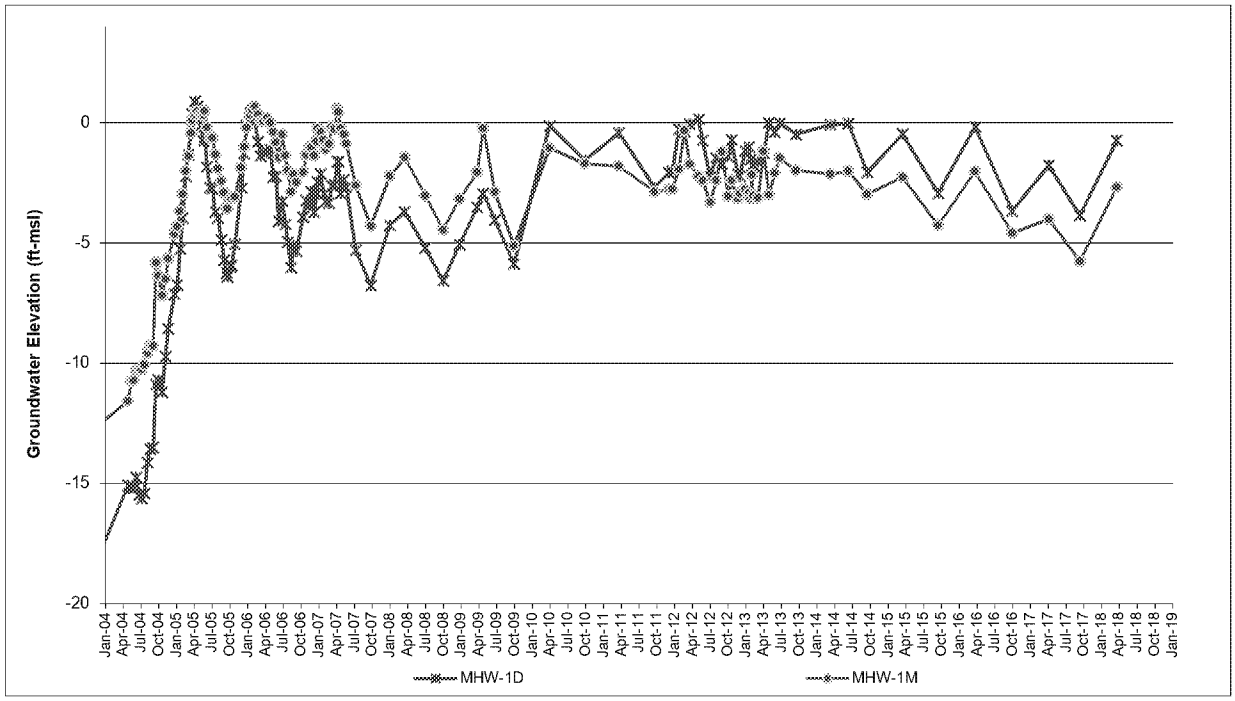
Reduced positive gradients or slightly negative gradients are generally associated with water level events conducted:

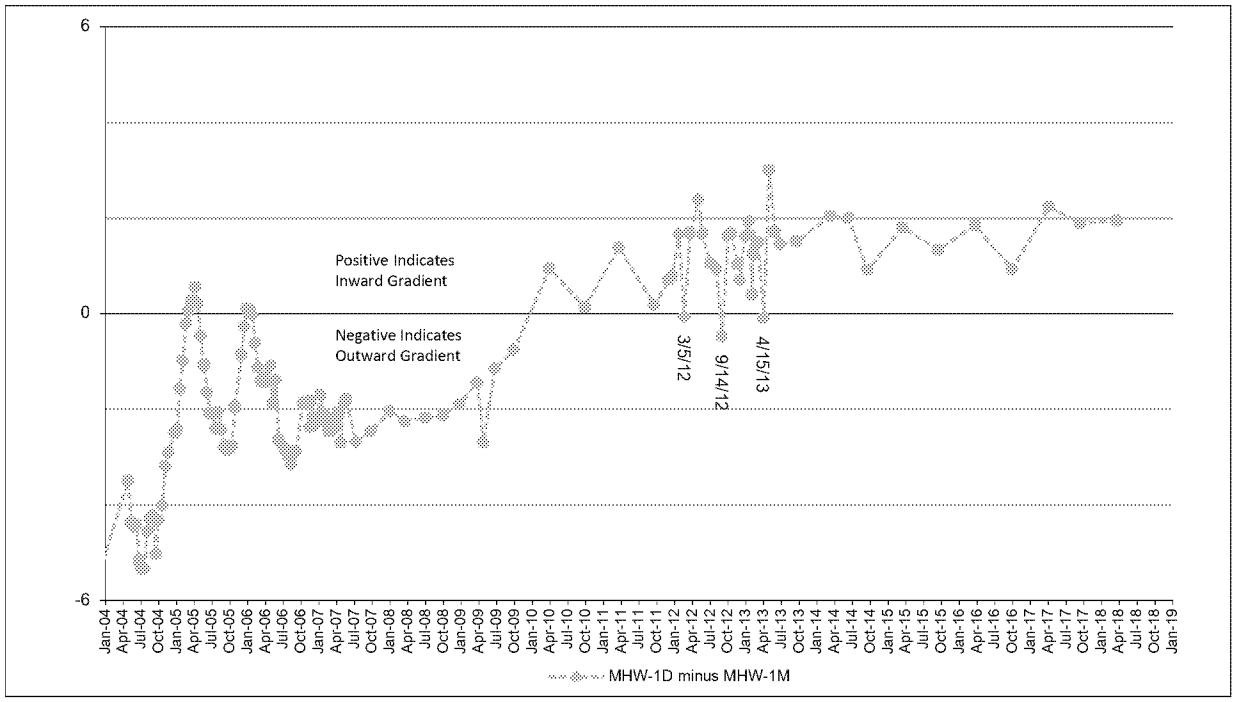
- During brief well, pump, or system performance declines between quarterly events due to iron fouling. The duration of these issues has been reduced due to routine, quarterly maintenance, addition of Redux 620 to wells B-4DR and C-2D, and maintaining spare parts for pumps.
- Before, during, or soon after routine, quarterly maintenance of the LFExS.

Vertical Head Difference - B-3D

Golder Associates	Project Number:	013-6052		FIGURE E-8
	Prepared by:	RWB	04/02/18	
	Checked by:	BPC	08/29/18	Notes:
	Reviewed by:	TAM	08/29/18	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx
8/29/2018





Notes:

Elevations revised based on December 2012 re-survey

Reduced positive gradients or slightly negative gradients are generally associated with water level events conducted:

- During brief well, pump, or system performance declines between quarterly events due to iron fouling. The duration of these issues has been reduced due to routine, quarterly maintenance, addition of Redux 620 to wells B-4DR and C-2D, and maintaining spare parts for pumps.
- Before, during, or soon after routine, quarterly maintenance of the LFExS.

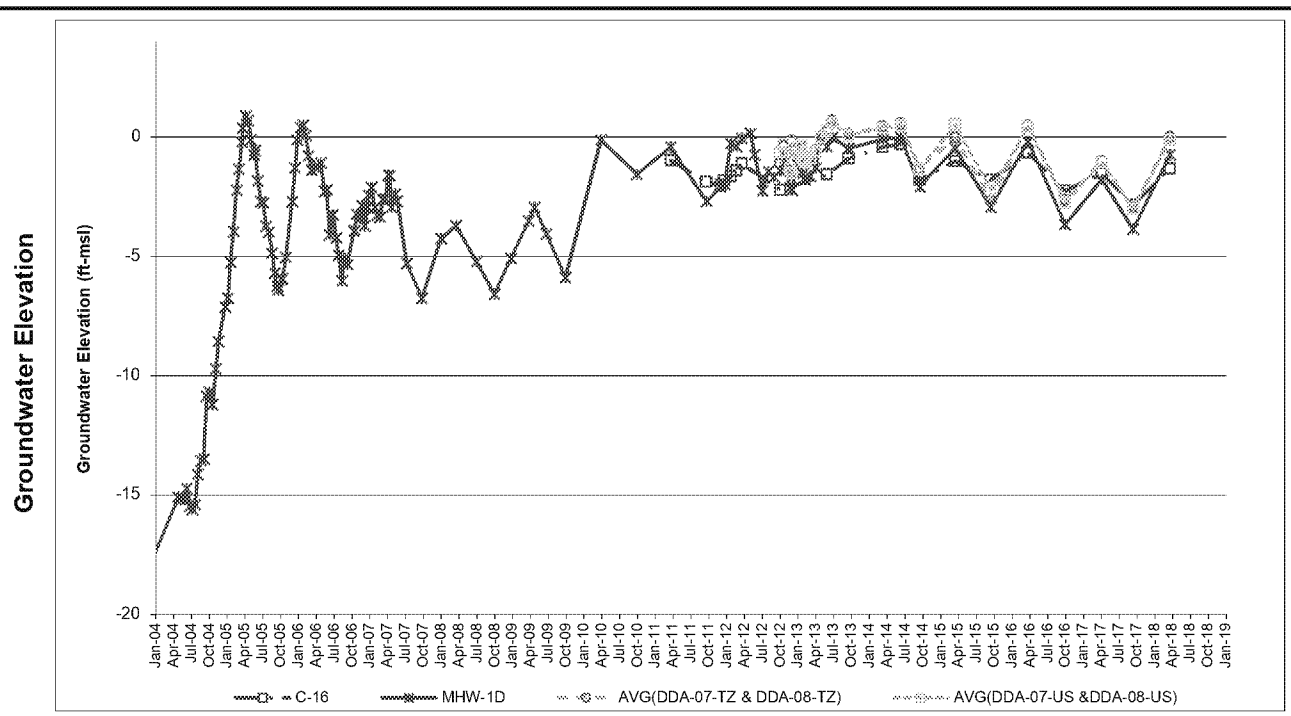
Specific events with reduced positive gradients or slightly negative gradients include:

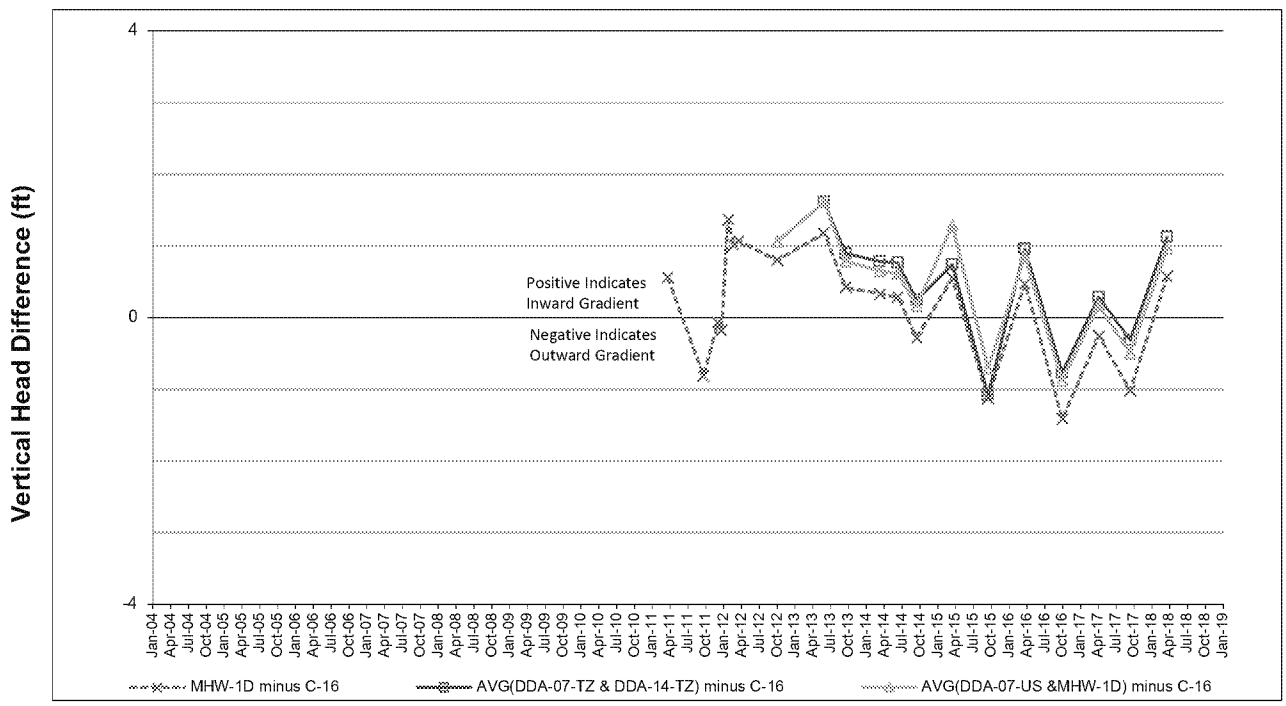
- March 5, 2012: System off for maintenance and well B-4DR connection (March 2-6, 2012)
- September 14, 2012: System off intermittently for quarterly maintenance (September 9, 2012 - September 13, 2012)
- April 15, 2013: System off for quarterly maintenance (April 9-11, 2013) and running at reduced rates until discharge pump repair on April 15, 2013.

Vertical Head Difference - MHW-1M

Golder Associates	Project Number:	013-6052		FIGURE E-9
	Prepared by:	RWB	04/02/18	
	Checked by:	BPC	08/29/18	Notes:
	Reviewed by:	TAM	08/29/18	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx
8/29/2018





Notes:

Elevations revised based on December 2012 re-survey

Reduced positive gradients or slightly negative gradients are generally associated with water level events conducted:

- During brief well, pump, or system performance declines between quarterly events due to iron fouling. The duration of these issues has been reduced due to routine, quarterly maintenance, addition of Redux 620 to wells B-4DR and C-2D, and maintaining spare parts for pumps.
- Before, during, or soon after routine, quarterly maintenance of the LFExS.

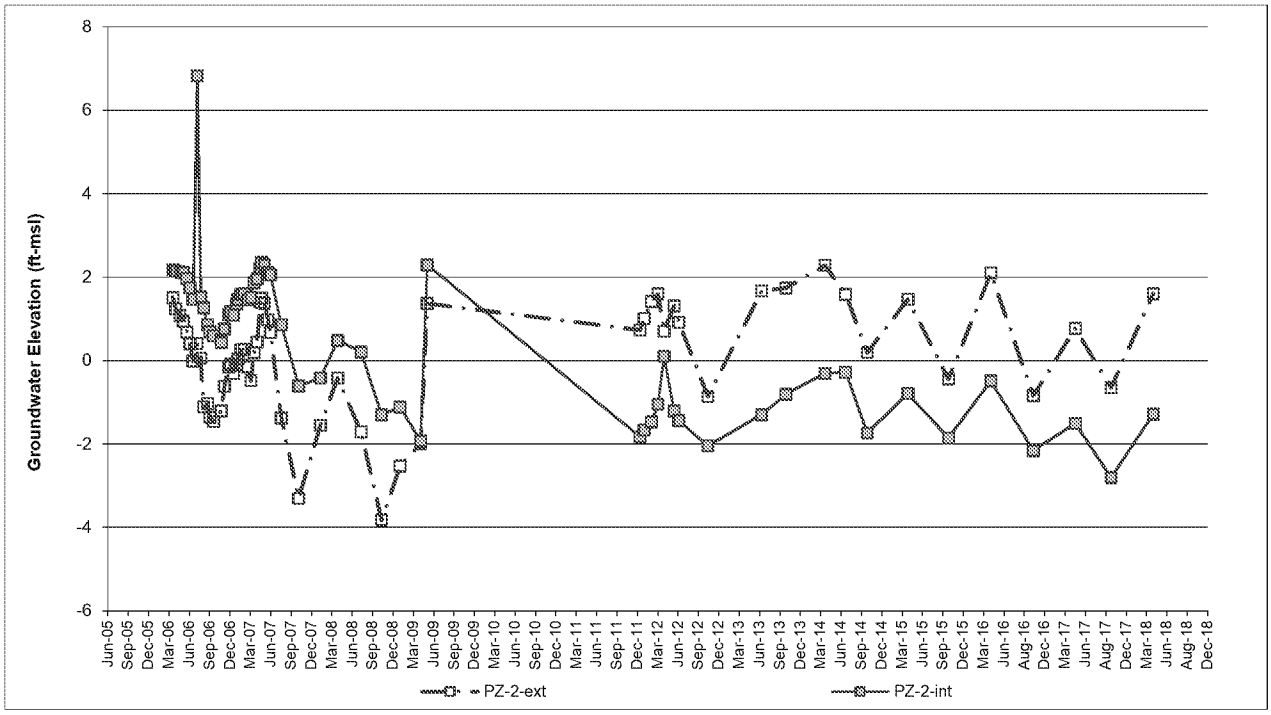
Specific events with reduced positive gradients or slightly negative gradients include:

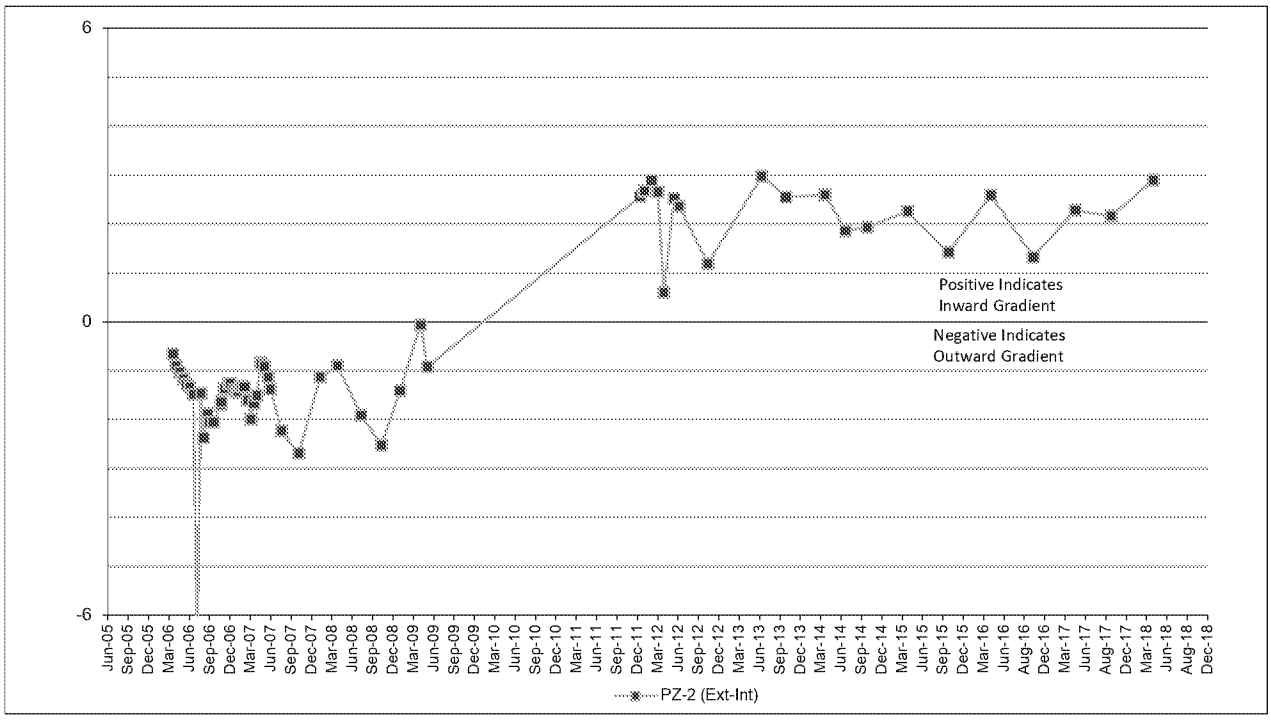
- The fluctuating vertical head differences calculated for well C-16 since 2011 indicate that well C-16 suggesting that well C-16 is at the periphery of the LFExS influence and that gradients can temporarily reverse when UPA groundwater elevations are low. Well C-16 is located in a portion of the containment area where thick UPCU is present and VOC and SVOC concentrations are low (e.g., VOCs were non-detect and BCEE was detected at 0.053 micrograms per liter [ug/l] in 2008, prior to LFExS startup).

Vertical Head Difference - C-16

Golder Associates	Project Number:	013-6052		FIGURE E-10
	Prepared by:	RWB	04/02/18	
	Checked by:	BPC	08/29/18	Notes:
	Reviewed by:	TAM	08/29/18	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx
8/29/2018





Notes:

Elevations revised based on December 2012 re-survey

Reduced positive gradients or slightly negative gradients are generally associated with water level events conducted:

- During brief well, pump, or system performance declines between quarterly events due to iron fouling. The duration of these issues has been reduced due to routine, quarterly maintenance, addition of Redux 620 to wells B-4DR and C-2D, and maintaining spare parts for pumps.
- Before, during, or soon after routine, quarterly maintenance of the LFExS.

Horizontal Head Difference - PZ-2

Golder Associates	Project Number:	013-6052		FIGURE E-11
	Prepared by:	RWB	04/02/18	
	Checked by:	BPC	08/29/18	Notes:
	Reviewed by:	TAM	08/29/18	

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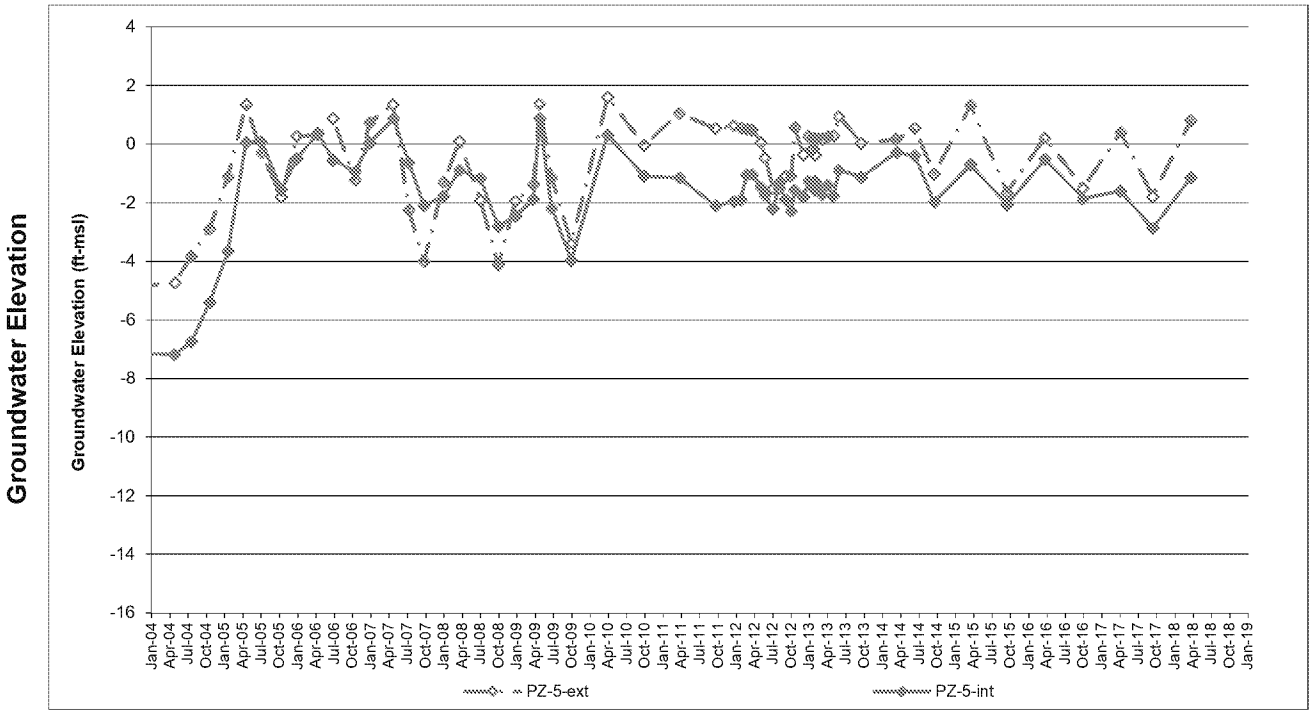

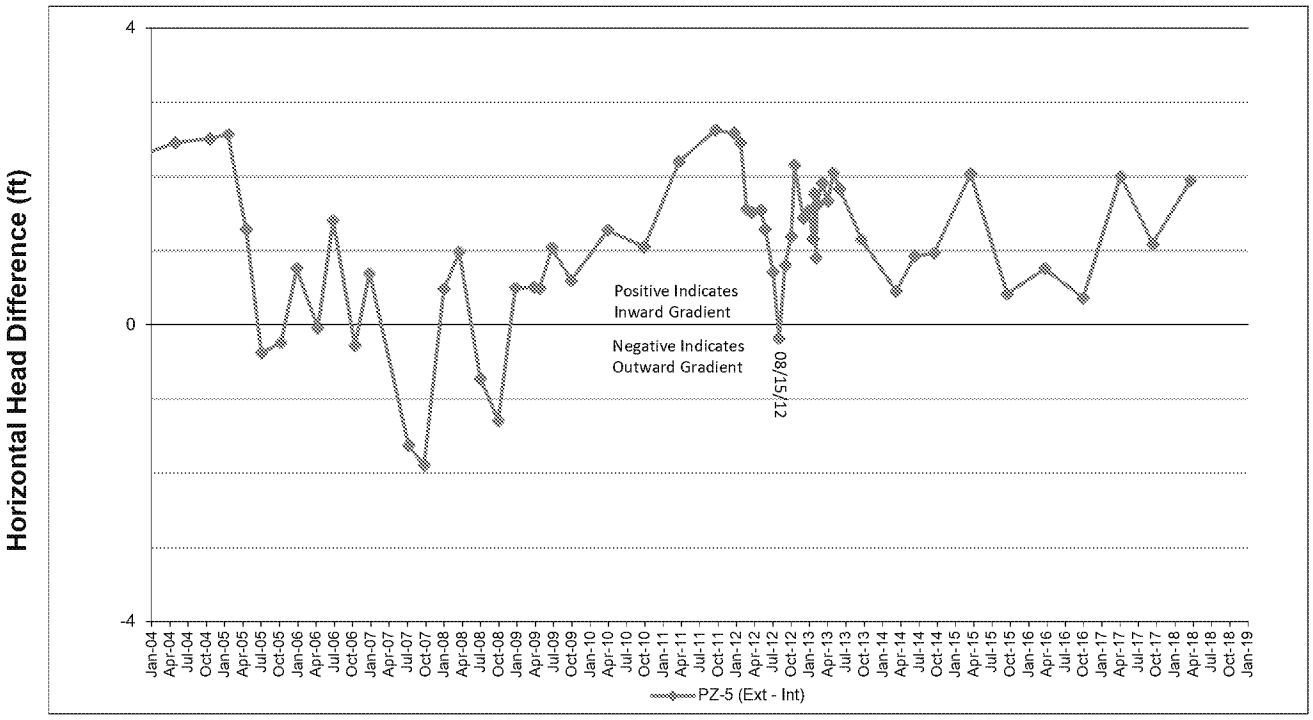

Notes:

Elevations revised based on December 2012 re-survey

Reduced positive gradients or slightly negative gradients are generally associated with water level events conducted:

- During brief well, pump, or system performance declines between quarterly events due to iron fouling. The duration of these issues has been reduced due to routine, quarterly maintenance, addition of Redux 620 to wells B-4DR and C-2D, and maintaining spare parts for pumps.
- Before, during, or soon after routine, quarterly maintenance of the LFExS.
- August 2012: Decreased extraction from nearby well C-4D due to restricted discharge capacity of the line.

Horizontal Head Difference - PZ-5

Golder Associates	Project Number:	013-6052		FIGURE E-12
	Prepared by:	RWB	04/02/18	
	Checked by:	BPC	08/29/18	Notes:
	Reviewed by:	TAM	08/29/18	

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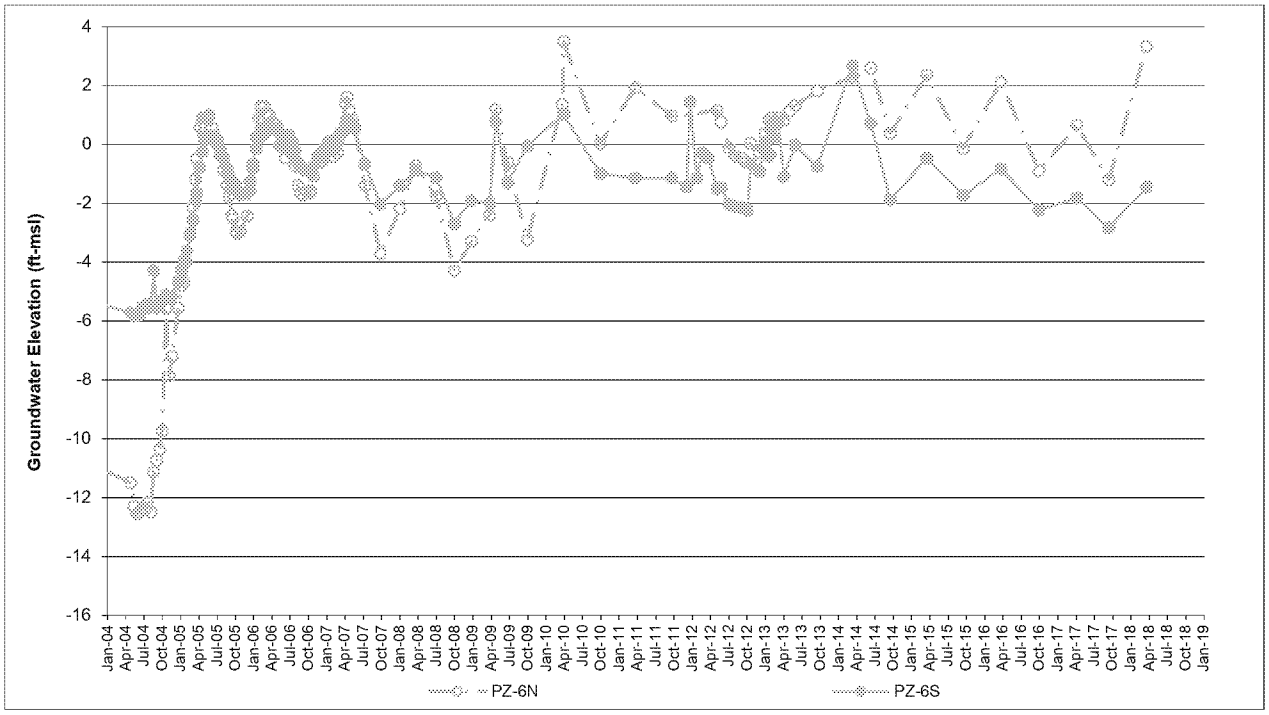

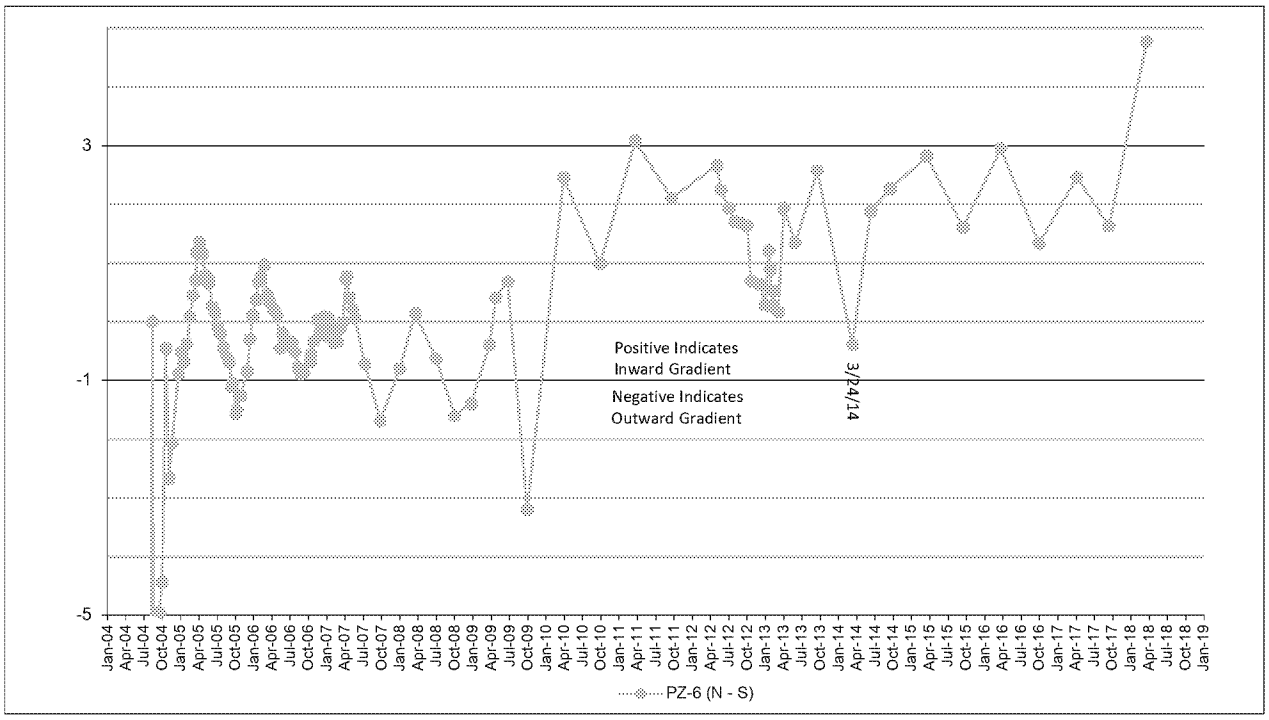

Notes:

Elevations revised based on December 2012 re-survey

Reduced positive gradients or slightly negative gradients are generally associated with water level events conducted:

- During brief well, pump, or system performance declines between quarterly events due to iron fouling. The duration of these issues has been reduced due to routine, quarterly maintenance, addition of Redux 620 to wells B-4DR and C-2D, and maintaining spare parts for pumps.
- Before, during, or soon after routine, quarterly maintenance of the LFExS.
- March 24, 2014: Decreased extraction from nearby well C-30 due to restricted discharge capacity of the line.

Horizontal Head Difference - PZ-6

Golder Associates	Project Number:	013-6052		FIGURE E-13
	Prepared by:	RWB	04/02/18	
	Checked by:	BPC	08/29/18	Notes:
	Reviewed by:	TAM	08/29/18	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx
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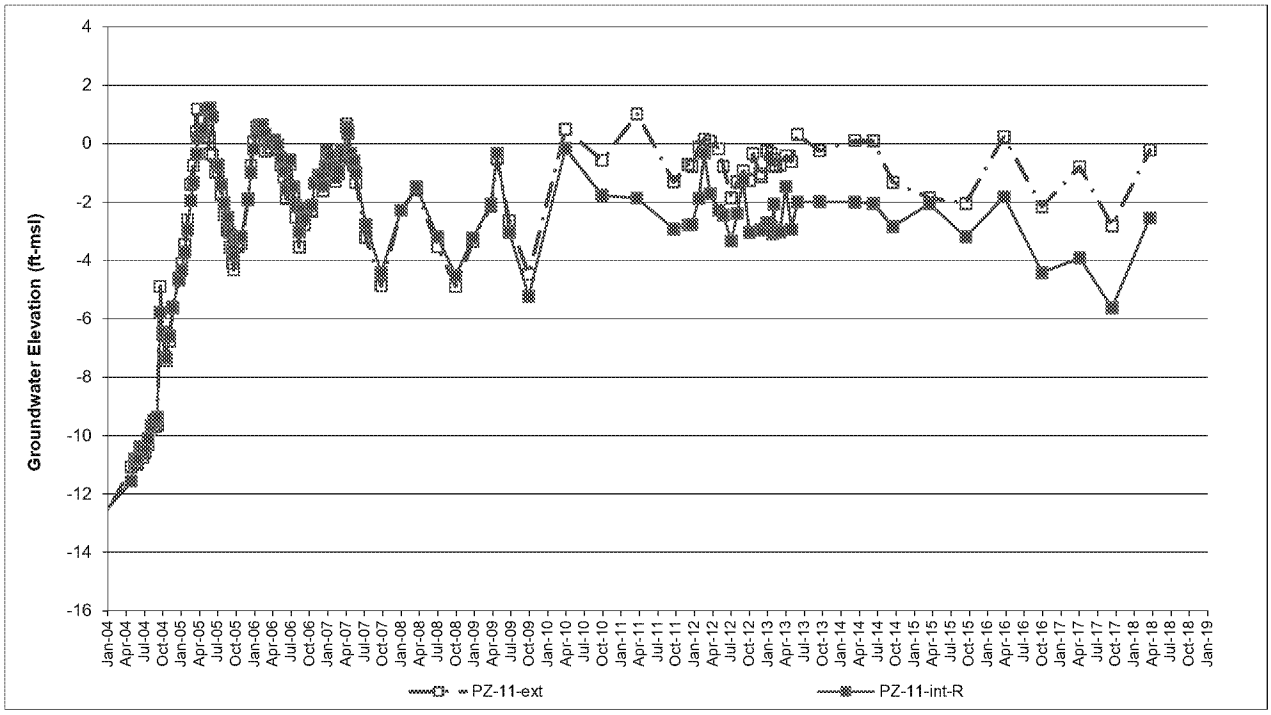

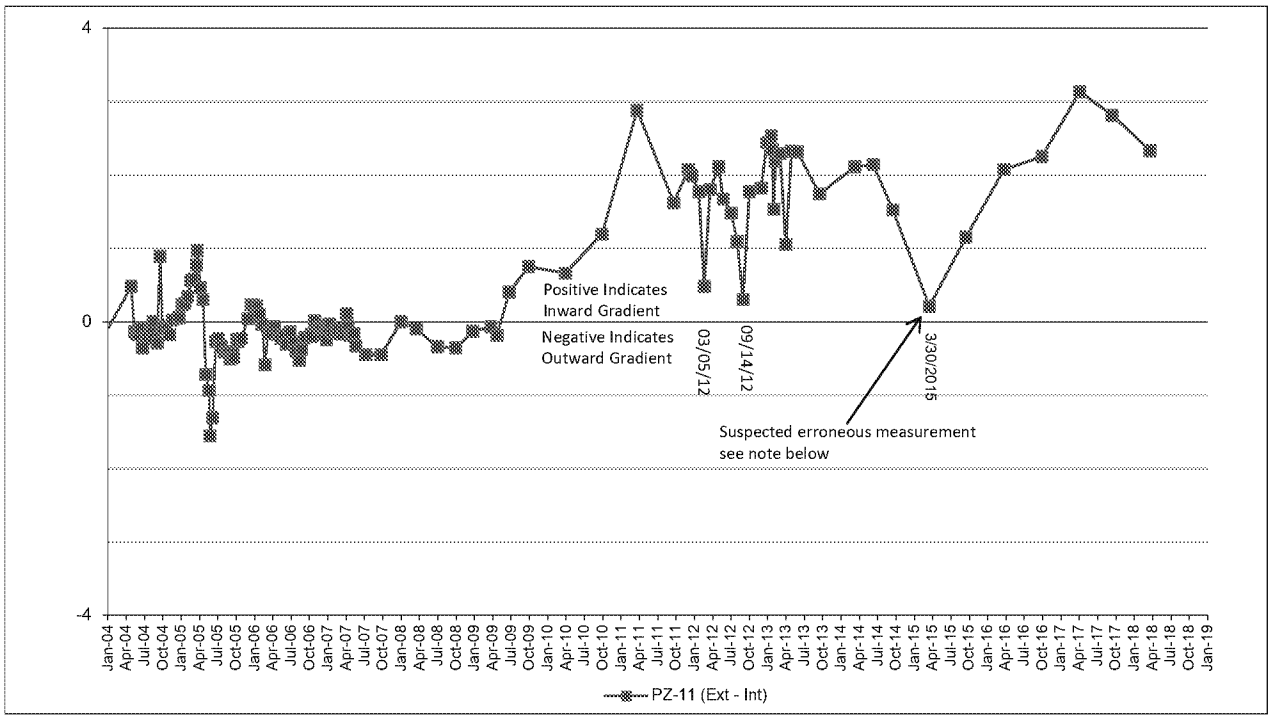

Notes:

Elevations revised based on December 2012 re-survey

Reduced positive gradients or slightly negative gradients are generally associated with water level events conducted:

- During brief well, pump, or system performance declines between quarterly events due to iron fouling. The duration of these issues has been reduced due to routine, quarterly maintenance, addition of Redux 620 to wells B-4DR and C-2D, and maintaining spare parts for pumps.
- Before, during, or soon after routine, quarterly maintenance of the LFExS.
- March 5, 2012: System off for maintenance and well B-4DR connection (March 2-6, 2012)
- September 14, 2012: System off intermittently for quarterly maintenance (September 9, 2012 - September 13, 2012)
- March 30, 2015 - Suspected erroneous measurement: the groundwater elevation in well PZ-11-EXT is typically less than one foot different from nearby well GA-101. In March 2015, the calculated groundwater elevation in PZ-11-EXT (-1.81 ft-msl) was more than two feet lower than well GA-101 (+0.63 ft-msl).

Horizontal Head Difference - PZ-11

Golder Associates	Project Number:	013-6052		FIGURE E-14
	Prepared by:	RWB	04/02/18	
	Checked by:	BPC	08/29/18	Notes:
	Reviewed by:	TAM	08/29/18	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx
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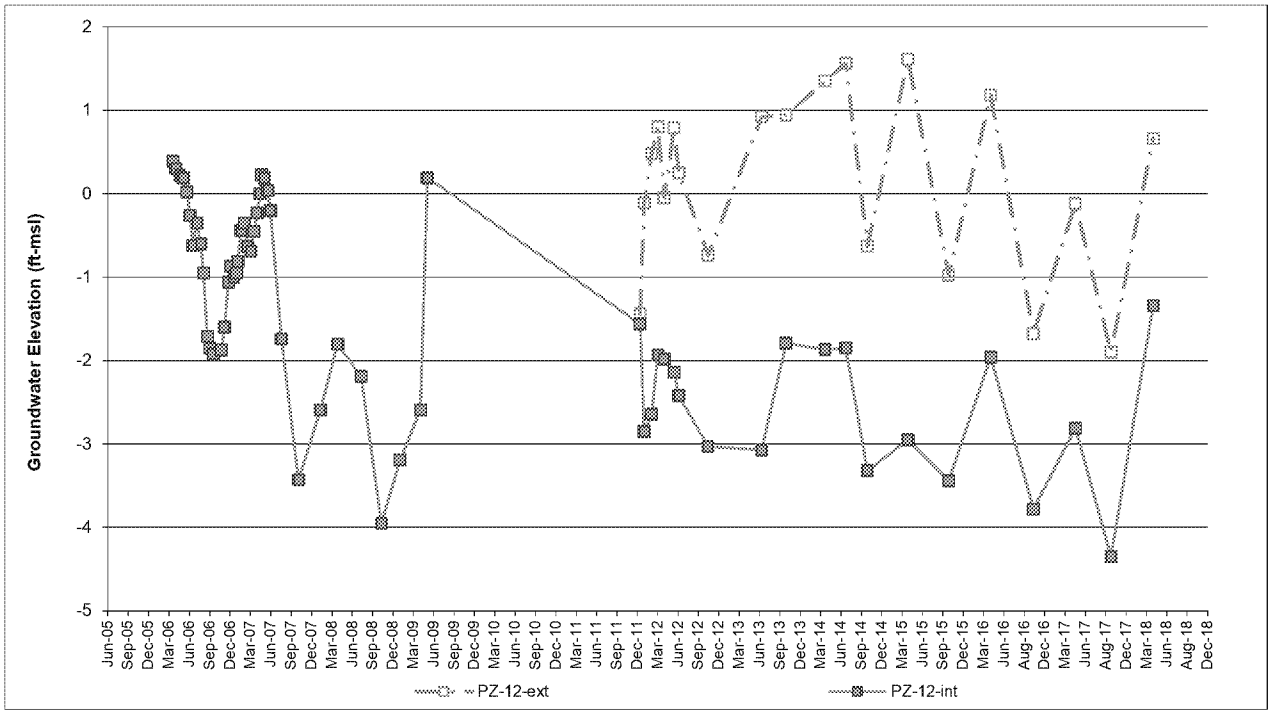

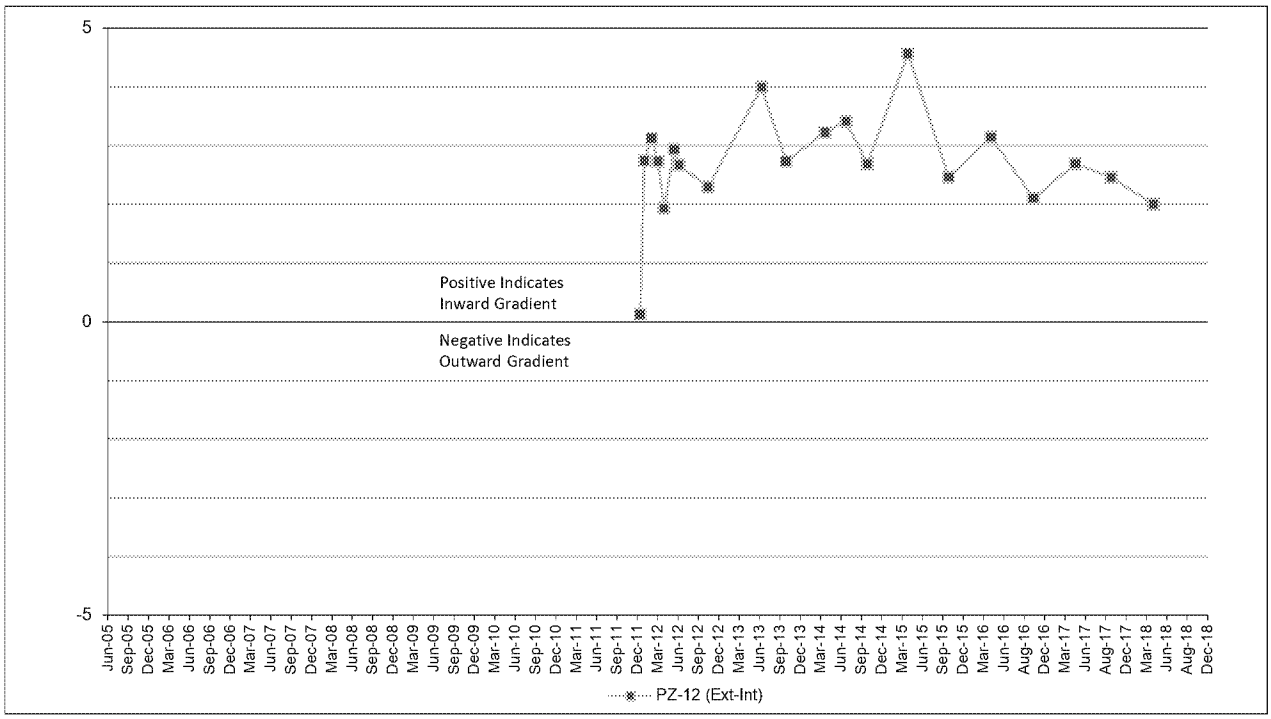

Notes:

Elevations revised based on December 2012 re-survey

Reduced positive gradients or slightly negative gradients are generally associated with water level events conducted:

- During brief well, pump, or system performance declines between quarterly events due to iron fouling. The duration of these issues has been reduced due to routine, quarterly maintenance, addition of Redux 620 to wells B-4DR and C-2D, and maintaining spare parts for pumps.
- Before, during, or soon after routine, quarterly maintenance of the LFExS.

Horizontal Head Difference - PZ-12

Golder Associates	Project Number:	013-6052		FIGURE E-15
	Prepared by:	RWB	04/02/18	
	Checked by:	BPC	08/29/18	Notes:
	Reviewed by:	TAM	08/29/18	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx
8/29/2018

APPENDIX F

Analytical Chemistry Trend Plots

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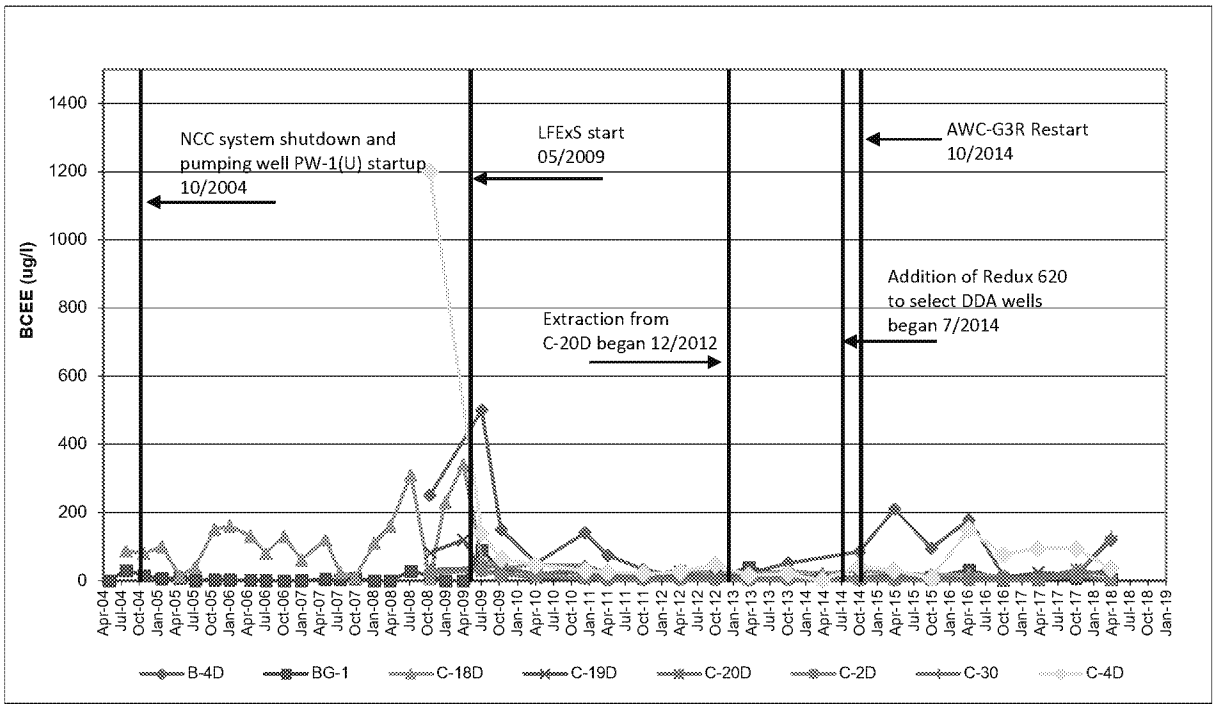

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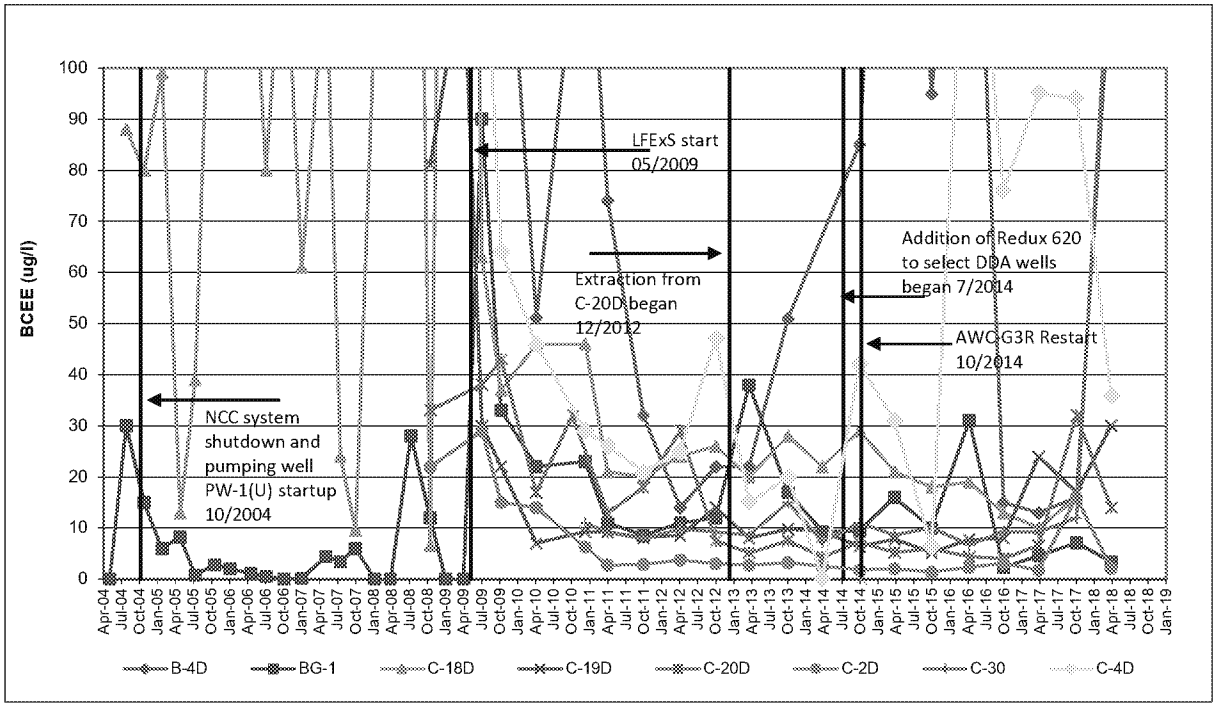

BCEE - DDA Groundwater - LFExS Extraction Well Trends

Golder Associates	Project Number:	013-6052	FIGURE F-1A
	Prepared by:	LWL 5/21/2018	
	Checked by:	BPC 8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM 8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

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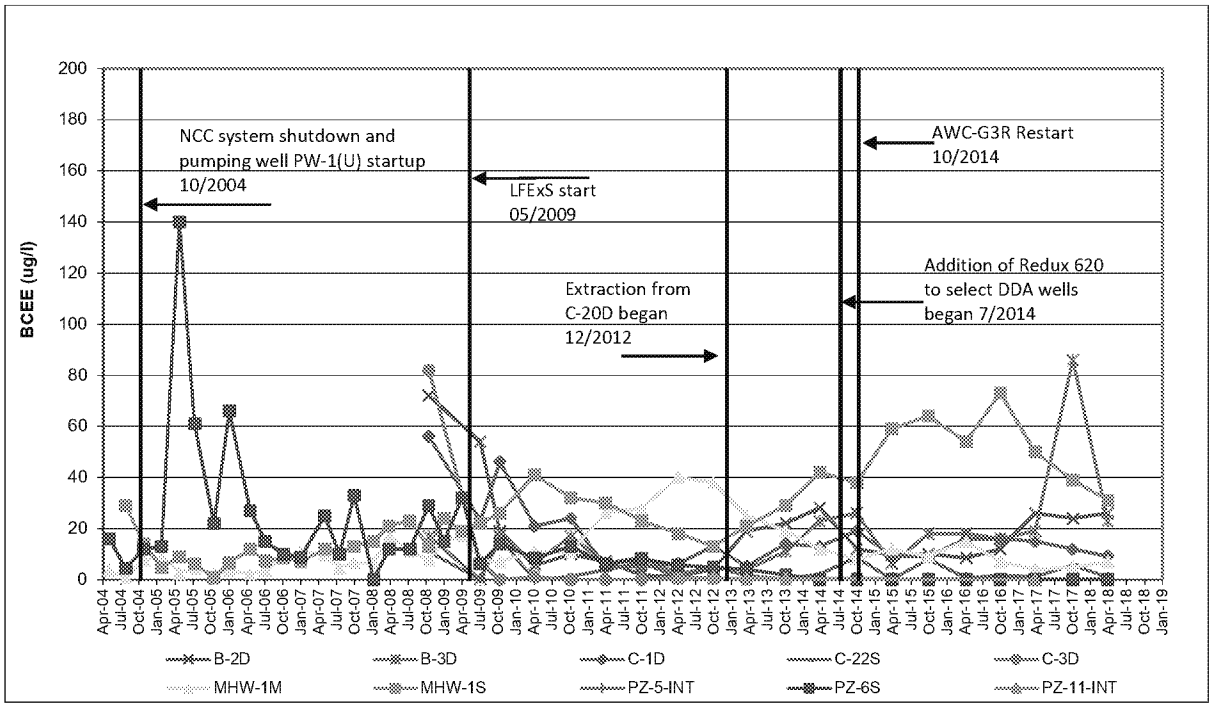

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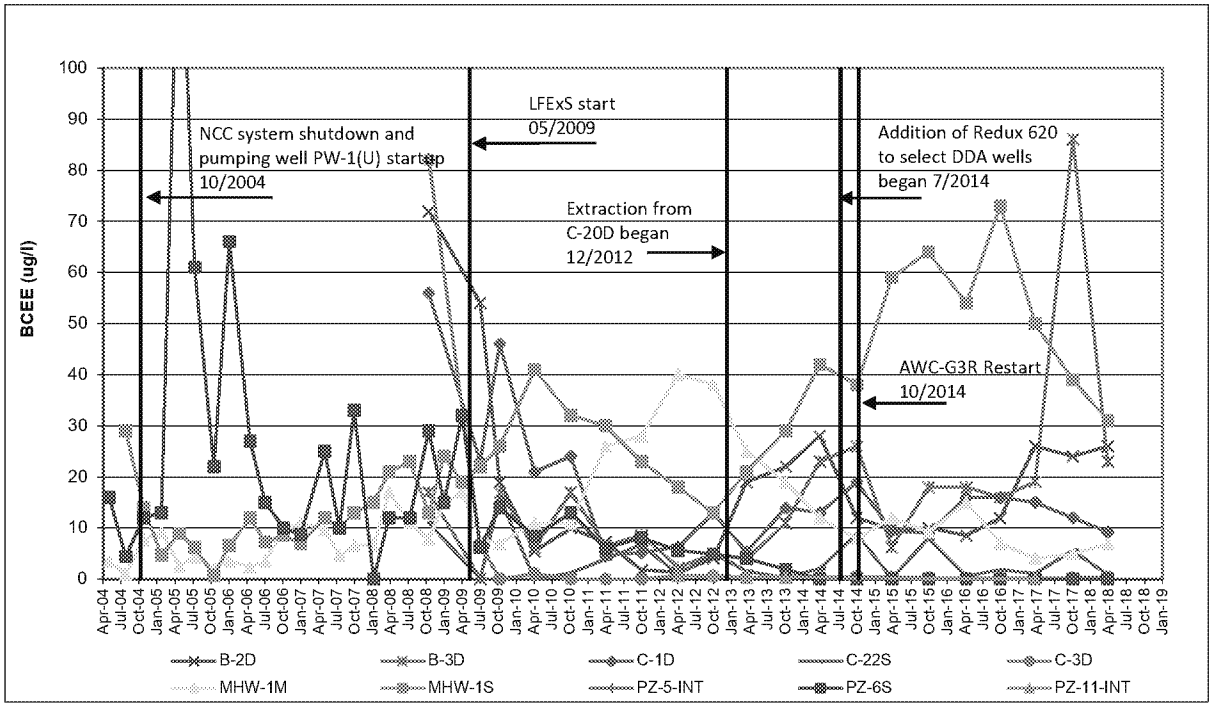

BCEE - DDA Groundwater - LFExS Monitoring Well Trends

Golder Associates

Project Number:	013-6052		FIGURE F-2A
Prepared by:	LWL	5/21/2018	
Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

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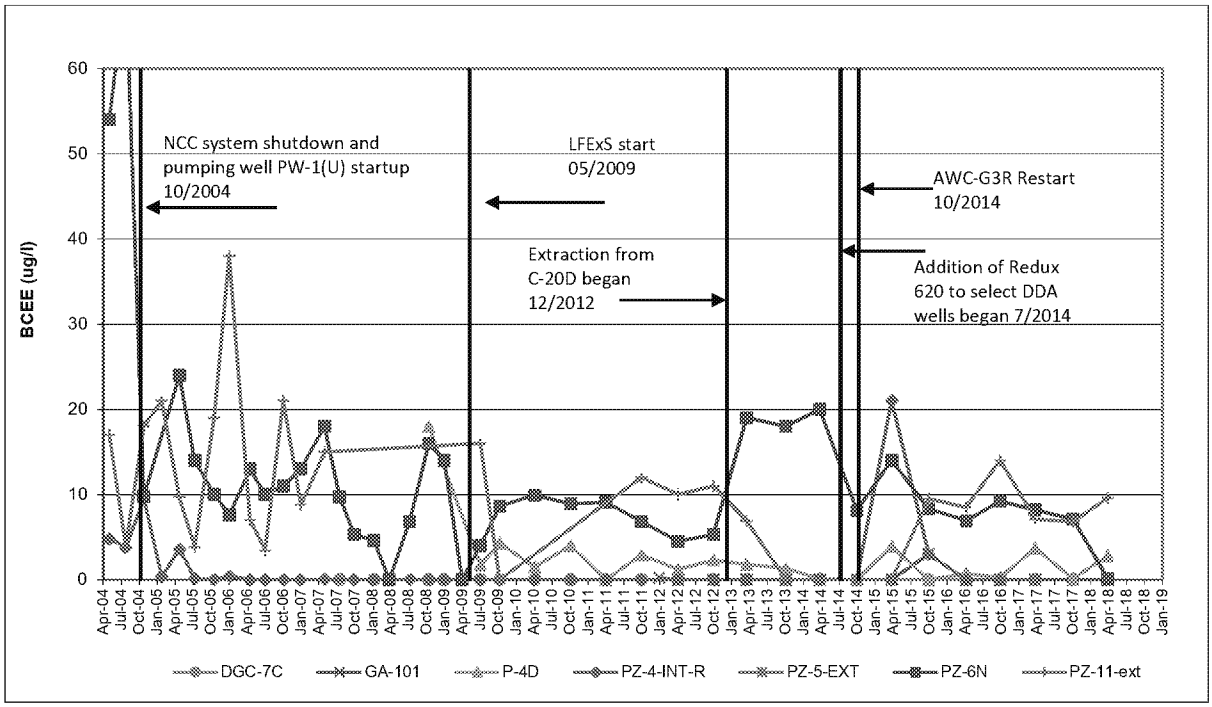

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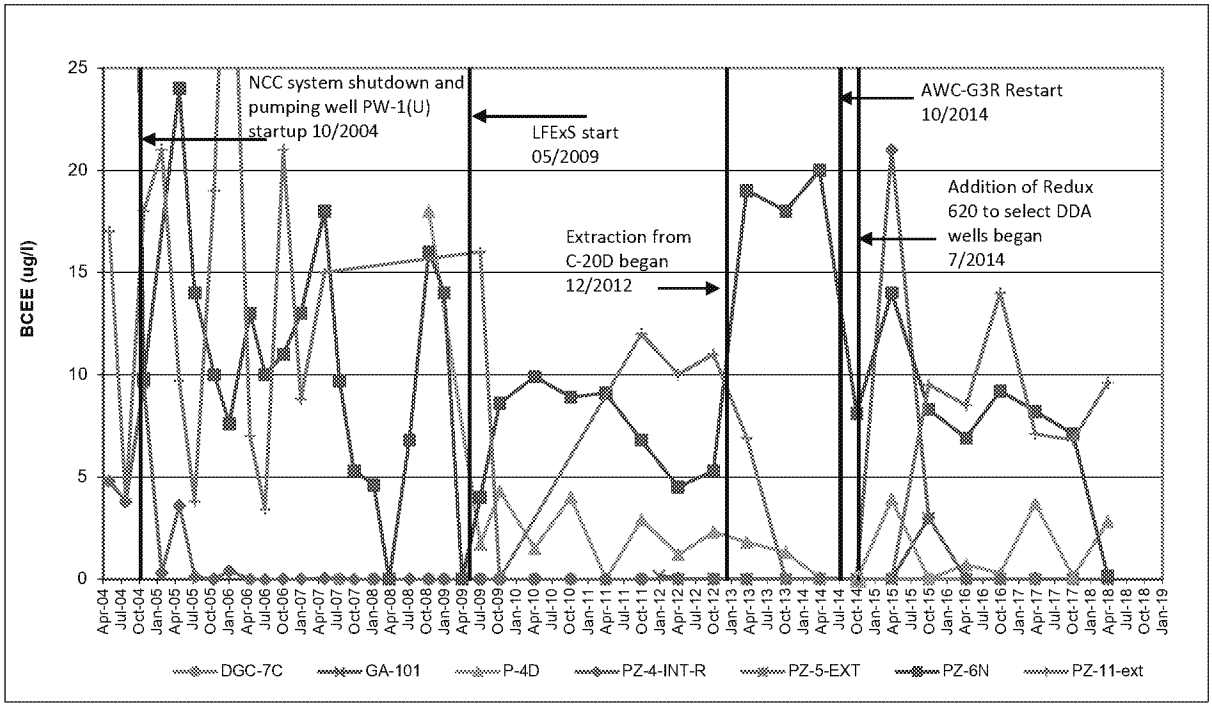
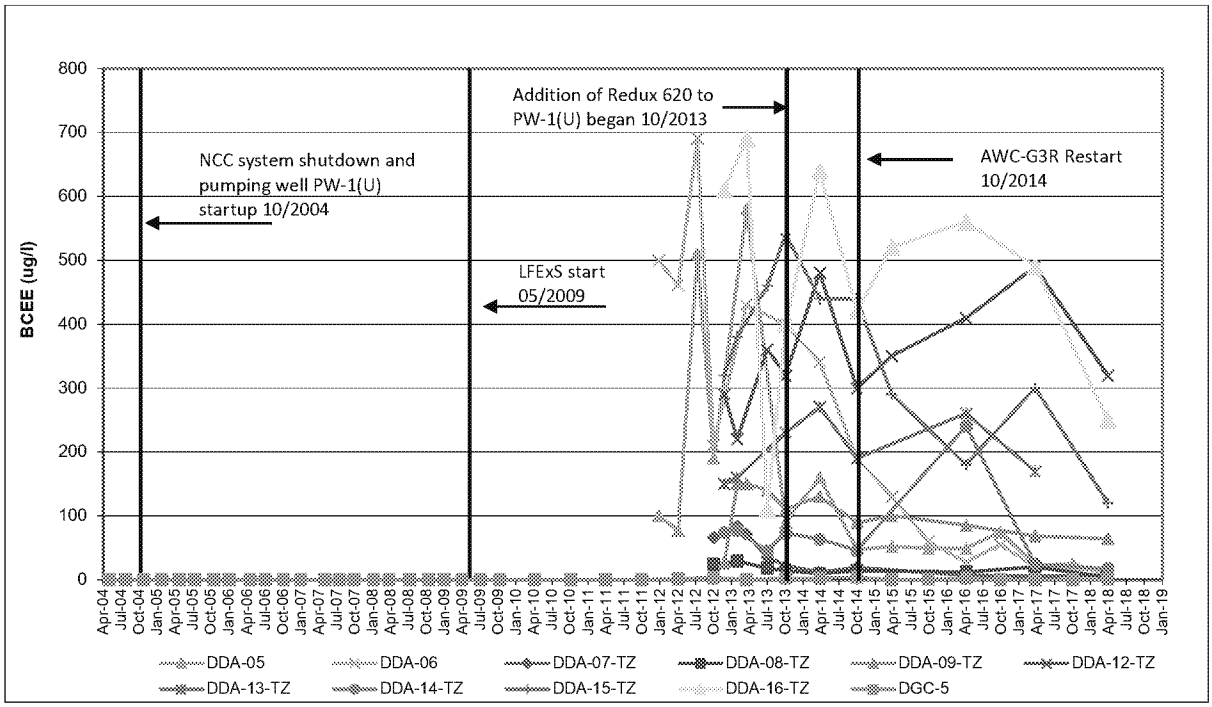


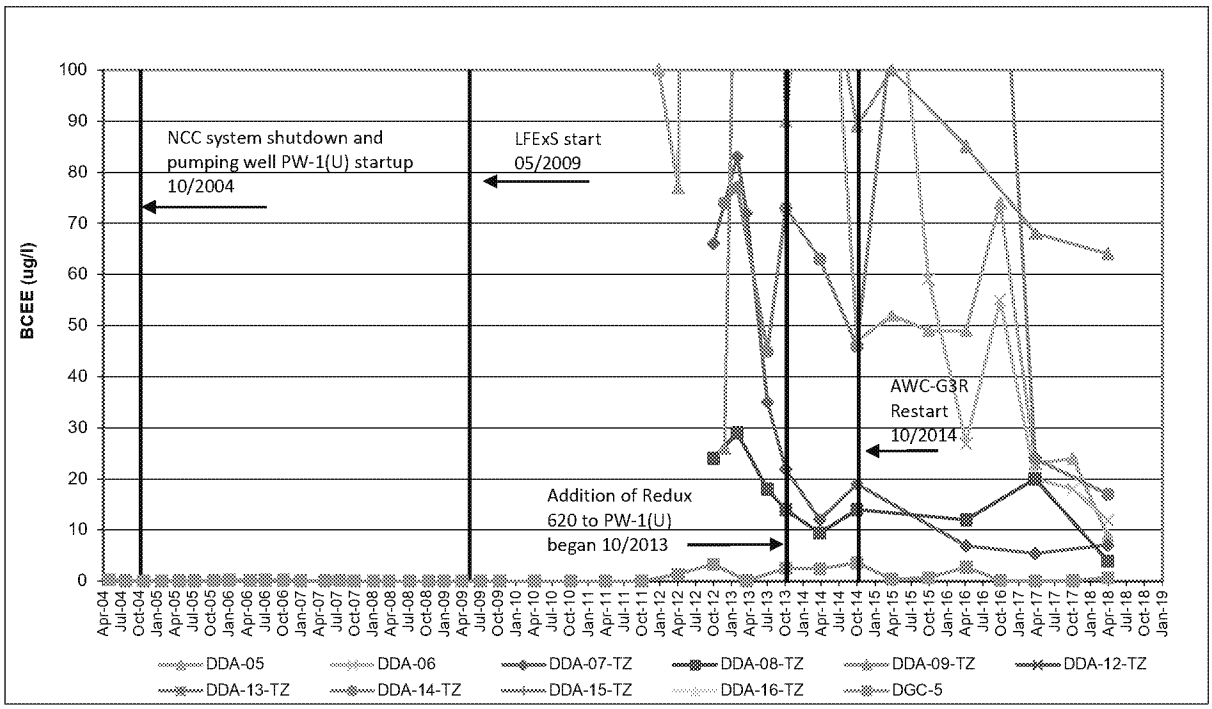
BCEE - DDA Monitoring Well Trends

Golder Associates

Project Number:	013-6052		FIGURE F-3A
Prepared by:	LWL	5/21/2018	
Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx





BCEE - DDA to Well PW-1(U) UPCU Transition Zone Trends

Golder Associates	Project Number:	013-6052		FIGURE F-4A
	Prepared by:	LWL	5/21/2018	
	Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

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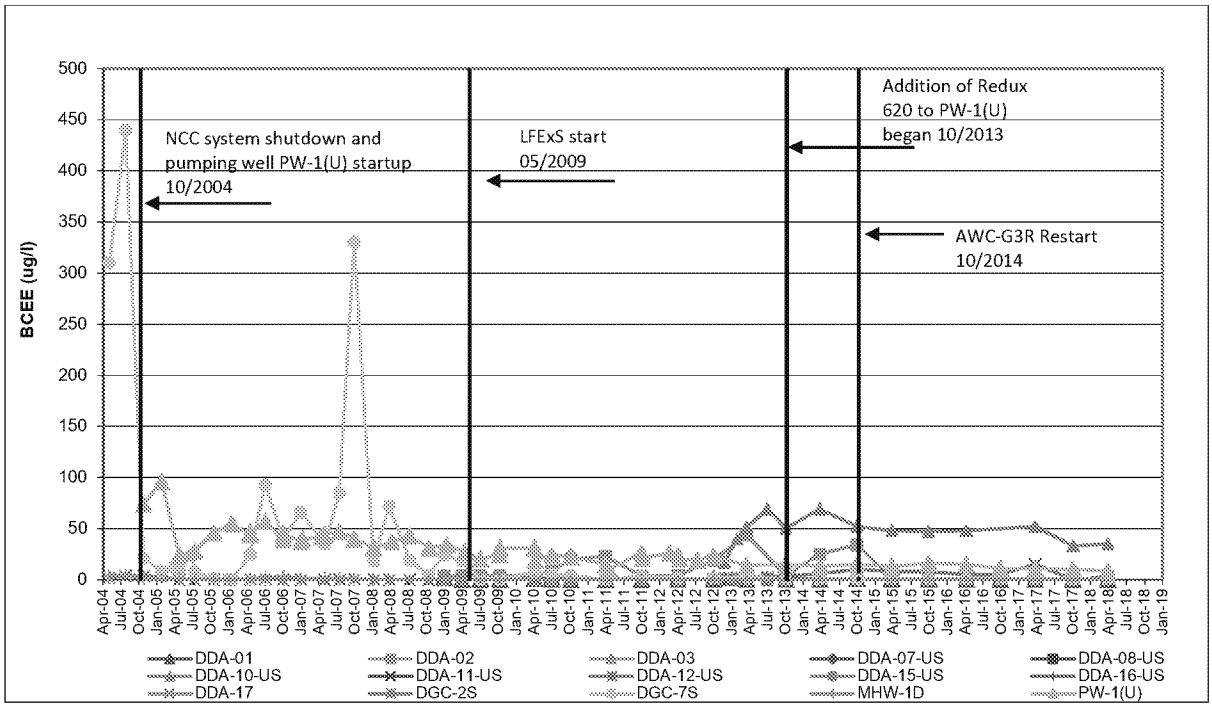

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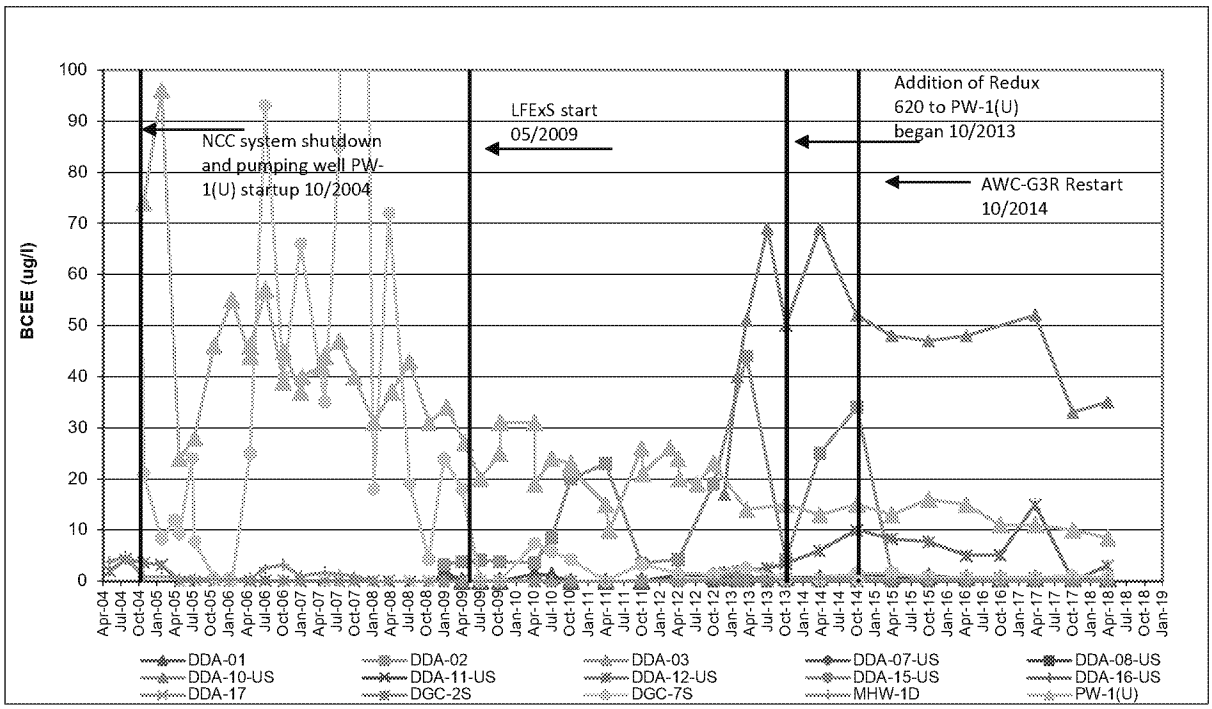

BCEE - DDA to Well PW-1(U) UPA Trends

Golder Associates	Project Number:	013-6052		FIGURE F-5A
	Prepared by:	LWL	5/21/2018	
	Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

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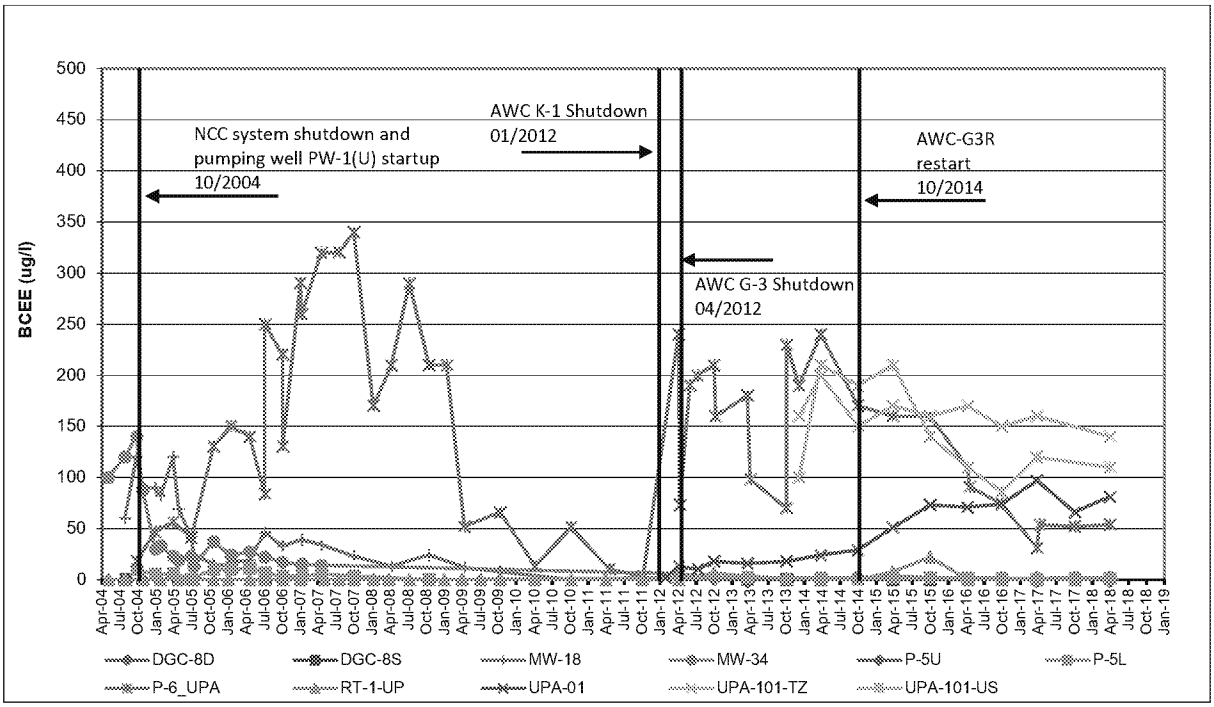

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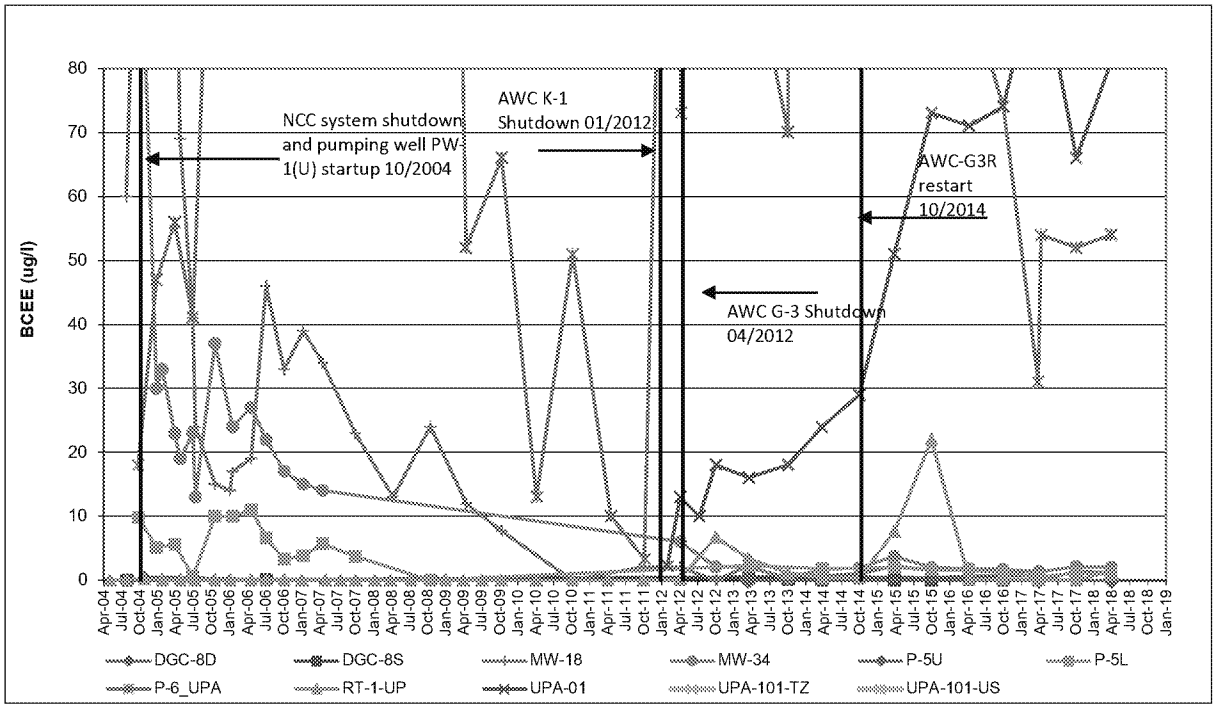

BCEE - UPA Downgradient of Well PW-1(U) Trends - Well P-6 Area

Golder Associates

Project Number:	013-6052		FIGURE F-6A
Prepared by:	LWL	5/21/2018	
Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

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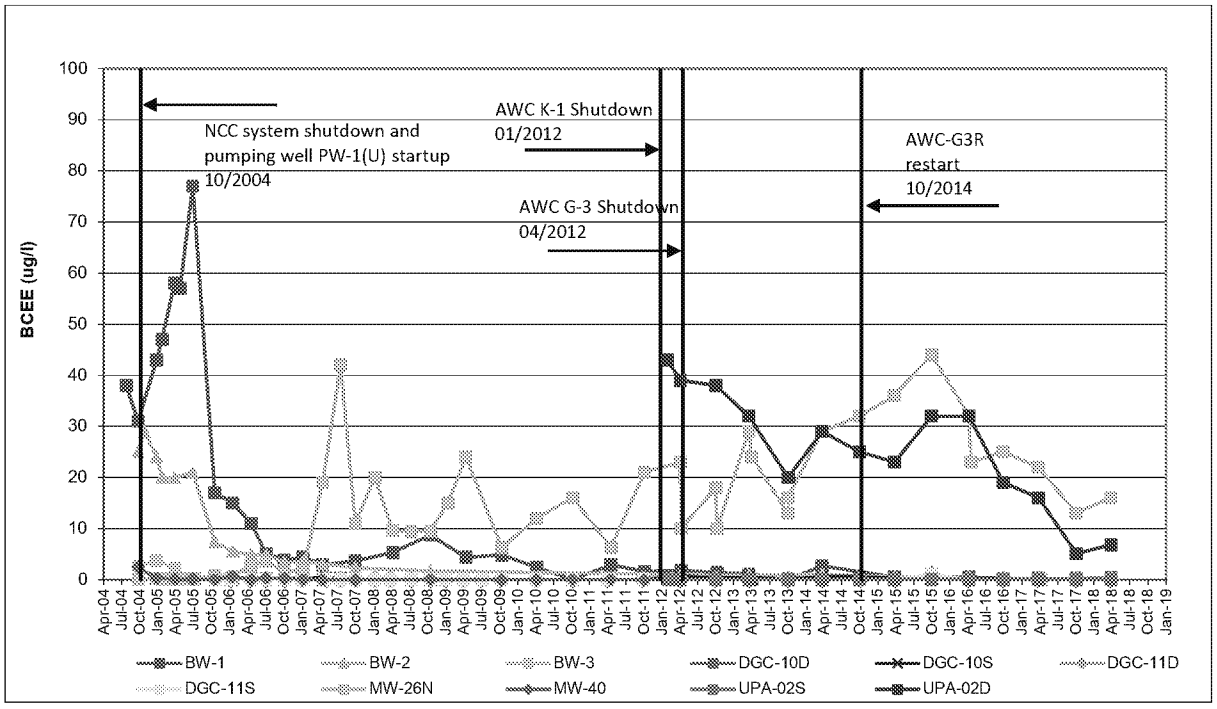

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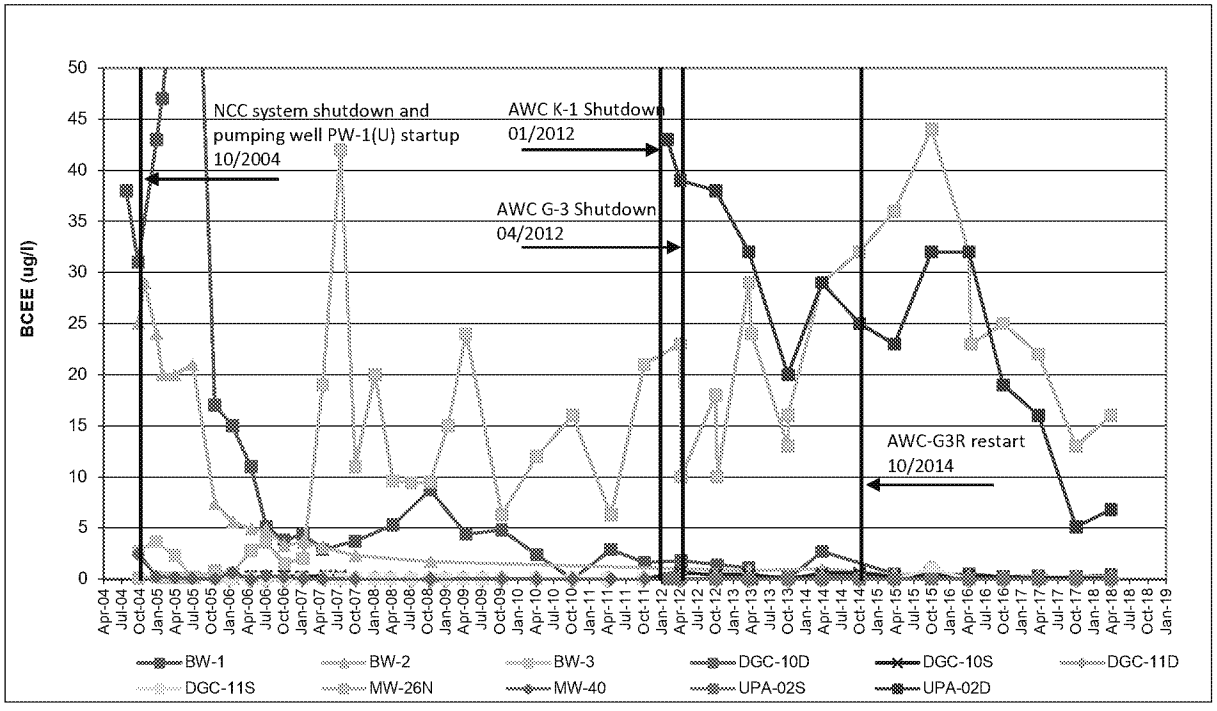

BCEE - UPA Downgradient of Well PW-1(U) Trends

Golder Associates

Project Number:	013-6052		FIGURE F-7A
Prepared by:	LWL	5/21/2018	
Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

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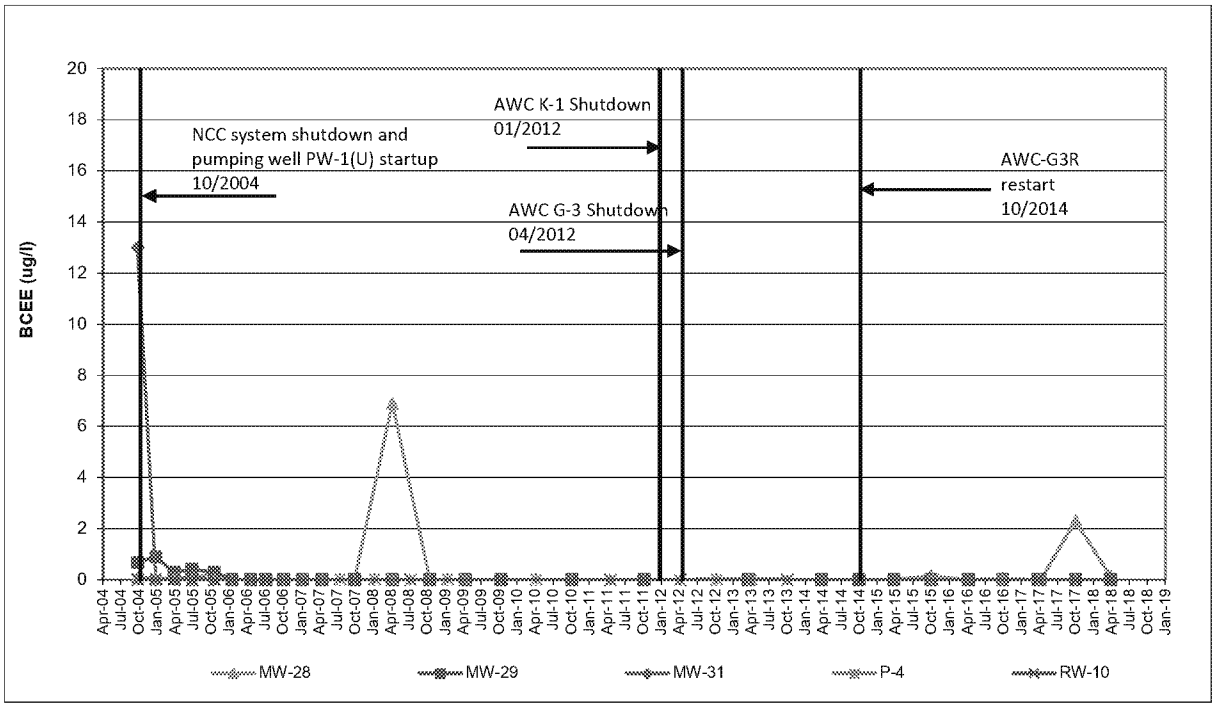

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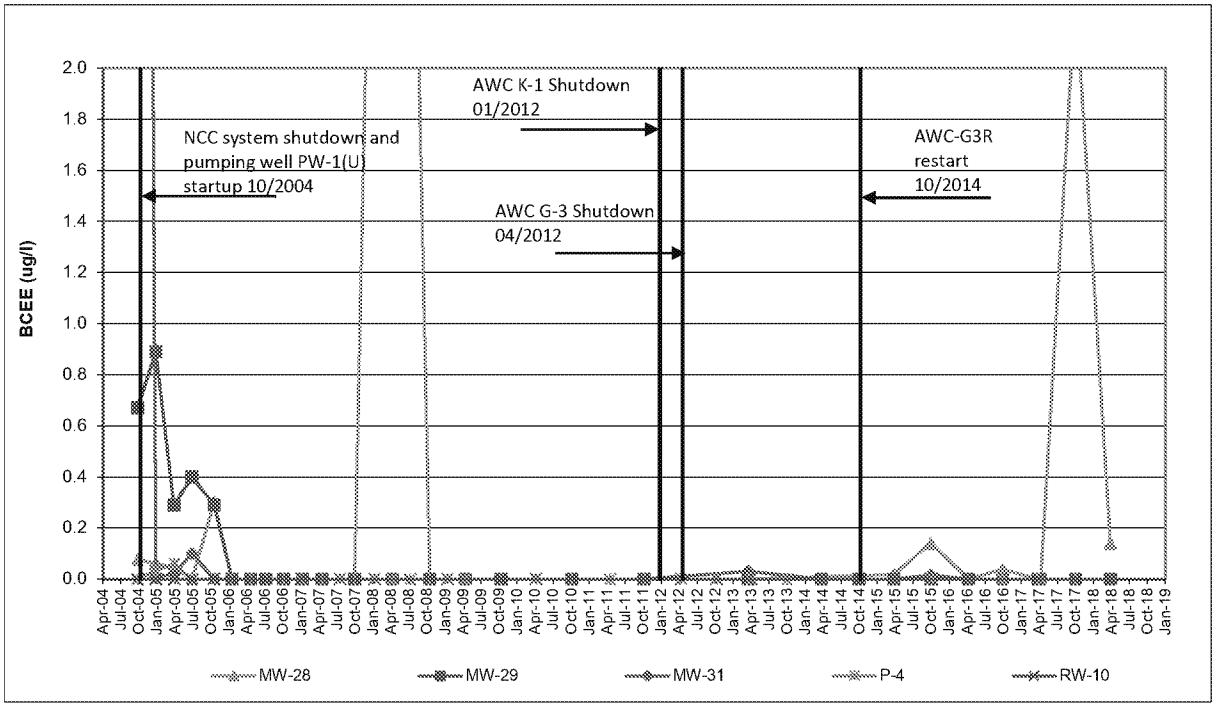
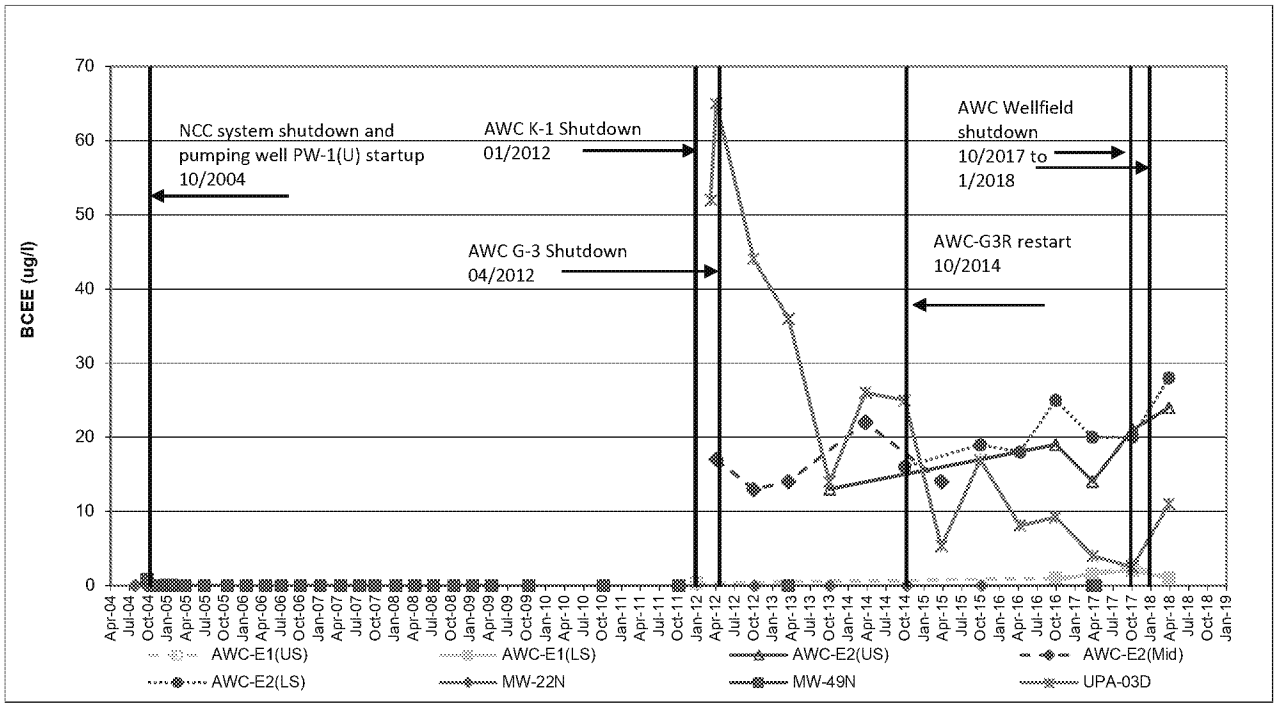


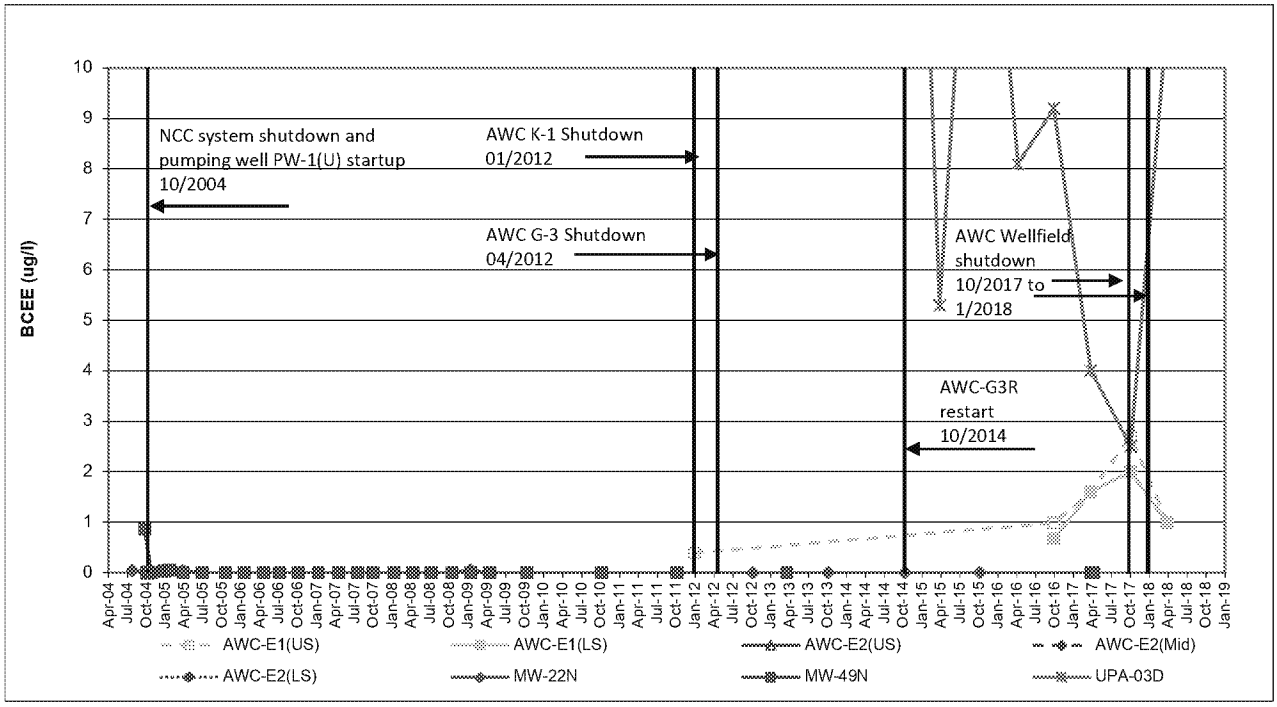
BCEE - UPA Downgradient - Western Edge NCC Well Trends

Golder Associates

Project Number:	013-6052		FIGURE F-8A
Prepared by:	LWL	5/21/2018	
Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx





BCEE - UPA Downgradient - Well Trends in Front of AWC Wellfield

Golder Associates	Project Number:	013-6052		FIGURE F-9A
	Prepared by:	LWL	5/21/2018	
	Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

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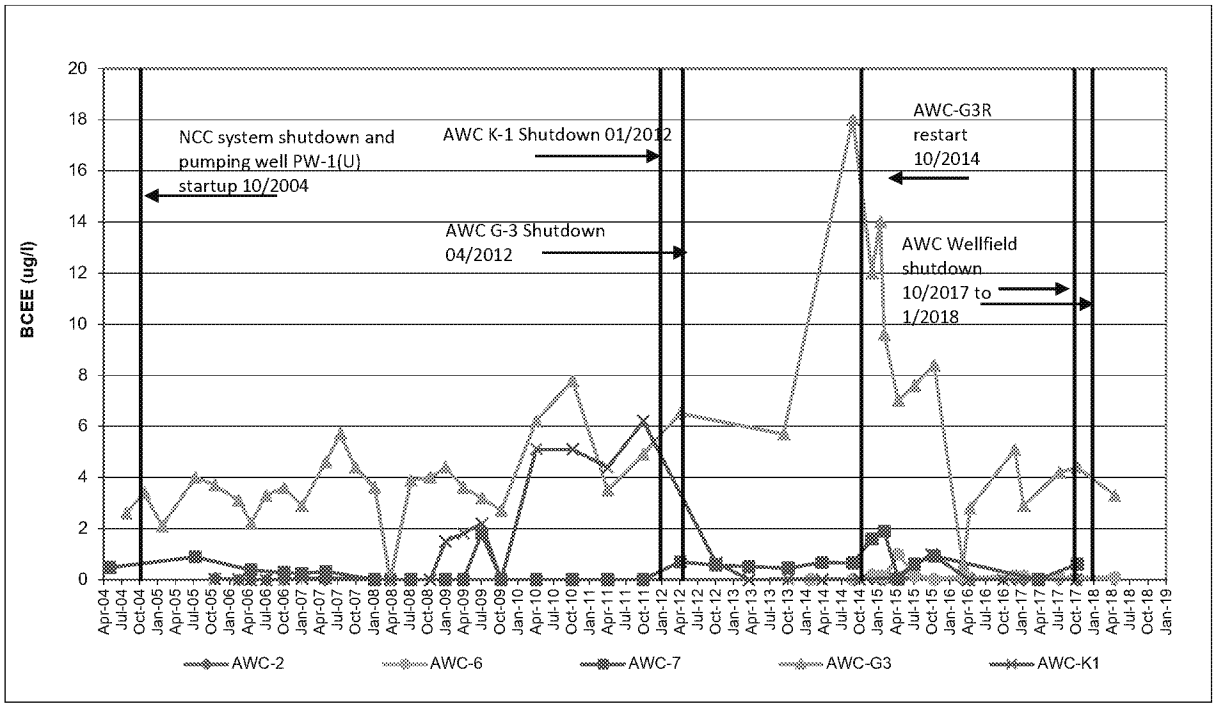

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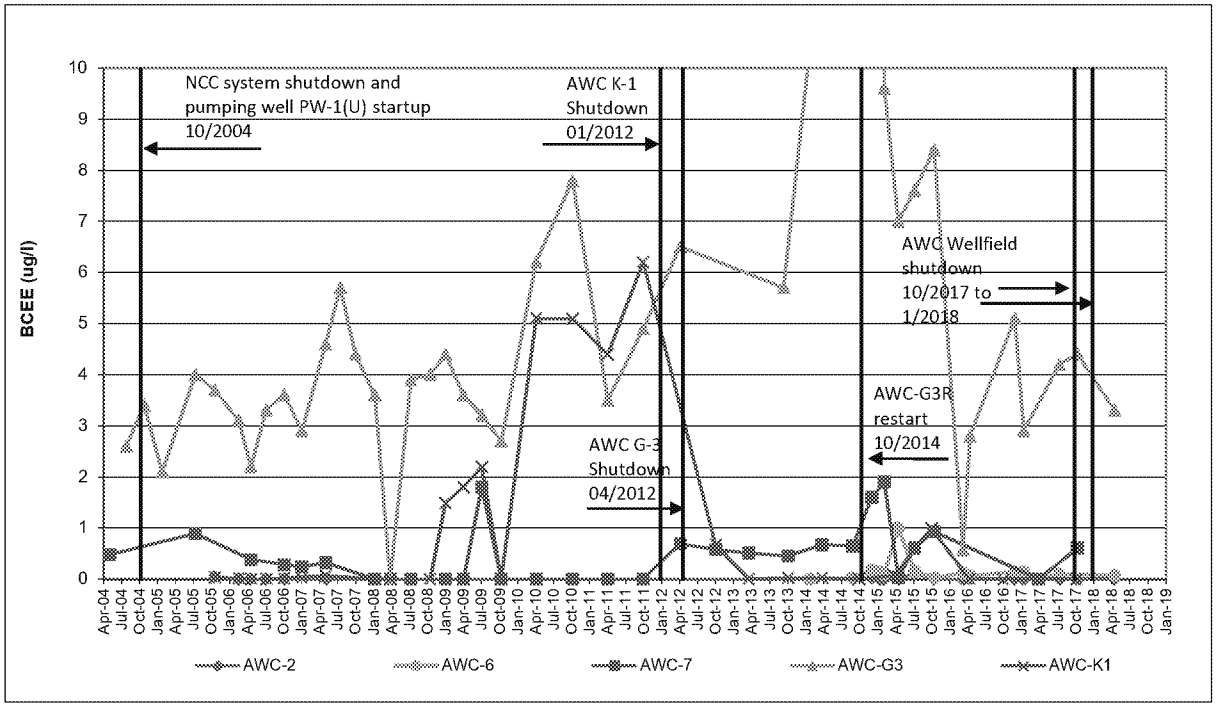

BCEE - UPA Downgradient - AWC Well Trends

Golder Associates	Project Number:	013-6052	FIGURE F-10A
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	Checked by:	BPC 8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM 8/29/2018	

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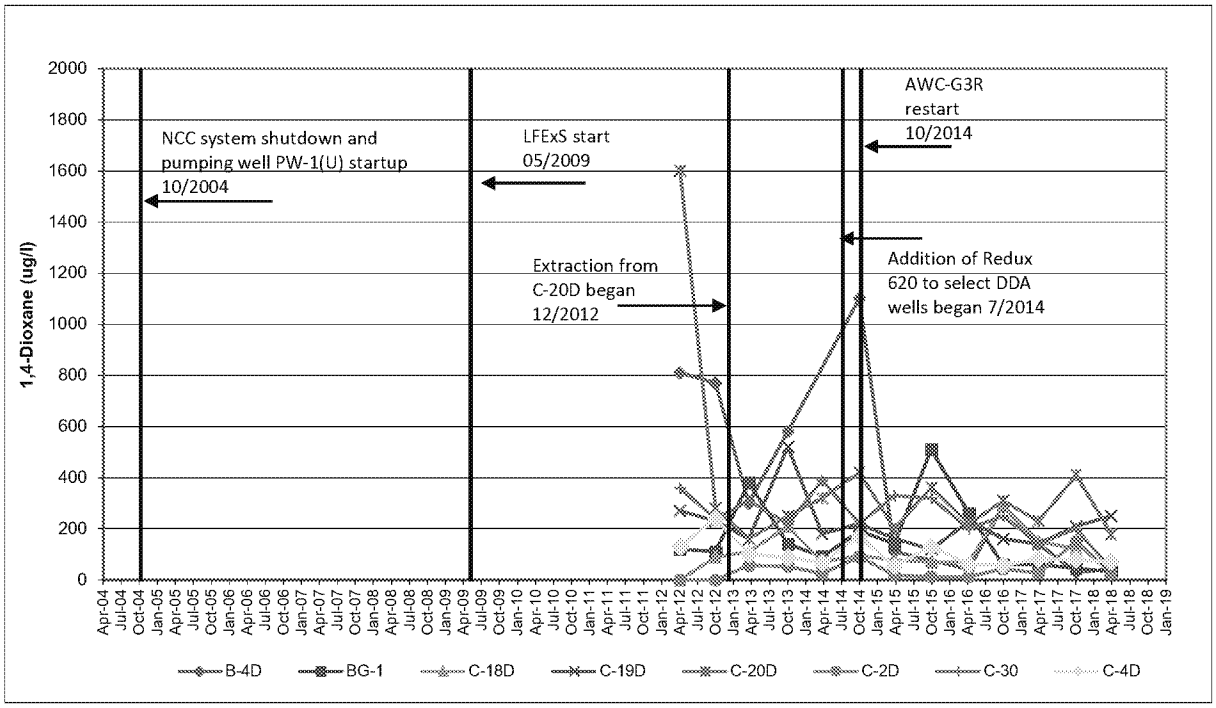

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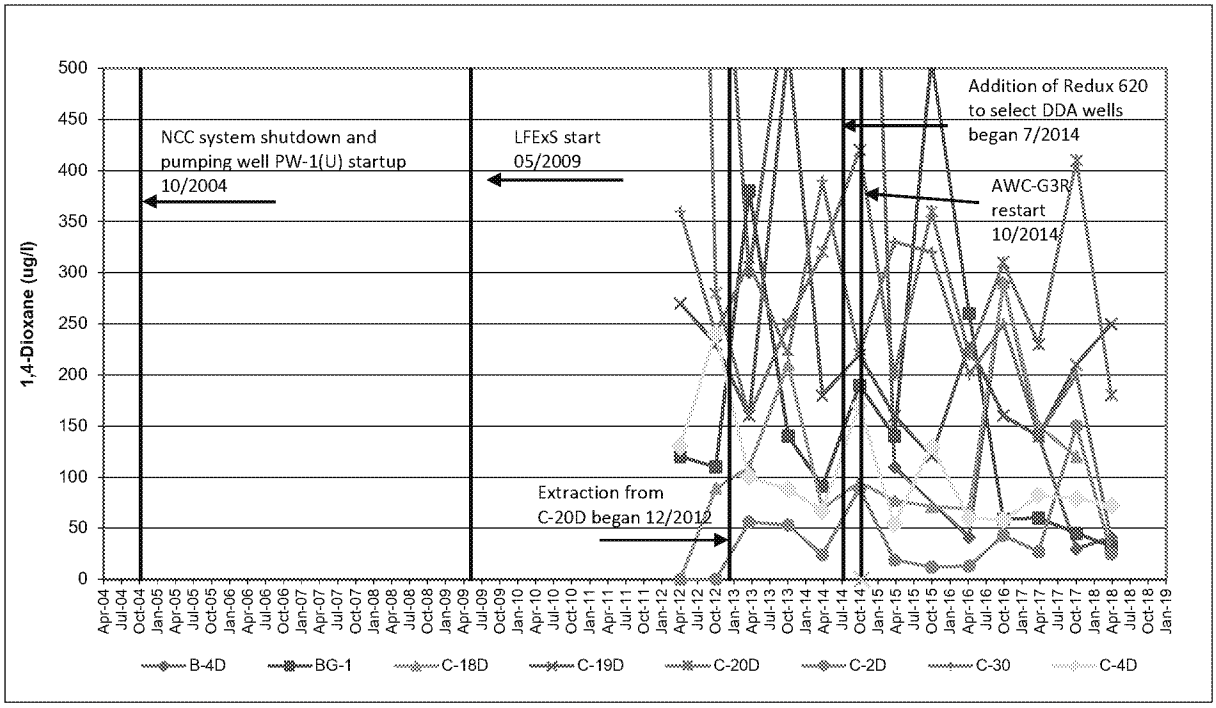

1,4-Dioxane - DDA Groundwater - LFExS Extraction Well Trends

Golder Associates	Project Number:	013-6052		FIGURE F-1B
	Prepared by:	LWL	5/21/2018	
	Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM	8/29/2018	

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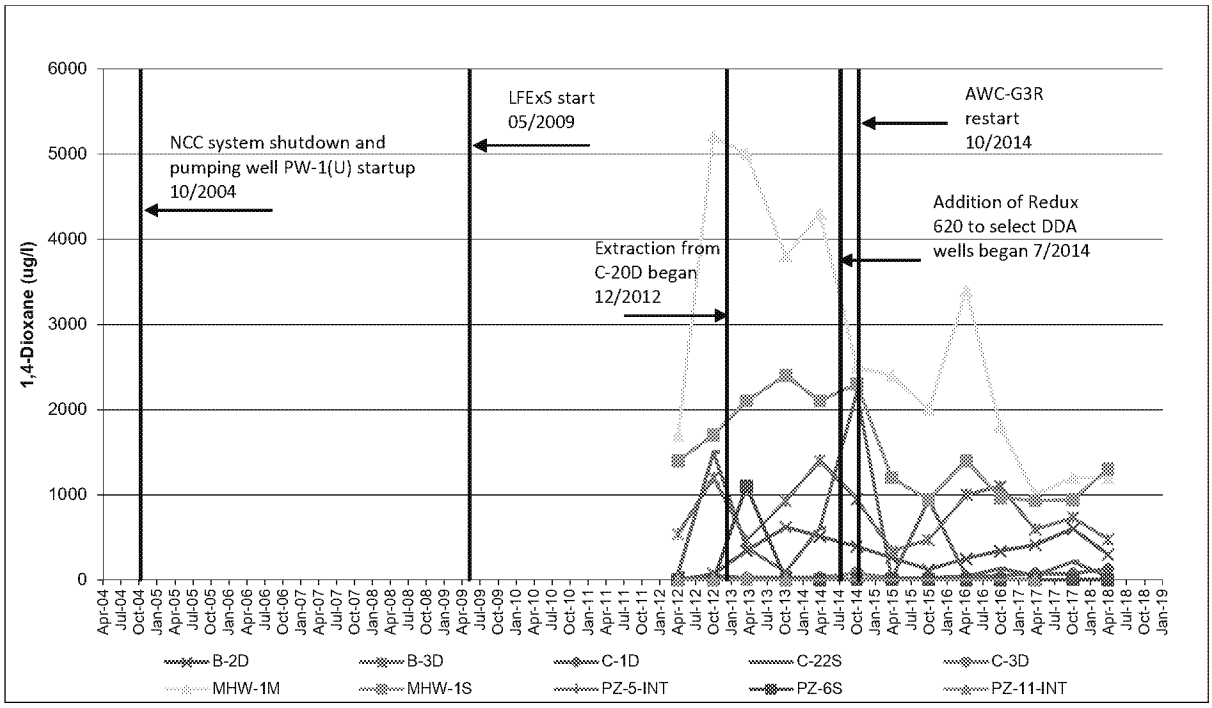

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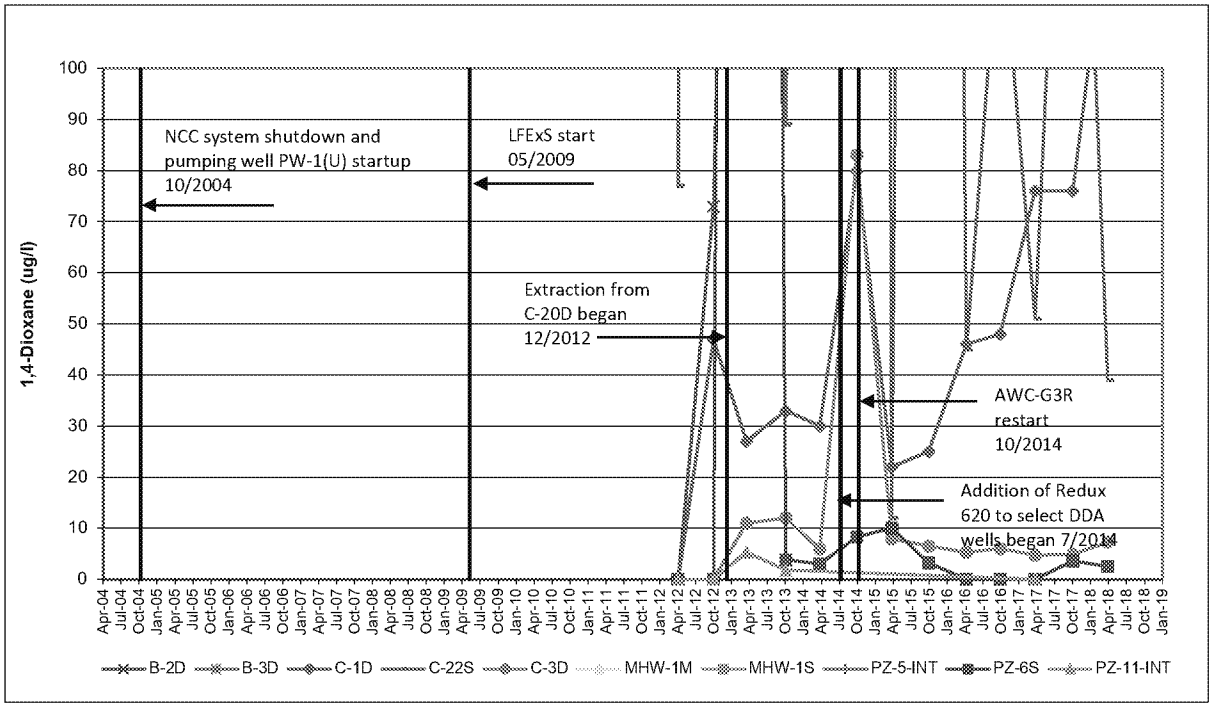

1,4-Dioxane - DDA Groundwater - LFExS Monitoring Well Trends

Golder Associates

Project Number:	013-6052		FIGURE F-2B
Prepared by:	LWL	5/21/2018	
Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

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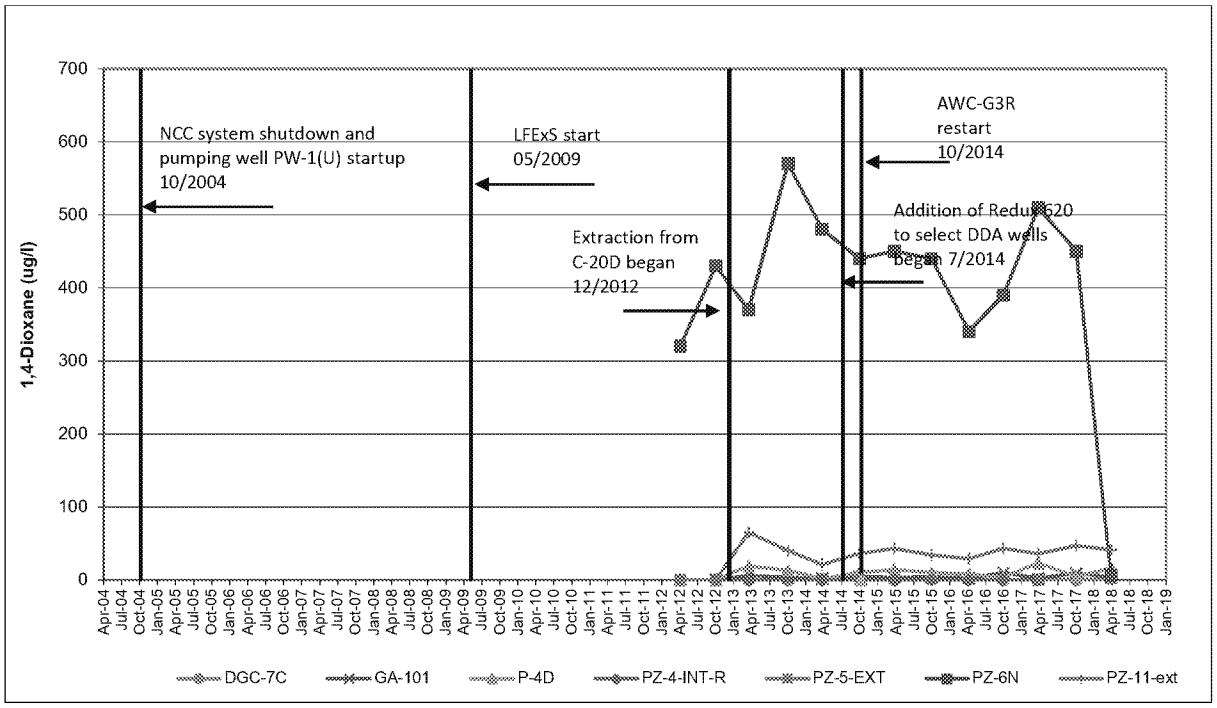

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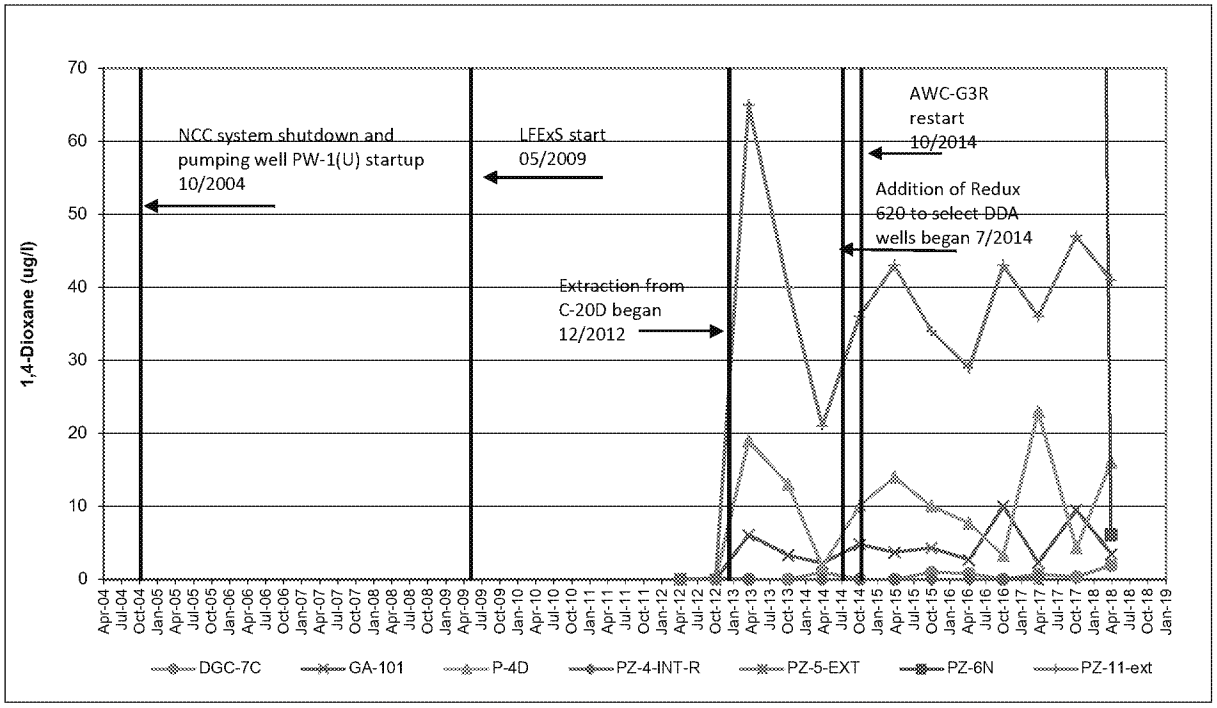

1,4-Dioxane - DDA Monitoring Well Trends

Golder Associates

Project Number:	013-6052		FIGURE F-3B
Prepared by:	LWL	5/21/2018	
Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

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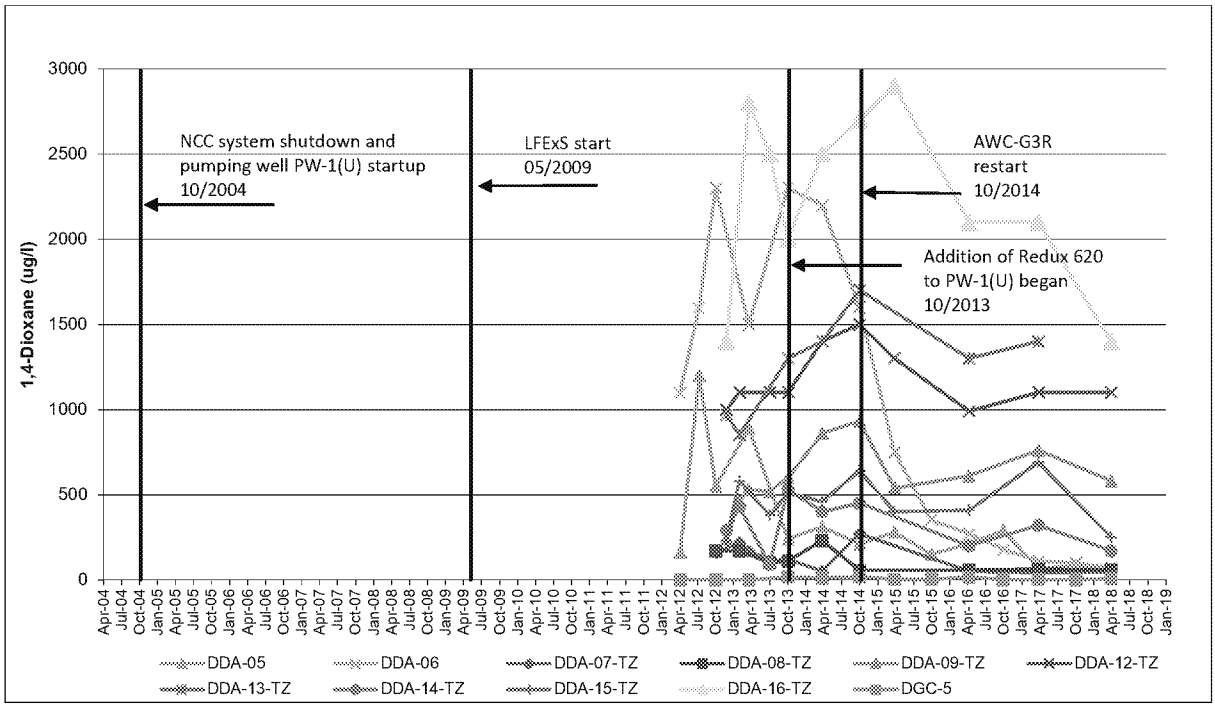

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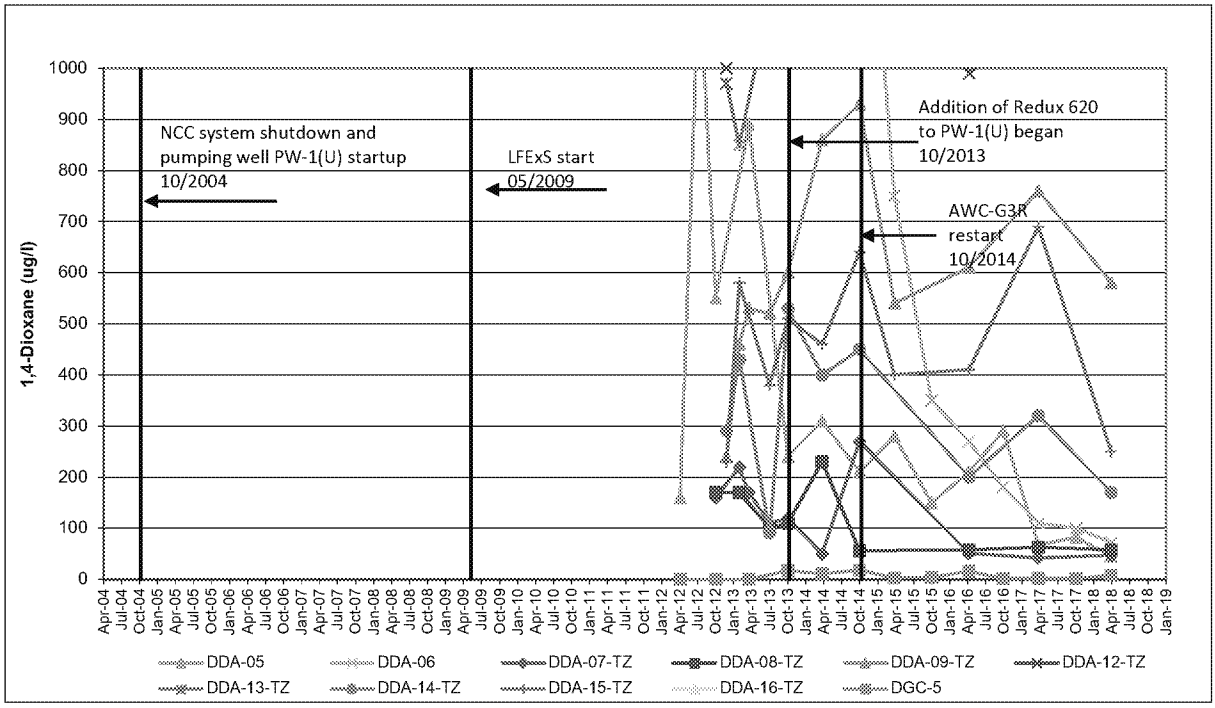

1,4-Dioxane - DDA to Well PW-1(U) UPCU Transition Zone Trends

Golder Associates	Project Number:	013-6052	FIGURE F-4B
	Prepared by:	LWL 5/21/2018	
	Checked by:	BPC 8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM 8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

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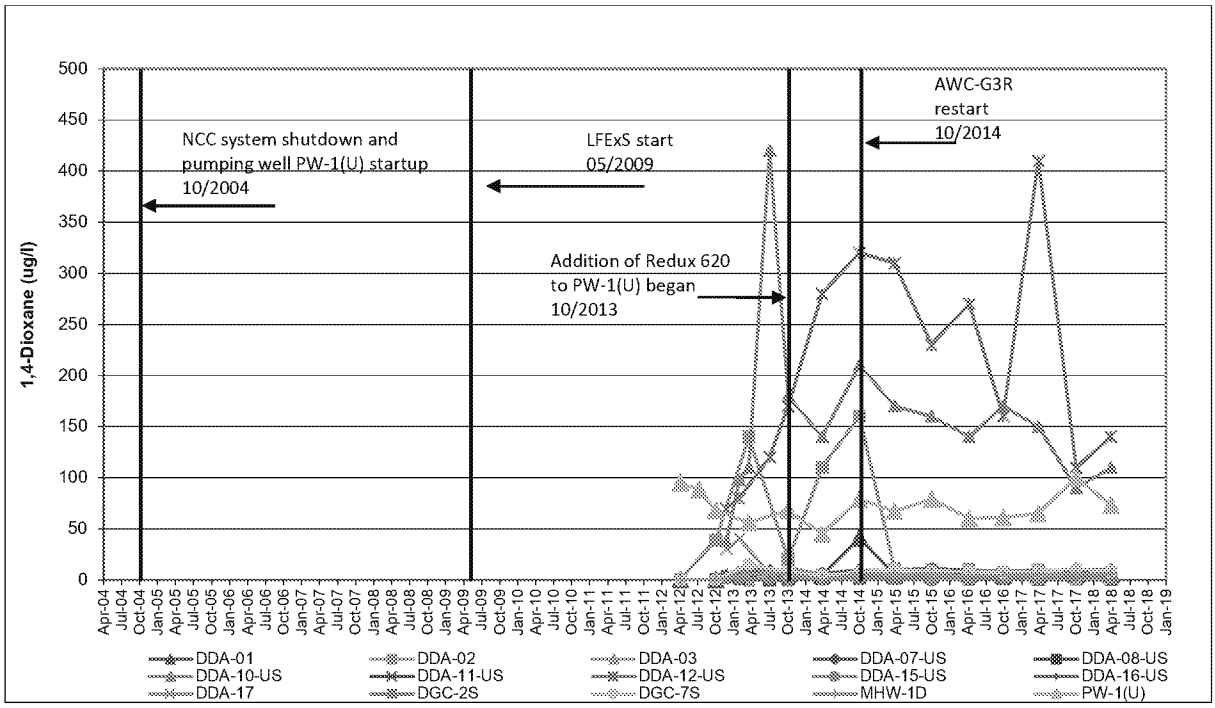

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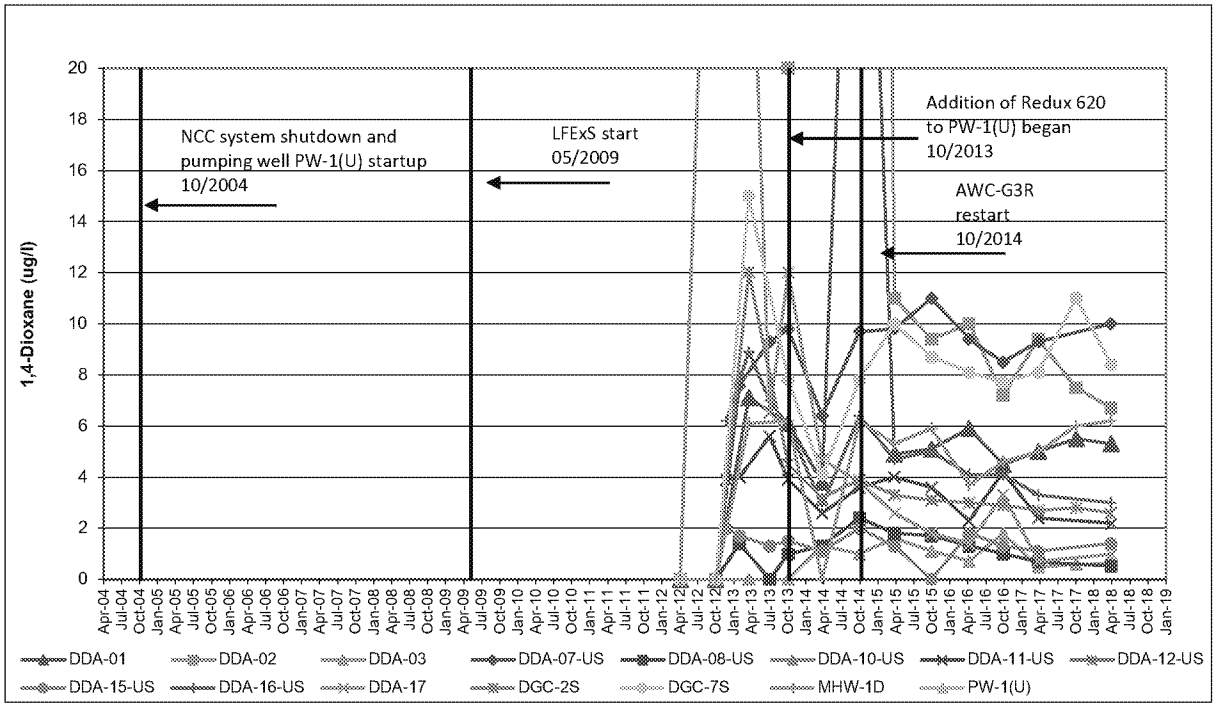

1,4-Dioxane - DDA to Well PW-1(U) UPA Trends

Golder Associates	Project Number:	013-6052	FIGURE F-5B
	Prepared by:	LWL 5/21/2018	
	Checked by:	BPC 8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM 8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

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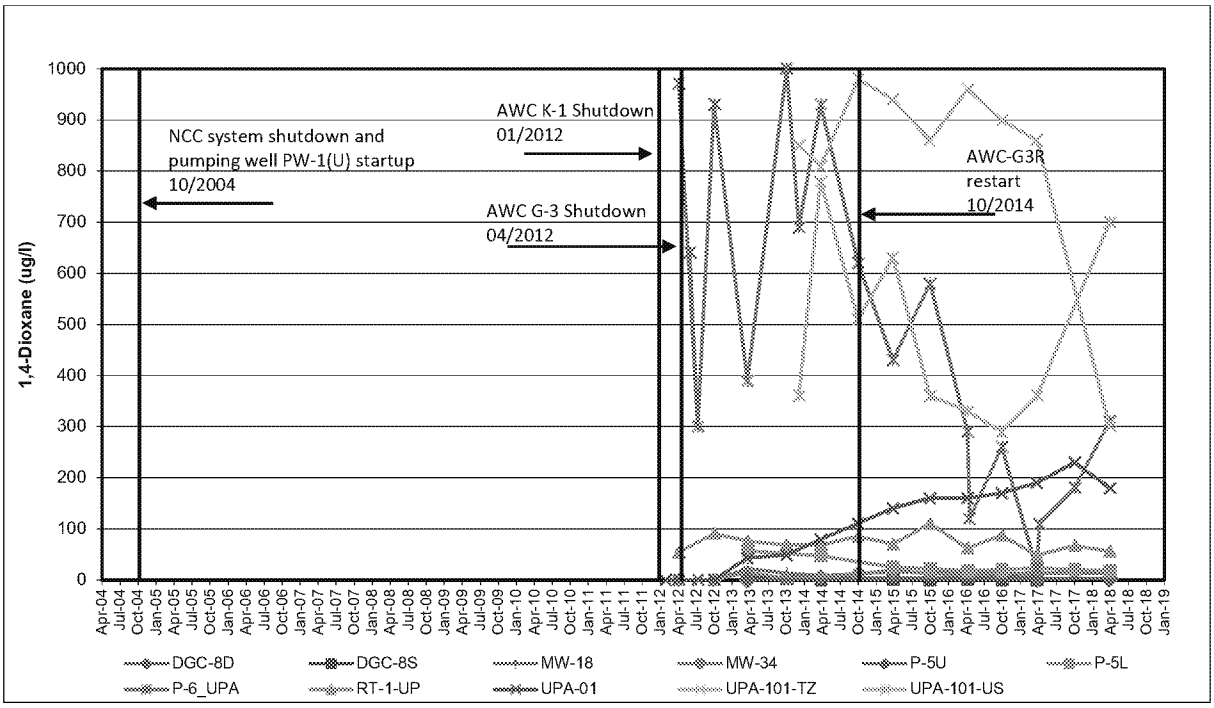

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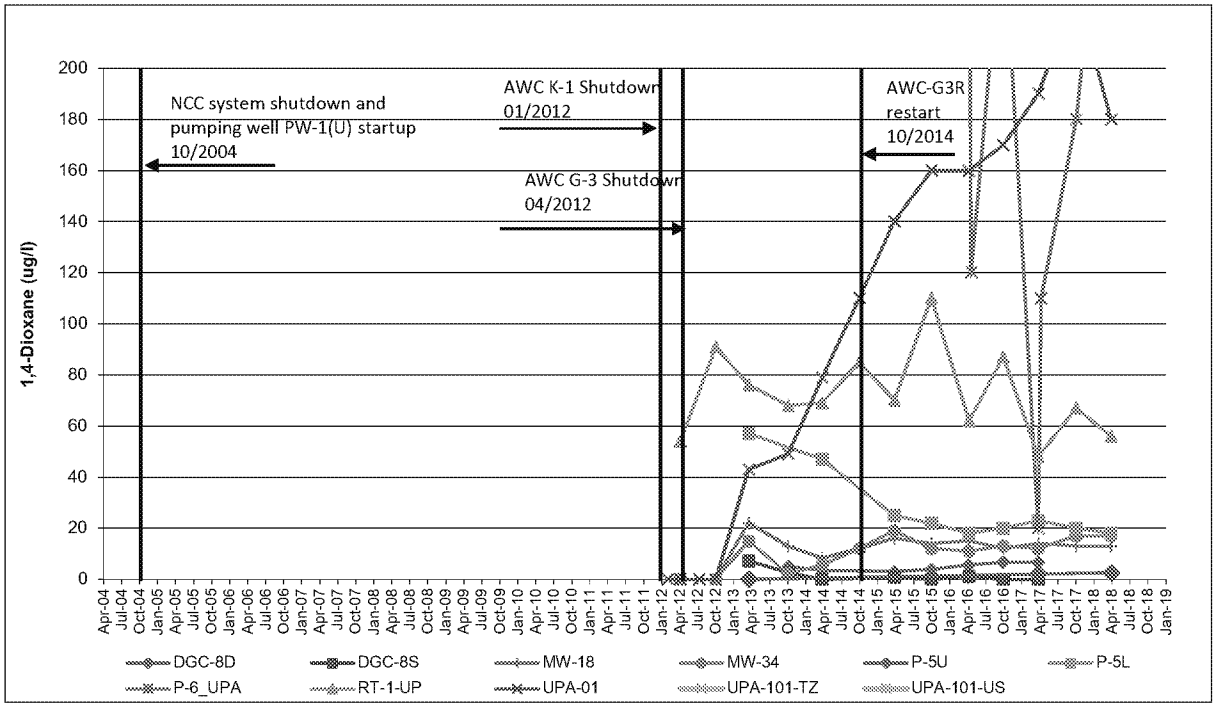

1,4-Dioxane - UPA Downgradient of Well PW-1(U) Trends - Well P-6 Area

Golder Associates

Project Number:	013-6052		FIGURE F-6B
Prepared by:	LWL	5/21/2018	
Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

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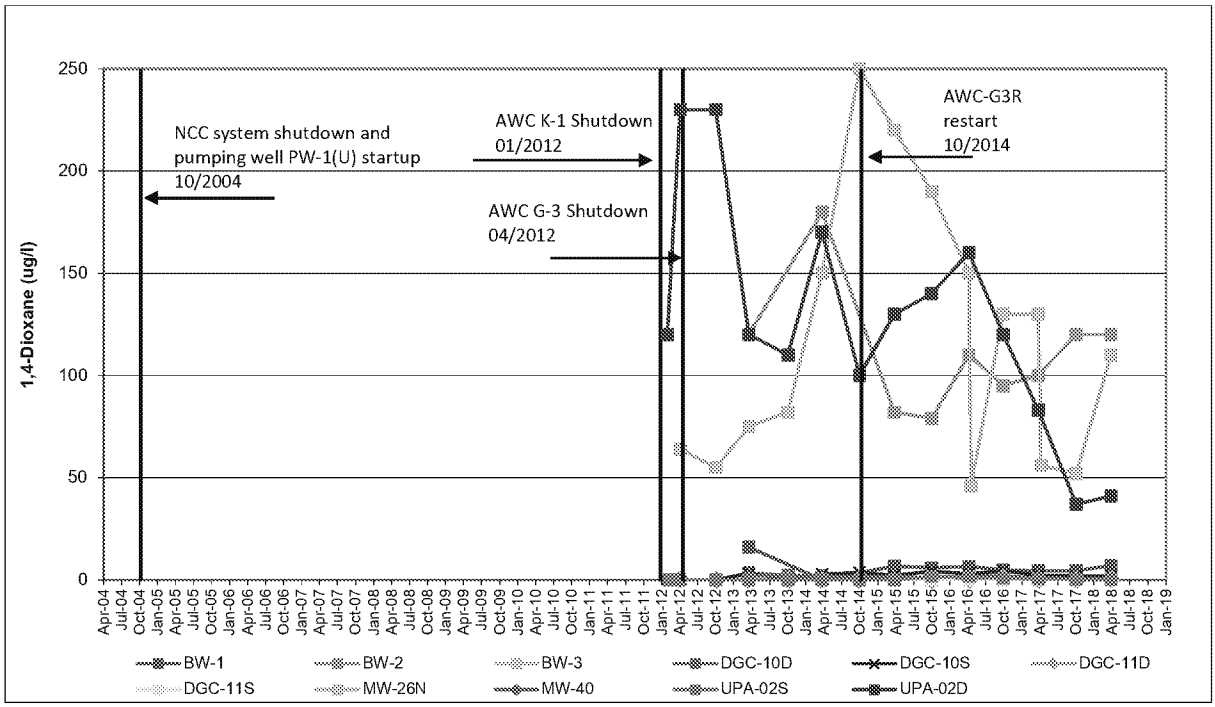

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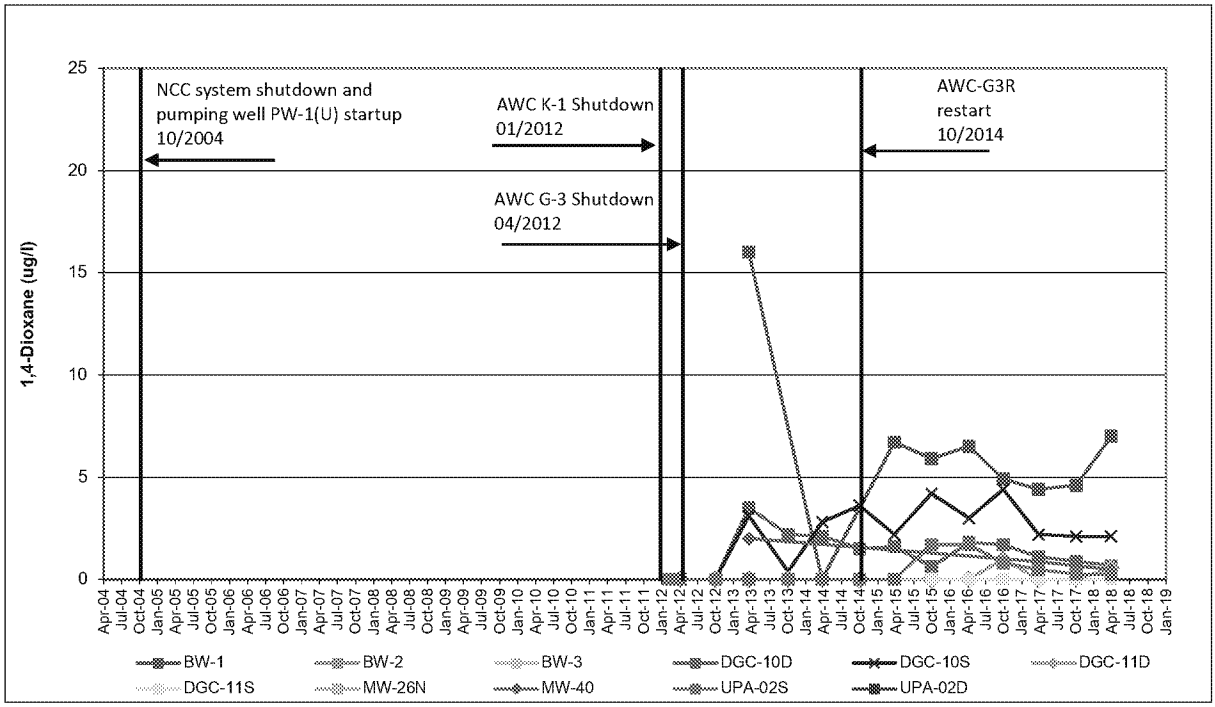

1,4-Dioxane - UPA Downgradient of Well PW-1(U) Trends

Golder Associates	Project Number:	013-6052	FIGURE F-7B
	Prepared by:	LWL 5/21/2018	
	Checked by:	BPC 8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM 8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

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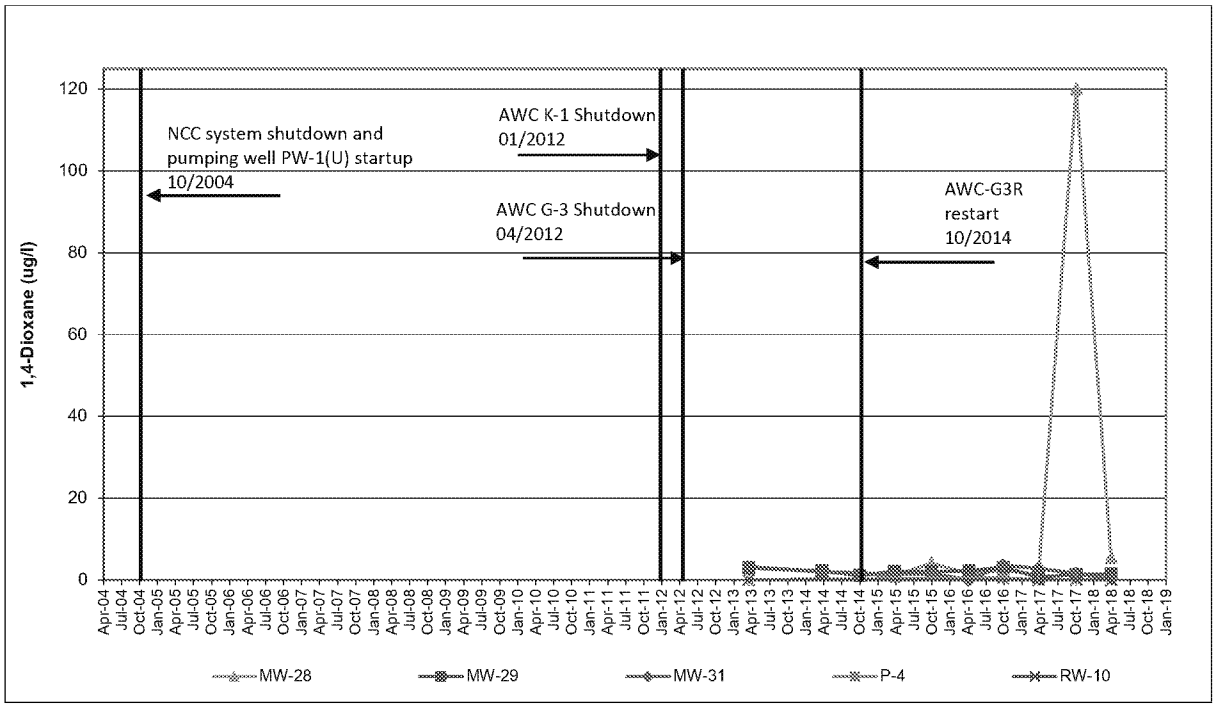

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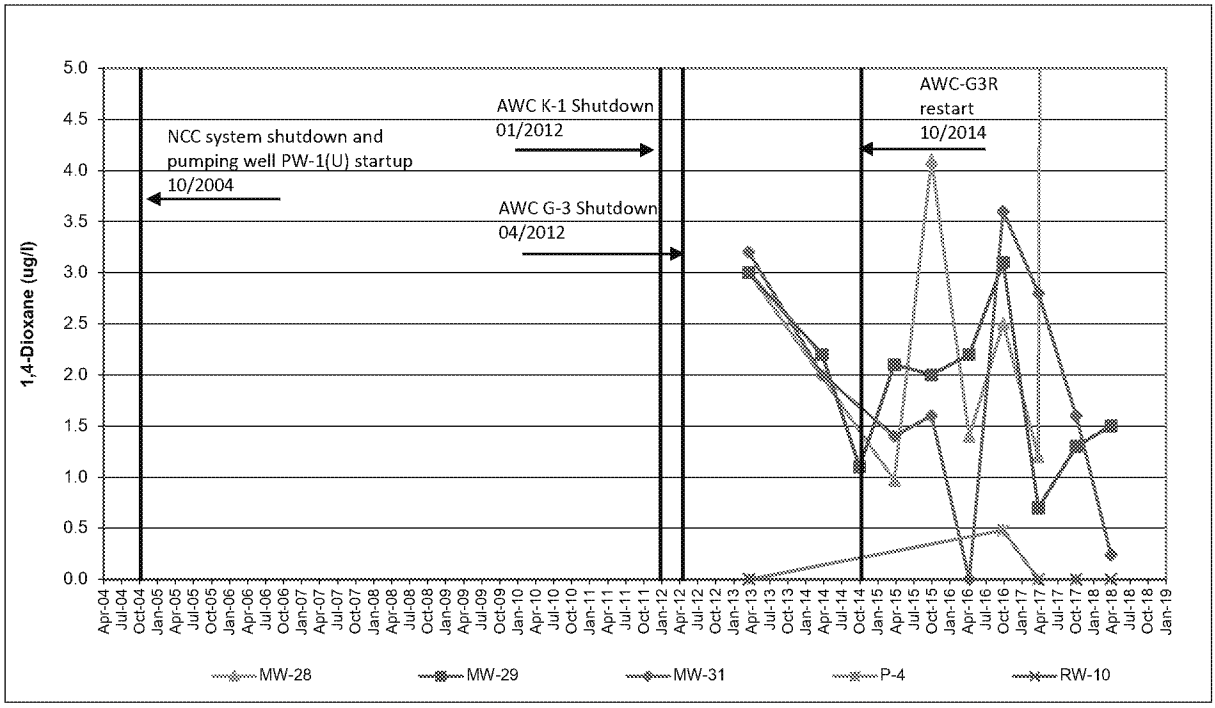
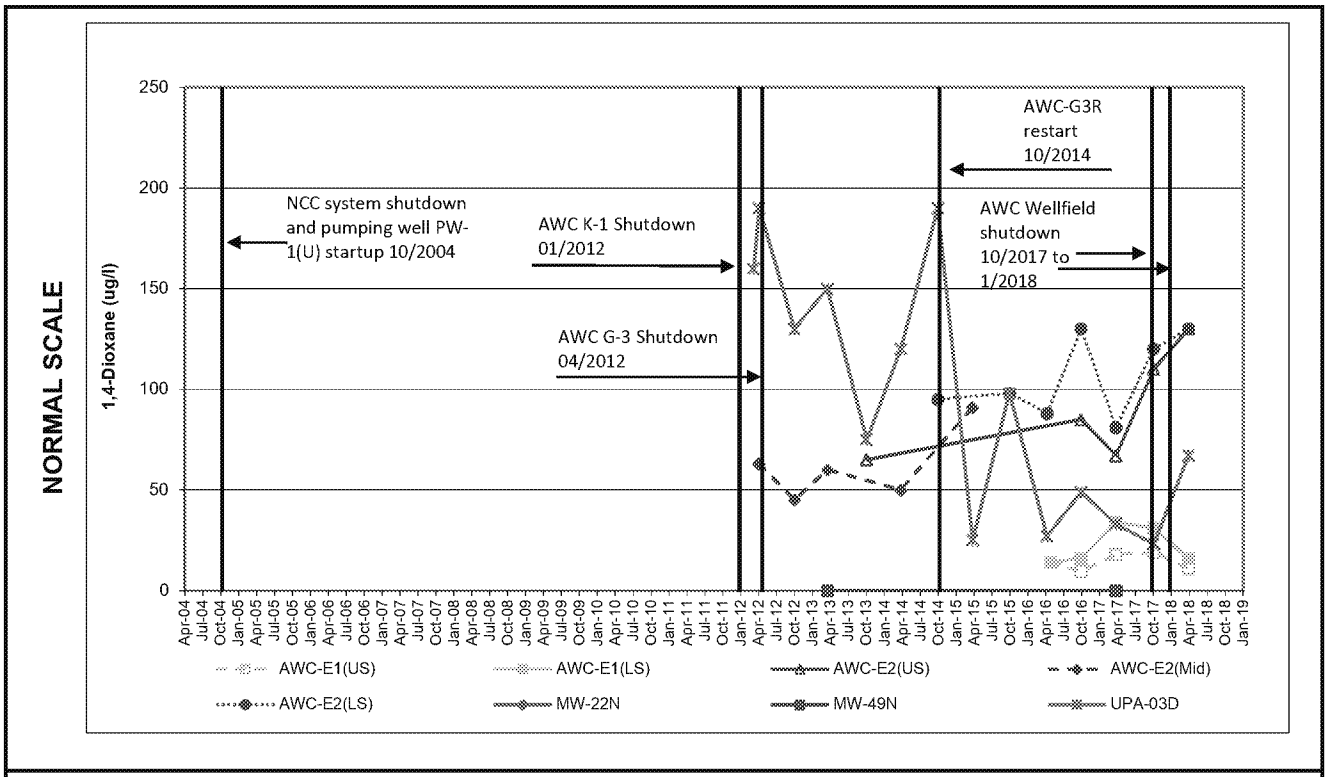
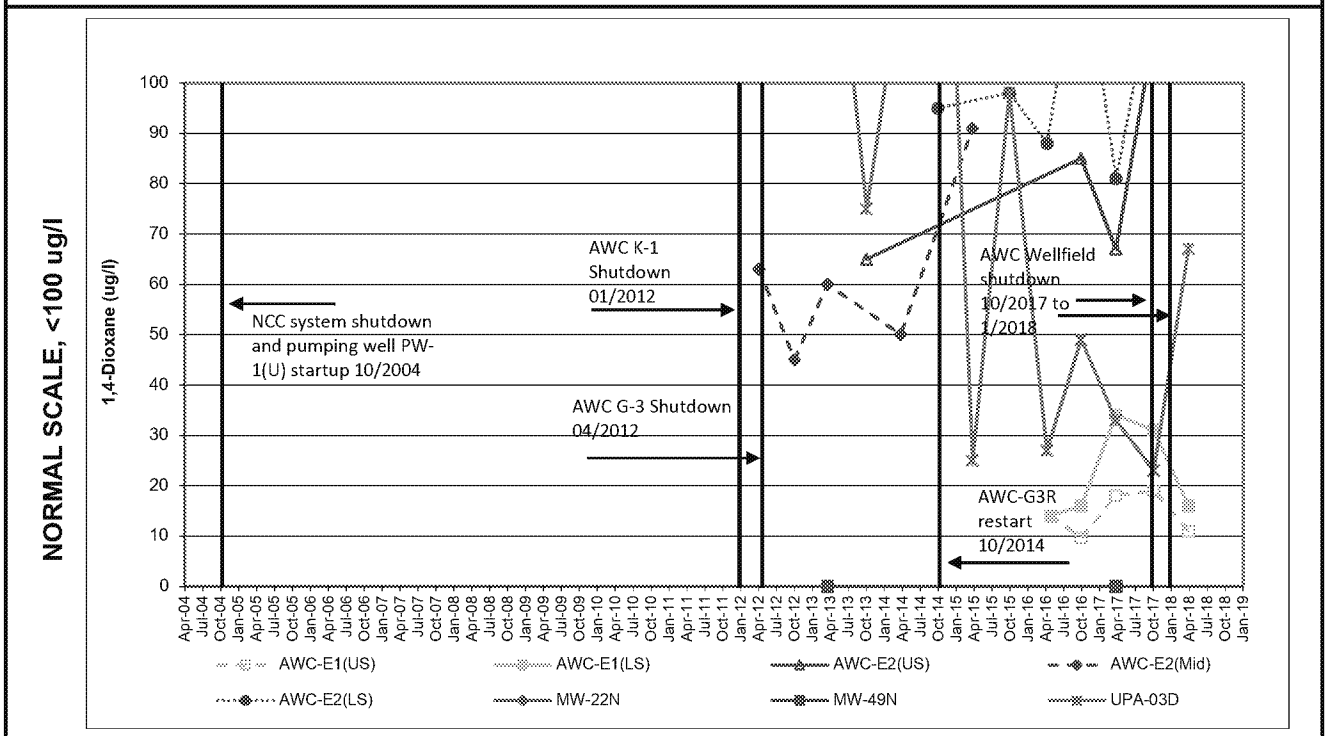


1,4-Dioxane - UPA Downgradient - Western Edge NCC Well Trends

Golder Associates	Project Number:	013-6052	FIGURE F-8B
	Prepared by:	LWL 5/21/2018	
	Checked by:	BPC 8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM 8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx





On May 4 2016, AWC collected a combined sample from the shallow and deep aquifer at AWC-E1 via a 3x purge of the entire screen length.

1,4-Dioxane - UPA Downgradient - Well Trends in Front of AWC Wellfield

Golder Associates	Project Number:	013-6052	FIGURE F-9B
	Prepared by:	LWL 5/21/2018	
	Checked by:	BPC 8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM 8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

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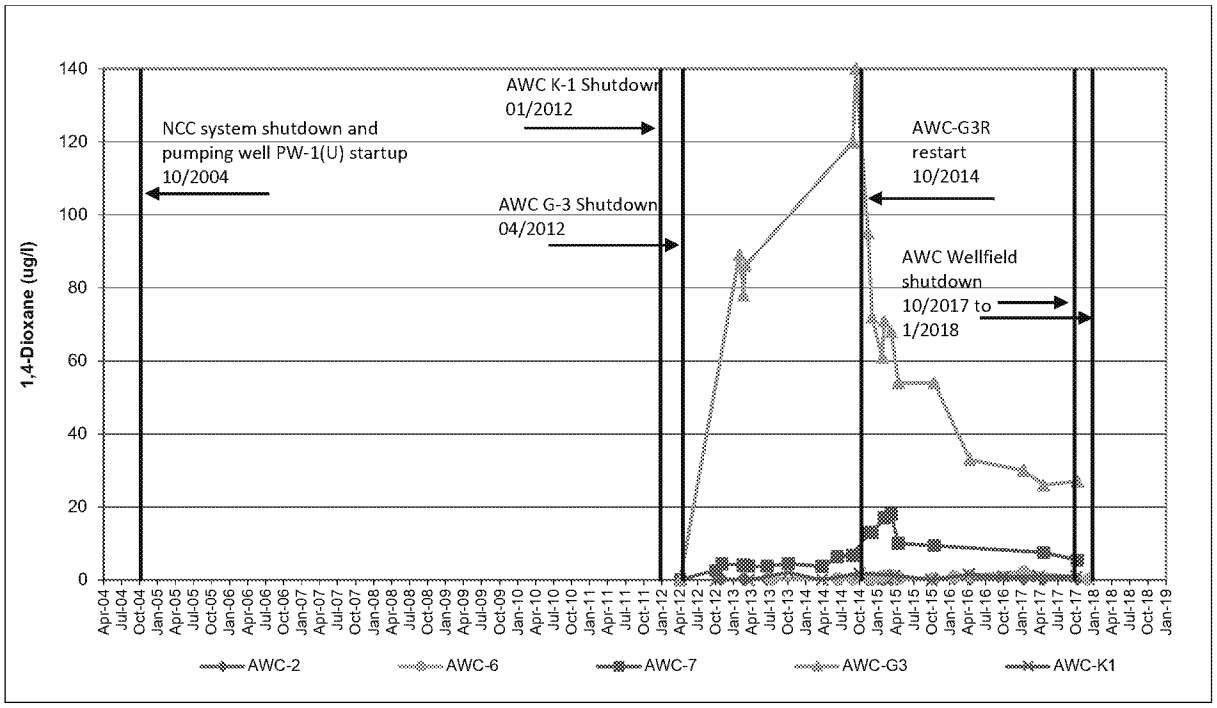

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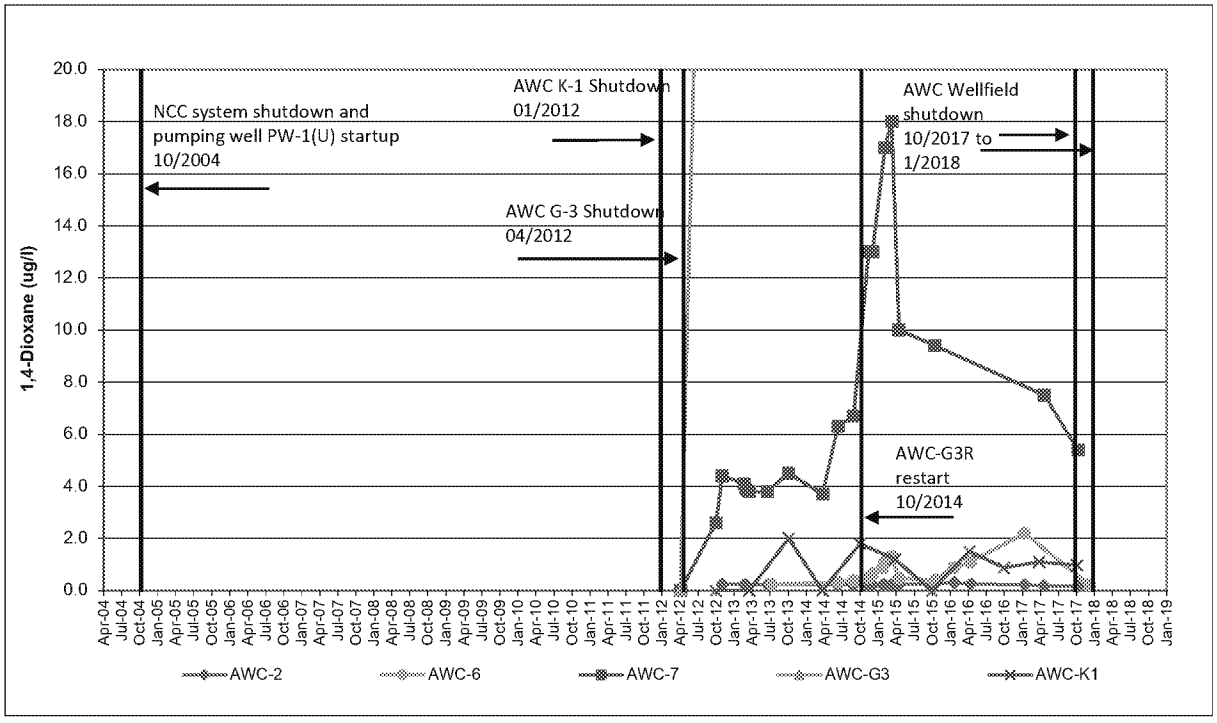

1,4-Dioxane - UPA Downgradient - AWC Well Trends

Golder Associates	Project Number:	013-6052	FIGURE F-10B
	Prepared by:	LWL 5/21/2018	
	Checked by:	BPC 8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM 8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

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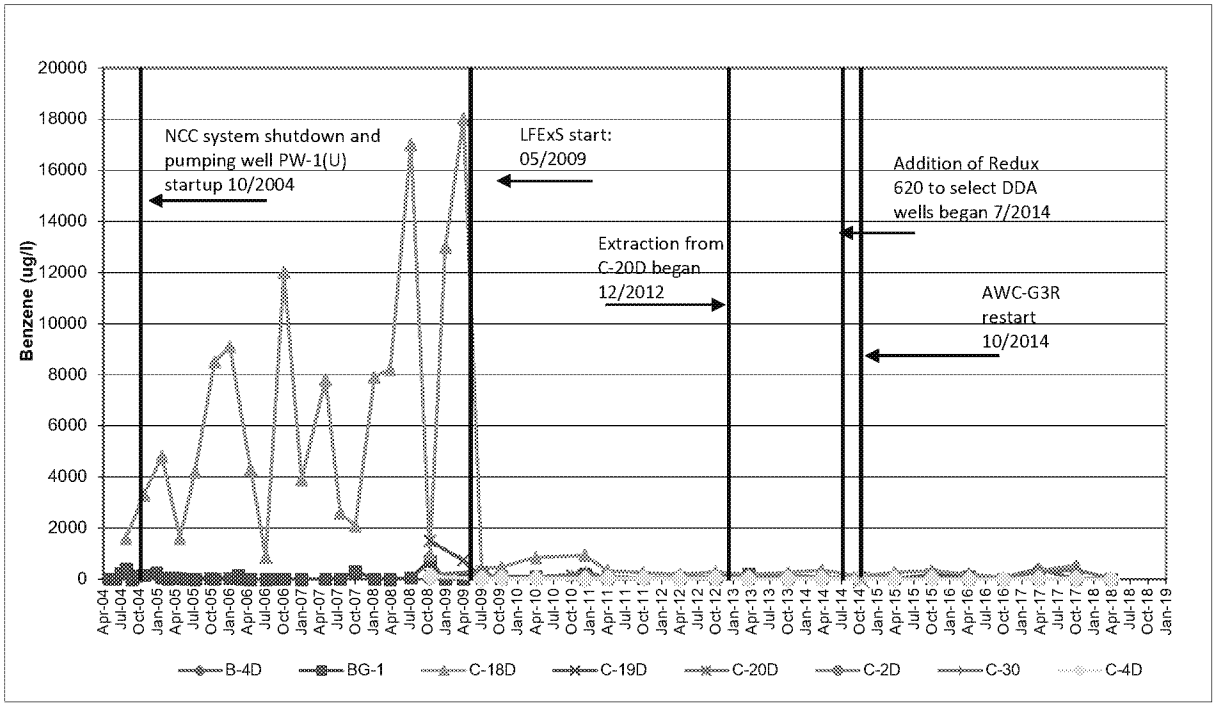

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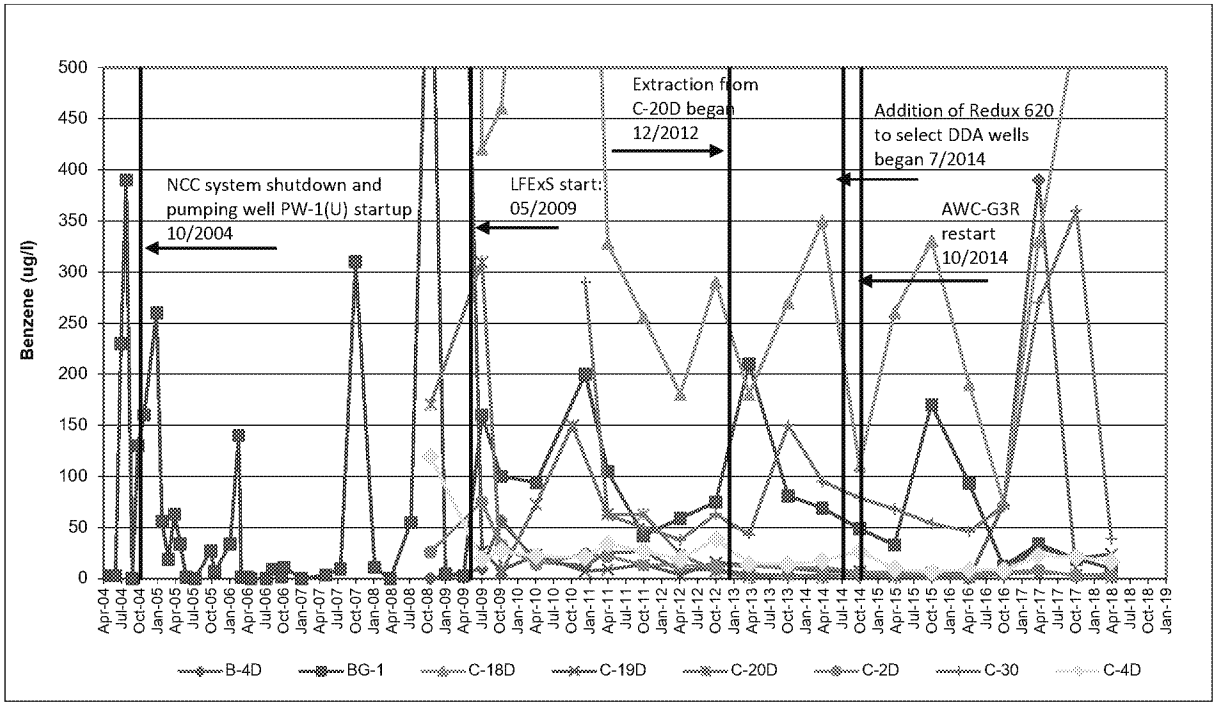

Benzene - DDA Groundwater - LFExS Extraction Well Trends

Golder Associates	Project Number:	013-6052		FIGURE F-1C
	Prepared by:	LWL	5/21/2018	
	Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

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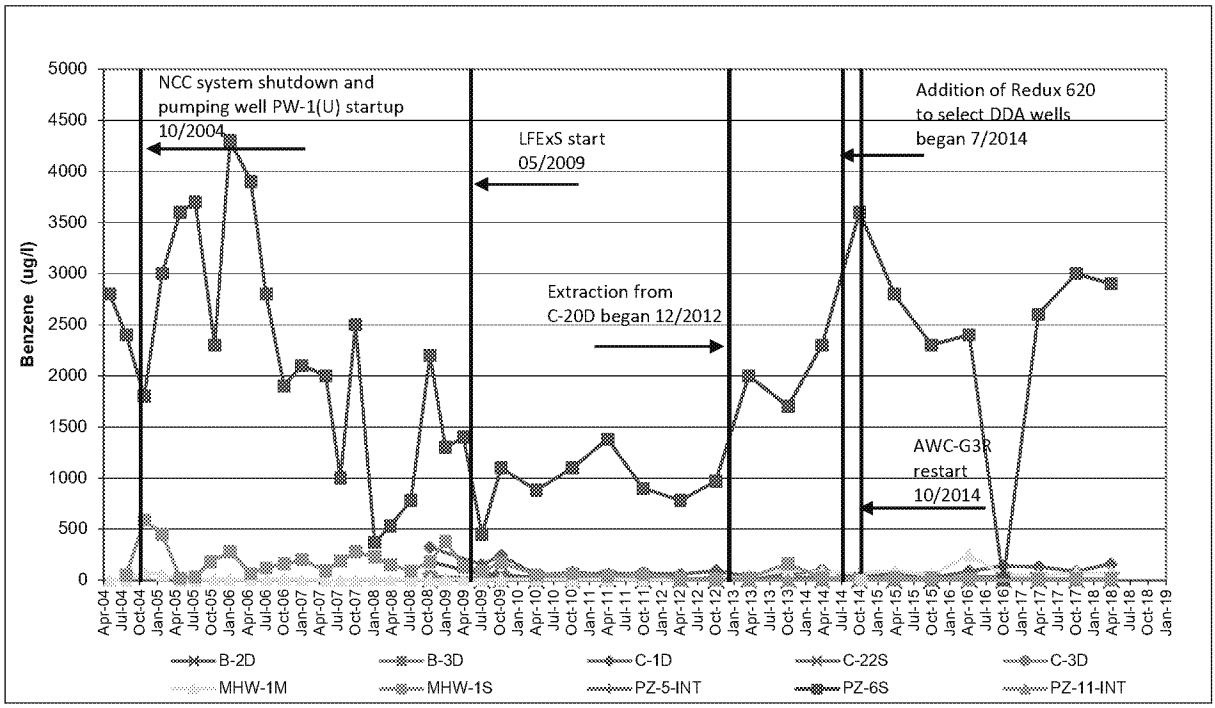

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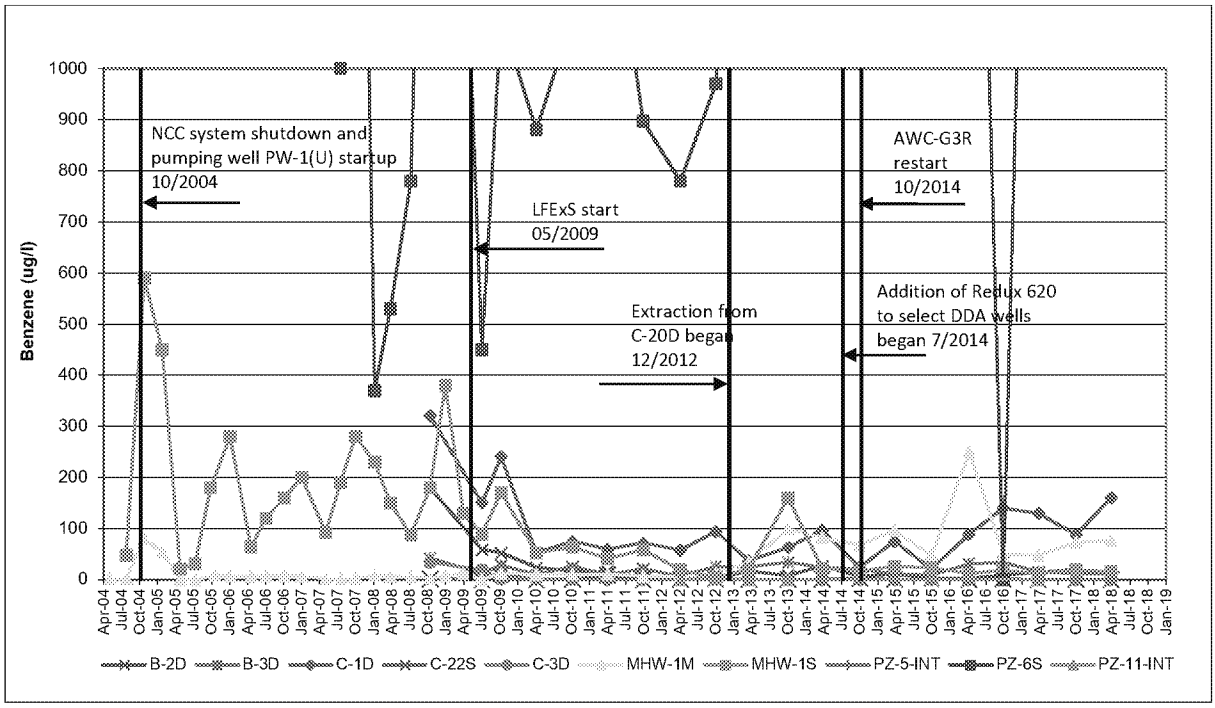

Benzene - DDA Groundwater - LFExS Monitoring Well Trends

Golder Associates

Project Number:	013-6052		FIGURE F-2C
Prepared by:	LWL	5/21/2018	
Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
Reviewed by:	TAM	8/29/2018	

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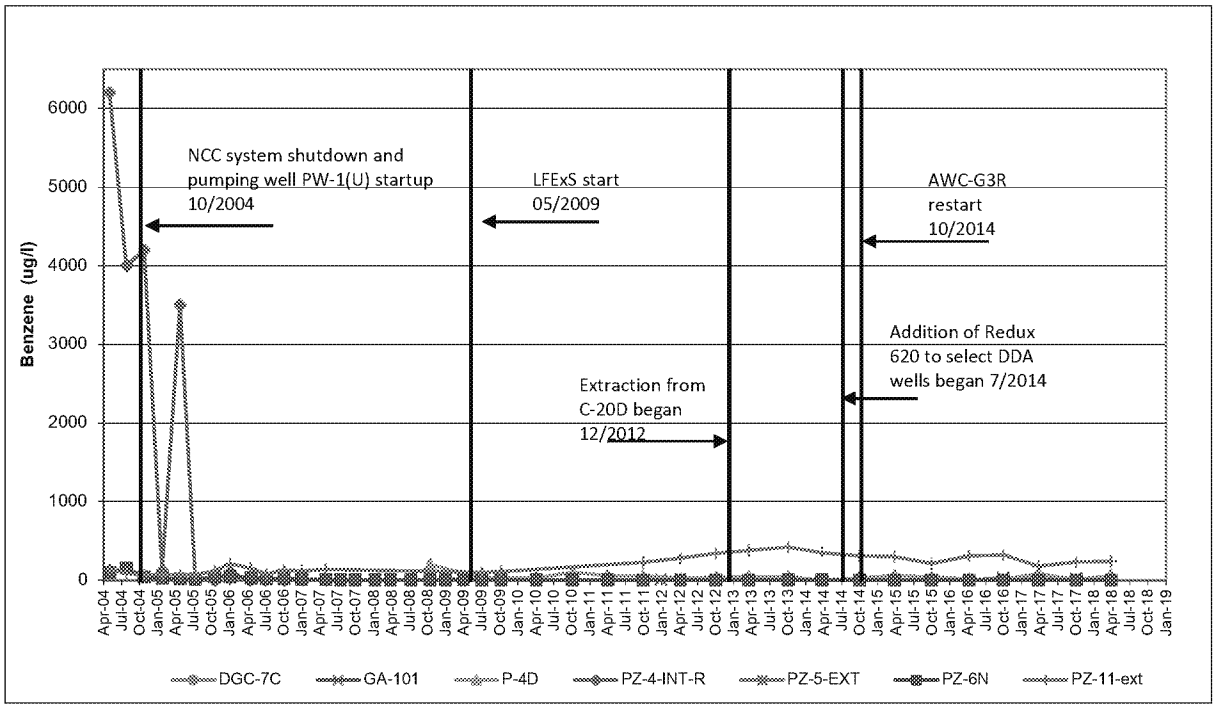

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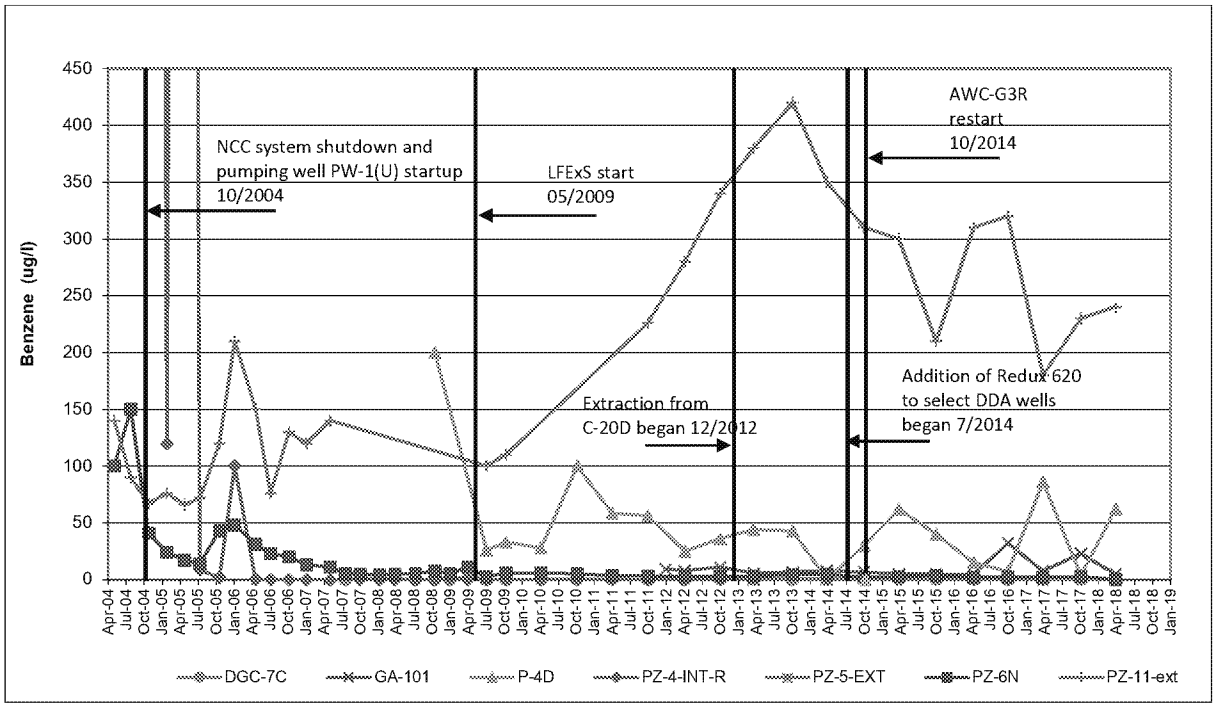

Benzene - DDA Monitoring Well Trends

Golder Associates	Project Number:	013-6052		FIGURE F-3C
	Prepared by:	LWL	5/21/2018	
	Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

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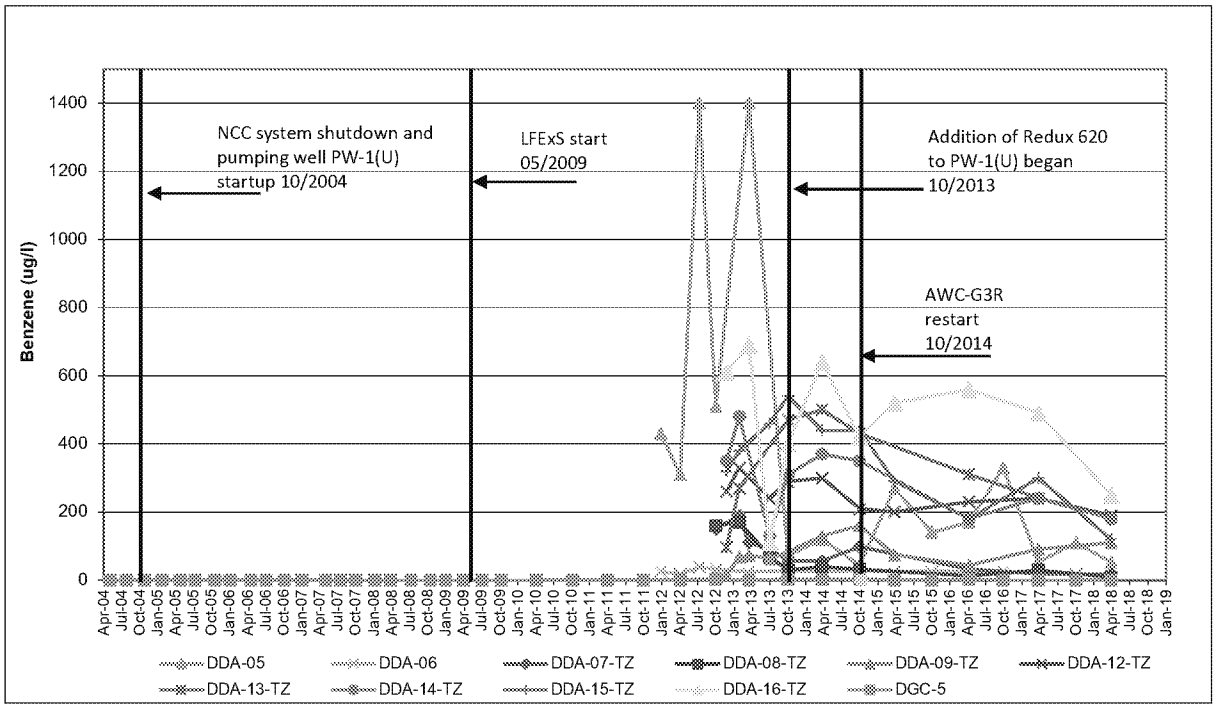

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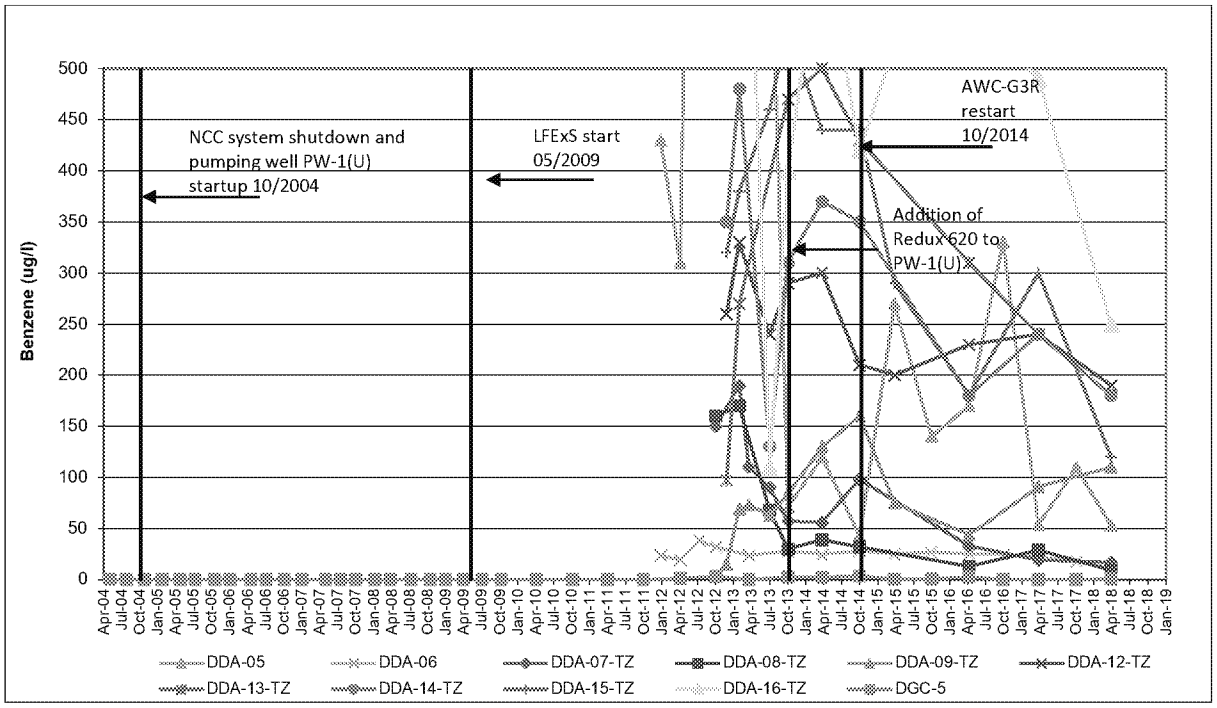

Benzene - DDA to Well PW-1(U) UPCU Transition Zone Trends

Golder Associates	Project Number:	013-6052		FIGURE F-4C
	Prepared by:	LWL	5/21/2018	
	Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

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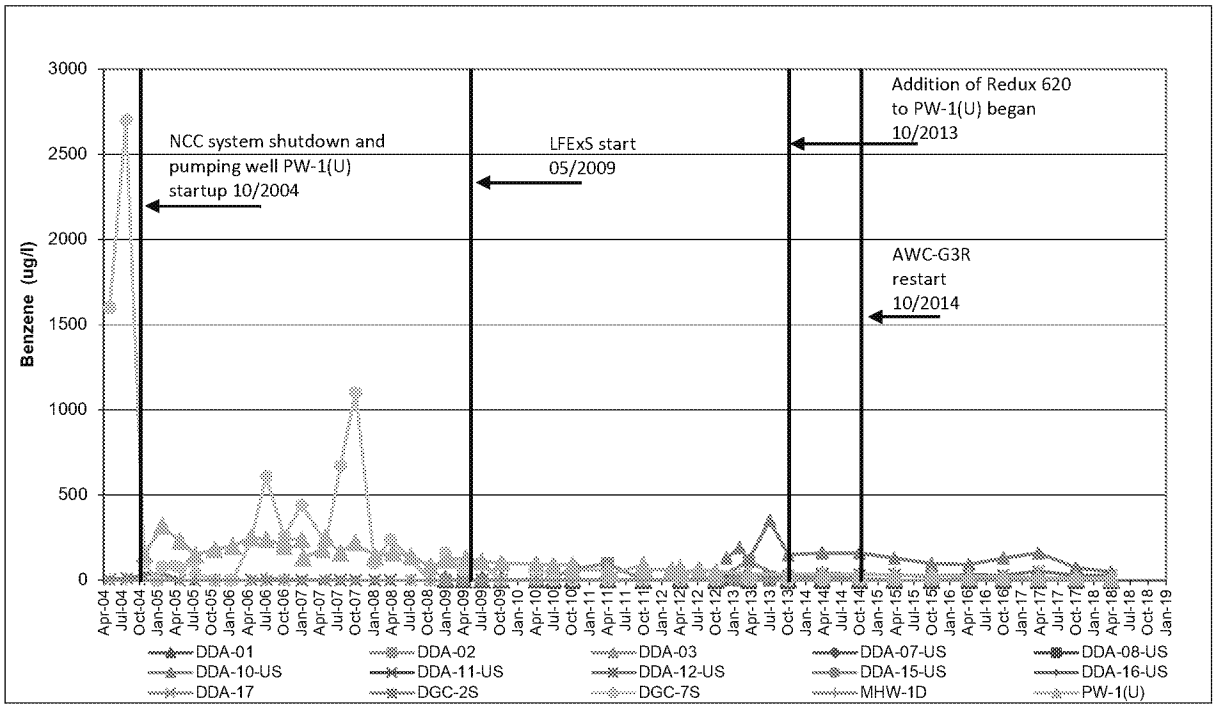

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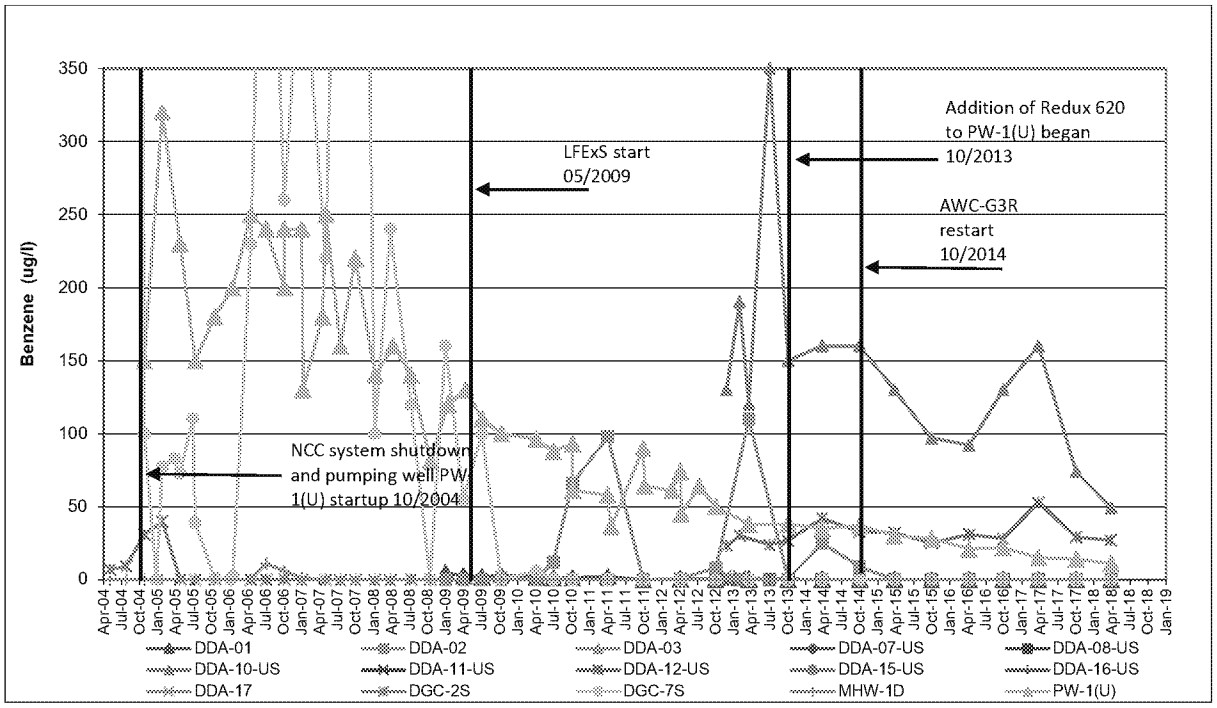

Benzene - DDA to Well PW-1(U) UPA Trends

Golder Associates	Project Number:	013-6052		FIGURE F-5C
	Prepared by:	LWL	5/21/2018	
	Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

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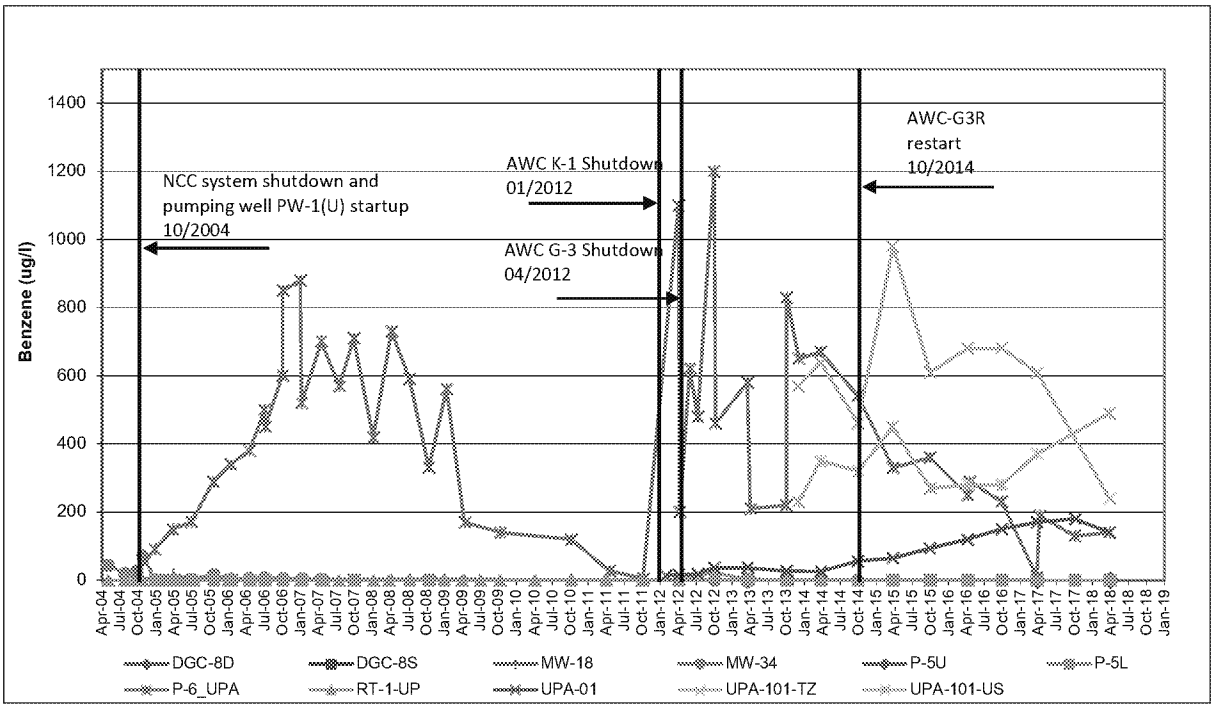

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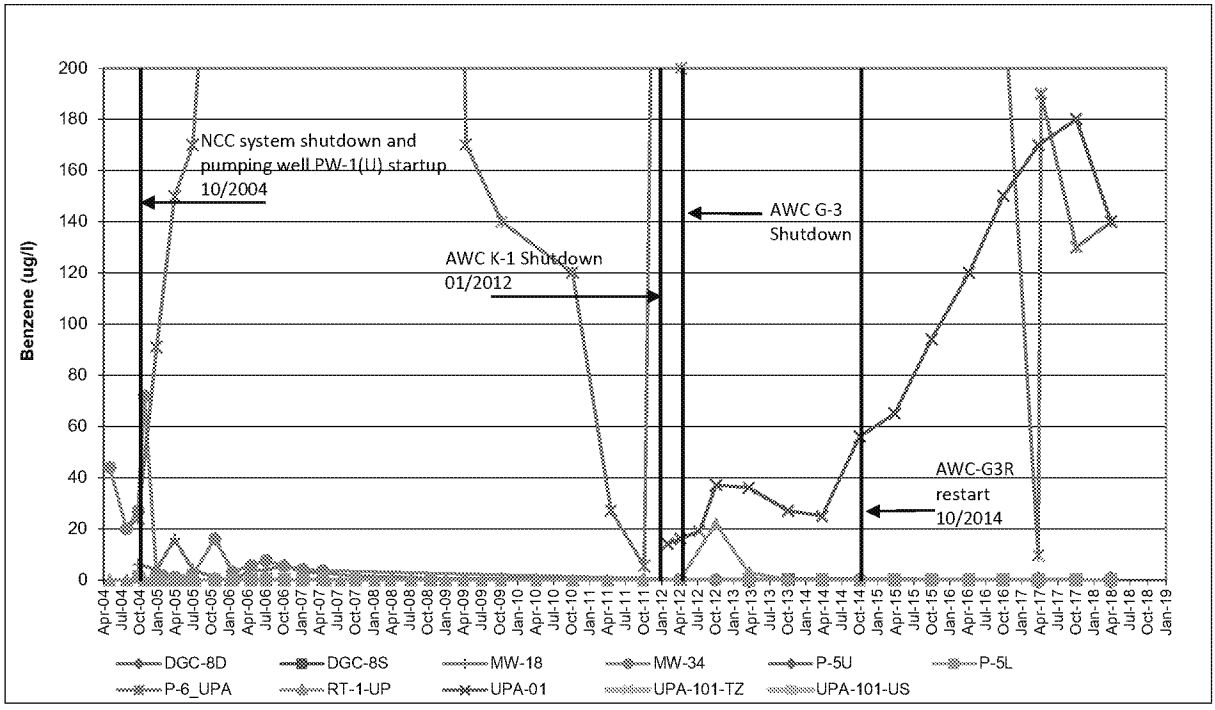

Benzene - UPA Downgradient of Well PW-1(U) Trends - Well P-6 Area

Golder Associates	Project Number:	013-6052		FIGURE F-6C
	Prepared by:	LWL	5/21/2018	
	Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

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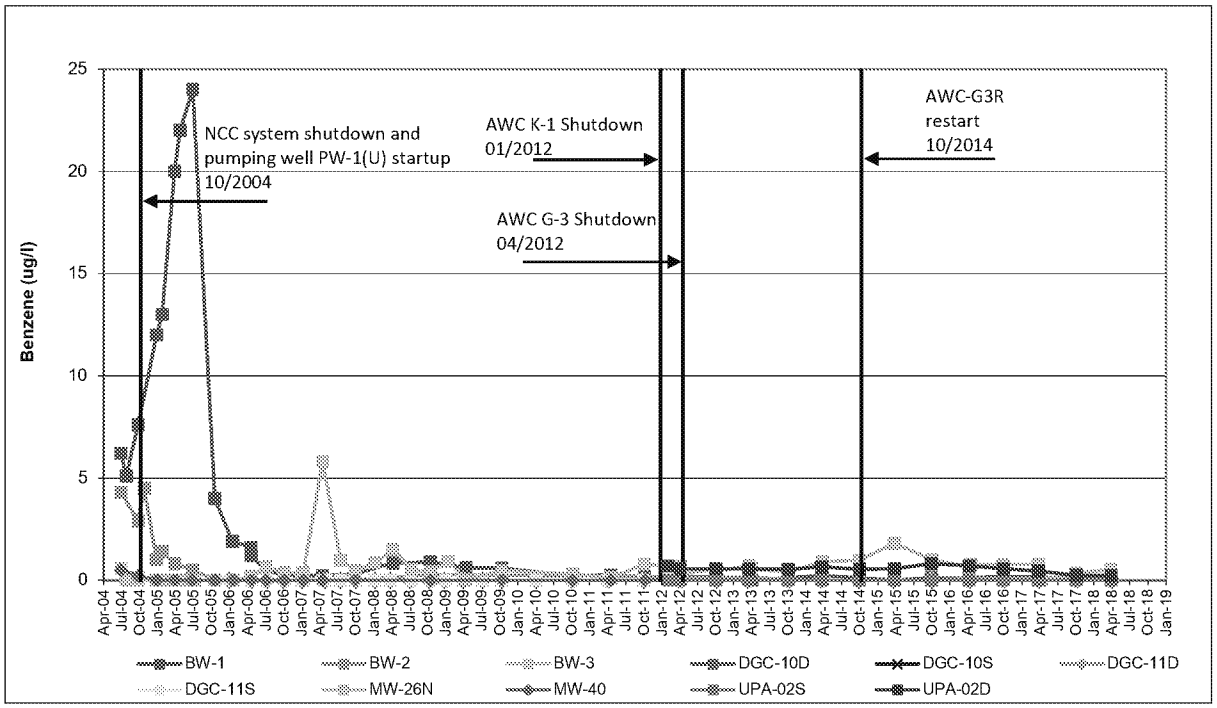

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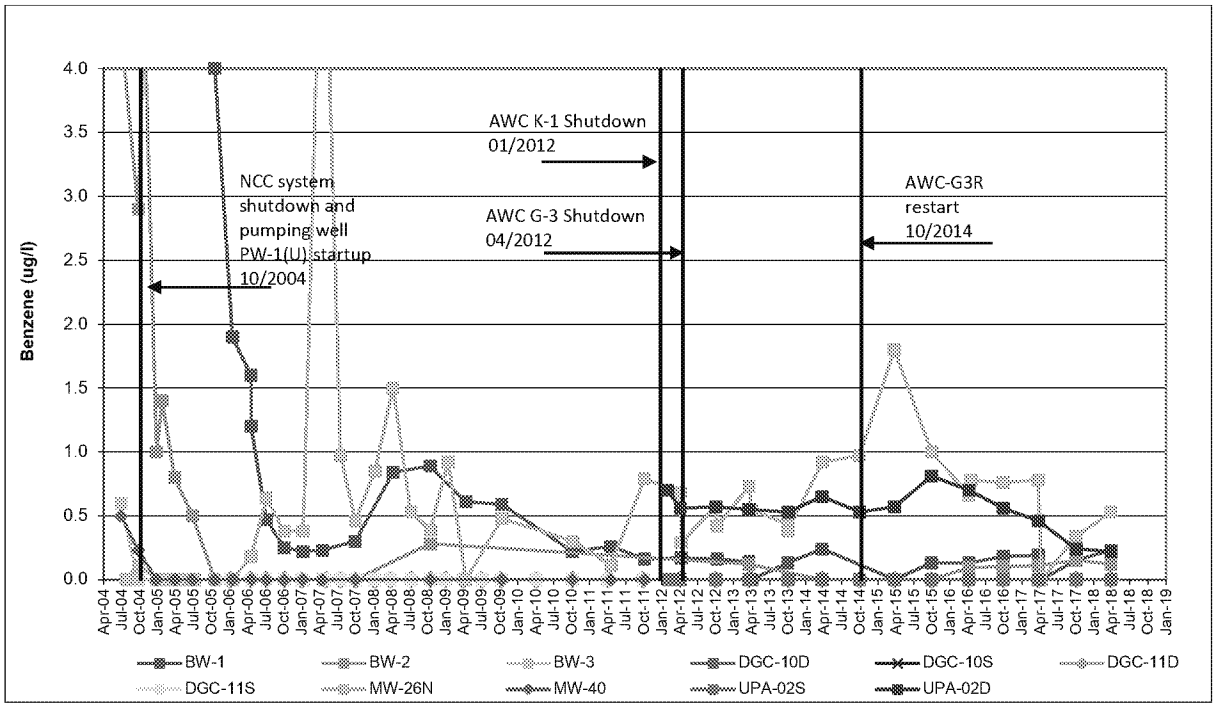

Benzene - UPA Downgradient of Well PW-1(U) Trends

Golder Associates	Project Number:	013-6052	FIGURE F-7C
	Prepared by:	LWL 5/21/2018	
	Checked by:	BPC 8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM 8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

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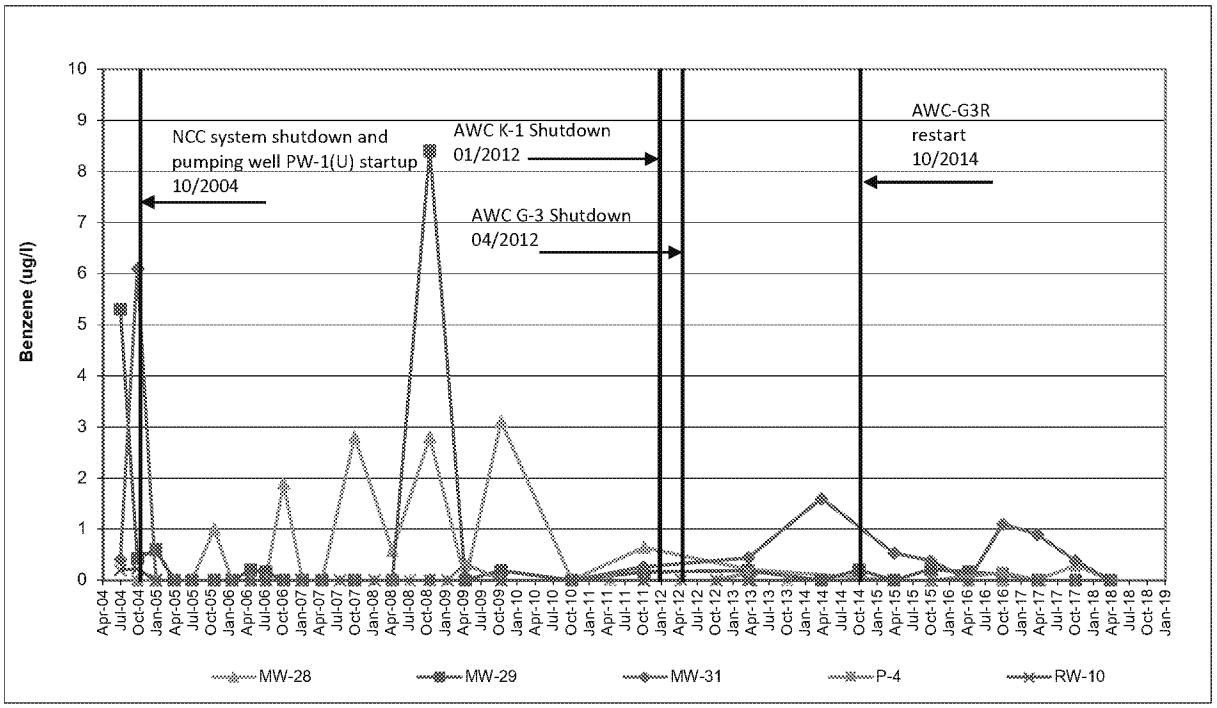

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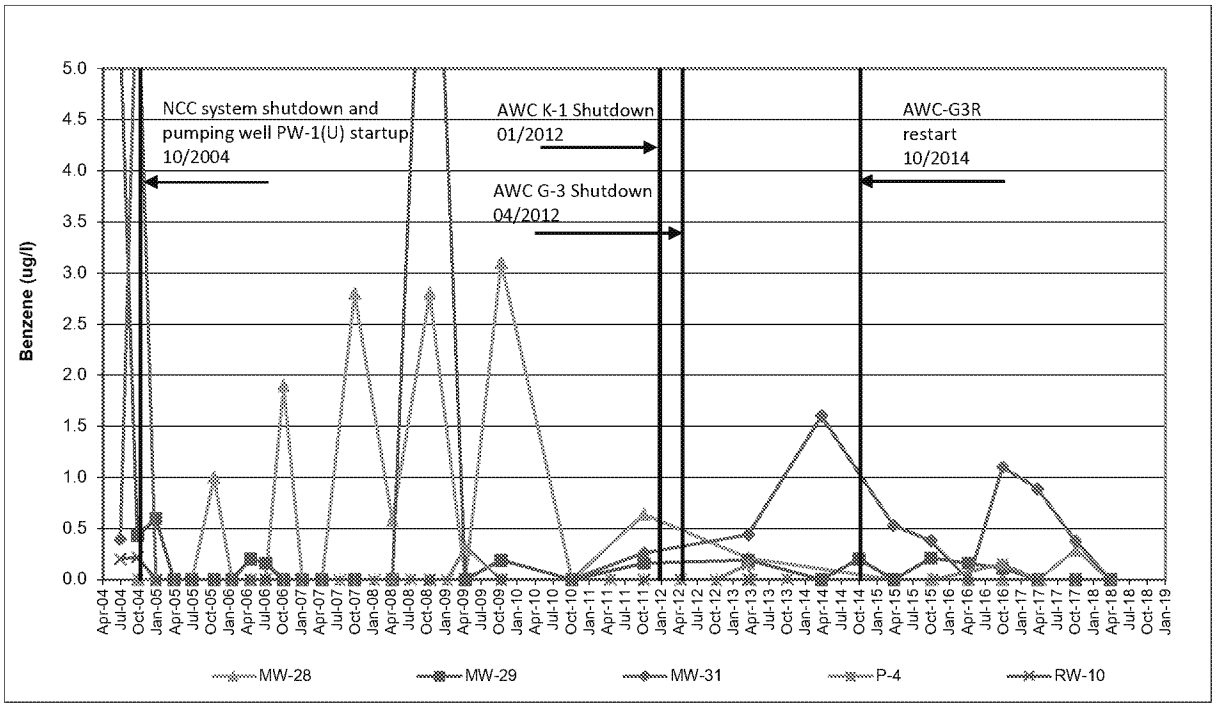

Benzene - UPA Downgradient - Western Edge NCC Well Trends

Golder Associates	Project Number:	013-6052	FIGURE F-8C
	Prepared by:	LWL 5/21/2018	
	Checked by:	BPC 8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM 8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

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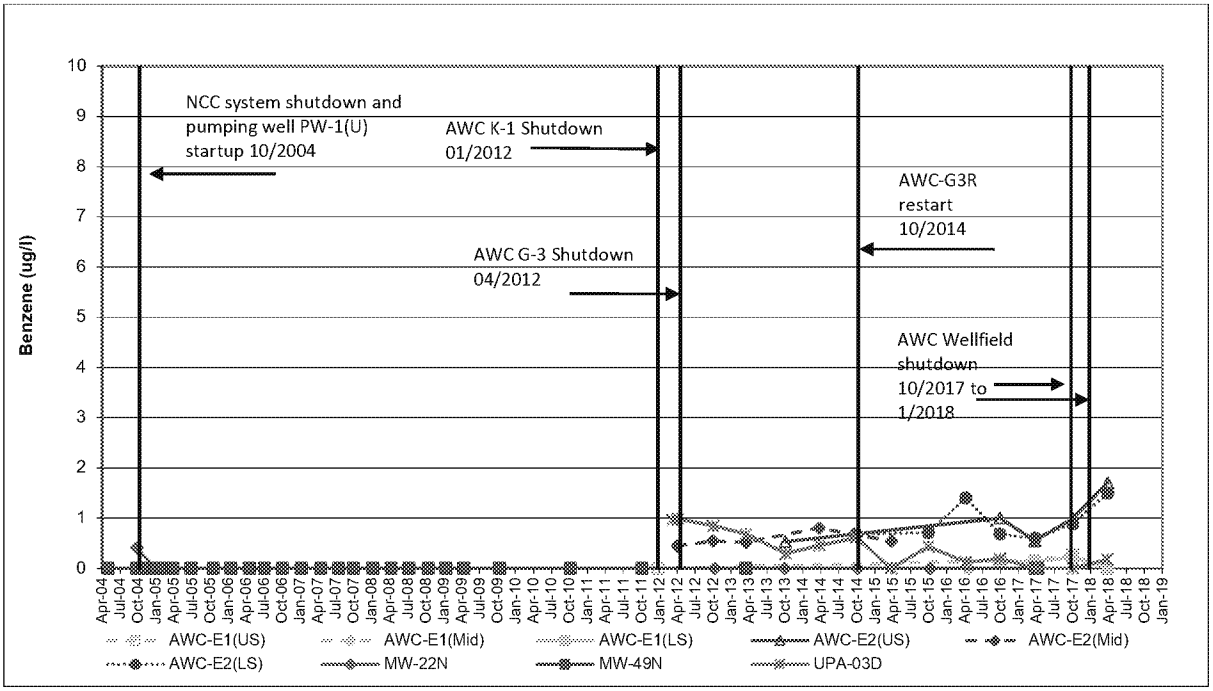
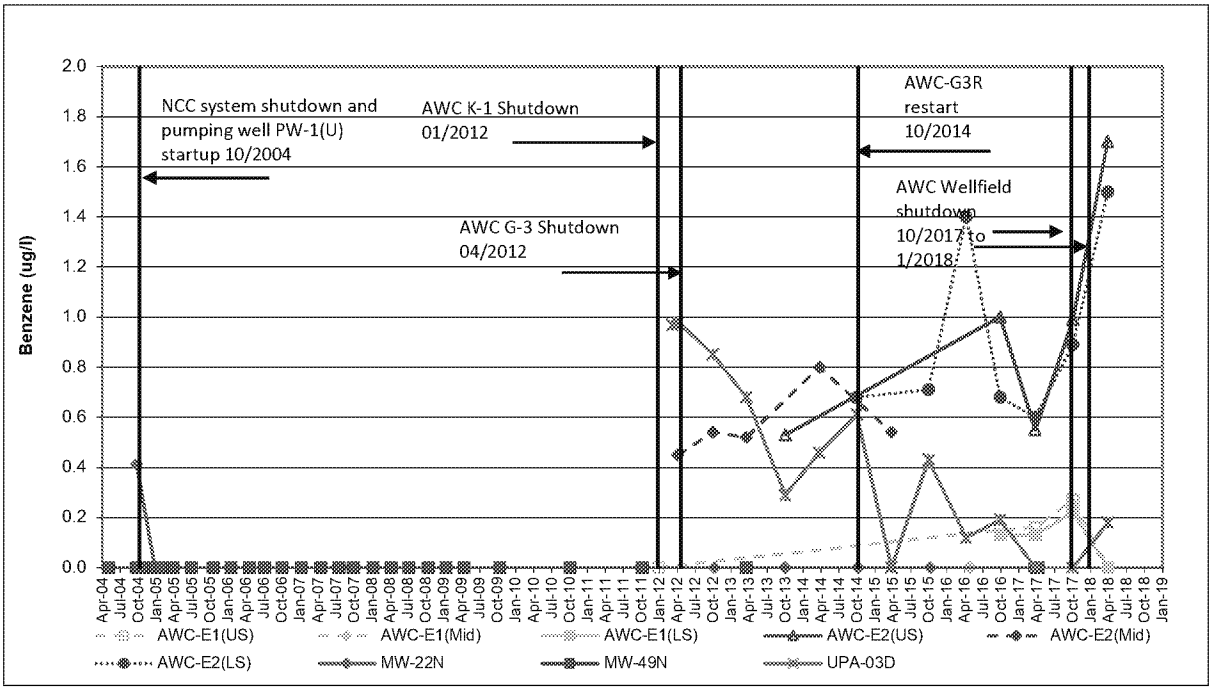


NORMAL SCALE, <5 ug/l



On May 4 2016, AWC collected a combined sample from the shallow and deep aquifer at AWC-E1 via a 3x purge of the entire screen length.

Benzene - UPA Downgradient - Well Trends in Front of AWC Wellfield

Golder Associates	Project Number:	013-6052		FIGURE F-9C
	Prepared by:	LWL	5/21/2018	
	Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

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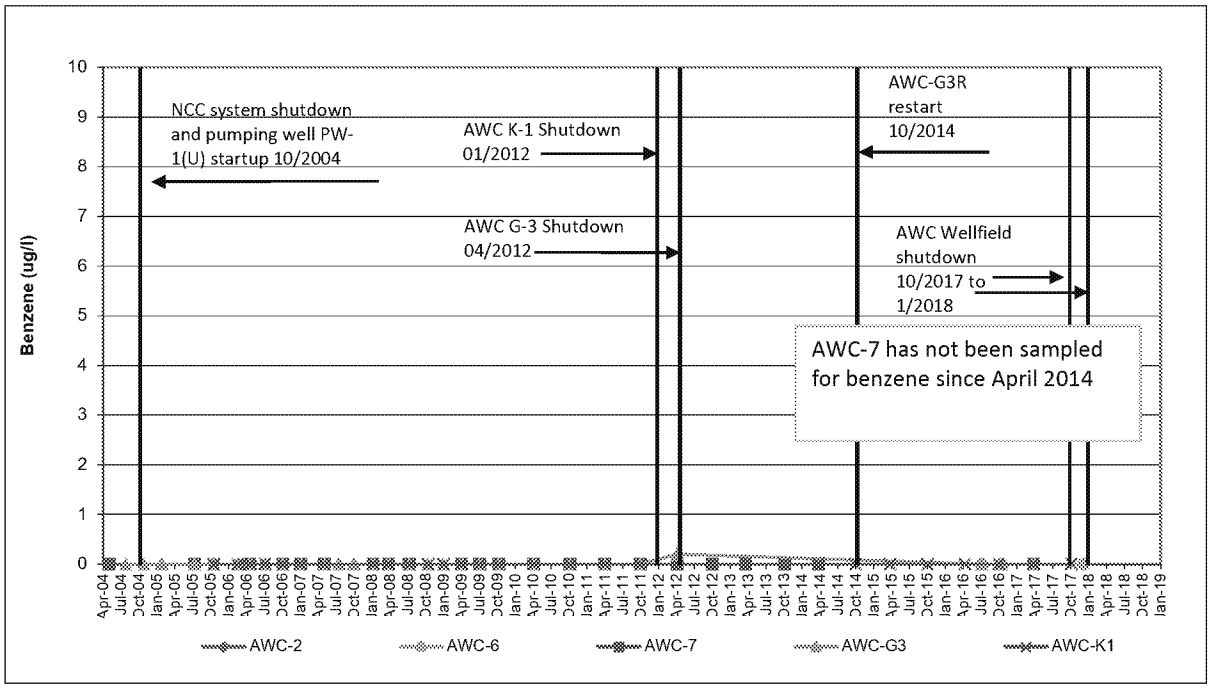

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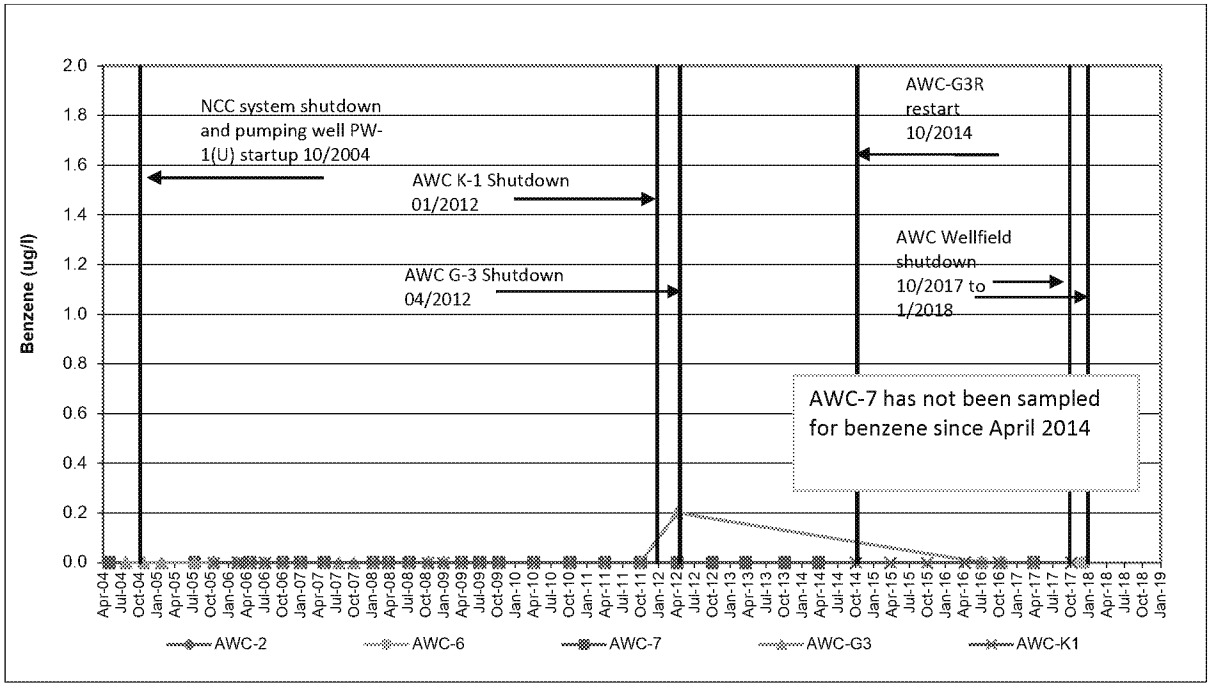

Benzene - UPA Downgradient - AWC Well Trends

Golder Associates	Project Number:	013-6052	FIGURE F-10C
	Prepared by:	LWL 5/21/2018	
	Checked by:	BPC 8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM 8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

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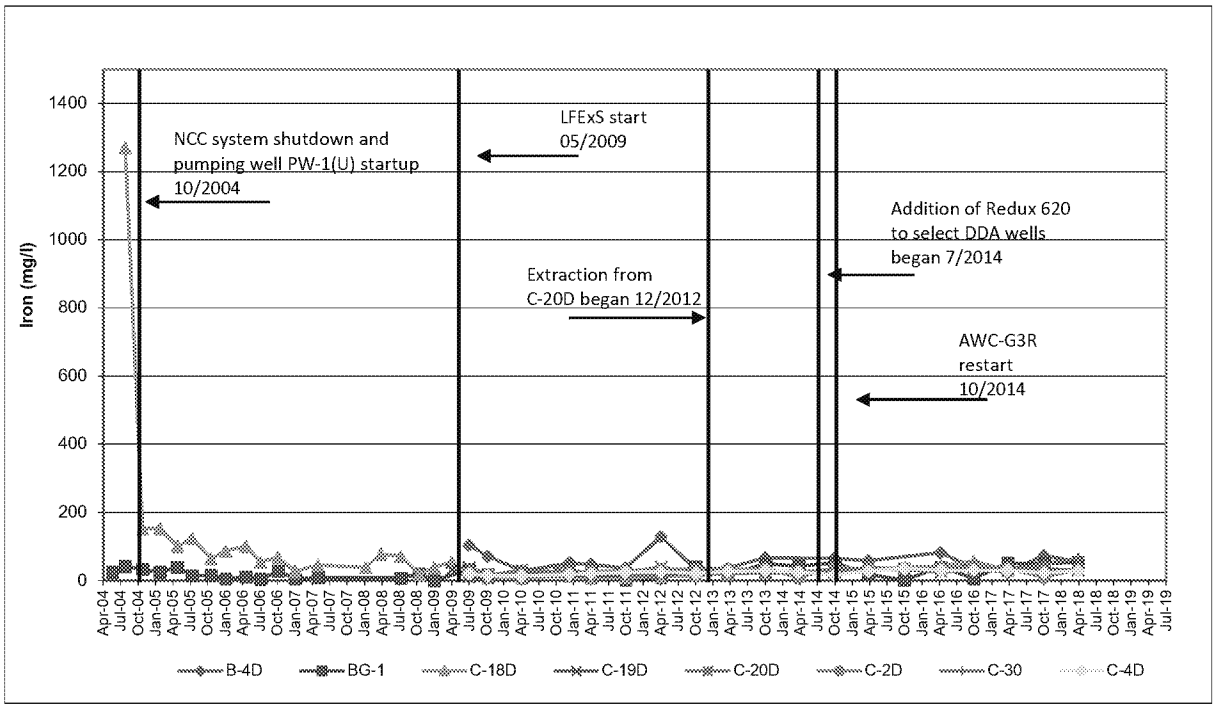
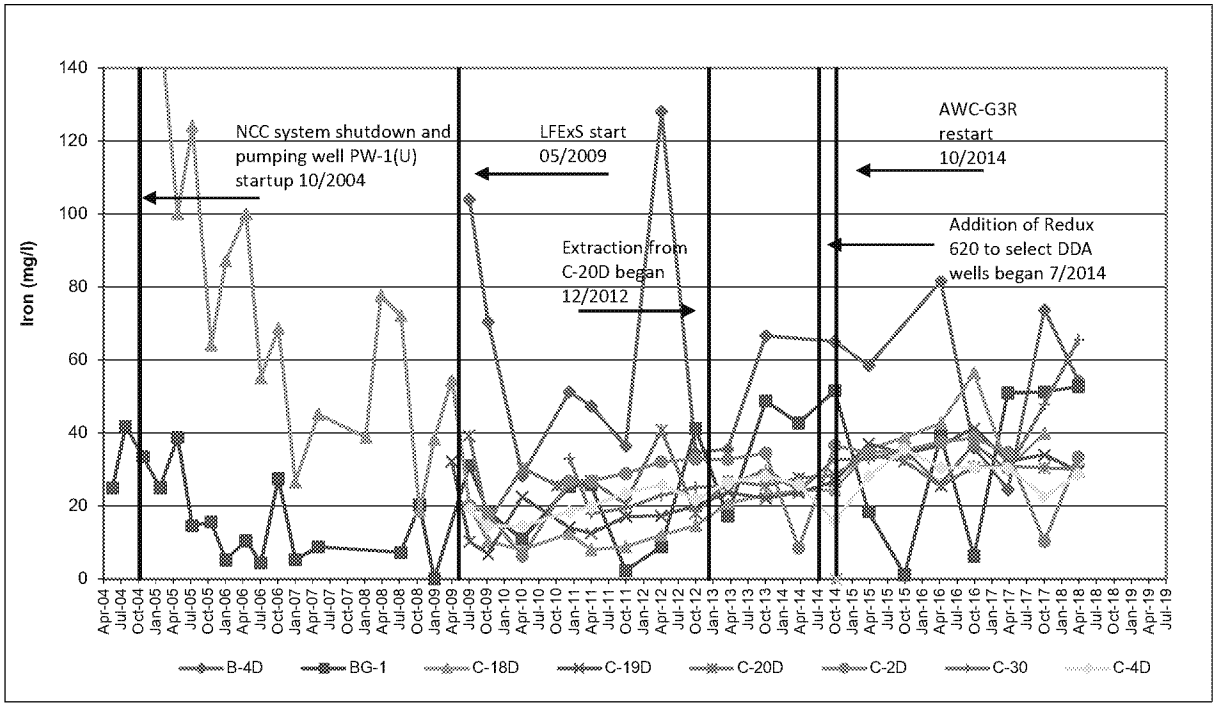


NORMAL SCALE, <140 mg/l



Note: Prior to January 2008, routine groundwater samples for the DS&G site were analyzed for total metals only; therefore, data presented for samples collected prior to January 2008 are based on total iron results.

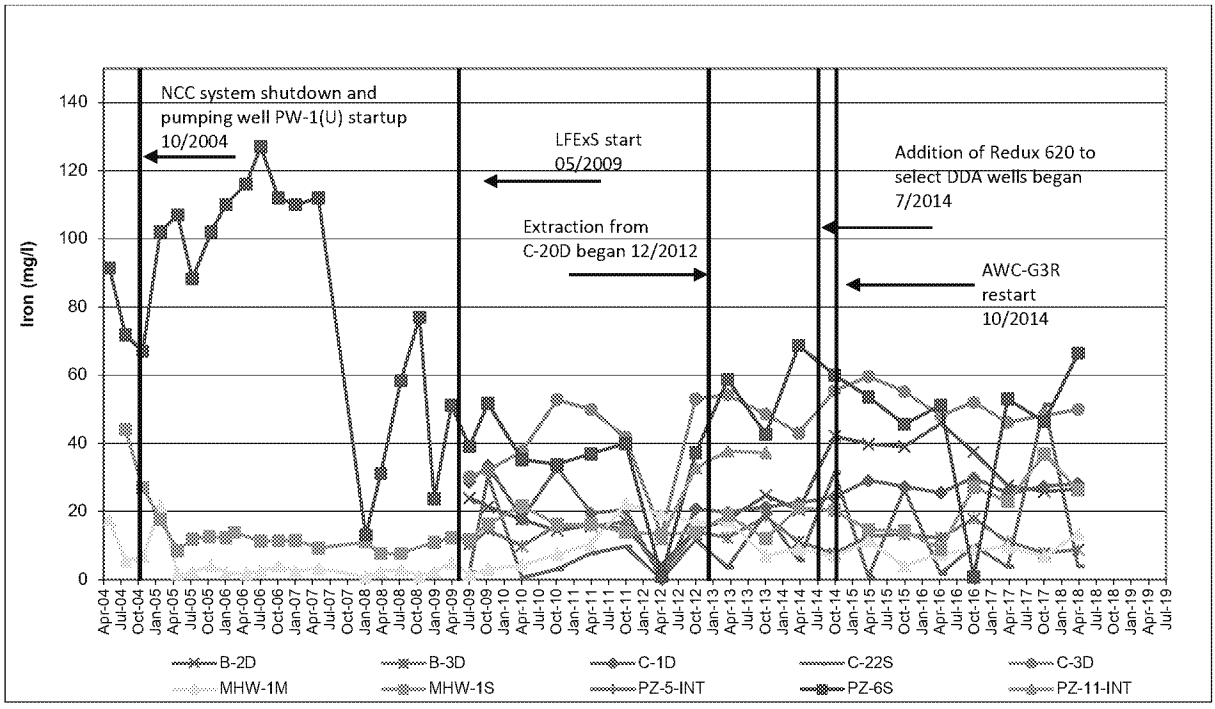
Iron - DDA Groundwater - LFExS Extraction Well Trends

Golder Associates

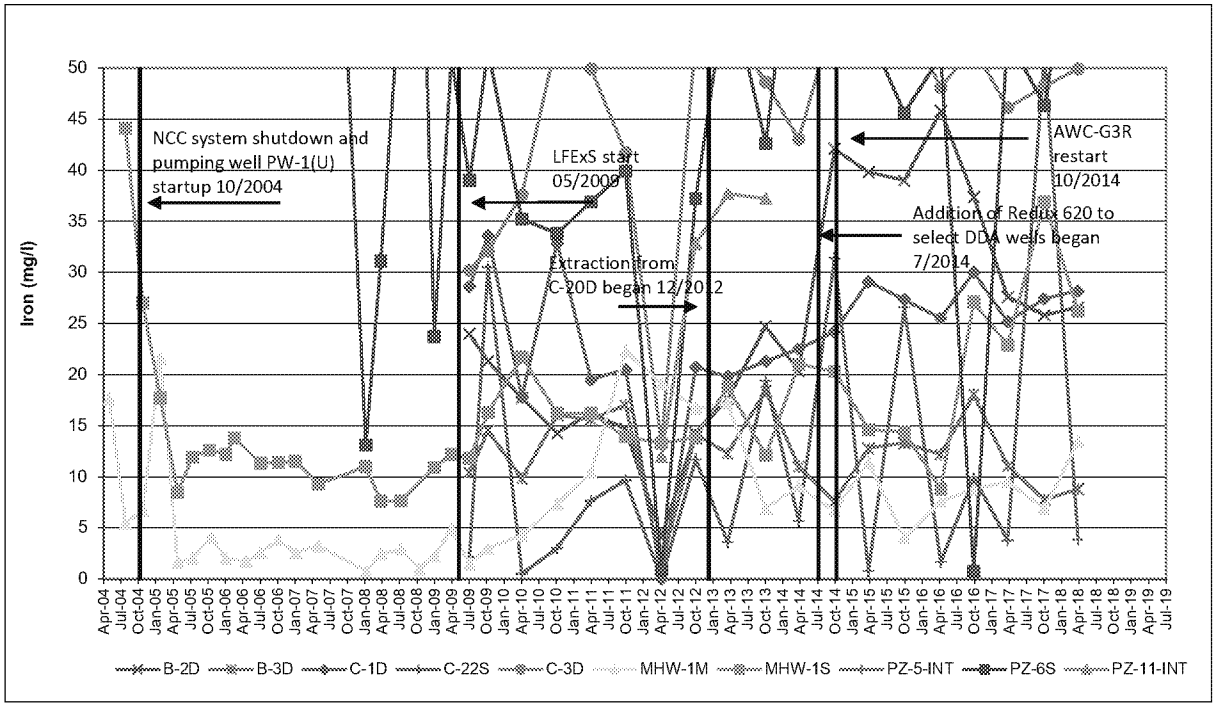
Project Number:	013-6052		**FIGURE F-1D**
Prepared by:	TGB	6/25/2018	
Checked by:	BPC	8/29/2018	**Delaware Sand and Gravel Superfund Site**
Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

NORMAL SCALE



NORMAL SCALE, <50 mg/l



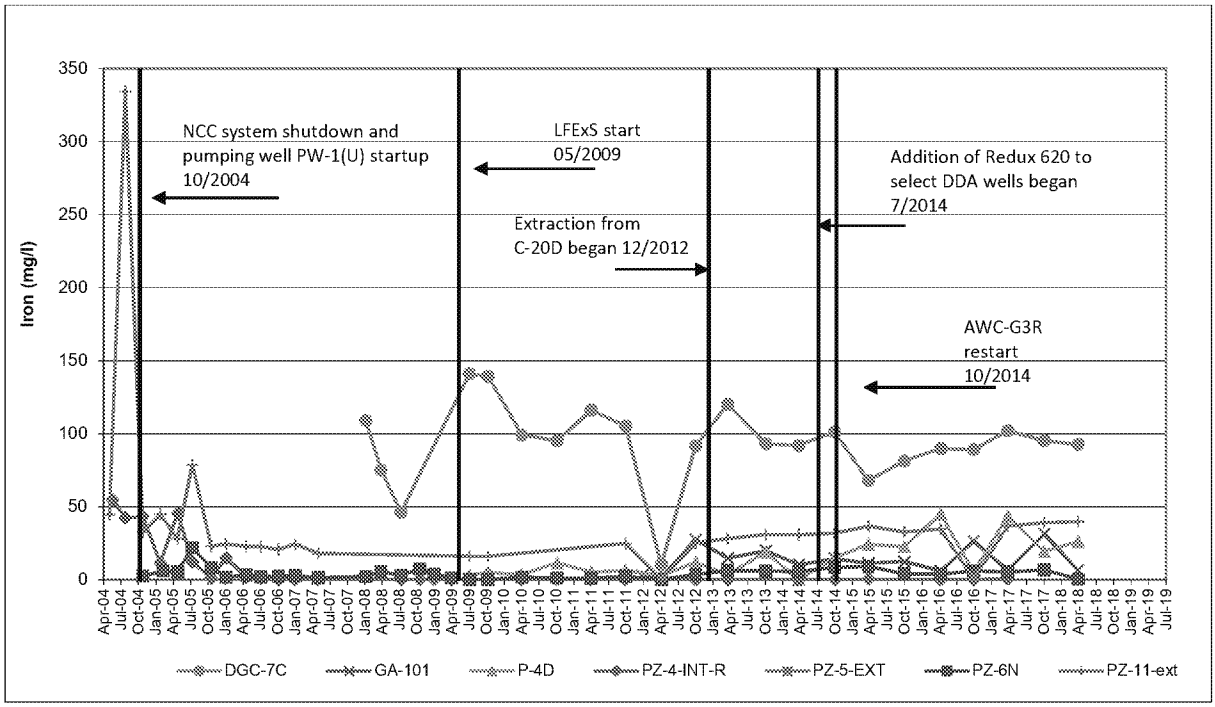
Note: Prior to January 2008, routine groundwater samples for the DS&G site were analyzed for total metals only; therefore, data presented for samples collected prior to January 2008 are based on total iron results.

Iron - DDA Groundwater - LFExS Monitoring Well Trends

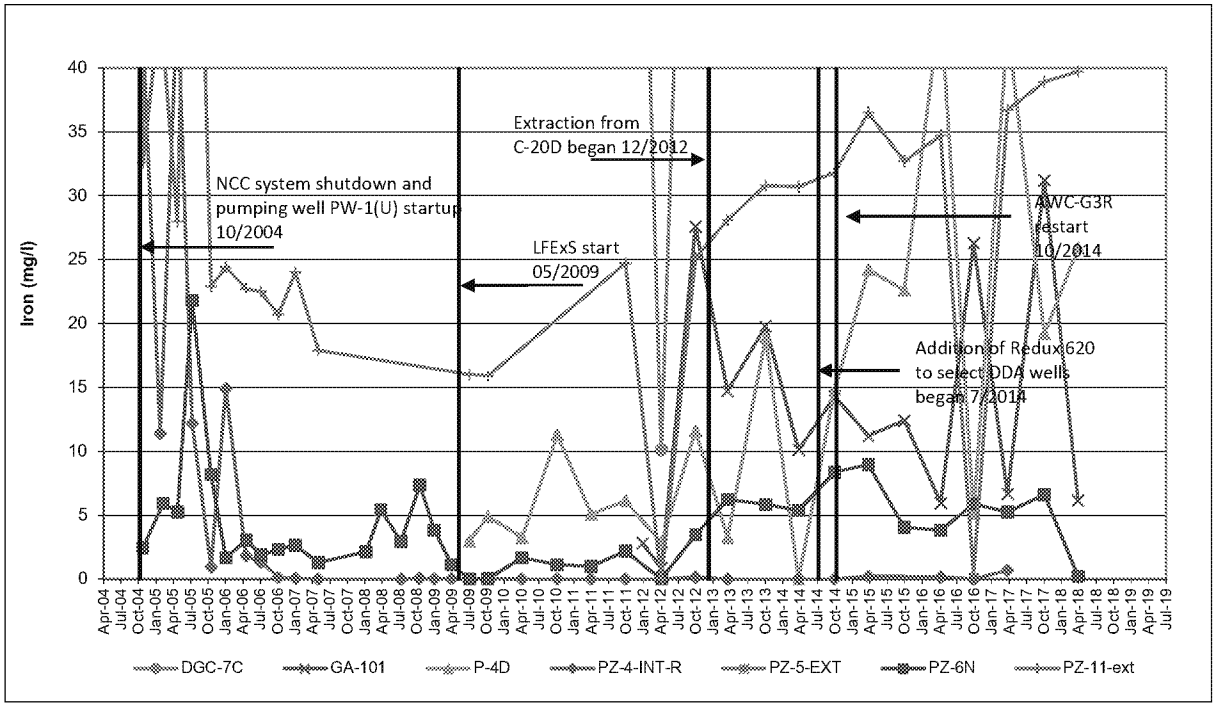
Golder Associates	Project Number:	013-6052	**FIGURE F-2D**
	Prepared by:	TGB 6/25/2018	
	Checked by:	BPC 8/29/2018	**Delaware Sand and Gravel Superfund Site**
	Reviewed by:	TAM 8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

NORMAL SCALE



NORMAL SCALE, <40 mg/l



Note: Prior to January 2008, routine groundwater samples for the DS&G site were analyzed for total metals only; therefore, data presented for samples collected prior to January 2008 are based on total iron results.

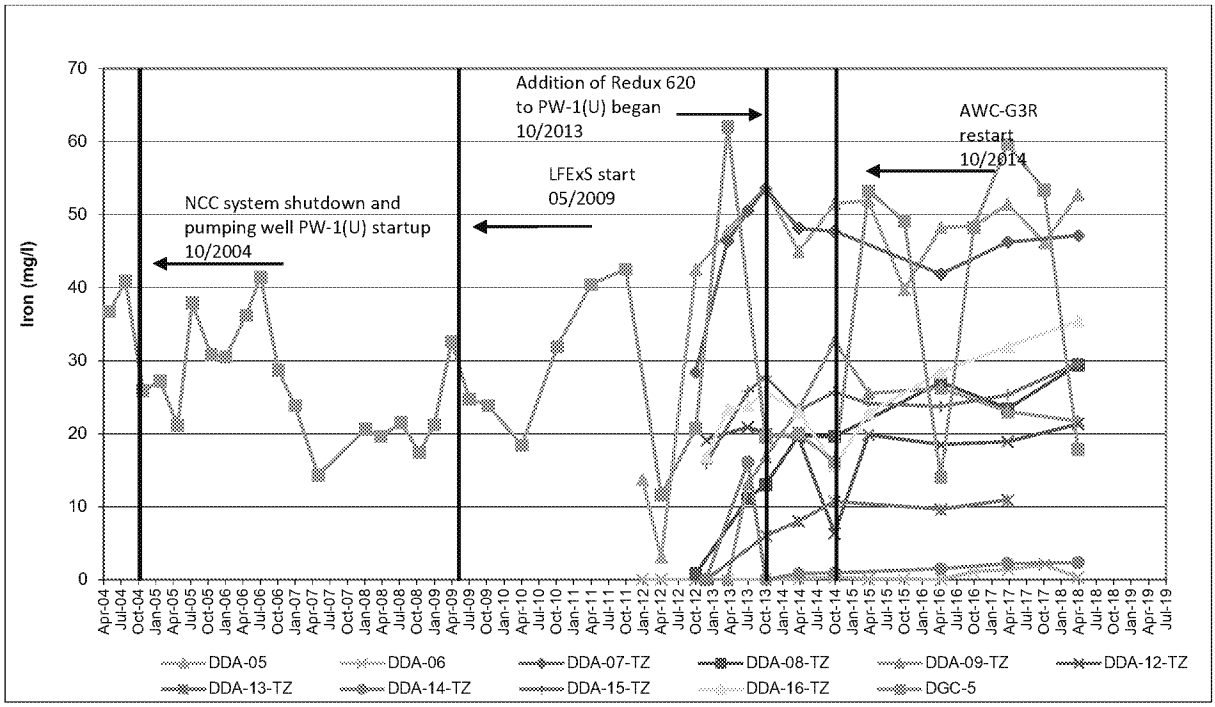
Iron - DDA Monitoring Well Trends

Golder Associates

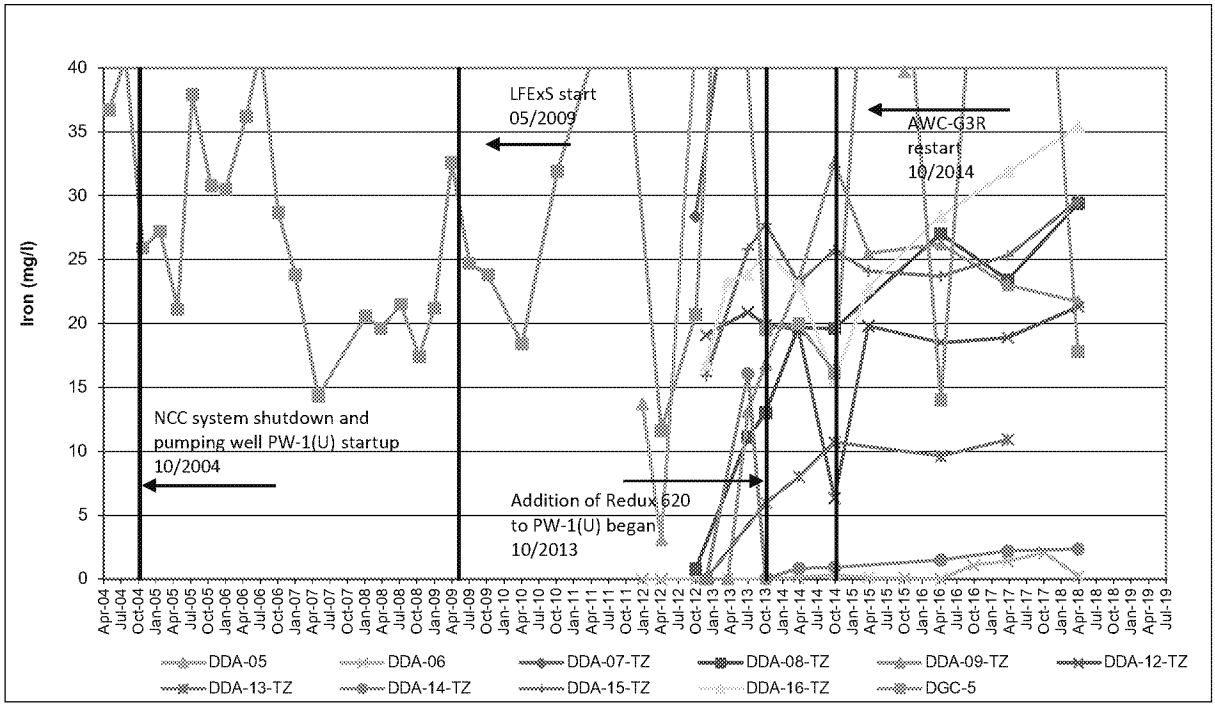
Project Number:	013-6052		**FIGURE F-3D**
Prepared by:	TGB	6/25/2018	
Checked by:	BPC	8/29/2018	**Delaware Sand and Gravel Superfund Site**
Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

NORMAL SCALE



NORMAL SCALE, <40 mg/l



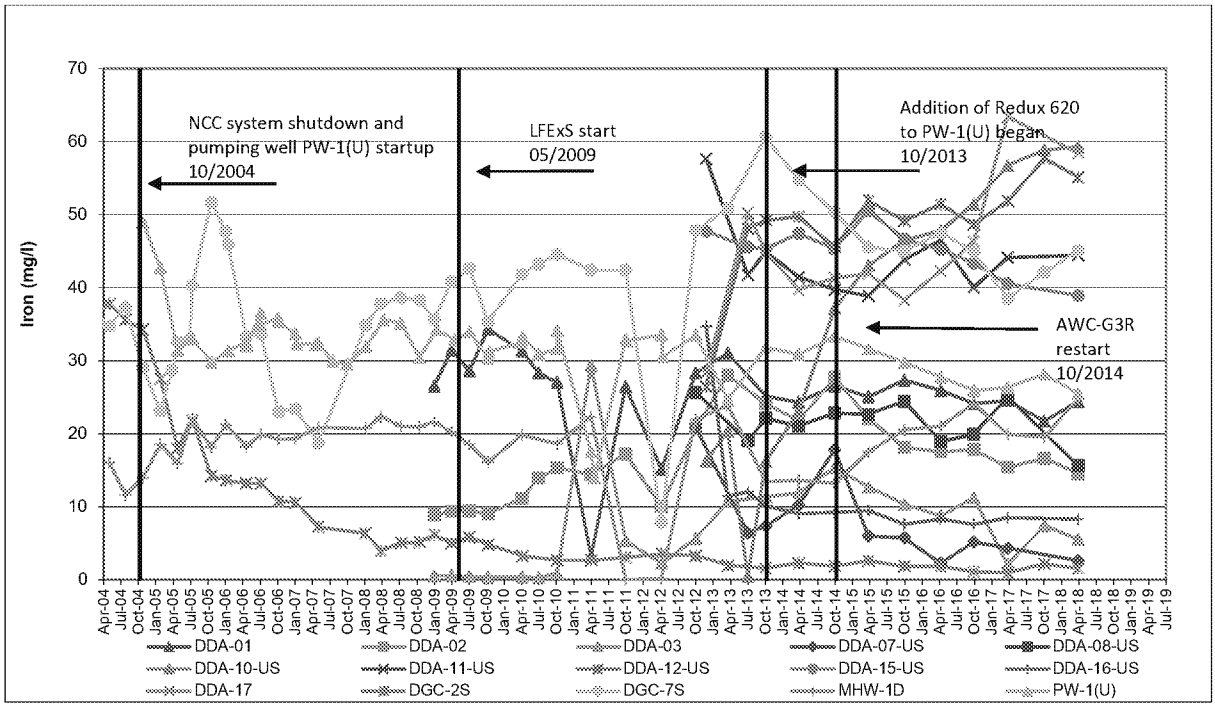
Note: Prior to January 2008, routine groundwater samples for the DS&G site were analyzed for total metals only; therefore, data presented for samples collected prior to January 2008 are based on total iron results.

Iron - DDA to Well PW-1(U) UPCU Transition Zone Trends

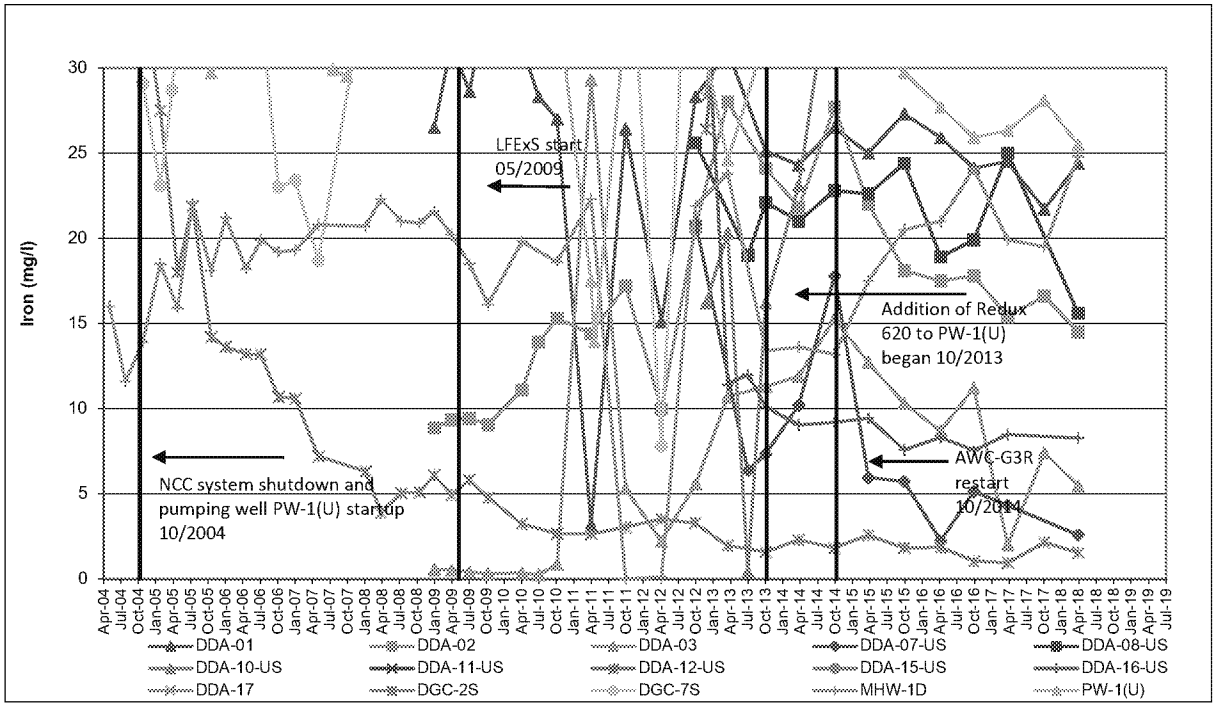
Golder Associates	Project Number:	013-6052		FIGURE F-4D
	Prepared by:	TGB	6/25/2018	
	Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

NORMAL SCALE



NORMAL SCALE, <30 mg/l



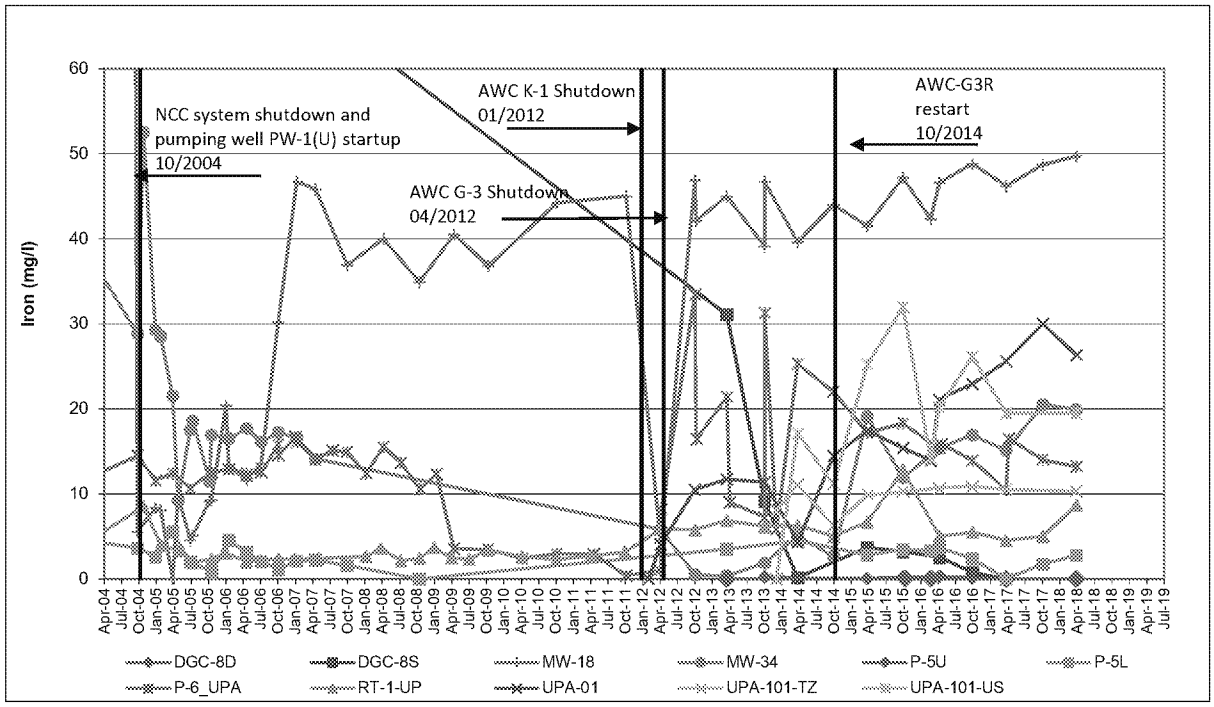
Note: Prior to January 2008, routine groundwater samples for the DS&G site were analyzed for total metals only; therefore, data presented for samples collected prior to January 2008 are based on total iron results.

Iron - DDA to Well PW-1(U) UPA Trends

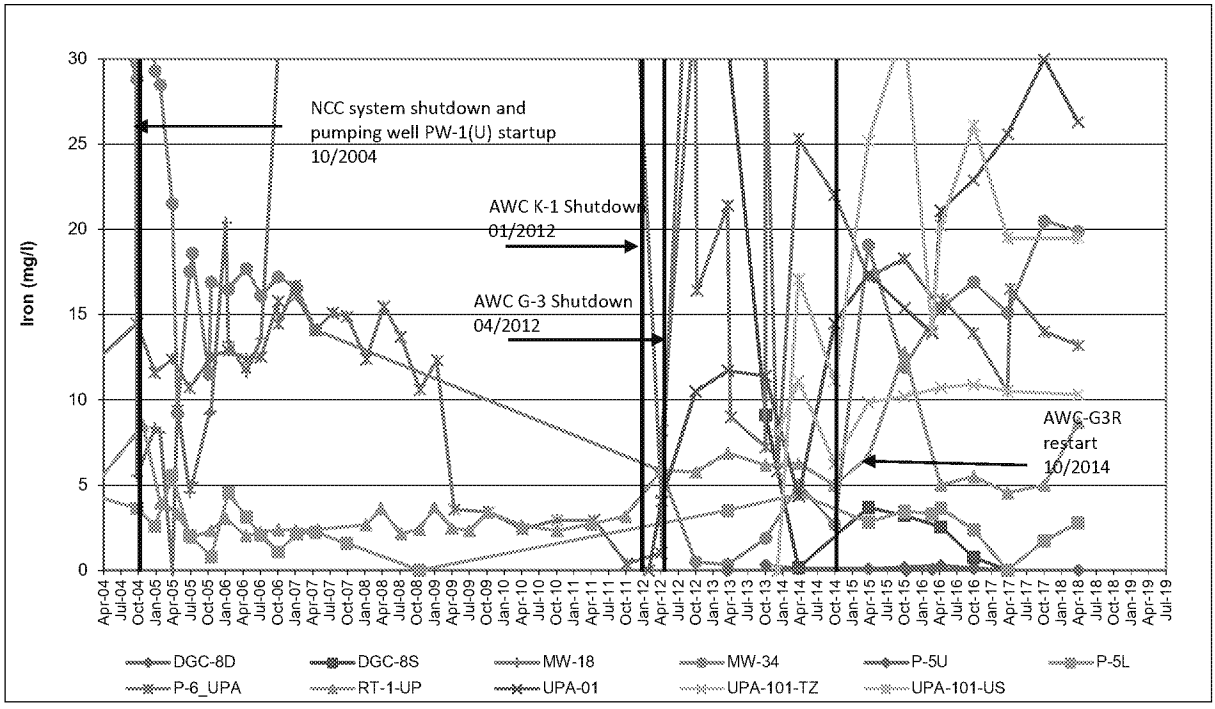
Golder Associates	Project Number:	013-6052	**FIGURE F-5D**
	Prepared by:	TGB 6/25/2018	
	Checked by:	BPC 8/29/2018	**Delaware Sand and Gravel Superfund Site**
	Reviewed by:	TAM 8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

NORMAL SCALE



NORMAL SCALE, <30 mg/l



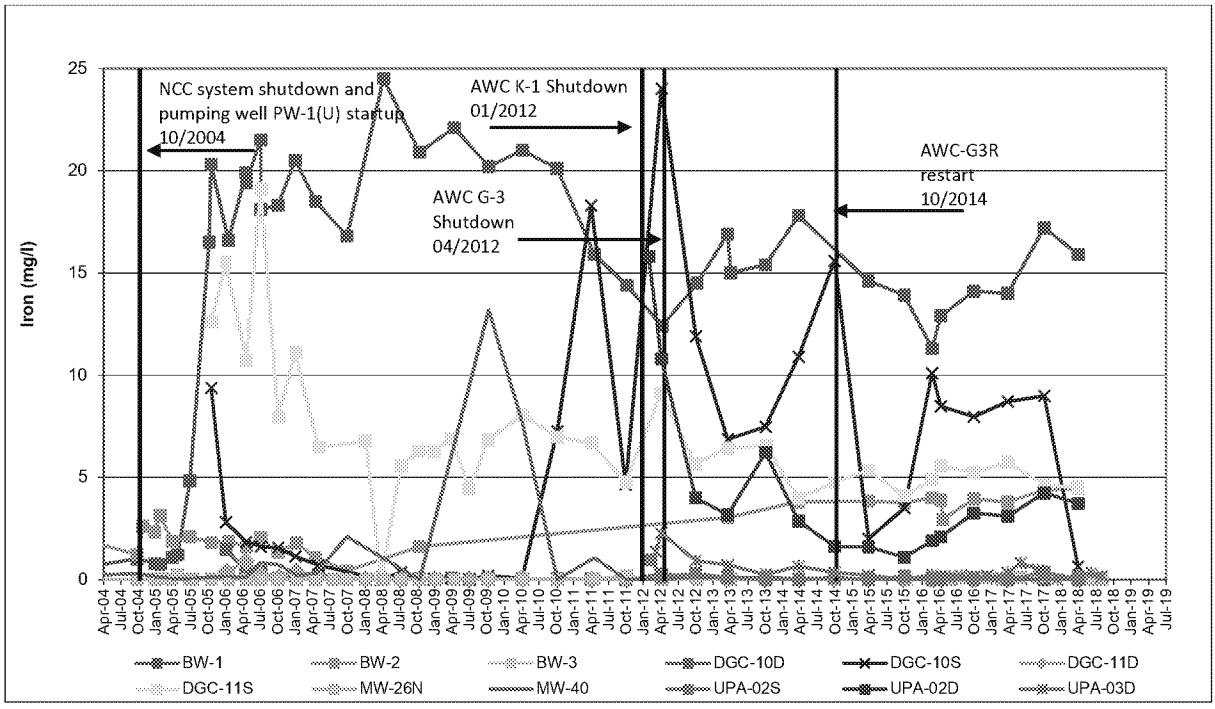
Note: Prior to January 2008, routine groundwater samples for the DS&G site were analyzed for total metals only; therefore, data presented for samples collected prior to January 2008 are based on total iron results.

Iron - UPA Downgradient of Well PW-1(U) Trends - Well P-6 Area

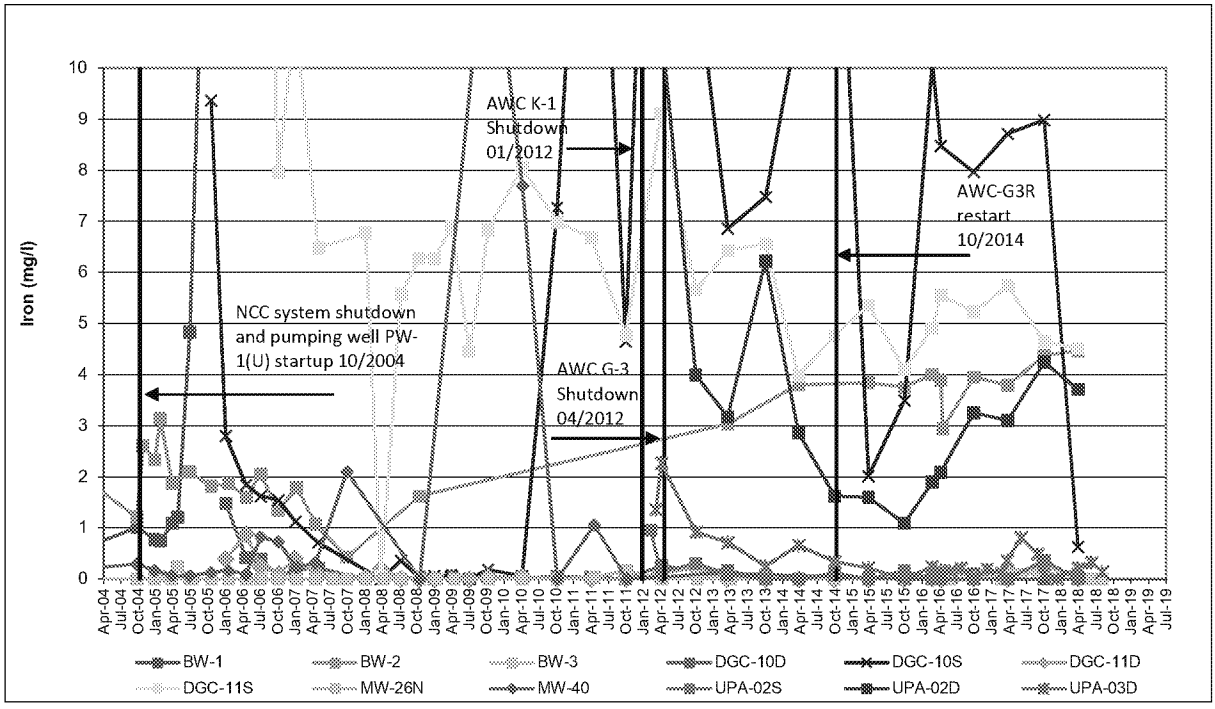
Golder Associates	Project Number:	013-6052		FIGURE F-6D
	Prepared by:	TGB	6/25/2018	
	Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

NORMAL SCALE



NORMAL SCALE, <10 mg/l



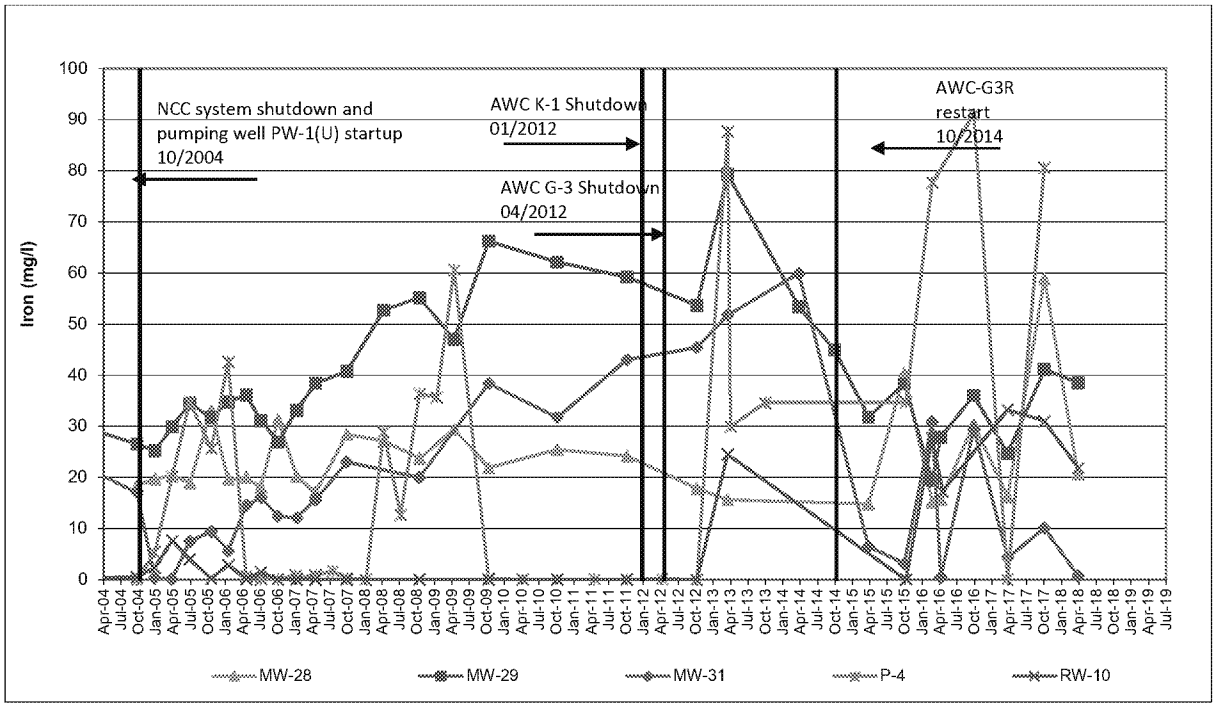
Note: Prior to January 2008, routine groundwater samples for the DS&G site were analyzed for total metals only; therefore, data presented for samples collected prior to January 2008 are based on total iron results.

Iron - UPA Downgradient of Well PW-1(U) Trends

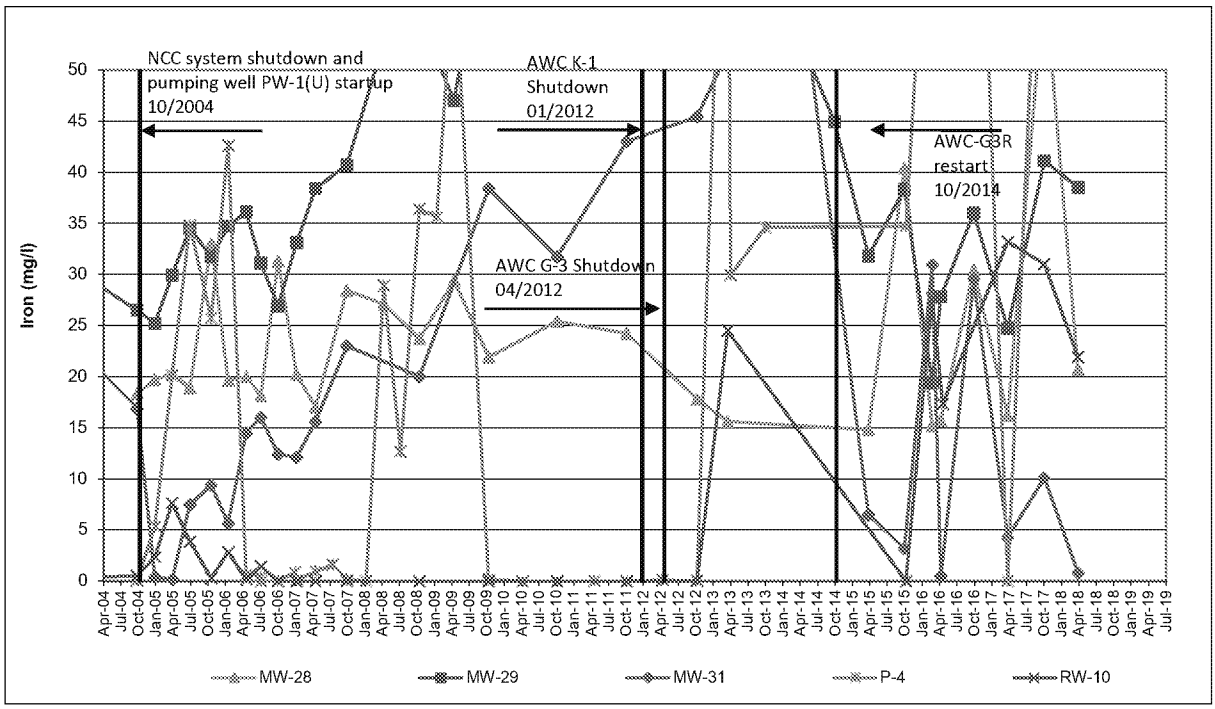
Golder Associates	Project Number:	013-6052	FIGURE F-7D
	Prepared by:	TGB 6/25/2018	
	Checked by:	BPC 8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM 8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

NORMAL SCALE



NORMAL SCALE, <50 mg/l

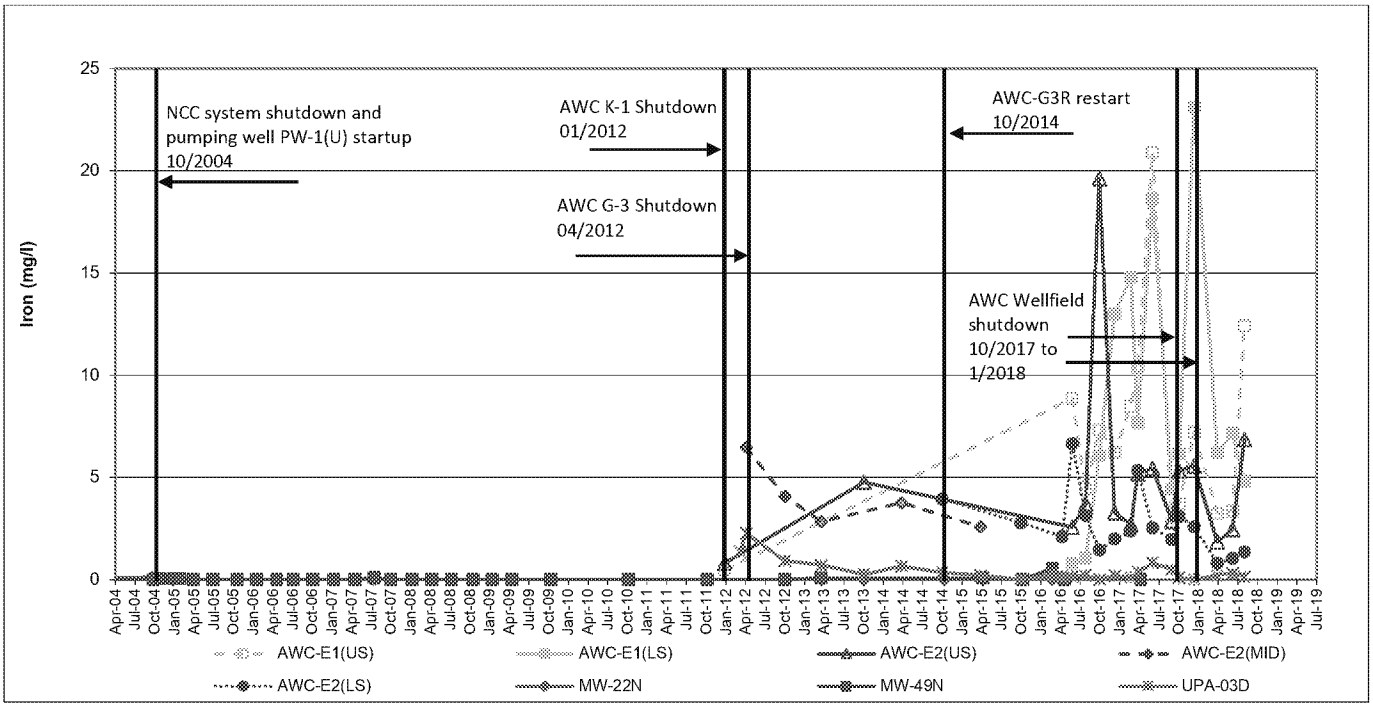


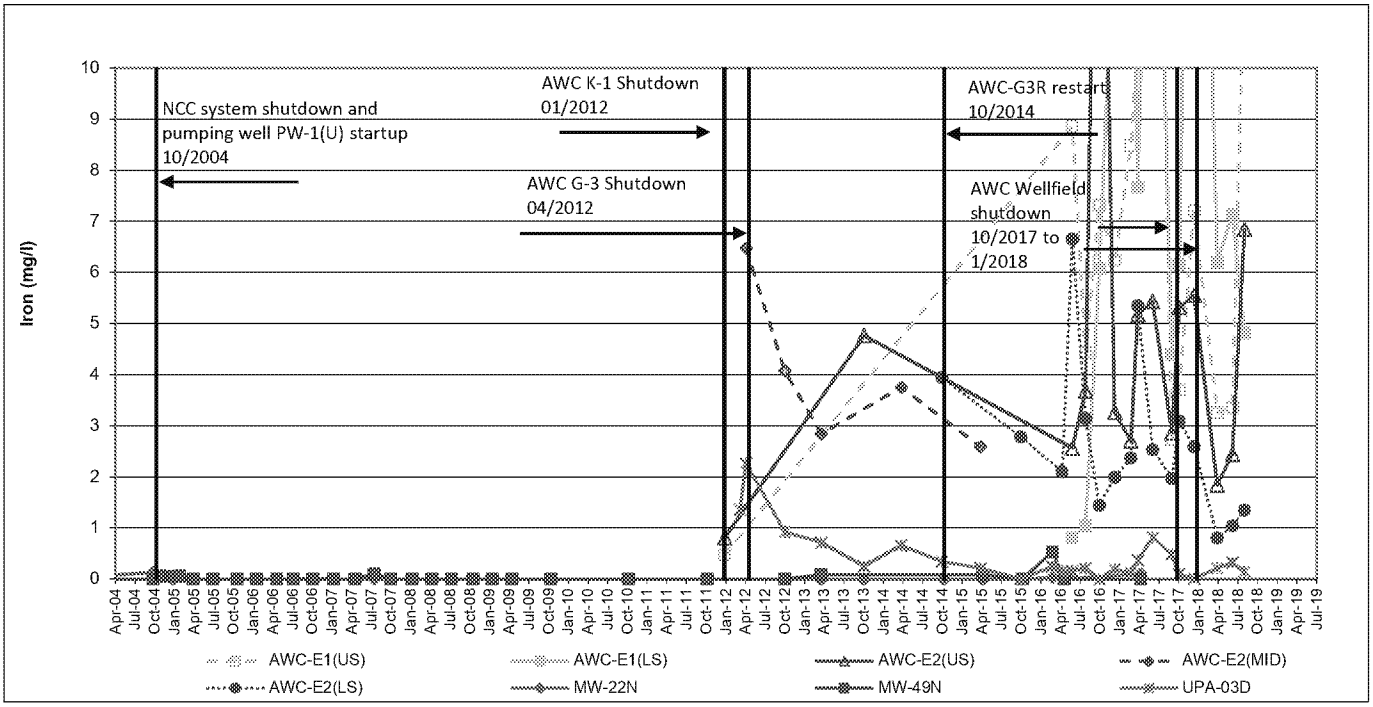
Note: Prior to January 2008, routine groundwater samples for the DS&G site were analyzed for total metals only; therefore, data presented for samples collected prior to January 2008 are based on total iron results.

Iron - UPA Downgradient - Western Edge NCC Well Trends

Golder Associates	Project Number:	013-6052		FIGURE F-8D
	Prepared by:	TGB	6/25/2018	
	Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx





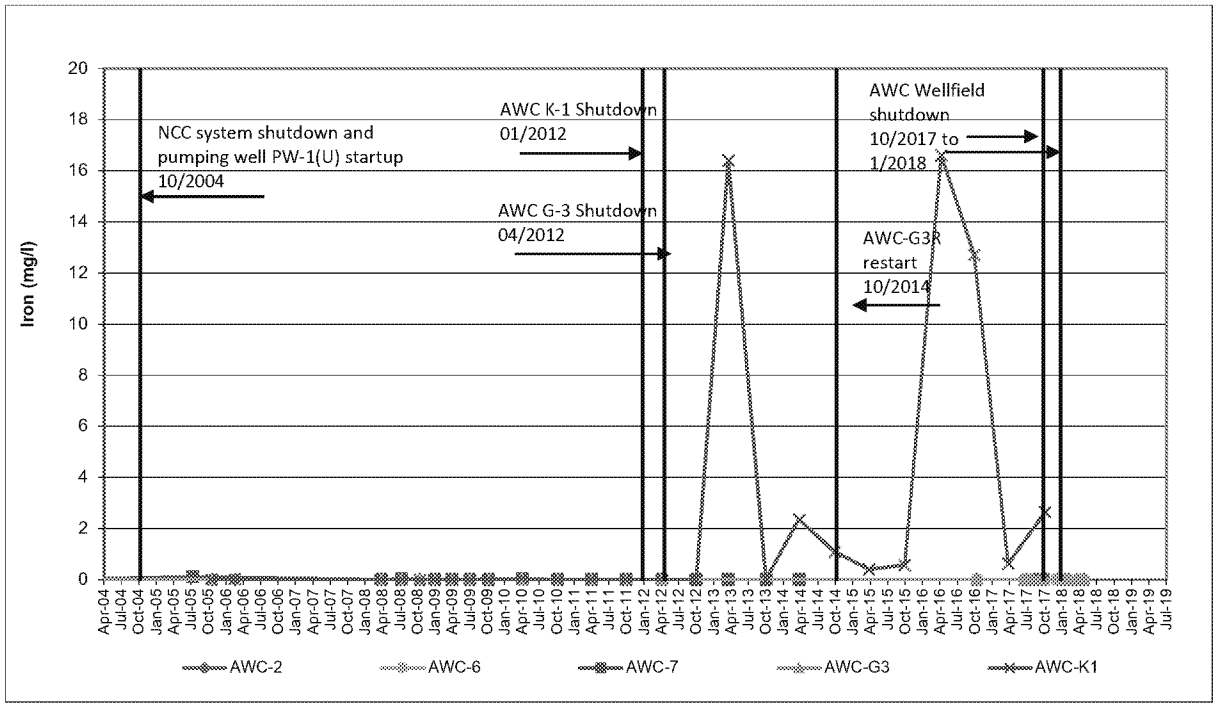
Notes: Prior to January 2008, routine groundwater samples for the DS&G site were analyzed for total metals only; therefore, data presented for samples collected prior to January 2008 are based on total iron results.

Iron - UPA Downgradient - Well Trends in Front of AWC Wellfield

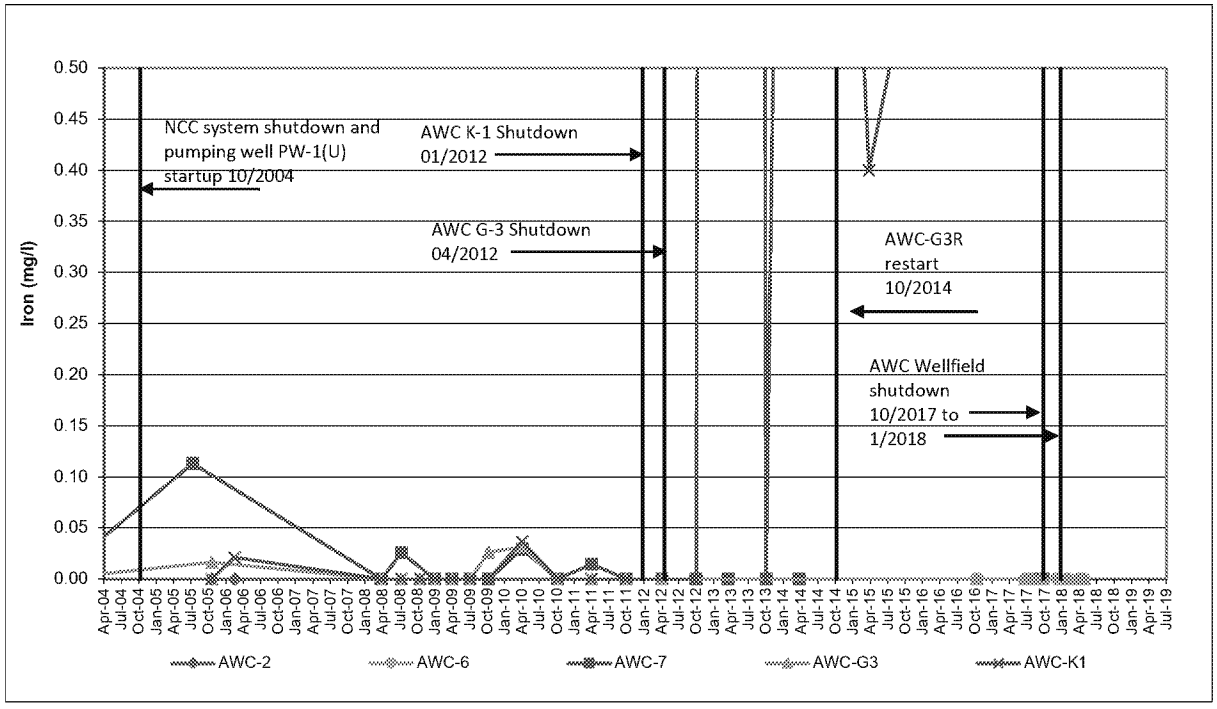
Golder Associates	Project Number:	013-6052		FIGURE F-9D
	Prepared by:	TGB	6/25/2018	
	Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

NORMAL SCALE



NORMAL SCALE, <0.5 mg/l



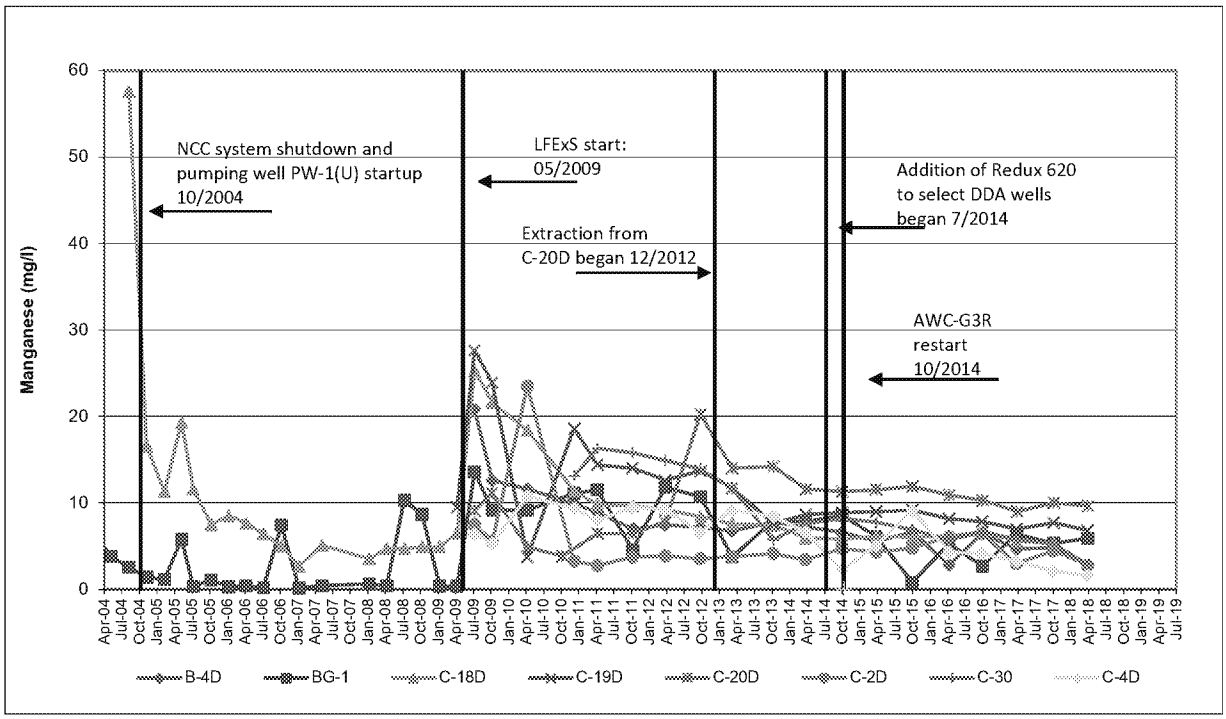
Note: Prior to January 2008, routine groundwater samples for the DS&G site were analyzed for total metals only; therefore, data presented for samples collected prior to January 2008 are based on total iron results.

Iron - UPA Downgradient - AWC Well Trends

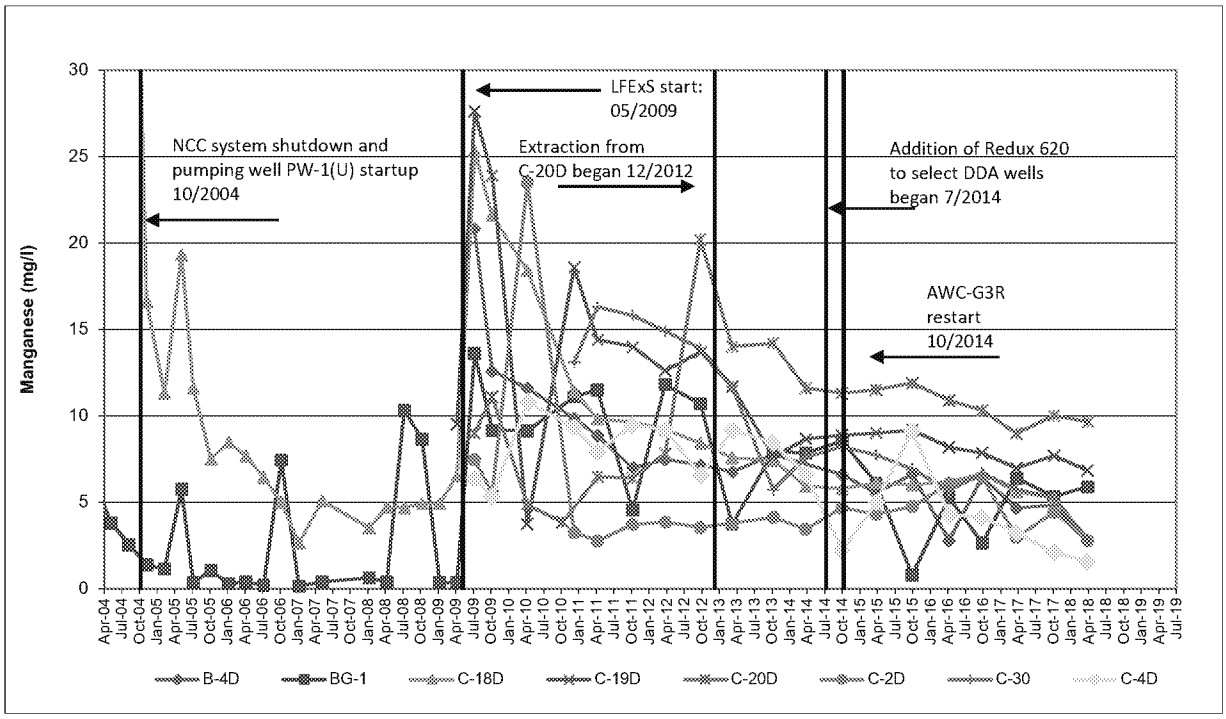
Golder Associates	Project Number:	013-6052	FIGURE F-10D
	Prepared by:	TGB 6/25/2018	
	Checked by:	BPC 8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM 8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

NORMAL SCALE <60 mg/l



NORMAL SCALE, <30 mg/l



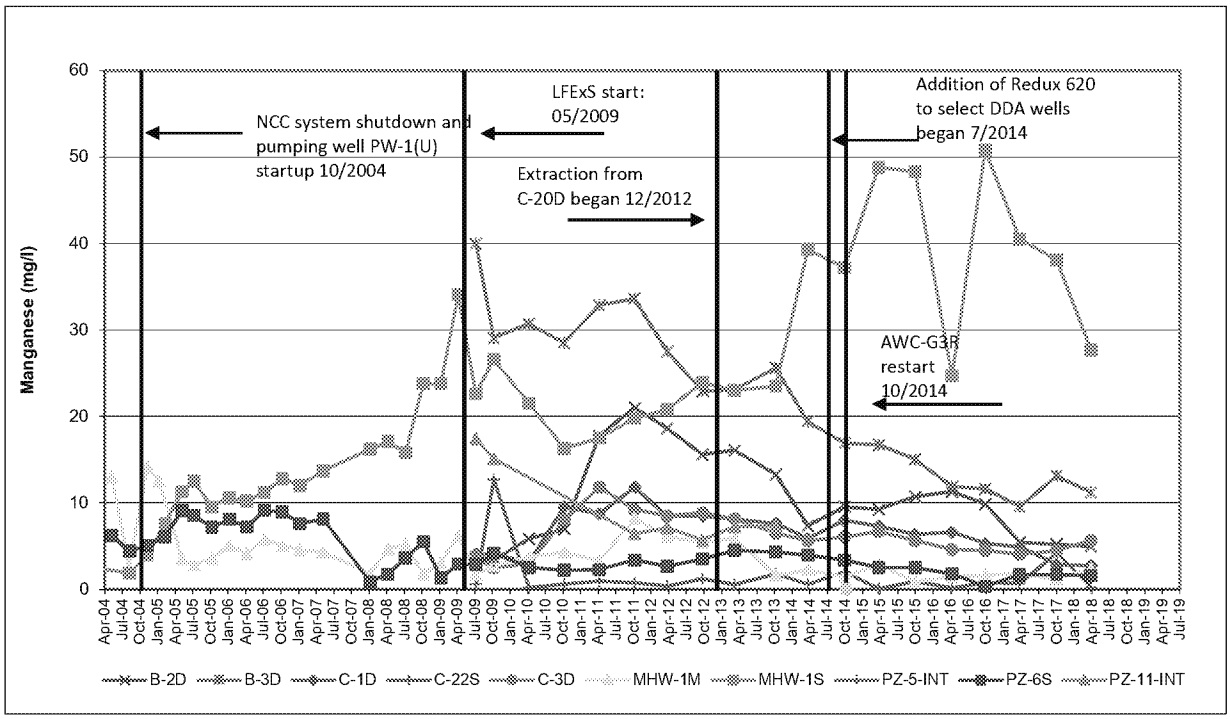
Note: Prior to January 2008, routine groundwater samples for the DS&G site were analyzed for total metals only; therefore, data presented for samples collected prior to January 2008 are based on total manganese results.

Manganese - DDA Groundwater - LFExS Extraction Well Trends

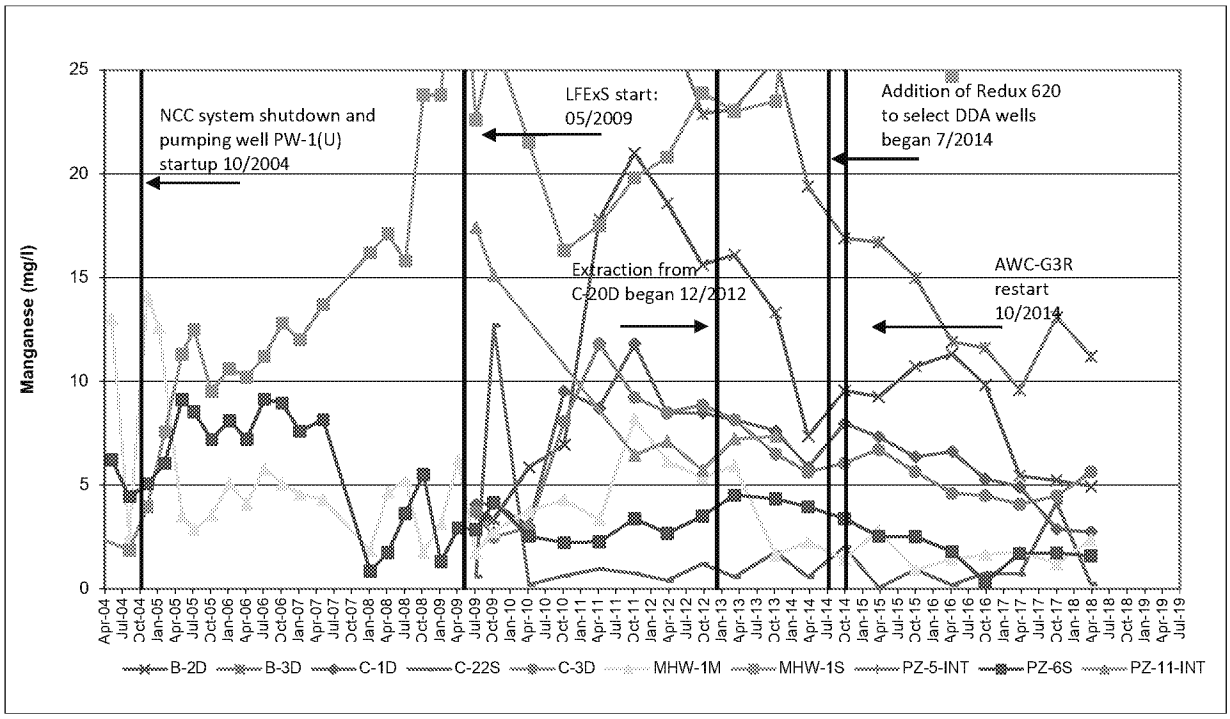
Golder Associates	Project Number:	013-6052		**FIGURE F-1E**
	Prepared by:	TGB	6/25/2018	
	Checked by:	BPC	8/29/2018	**Delaware Sand and Gravel Superfund Site**
	Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

NORMAL SCALE <60 mg/l



NORMAL SCALE, <25 mg/l

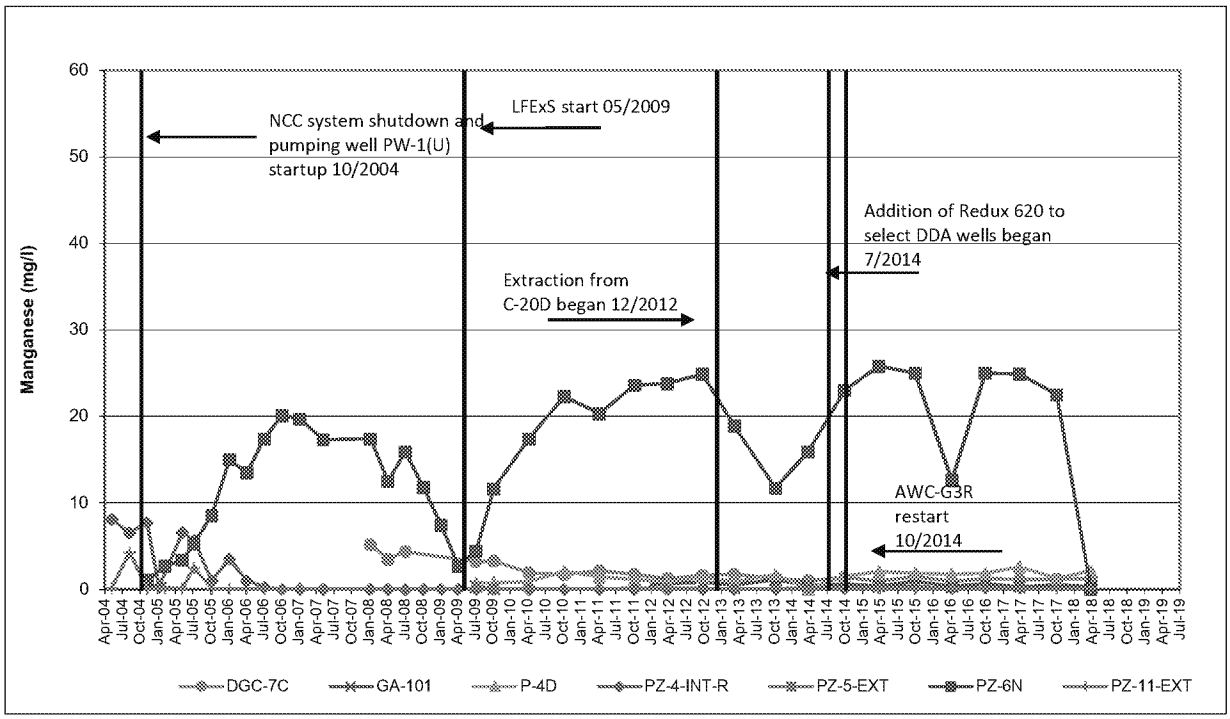


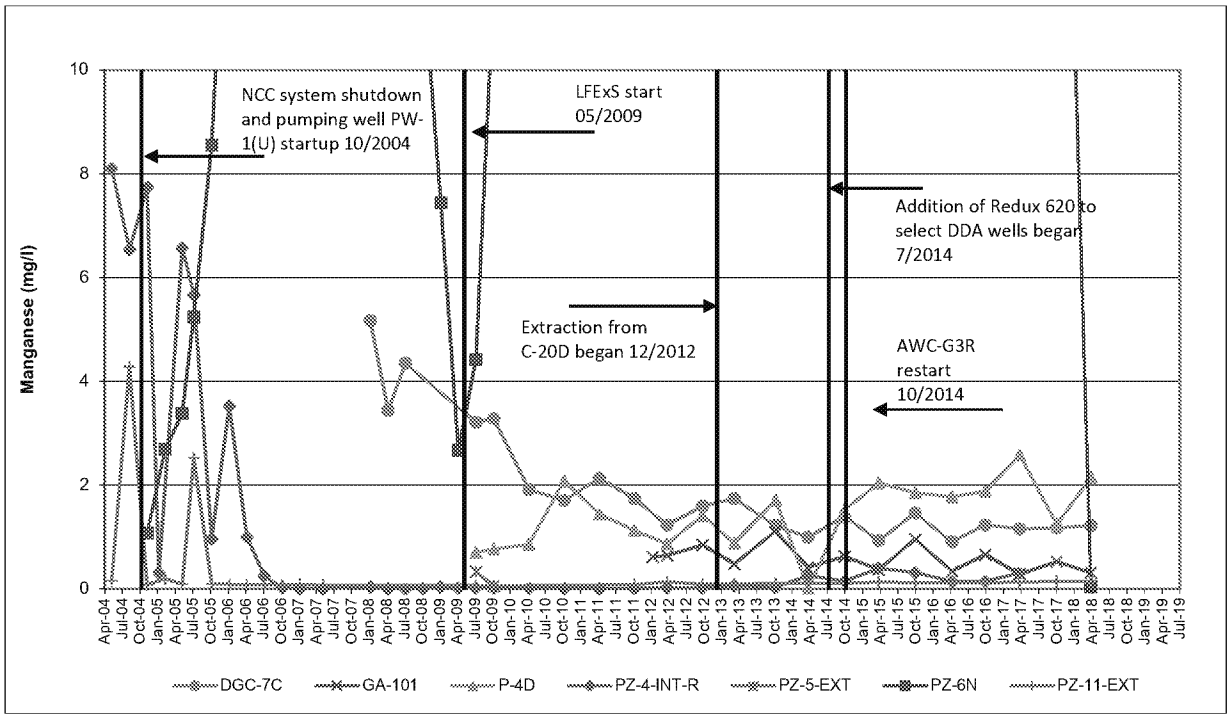
Note: Prior to January 2008, routine groundwater samples for the DS&G site were analyzed for total metals only; therefore, data presented for samples collected prior to January 2008 are based on total manganese results.

Manganese - DDA Groundwater - LFExS Monitoring Well Trends

Golder Associates	Project Number:	013-6052		FIGURE F-2E
	Prepared by:	TGB	6/25/2018	
	Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx





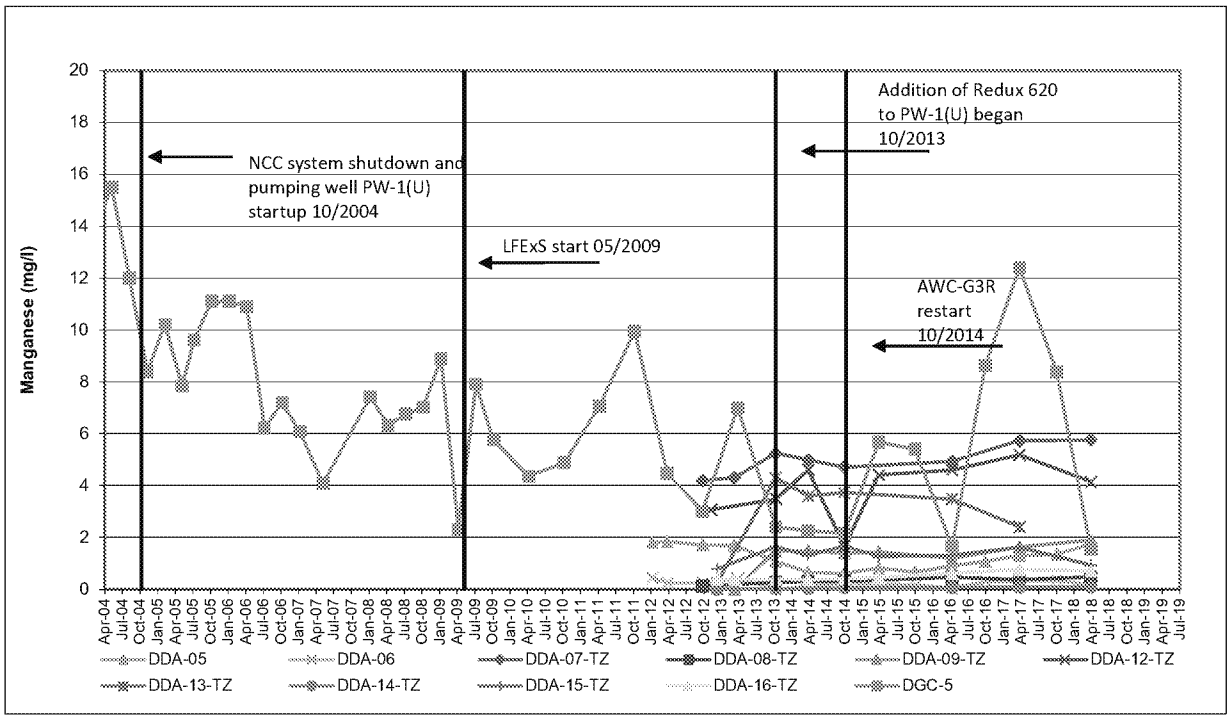
Note: Prior to January 2008, routine groundwater samples for the DS&G site were analyzed for total metals only; therefore, data presented for samples collected prior to January 2008 are based on total manganese results.

Manganese - DDA Monitoring Well Trends

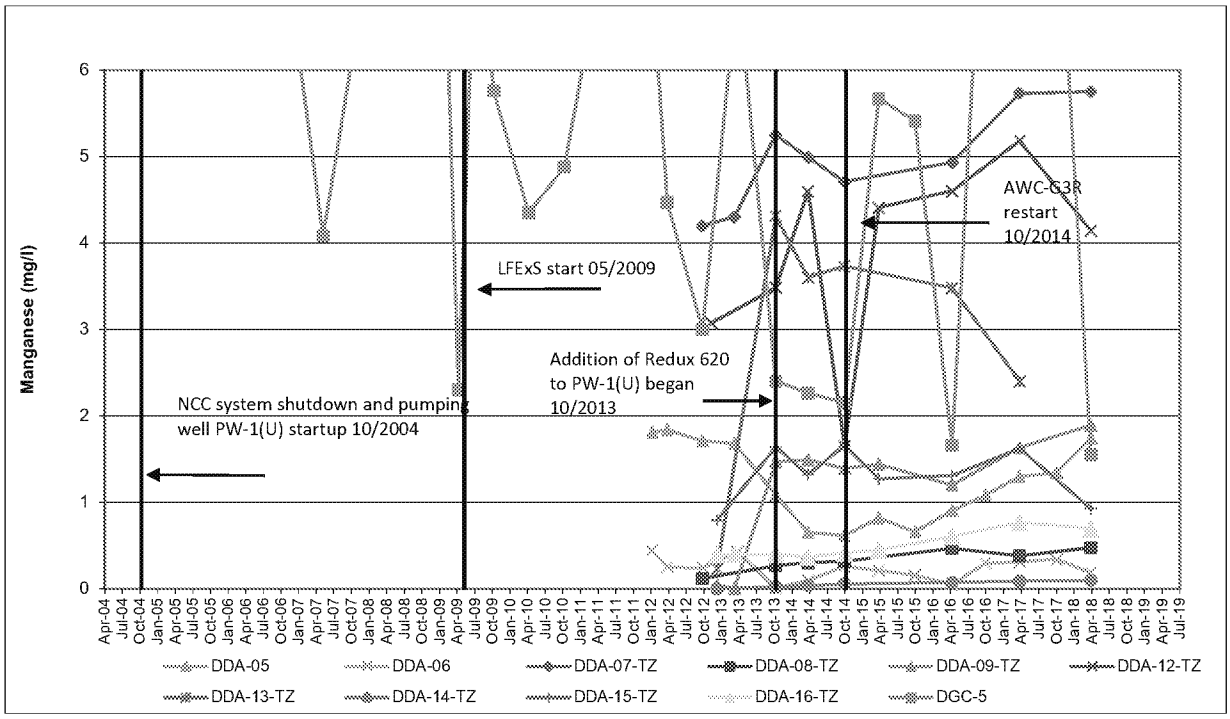
Golder Associates	Project Number:	013-6052		FIGURE F-3E
	Prepared by:	TGB	6/25/2018	
	Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

NORMAL SCALE <20 mg/l



NORMAL SCALE, <6 mg/l

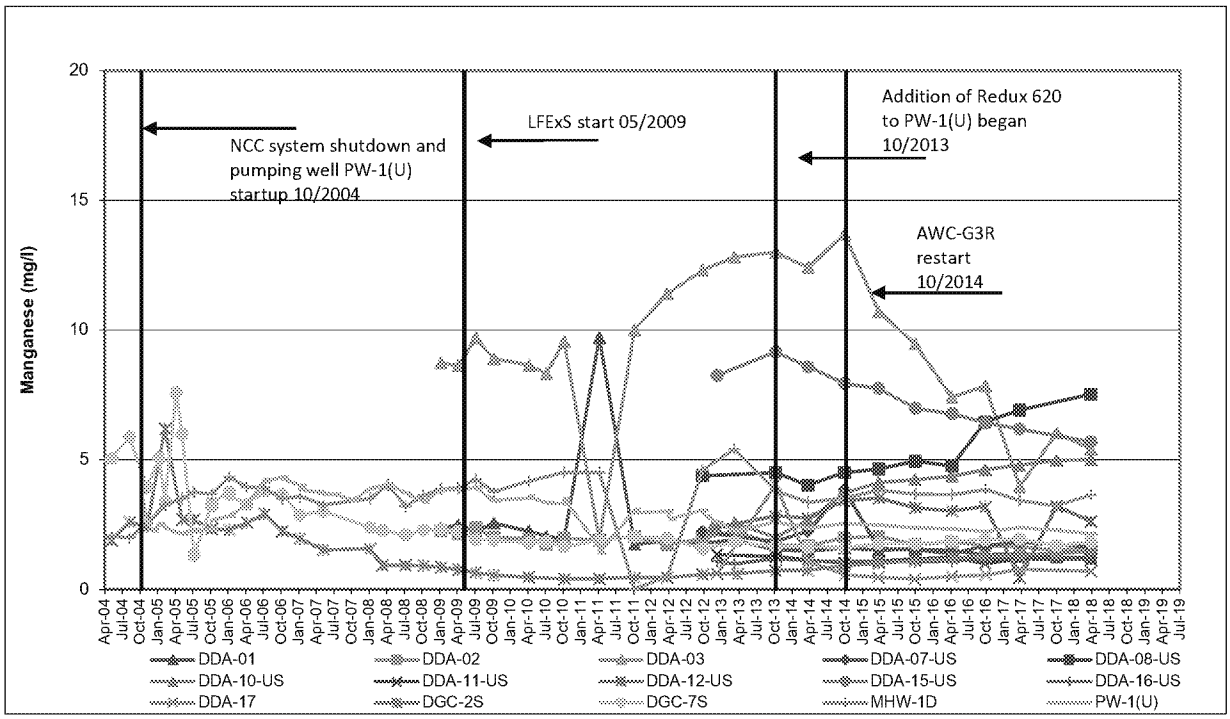


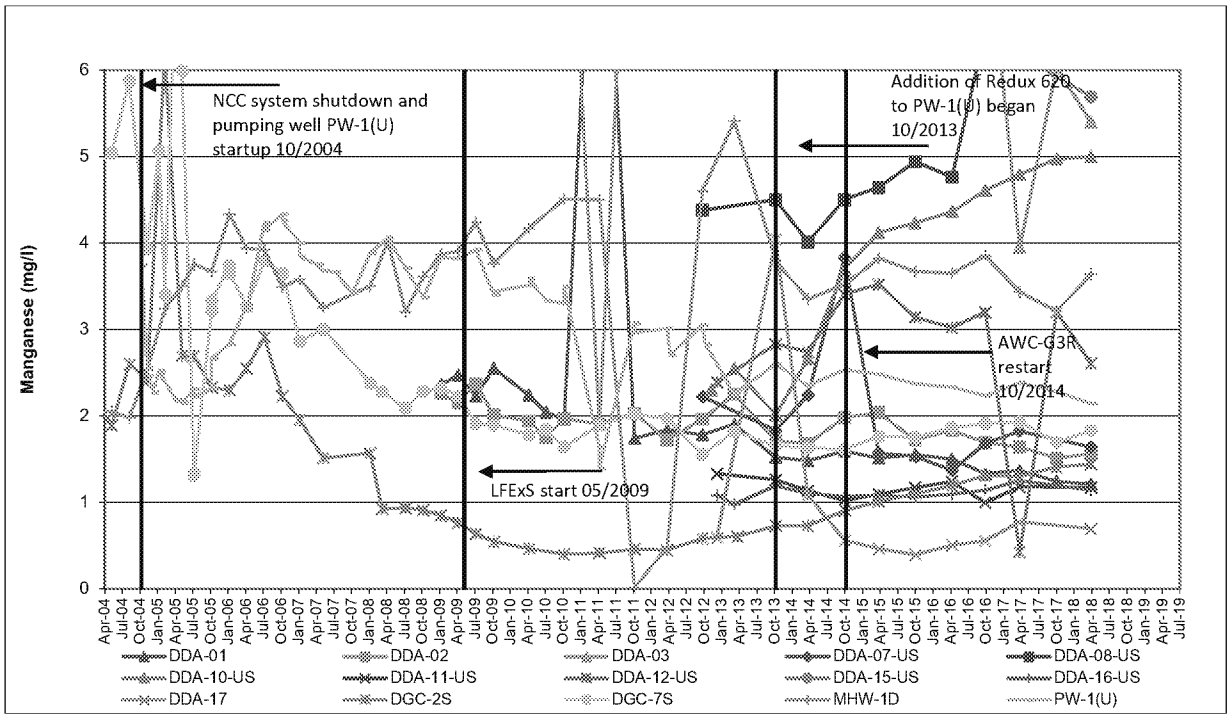
Note: Prior to January 2008, routine groundwater samples for the DS&G site were analyzed for total metals only; therefore, data presented for samples collected prior to January 2008 are based on total manganese results.

Manganese - DDA to Well PW-1(U) UPCU Transition Zone Trends

Golder Associates	Project Number:	013-6052		FIGURE F-4E
	Prepared by:	TGB	6/25/2018	
	Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx





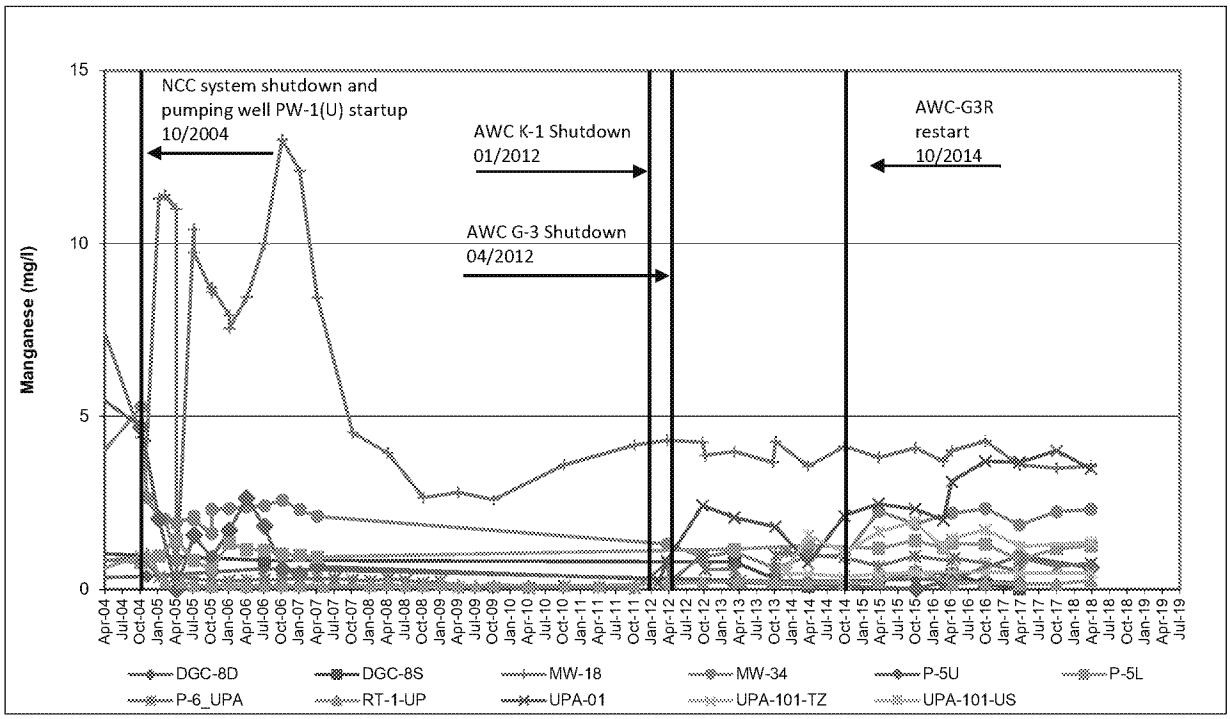
Note: Prior to January 2008, routine groundwater samples for the DS&G site were analyzed for total metals only; therefore, data presented for samples collected prior to January 2008 are based on total manganese results.

Manganese - DDA to Well PW-1(U) UPA Trends

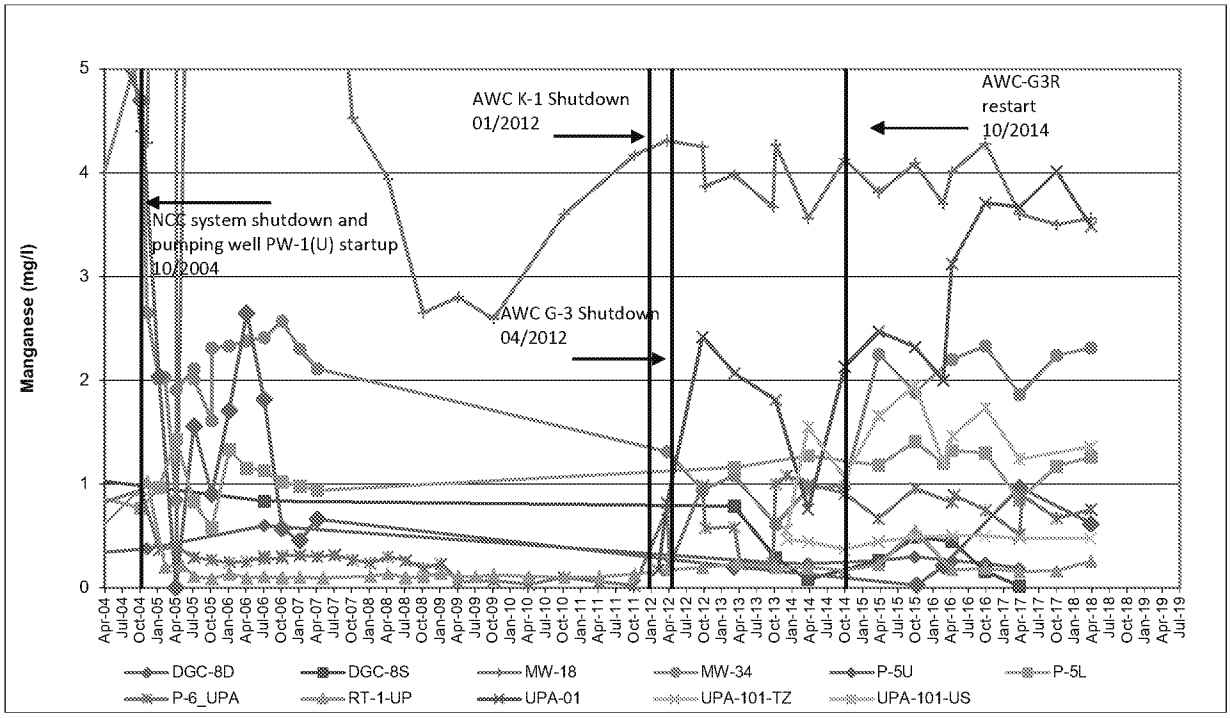
Golder Associates	Project Number:	013-6052		FIGURE F-5E
	Prepared by:	TGB	6/25/2018	
	Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

NORMAL SCALE, <15 mg/l



NORMAL SCALE, <5 ug/l

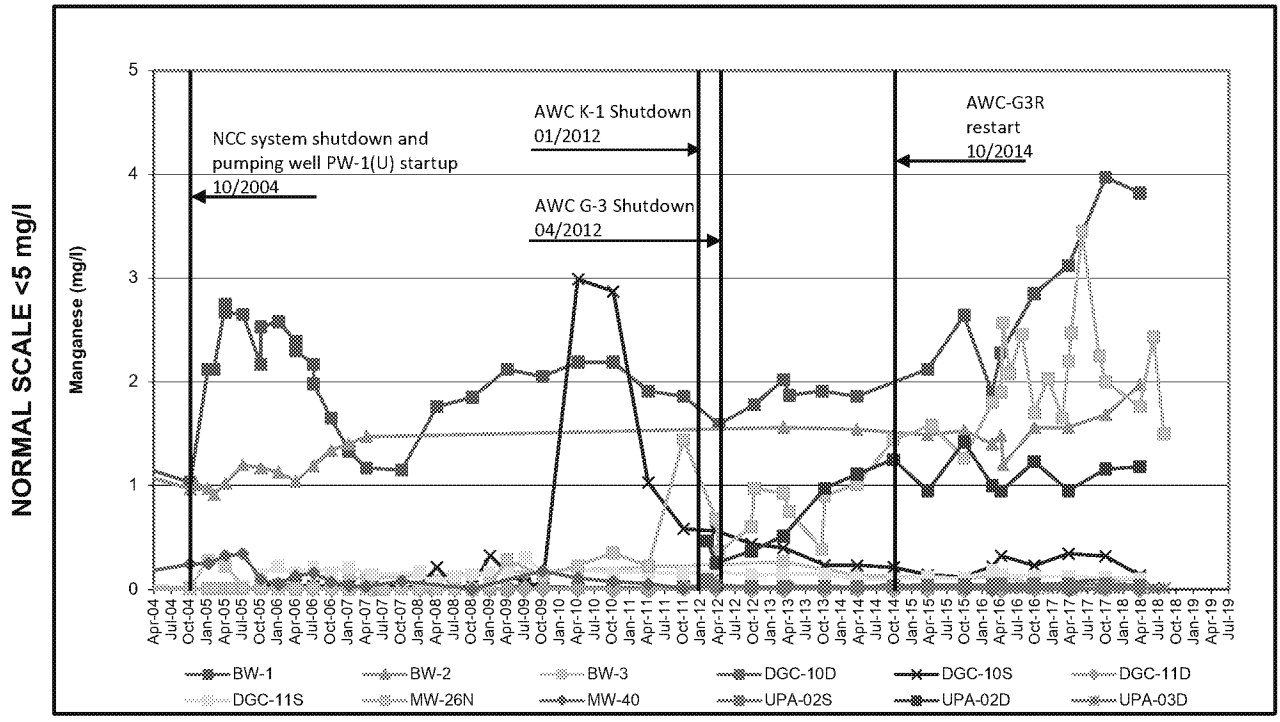


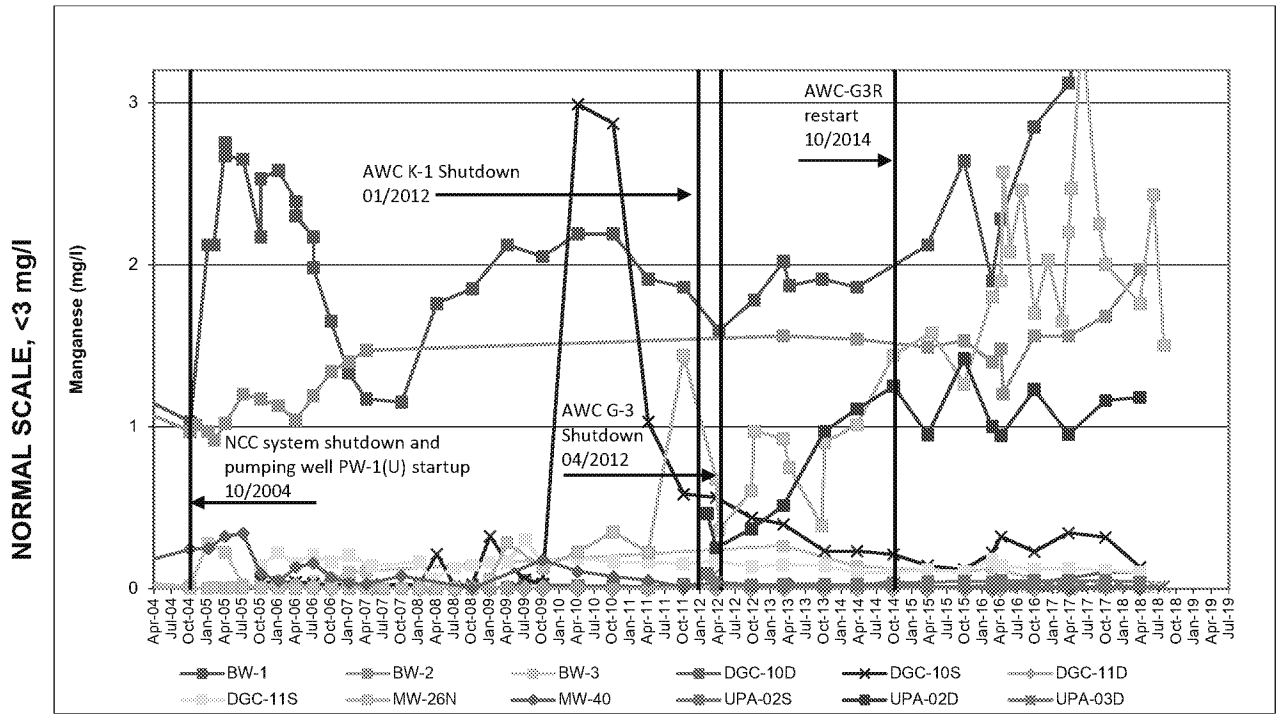
Note: Prior to January 2008, routine groundwater samples for the DS&G site were analyzed for total metals only; therefore, data presented for samples collected prior to January 2008 are based on total manganese results.

Manganese - UPA Downgradient of Well PW-1(U) Trends - Well P-6 Area

Golder Associates	Project Number:	013-6052		FIGURE F-6E
	Prepared by:	TGB	6/25/2018	
	Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx





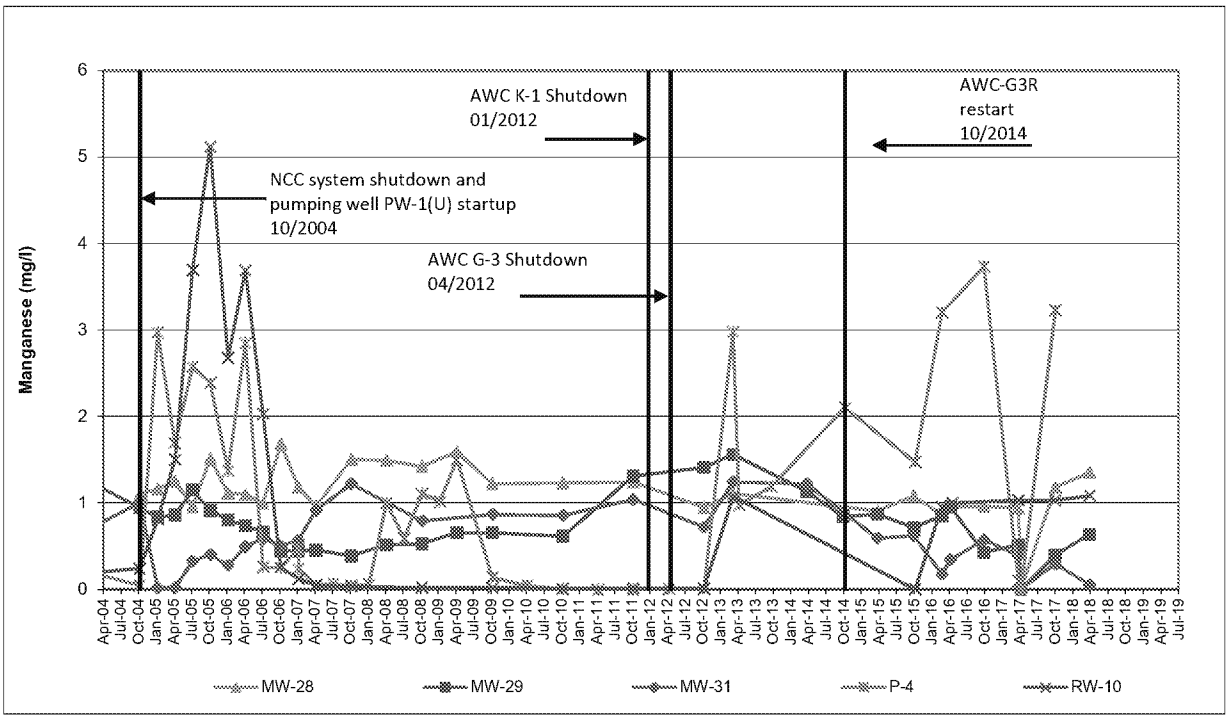
Note: Prior to January 2008, routine groundwater samples for the DS&G site were analyzed for total metals only; therefore, data presented for samples collected prior to January 2008 are based on total manganese results.

Manganese - UPA Downgradient of Well PW-1(U) Trends

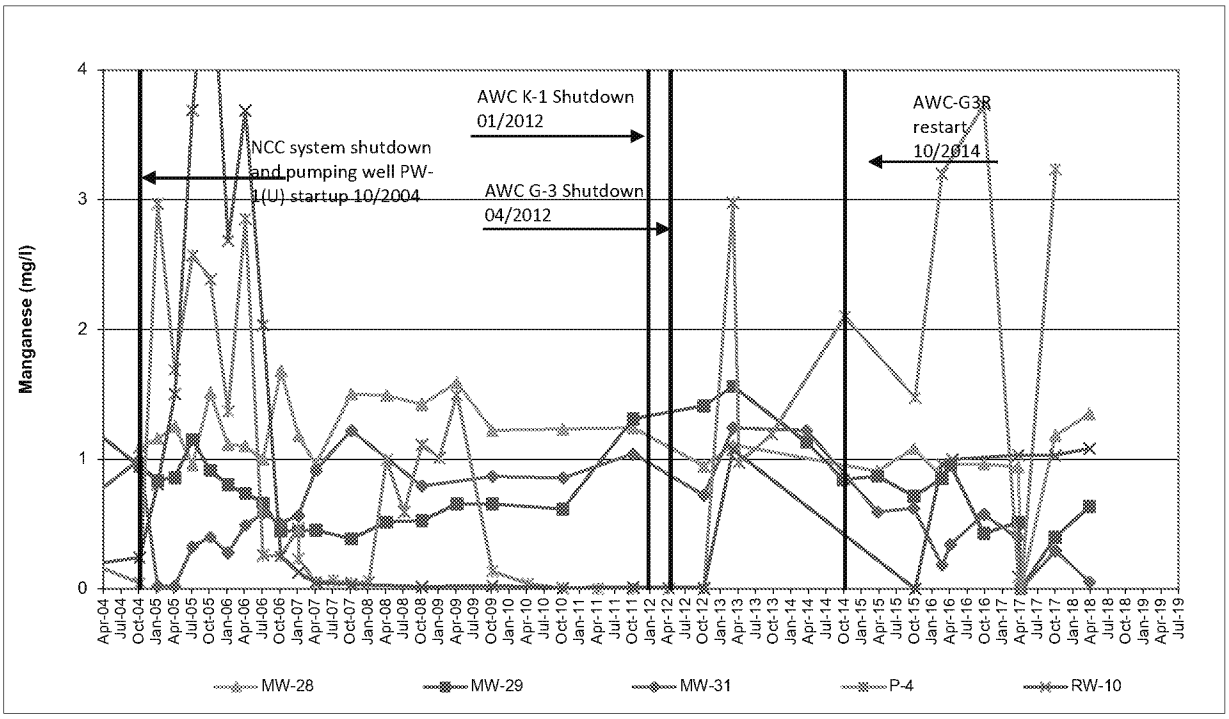
Golder Associates	Project Number:	013-6052		FIGURE F-7E
	Prepared by:	TGB	6/25/2018	
	Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

NORMAL SCALE <6 mg/l



NORMAL SCALE, <4 mg/l

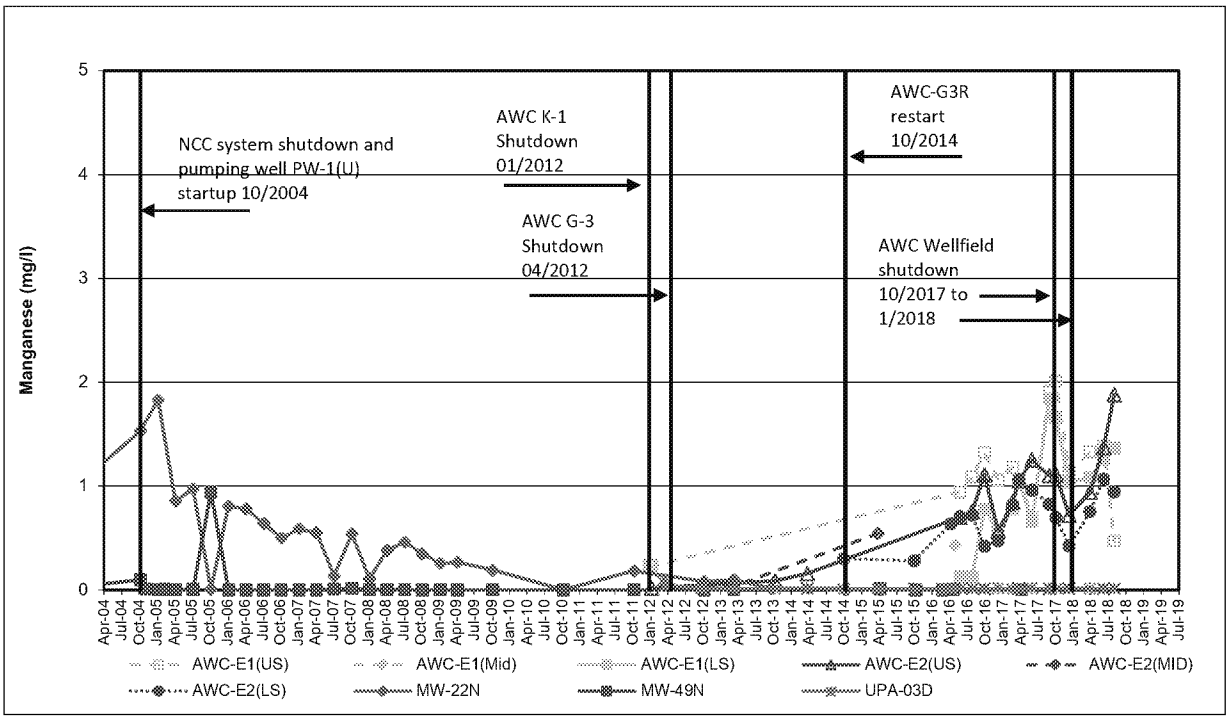


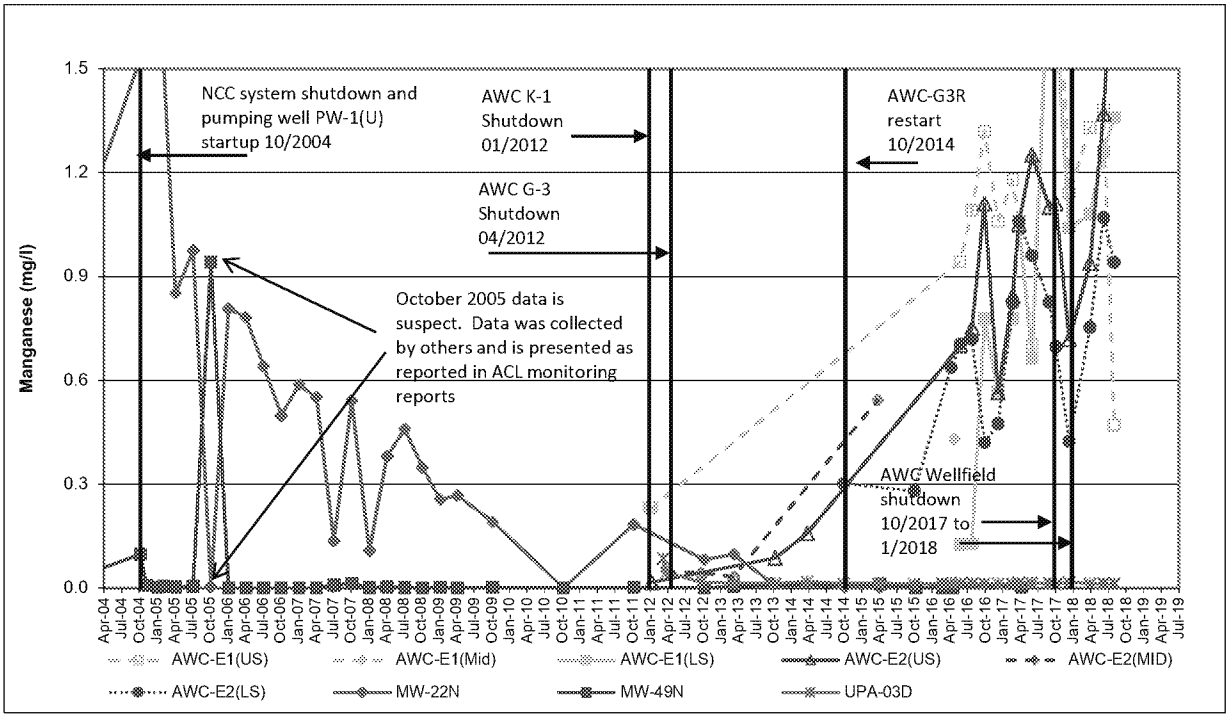
Note: Prior to January 2008, routine groundwater samples for the DS&G site were analyzed for total metals only; therefore, data presented for samples collected prior to January 2008 are based on total manganese results..

Manganese - UPA Downgradient - Western Edge NCC Well Trends

Golder Associates	Project Number:	013-6052		FIGURE F-8E
	Prepared by:	TGB	6/25/2018	
	Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx





Notes: Prior to January 2008, routine groundwater samples for the DS&G site were analyzed for total metals only; therefore, data presented for samples collected prior to January 2008 are based on total manganese results.

On May 4 2016, AWC collected a combined sample from the shallow and deep aquifer at AWC-E1 via a 3x purge of the entire screen.

Manganese - UPA Downgradient - Well Trends in Front of AWC Wellfield

Golder Associates	Project Number:	013-6052		FIGURE F-9E
	Prepared by:	TGB	6/25/2018	
	Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

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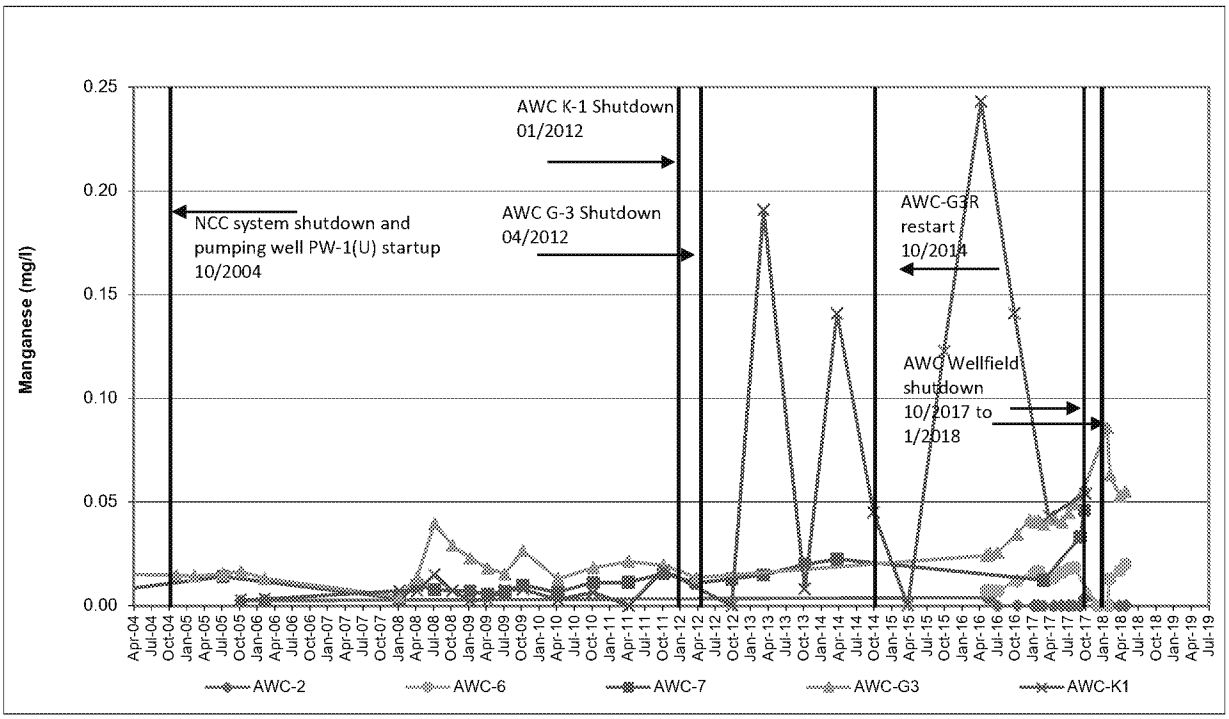

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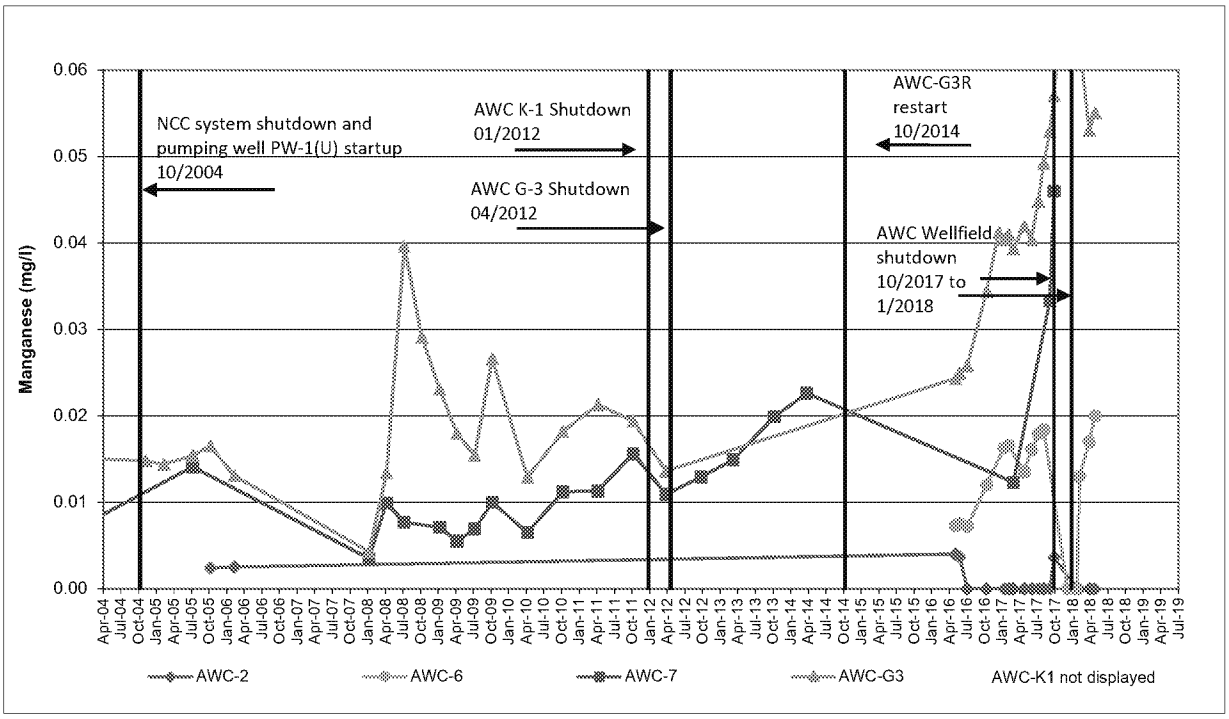
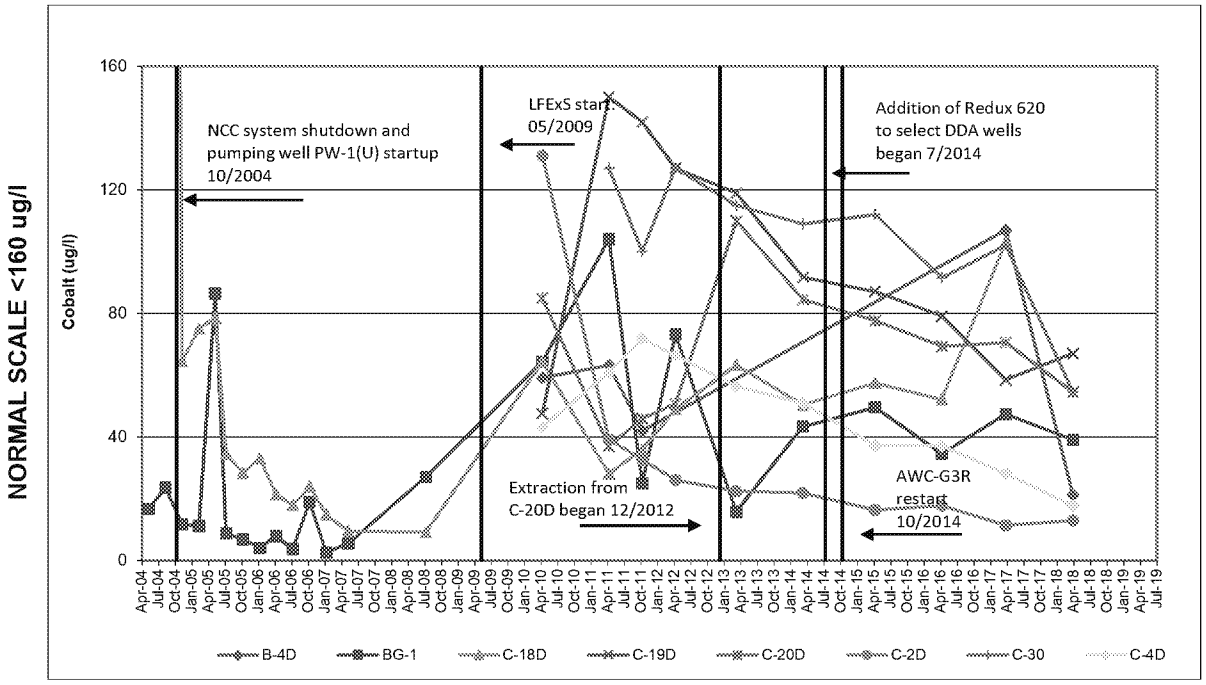


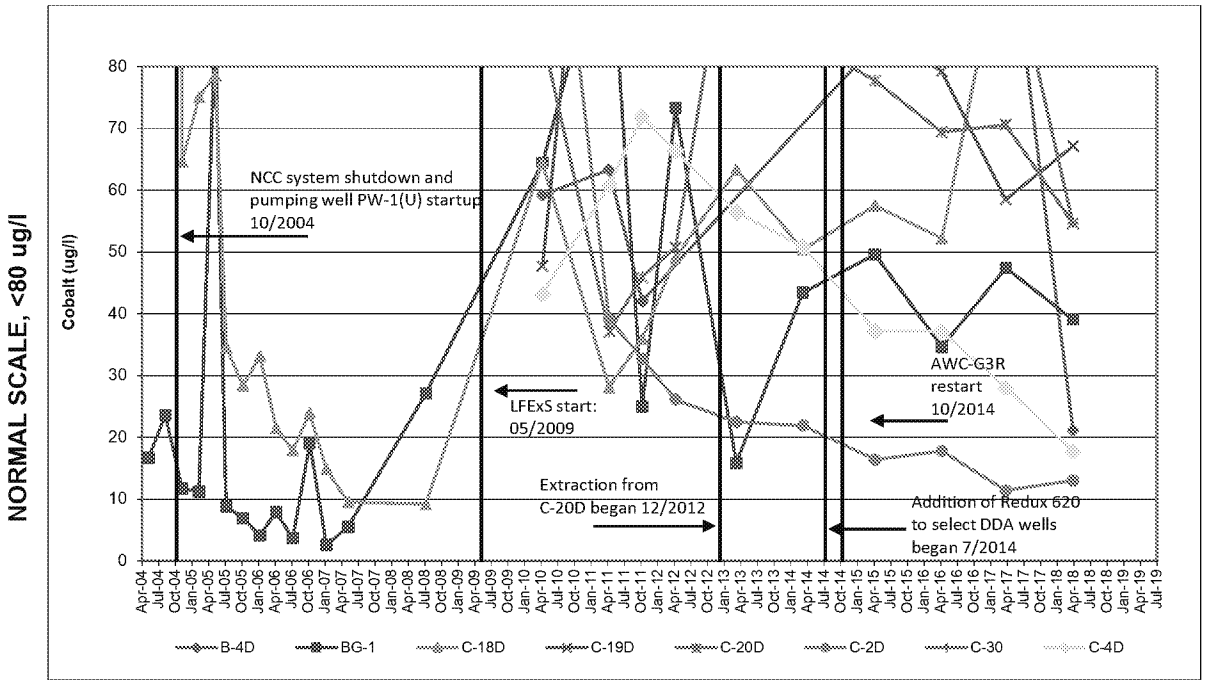
Note: Prior to January 2008, routine groundwater samples for the DS&G site were analyzed for total metals only; therefore, data presented for samples collected prior to January 2008 are based on total manganese results.

Manganese - UPA Downgradient - AWC Well Trends

Golder Associates	Project Number:	013-6052	FIGURE F-10E
	Prepared by:	TGB 6/25/2018	
	Checked by:	BPC 8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM 8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

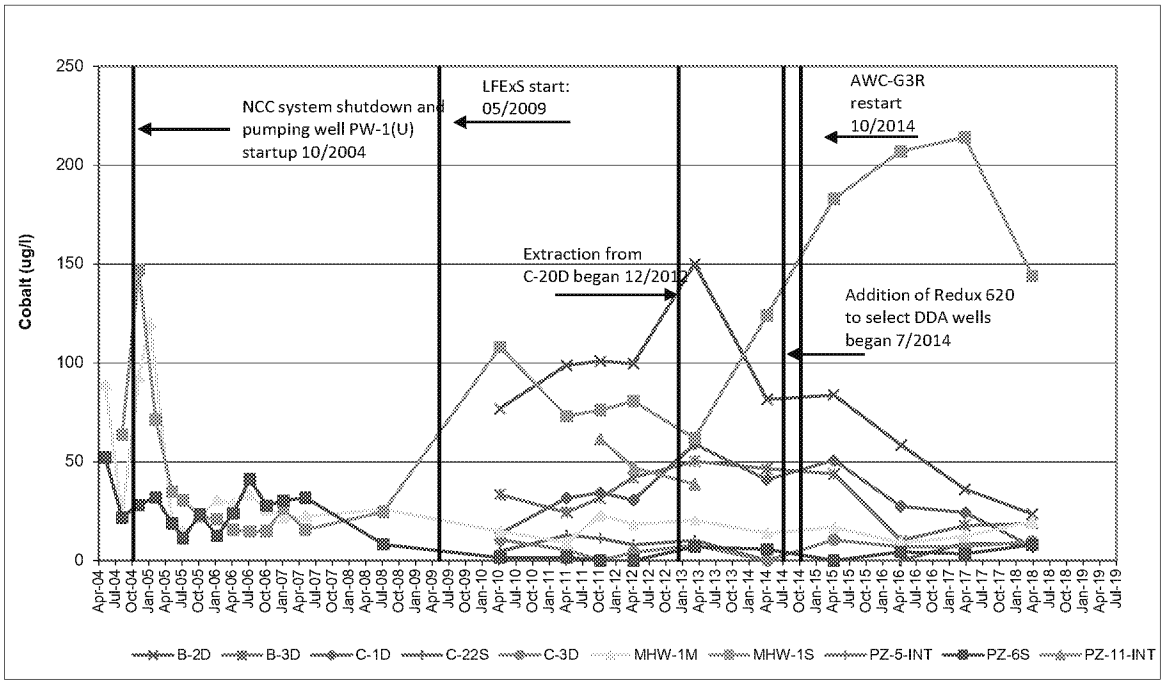


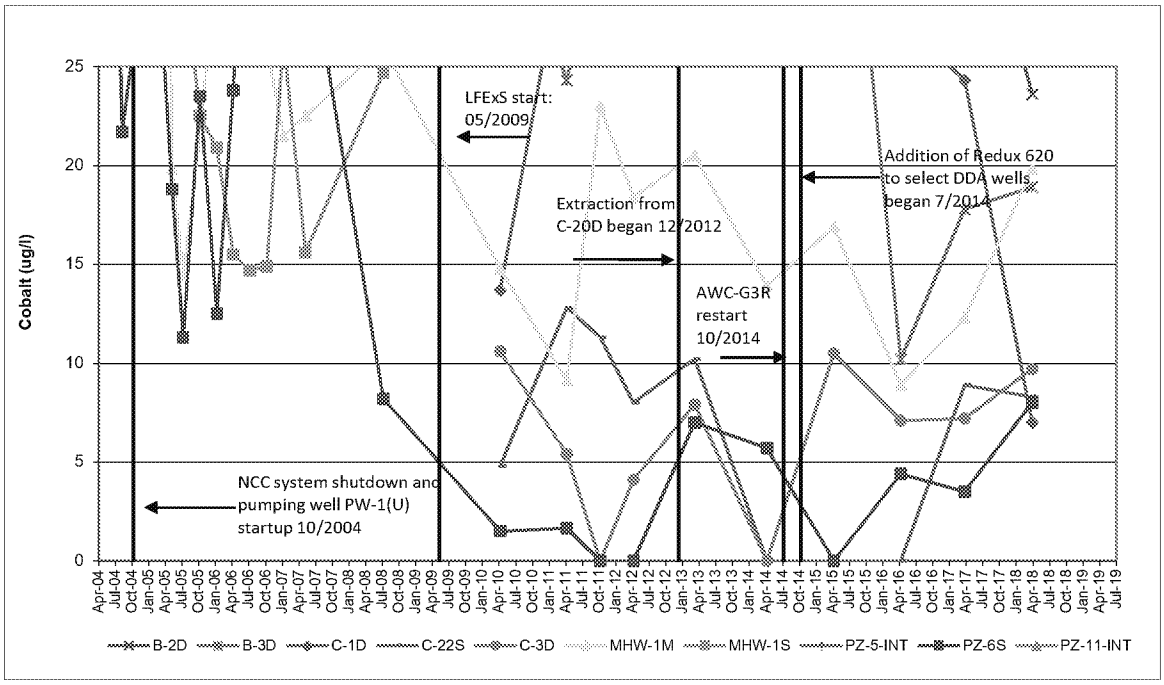


Cobalt - DDA Groundwater - LFExS Extraction Well Trends

Golder Associates	Project Number:	013-6052	FIGURE F-1F
	Prepared by:	TGB 6/25/2018	
	Checked by:	BPC 8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM 8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

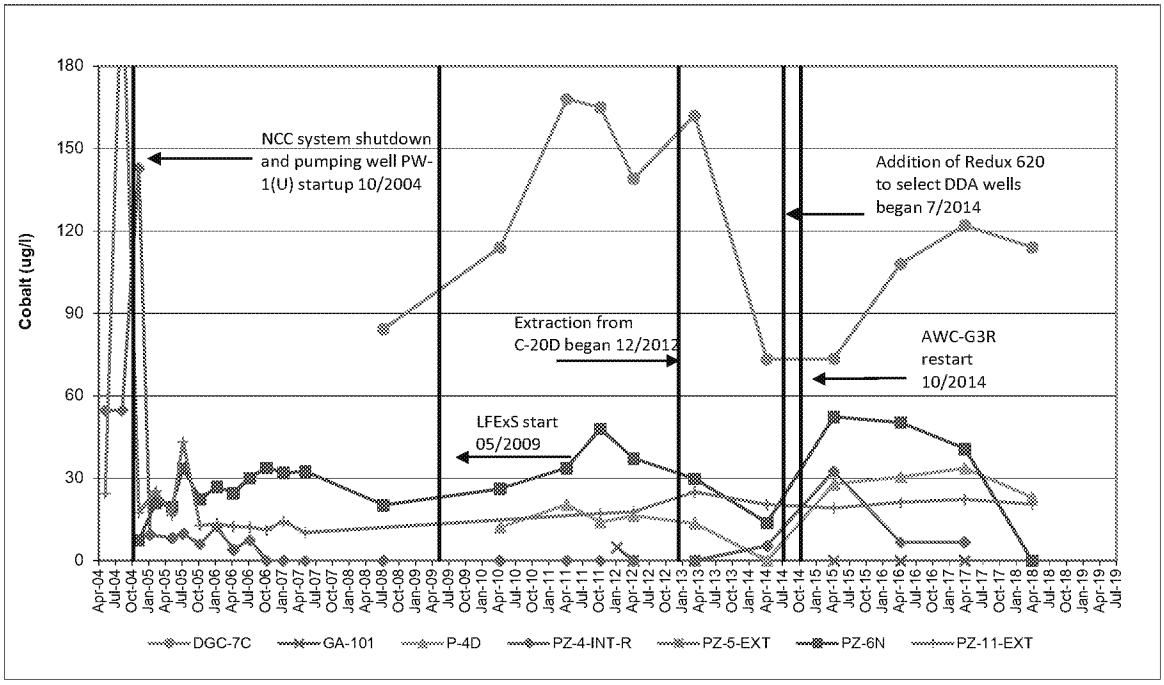


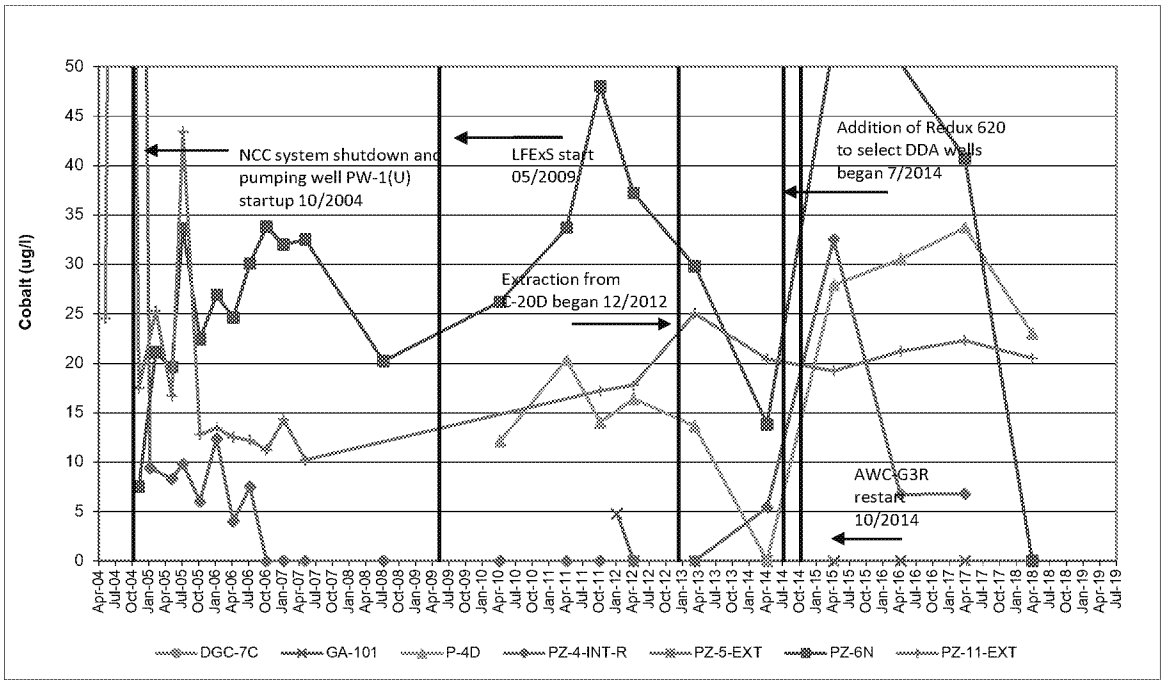


Cobalt - DDA Groundwater - LFExS Monitoring Well Trends

Golder Associates	Project Number:	013-6052	FIGURE F-2F
	Prepared by:	TGB 6/25/2018	
	Checked by:	BPC 8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM 8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

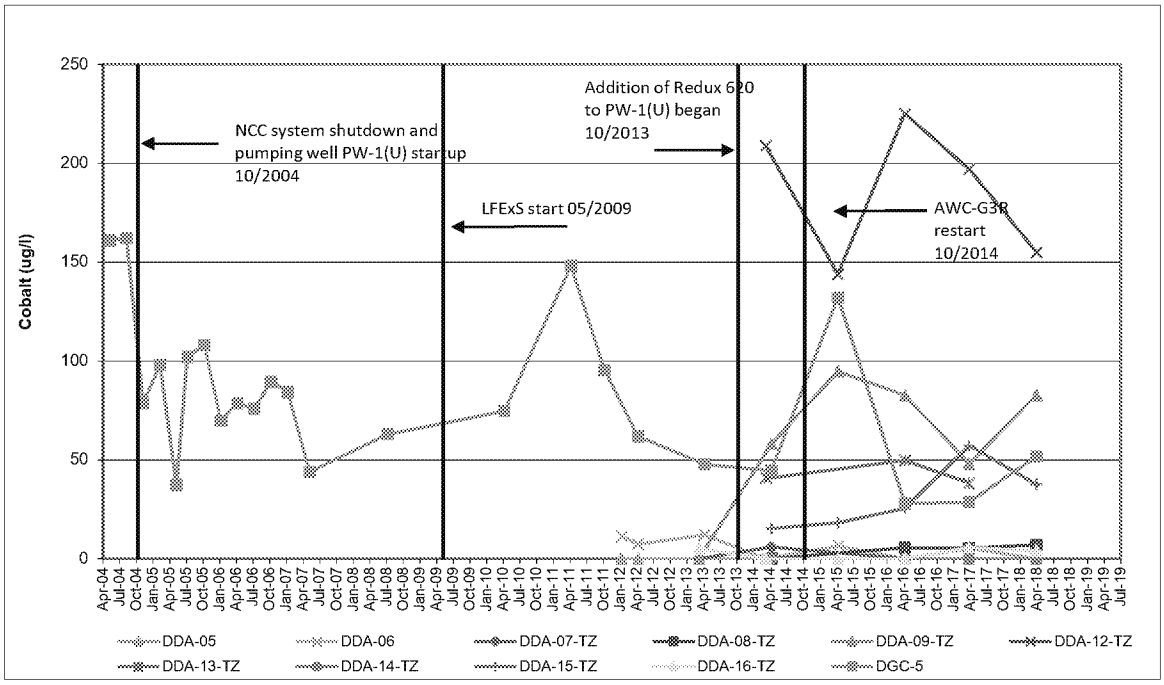


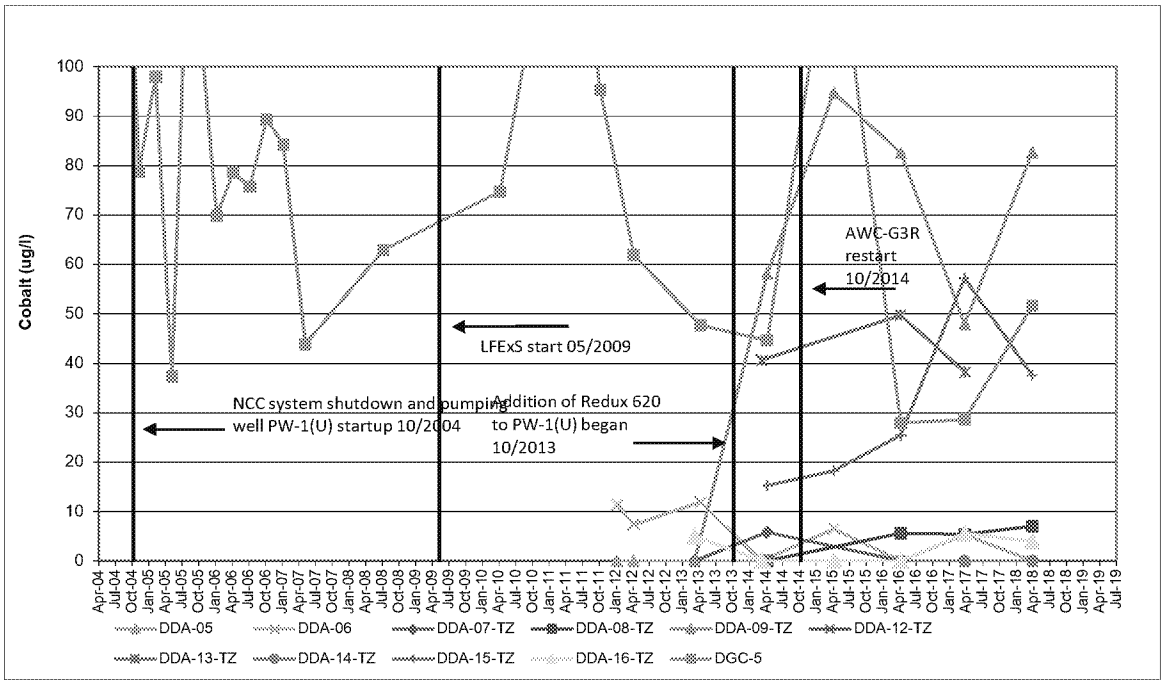


Cobalt - DDA Monitoring Well Trends

Golder Associates	Project Number:	013-6052	FIGURE F-3F
	Prepared by:	TGB 6/25/2018	
	Checked by:	BPC 8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM 8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

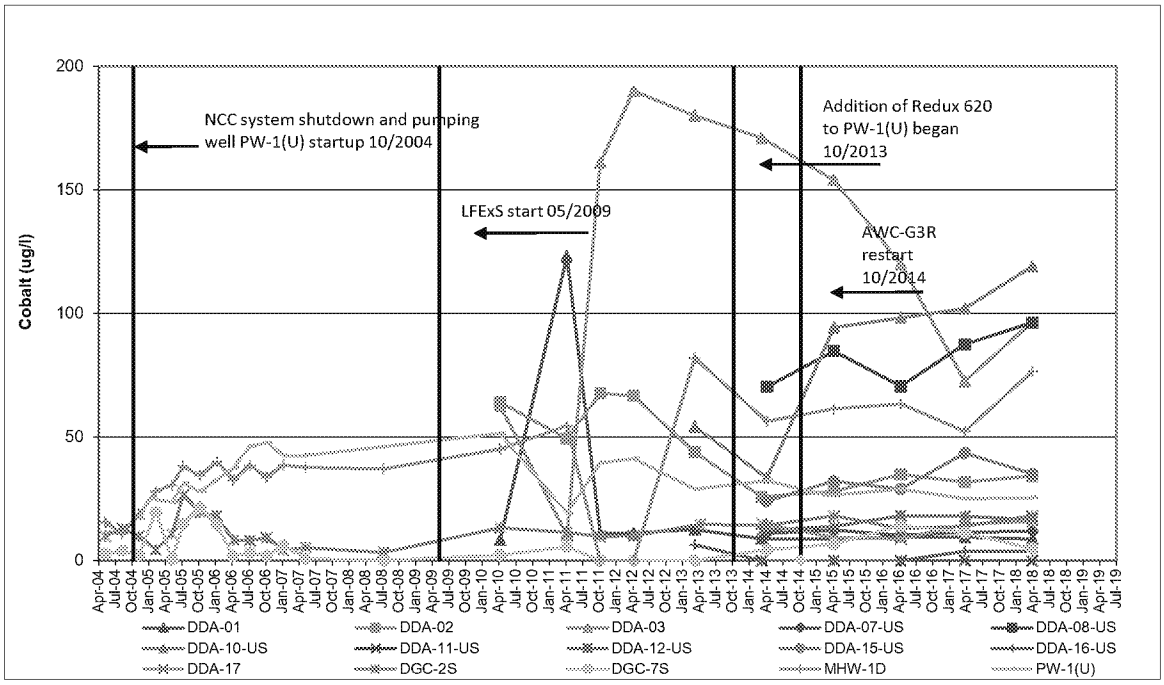


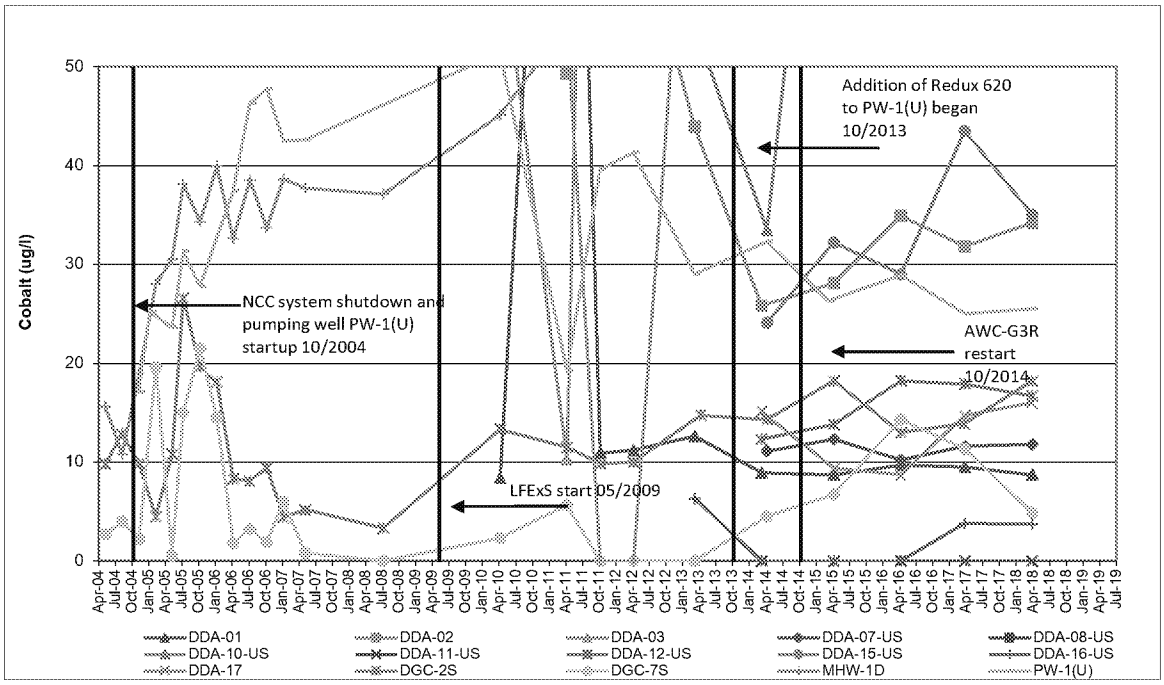


Cobalt - DDA to Well PW-1(U) UPCU Transition Zone Trends

Golder Associates	Project Number:	013-6052	FIGURE F-4F
	Prepared by:	TGB 6/25/2018	
	Checked by:	BPC 8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM 8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

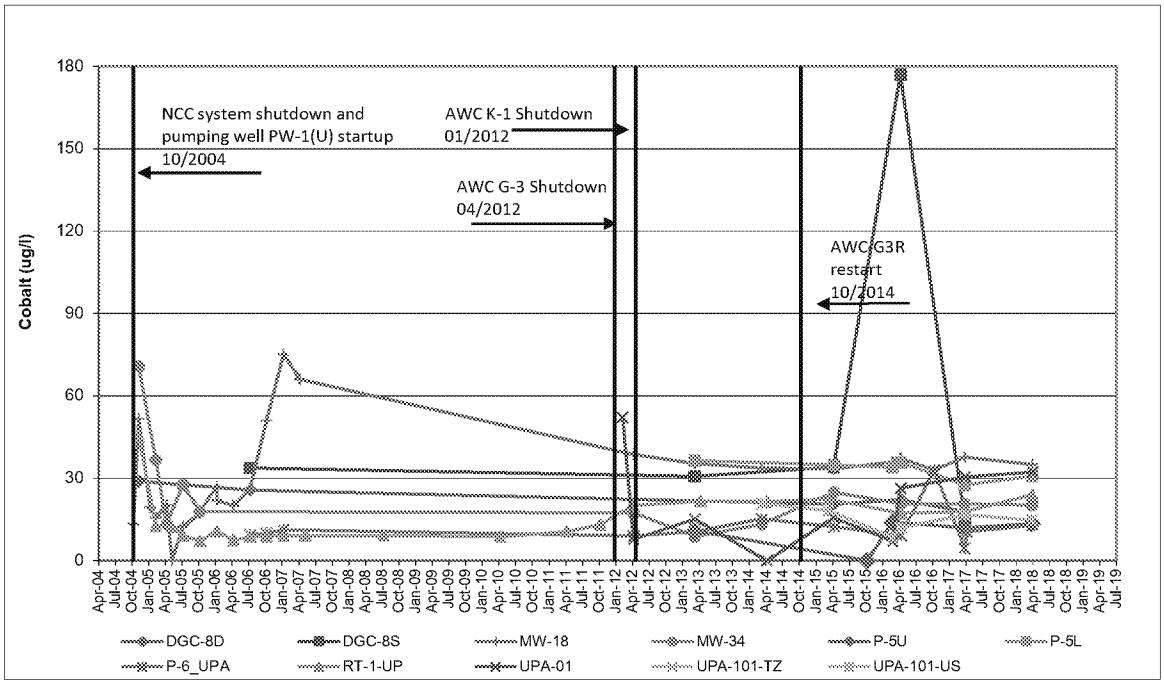


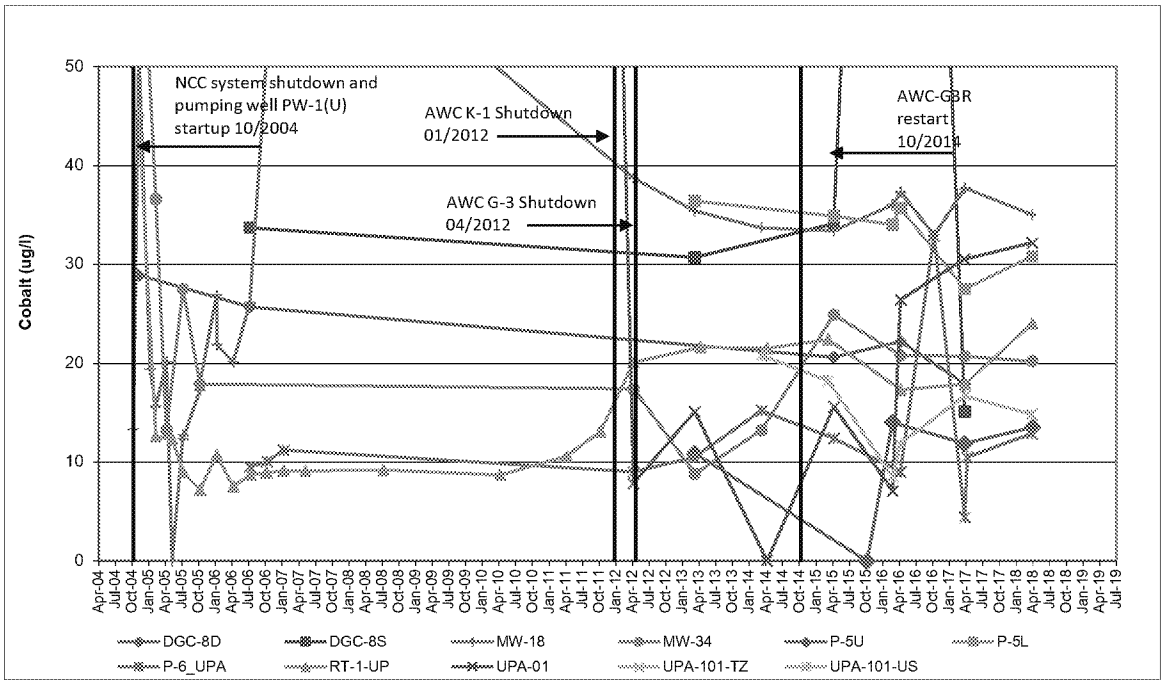


Cobalt - DDA to Well PW-1(U) UPA Trends

Golder Associates	Project Number:	013-6052		FIGURE F-5F
	Prepared by:	TGB	6/25/2018	
	Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx



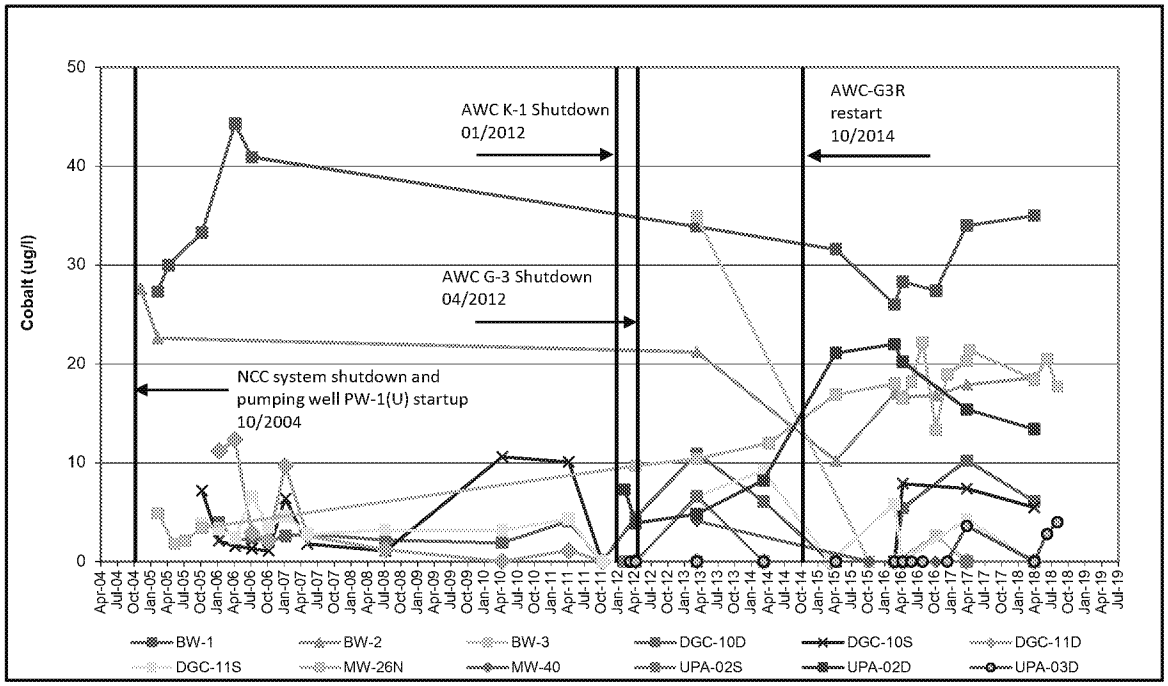


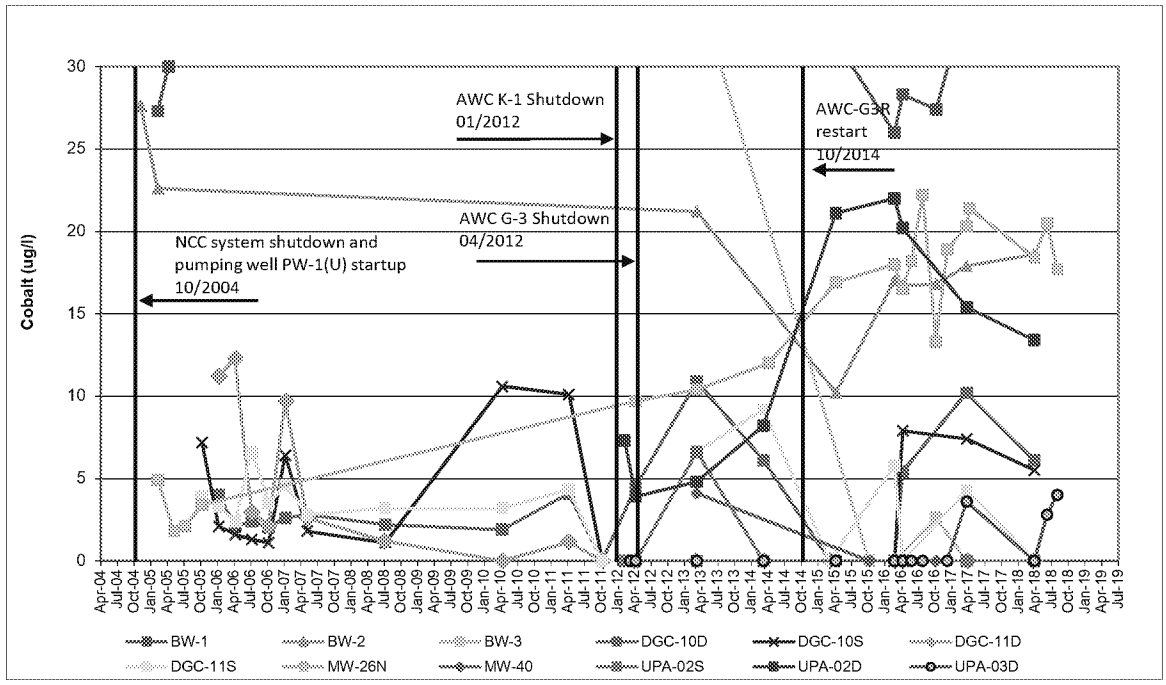
Cobalt - UPA Downgradient of Well PW-1(U) Trends - Well P-6 Area

Golder Associates

Project Number:	013-6052		FIGURE F-6F
Prepared by:	TGB	6/25/2018	
Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx



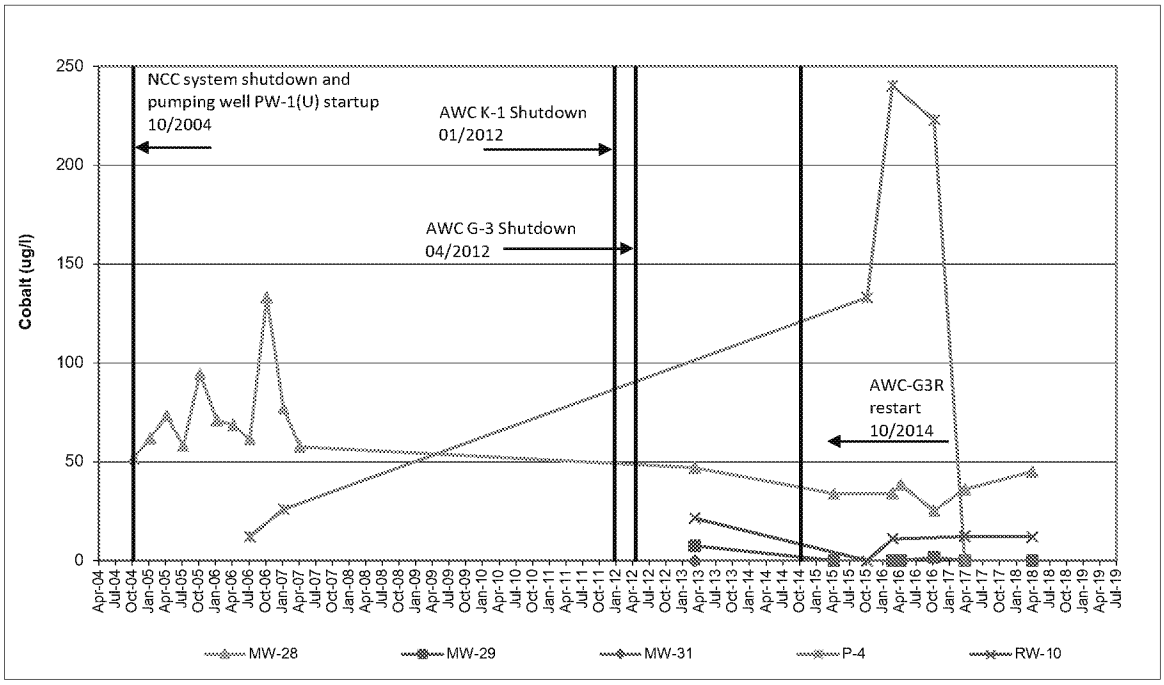


Cobalt - UPA Downgradient of Well PW-1(U) Trends

Golder Associates	Project Number:	013-6052	FIGURE F-7F
	Prepared by:	TGB 6/25/2018	
	Checked by:	BPC 8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM 8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

NORMAL SCALE <250 ug/l



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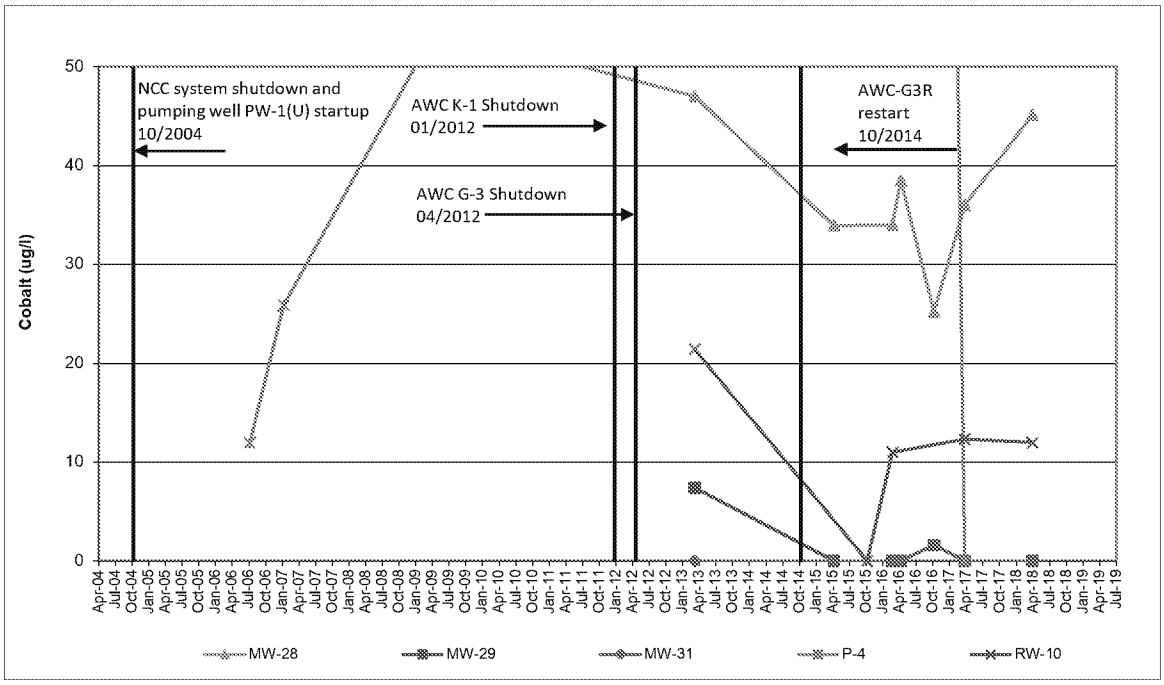

Cobalt - UPA Downgradient - Western Edge NCC Well Trends

Golder Associates	Project Number:	013-6052		FIGURE F-8F
	Prepared by:	TGB	6/25/2018	
	Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

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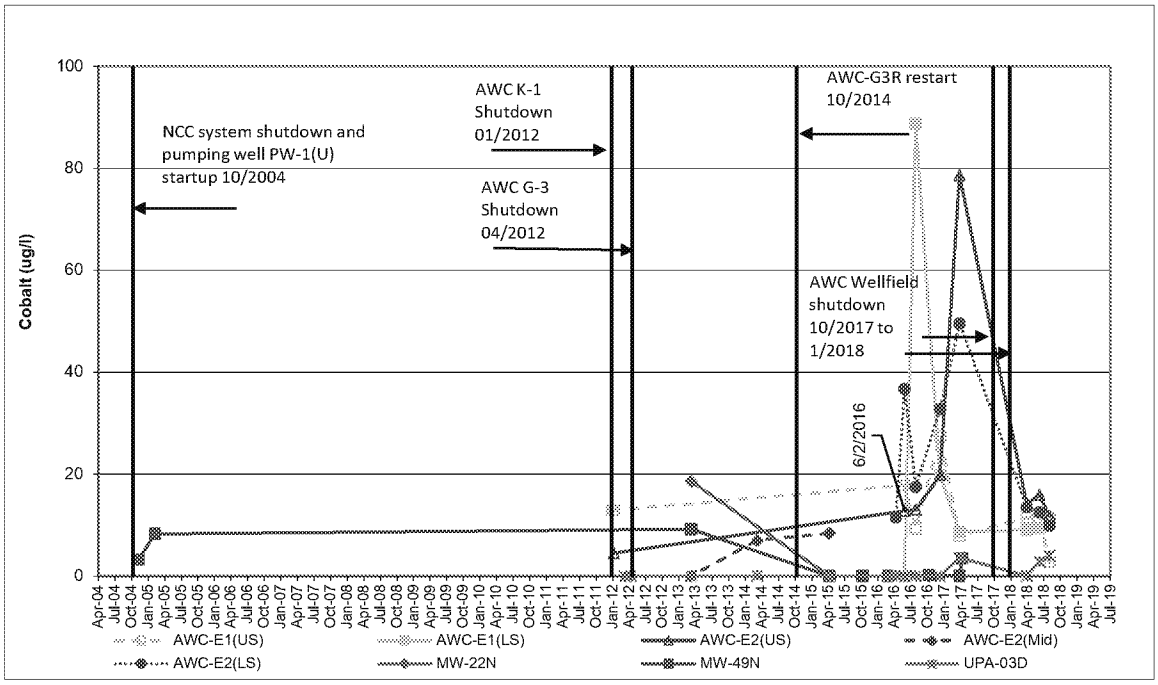

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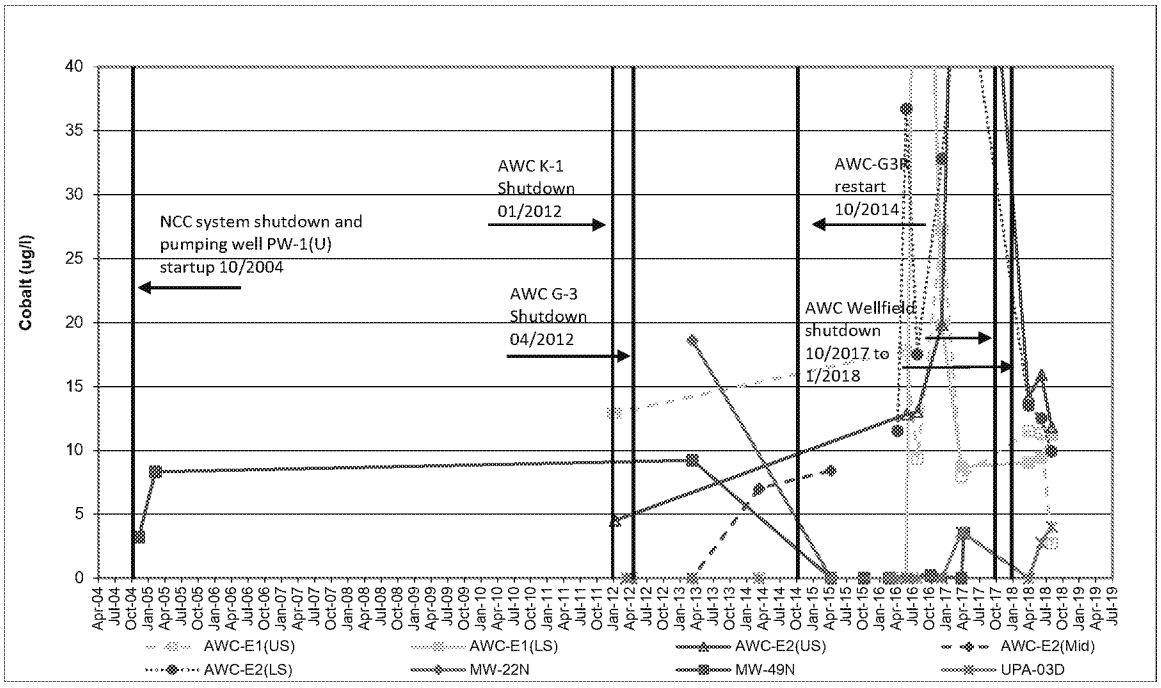
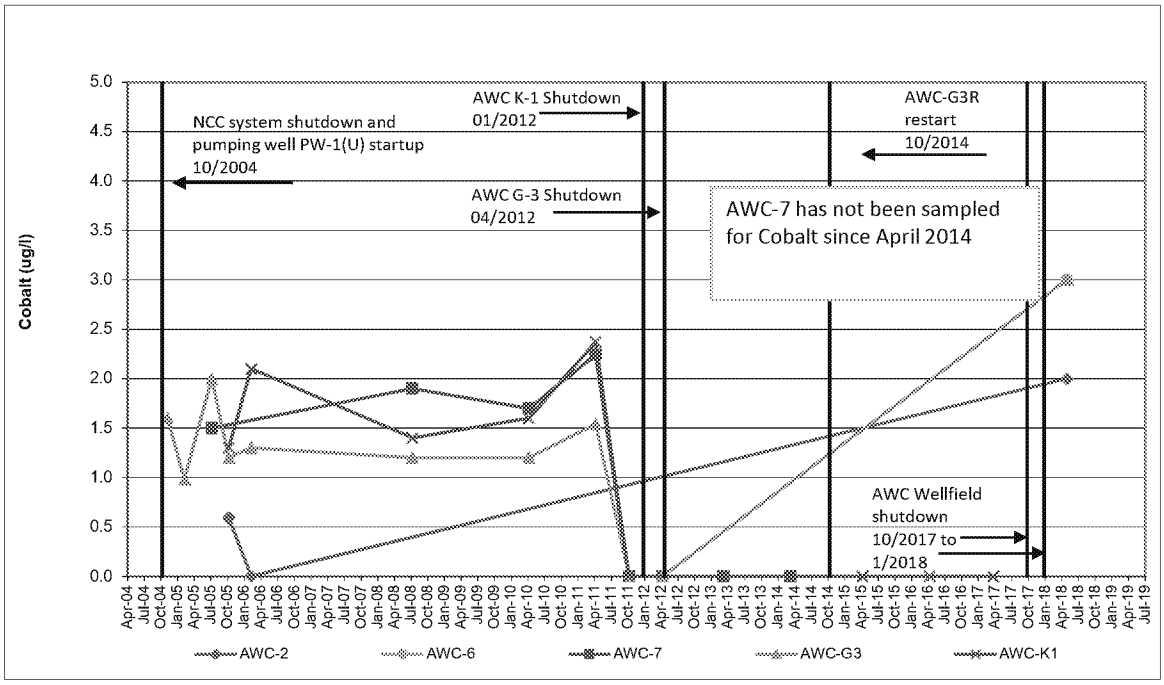


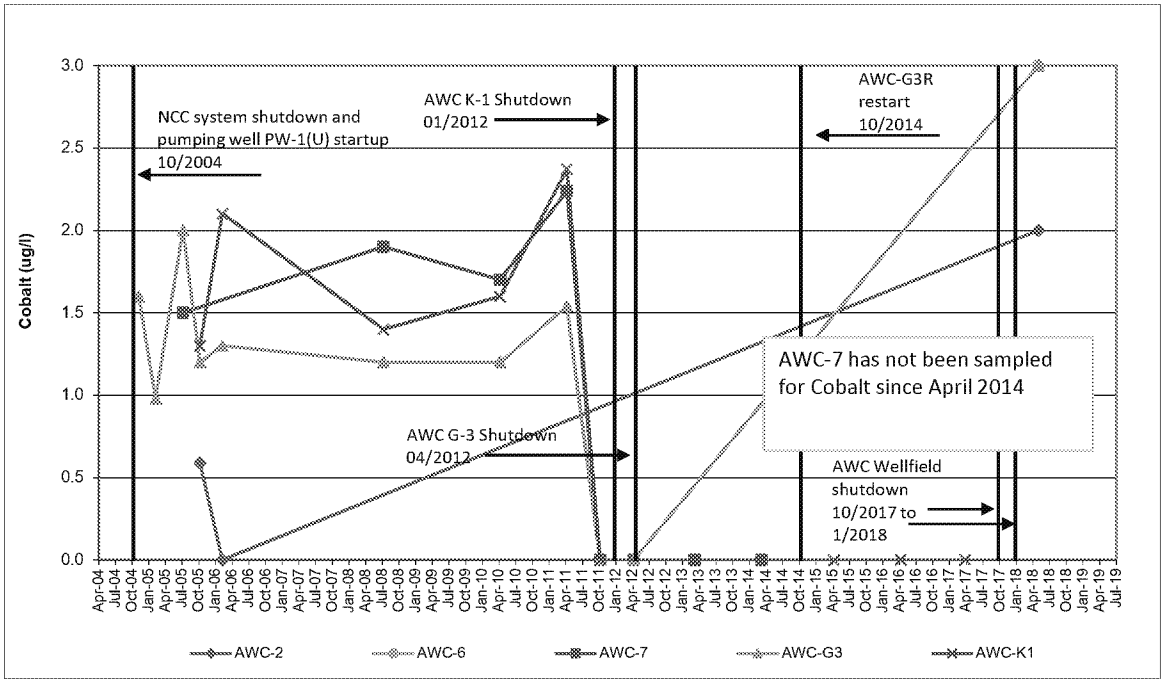
Cobalt - UPA Downgradient - Well Trends in Front of AWC Wellfield

Golder Associates

Project Number:	013-6052		FIGURE F-9F
Prepared by:	TGB	6/25/2018	
Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx





Cobalt - UPA Downgradient - AWC Well Trends

Golder Associates	Project Number:	013-6052		FIGURE F-10F
	Prepared by:	TGB	6/25/2018	
	Checked by:	BPC	8/29/2018	Delaware Sand and Gravel Superfund Site
	Reviewed by:	TAM	8/29/2018	

\\Manchester\data\Projects\2001\013-6052 DS&G\Trends\44 Trends for 2018 Q1\DSG Trends V44.0.xlsx

APPENDIX G

Effluent Analytical Reports and Mass Loading Estimates

Appendix Table G-1
PW-1 (U) and TTO Metals Mass Loading Estimate
Delaware Sand & Gravel Superfund Site
New Castle County, Delaware

PW-1 (U) DISCHARGE	Permit Limit (lb/day) Based on Flow Rate (gpm) of	Permit Limit (ug/l) Based on Permitted Flow Rate															
		Analytical Date	4/7/2016			9/30/2016			3/27/2017			10/9/2017			4/12/2018		
Total Metals (ug/L)	39	Method Number	E200.7	E245.1	ISM01.3	E200.7	E245.1	ISM01.3	E200.7	E245.1	ISM01.3	E200.7	E245.1	ISM02.3	E200.7	E245.1	ISM02.3
Arsenic	0.04215	90	<3.1		3.2	<3.1		2.8	<3.1		2.8	<3.1		2.9	<4.2		2.1
Cadmium	0.00141	3	<1.6		<1.0	<1.6		<0.22	<1.6		<0.22	<1.6		<0.15	<2.1		<0.08
Chromium	0.02342	50	<4.6		<2.0	<4.6		<0.13	<4.6		<0.13	<4.6		<0.13	<5.9		<0.46
Copper	0.04684	100	<5.6		<2.0	<5.6		1.3 J	48		38.7	<5.6		7.9	<5.5		1.2 J
Lead	0.02295	49	10.1		0.91	<4.3		2.2 B	7.1		4.1	<4.3		1.1	<3.8		0.98 J
Mercury	0.00014	0.3		<0.14	<0.044		<0.17	<0.044		<0.17	<0.075		<0.17	<0.075		<0.17	<0.075
Molybdenum*	0.00000	0.0	<4.5			<4.5			<4.5			<4.5			<4.7		
Nickel	0.35128	751	<5.5		4.6	<5.5		3.9	<5.5		5.1	<5.5		5.3	<6.3		3.4
Selenium	0.23419	500	<4.6		4 J	<4.6		3.4 J	<4.6		3.9 J	<4.6		3.4 J	<4.2		1.8 J
Zinc	0.08197	175	<5.2		21.5	14.5 J		11.5	58.1		62	<5.2		22.4	33.4		30.2

LFExS Discharge TTO	Permit Limit (lb/day) Based on Flow Rate (gpm) of	Permit Limit (ug/l) Based on Permitted Flow Rate										
		Analytical Date	4/7/2016		9/30/2016		3/27/2017		10/9/2017		4/12/2018	
Total Metals (ug/L)	12	Method Number	E200.7	E245.1	E200.7	E245.1	E200.7	E245.1	E200.7	E245.1	E200.7	E245.1
Arsenic	0.012970	90	6.8		6.8		4.3 J		7.1		6.4	
Cadmium	0.000432	3	<1.6		<1.6		<1.6		<1.6		<2.1	
Chromium	0.007206	15	<4.6		<4.6		<4.6		<4.6		<5.9	
Copper	0.014412	31	6.7		12.4 J		15.7 J		<5.6		11.8 J	
Lead	0.007062	15	12		6.9		<4.3		4.7 J		<3.8	
Mercury	0.000043	0.1		<0.14		<0.17		<0.17		<0.17		<0.17
Molybdenum*	0.000000	0.0	<4.5		<4.5		<4.5		<4.5		<4.7	
Nickel	0.108086	231	12		15.5 J		11.9 J		8.6 J		11 J	
Selenium	0.072058	154	<4.6		<4.6		<4.6		<4.6		<4.2	
Zinc	0.025220	54	14.5		10.8 J		17.2 J		8.4 J		15.4 J	

Prepared by: MBS 6/19/2018
Checked by: MLM 6/19/2018
Reviewed by: TAM 8/24/2018

Notes:
lb/day = pounds per day
gpm = gallons per minute
ug/L = micrograms per liter
NA = Not Available
Detection limits use method detection limit (MDL) values
Detection limits exceed permit limit
J = estimated result
B = Blank Contamination
TTO = total toxic organics
* Permit limit for molybdenum confirmed to be '0.000000 lb/day' based on review of discharge permit titled "Wastewater Discharge Permit WDP 04-107, Permit Revision 5" dated July 1, 2014

Appendix Table G-2
PW-1 (U) and TTO Wet Chemistry Mass Loading Estimate
Delaware Sand & Gravel Superfund Site
New Castle County, Delaware

PW-1 (U) DISCHARGE Wet Chemistry (mg/L)	Permit Limit (lb/day) Based on Flow Rate (gpm) of 39	Permit Limit (mg/l) Based on Permitted Flow Rate Analytical Date	4/7/2016	9/30/2016	3/27/2017	10/9/2017	4/12/2018
Cyanide, Total	0.2295	0.49	<2.0	<0.01	<0.01	0.0019 J	4.2 J
Ammonia (SM4500-NH3)	16.393	35	0.61	0.65	0.6	0.49	0.23
Biochemical Oxygen Demand (SM5210B)	234.187	500	<0.87	4.1	3.5	3.2	1.6
Total Suspended Solids (SM2540D)	234.187	500	4.2	13.5	17	13.1	14

LFExS Discharge TTO Wet Chemistry (mg/L)	Permit Limit (lb/day) Based on Flow Rate (gpm) of 12	Permit Limit (mg/l) Based on Permitted Flow Rate Analytical Date	4/7/2016	9/30/2016	3/27/2017	10/9/2017	4/12/2018
Cyanide, Total	0.070616	0.49	<0.004	0.0036 J	<0.01	<0.002	<0.01
Ammonia (SM4500-NH3)	5.044	35	0.87 B	1.3	1	0.54	0.89
Biochemical Oxygen Demand (SM5210B)	72.058	500	2.9	2.1	3.1	1.8	<1.5
Total Suspended Solids (SM2540D)	72.058	500	35.2	55.6	58.8	56.4	49.2

Notes:
lb/day = pounds per day
gpm = gallons per minute
mg/L = milligrams per liter
Detection Limits use reporting limit (RL) values
J = estimated result
B = blank contamination
TTO = total toxic organics

Prepared by: MBS 6/19/2018
Checked by: MLM 6/19/2018
Reviewed by: TAM 8/24/2018

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G - PW(1) Discharge

TestAmerica Job ID: 460-153936-1

Client Sample ID: PW-1 (U) Discharge

Lab Sample ID: 460-153936-1

Date Collected: 04/12/18 14:40
Date Received: 04/12/18 20:55

Matrix: Water

Method: Trace VOA - 2.3/Trace Volatiles

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
Chloromethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
Vinyl chloride	0.50	U	0.50		ug/L			04/18/18 13:32	1
Bromomethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
Chloroethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
Trichlorofluoromethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
1,1-Dichloroethene	0.50	U	0.50		ug/L			04/18/18 13:32	1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
Acetone	**2.4**	**J**	5.0		ug/L			04/18/18 13:32	1
Carbon disulfide	**0.11**	**J B**	0.50		ug/L			04/18/18 13:32	1
Methyl acetate	0.50	U	0.50		ug/L			04/18/18 13:32	1
Methylene Chloride	0.50	U	0.50		ug/L			04/18/18 13:32	1
trans-1,2-Dichloroethene	0.50	U	0.50		ug/L			04/18/18 13:32	1
Methyl tert-butyl ether	**0.24**	**J**	0.50		ug/L			04/18/18 13:32	1
1,1-Dichloroethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
cis-1,2-Dichloroethene	**0.097**	**J**	0.50		ug/L			04/18/18 13:32	1
2-Butanone	5.0	U	5.0		ug/L			04/18/18 13:32	1
Bromochloromethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
Chloroform	0.50	U	0.50		ug/L			04/18/18 13:32	1
1,1,1-Trichloroethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
Cyclohexane	**0.58**		0.50		ug/L			04/18/18 13:32	1
Carbon tetrachloride	0.50	U	0.50		ug/L			04/18/18 13:32	1
Benzene	**10**		0.50		ug/L			04/18/18 13:32	1
1,2-Dichloroethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
Trichloroethene	0.50	U	0.50		ug/L			04/18/18 13:32	1
Methylcyclohexane	**1.6**		0.50		ug/L			04/18/18 13:32	1
1,2-Dichloropropane	0.50	U	0.50		ug/L			04/18/18 13:32	1
Bromodichloromethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
cis-1,3-Dichloropropene	0.50	U	0.50		ug/L			04/18/18 13:32	1
4-Methyl-2-pentanone	5.0	U	5.0		ug/L			04/18/18 13:32	1
Toluene	0.50	U	0.50		ug/L			04/18/18 13:32	1
trans-1,3-Dichloropropene	0.50	U	0.50		ug/L			04/18/18 13:32	1
1,1,2-Trichloroethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
Tetrachloroethene	**2.2**		0.50		ug/L			04/18/18 13:32	1
2-Hexanone	5.0	U	5.0		ug/L			04/18/18 13:32	1
Dibromochloromethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
1,2-Dibromoethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
Chlorobenzene	**1.6**		0.50		ug/L			04/18/18 13:32	1
Ethylbenzene	**2.6**		0.50		ug/L			04/18/18 13:32	1
o-Xylene	0.50	U	0.50		ug/L			04/18/18 13:32	1
m,p-Xylene	**16**		0.50		ug/L			04/18/18 13:32	1
Styrene	0.50	U	0.50		ug/L			04/18/18 13:32	1
Bromoform	0.50	U	0.50		ug/L			04/18/18 13:32	1
Isopropylbenzene	**1.4**		0.50		ug/L			04/18/18 13:32	1
1,1,2,2-Tetrachloroethane	0.50	U	0.50		ug/L			04/18/18 13:32	1
1,3-Dichlorobenzene	0.50	U	0.50		ug/L			04/18/18 13:32	1
1,4-Dichlorobenzene	**0.12**	**J**	0.50		ug/L			04/18/18 13:32	1
1,2-Dichlorobenzene	**0.24**	**J**	0.50		ug/L			04/18/18 13:32	1
1,2-Dibromo-3-Chloropropane	0.50	U	0.50		ug/L			04/18/18 13:32	1

Client Sample ID: PW-1 (U) Discharge — Lab Sample ID: 460-153936-1

Date Collected: 04/12/18 14:40 — Matrix: Water
Date Received: 04/12/18 20:55

Method: Trace VOA - 2.3/Trace Volatiles (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	0.50	U	0.50		ug/L			04/18/18 13:32	1
1,2,3-Trichlorobenzene	0.50	U	0.50		ug/L			04/18/18 13:32	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown alkane	*0.85*	*J*	*ug/L*		*5.19*			*04/18/18 13:32*	*1*
Unknown alkane	*0.80*	*J*	*ug/L*		*5.68*			*04/18/18 13:32*	*1*
Benzene, propyl-	*3.1*	*J N*	*ug/L*		*11.02*	*103-65-1*		*04/18/18 13:32*	*1*
Benzene, 1-ethyl-2-methyl-	*6.9*	*J N*	*ug/L*		*11.13*	*611-14-3*		*04/18/18 13:32*	*1*
Benzene, 1,2,3-trimethyl-	*4.2*	*J N*	*ug/L*		*11.24*	*526-73-8*		*04/18/18 13:32*	*1*
Unknown	*4.0*	*J*	*ug/L*		*11.48*			*04/18/18 13:32*	*1*
Mesitylene	*19*	*J N*	*ug/L*		*11.69*	*108-67-8*		*04/18/18 13:32*	*1*
Unknown	*3.4*	*J*	*ug/L*		*12.20*			*04/18/18 13:32*	*1*
Unknown alkane	*4.4*	*J*	*ug/L*		*12.42*			*04/18/18 13:32*	*1*
Total Alkanes	*6.0*	*J*	*ug/L*			*STL00989*		*04/18/18 13:32*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Vinyl chloride-d3	*75*		*40 - 130*		*04/18/18 13:32*	*1*
Chloroethane-d5	*89*		*65 - 130*		*04/18/18 13:32*	*1*
1,1-Dichloroethene-d2	*68*		*60 - 125*		*04/18/18 13:32*	*1*
2-Butanone-d5	*82*		*40 - 130*		*04/18/18 13:32*	*1*
Chloroform-d	*91*		*70 - 125*		*04/18/18 13:32*	*1*
1,2-Dichloroethane-d4	*97*		*70 - 130*		*04/18/18 13:32*	*1*
Benzene-d6	*100*		*70 - 125*		*04/18/18 13:32*	*1*
1,2-Dichloropropane-d6	*87*		*60 - 140*		*04/18/18 13:32*	*1*
Toluene-d8	*95*		*70 - 130*		*04/18/18 13:32*	*1*
trans-1,3-Dichloropropene-d4	*88*		*55 - 130*		*04/18/18 13:32*	*1*
2-Hexanone-d5	*81*		*45 - 130*		*04/18/18 13:32*	*1*
1,1,2,2-Tetrachloroethane-d2	*92*		*65 - 120*		*04/18/18 13:32*	*1*
1,2-Dichlorobenzene-d4	*102*		*80 - 120*		*04/18/18 13:32*	*1*

Method: SVOA - 2.3/Semivolatiles

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**30**		2.1		ug/L		04/17/18 13:43	04/23/18 13:38	1
Benzaldehyde	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
Phenol	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
Bis(2-chloroethyl) ether	**9.0**	**J**	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
2-Chlorophenol	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
2-Methylphenol	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
2,2'-Oxybis(1-chloropropane)	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
Acetophenone	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
4-Methylphenol	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
N-Nitroso-di-n propylamine	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Hexachloroethane	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Nitrobenzene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Isophorone	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
2-Nitrophenol	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
2,4-Dimethylphenol	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Bis(2-chloroethoxy)methane	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
2,4-Dichlorophenol	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Naphthalene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1

Client Sample ID: PW-1 (U) Discharge

Lab Sample ID: 460-153936-1

Date Collected: 04/12/18 14:40
Date Received: 04/12/18 20:55

Matrix: Water

Method: SVOA - 2.3/Semivolatiles (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
Hexachlorobutadiene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Caprolactam	**0.43**	**J**	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
4-Chloro-3-methylphenol	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
2-Methylnaphthalene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Hexachlorocyclo-pentadiene	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
2,4,6-Trichlorophenol	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
2,4,5-Trichlorophenol	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
1,1'-Biphenyl	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
2-Chloronaphthalene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
2-Nitroaniline	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Dimethylphthalate	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
2,6-Dinitrotoluene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Acenaphthylene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
3-Nitroaniline	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
Acenaphthene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
2,4-Dinitrophenol	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
4-Nitrophenol	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
Dibenzofuran	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
2,4-Dinitrotoluene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Diethylphthalate	**0.39**	**J B**	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Fluorene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
4-Chlorophenyl-phenyl ether	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
4-Nitroaniline	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
4,6-Dinitro-2-methylphenol	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
N-Nitrosodiphenylamine	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
1,2,4,5-Tetrachlorobenzene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
4-Bromophenyl-phenylether	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Hexachlorobenzene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Atrazine	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
Pentachlorophenol	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
Phenanthrene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Anthracene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Carbazole	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
Di-n-butylphthalate	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Fluoranthene	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
Pyrene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Butylbenzylphthalate	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
3,3'-Dichlorobenzidine	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
Benzo(a)anthracene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Chrysene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Bis(2-ethylhexyl)phthalate	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Di-n-octylphthalate	11	U	11		ug/L		04/17/18 13:43	04/23/18 13:38	1
Benzo(b)fluoranthene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Benzo(k)fluoranthene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Benzo(a)pyrene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Indeno(1,2,3-cd)pyrene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Dibenzo(a,h)anthracene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1
Benzo(g,h,i)perylene	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1

Client Sample ID: PW-1 (U) Discharge — Lab Sample ID: 460-153936-1

Date Collected: 04/12/18 14:40 Matrix: Water
Date Received: 04/12/18 20:55

Method: SVOA - 2.3/Semivolatiles (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6-Tetrachlorophenol	5.3	U	5.3		ug/L		04/17/18 13:43	04/23/18 13:38	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*2.5*	*J B*	*ug/L*		*5.64*		*04/17/18 13:43*	*04/23/18 13:38*	*1*
Benzene, 1,2,3-trimethyl-	*2.8*	*J N*	*ug/L*		*7.79*	*526-73-8*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
Indane	*2.5*	*J N*	*ug/L*		*8.37*	*496-11-7*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
Unknown	*10*	*J*	*ug/L*		*12.86*		*04/17/18 13:43*	*04/23/18 13:38*	*1*
Phenol, 4,4'-(1-methylethylidene)bis-	*2.9*	*J N*	*ug/L*		*18.39*	*80-05-7*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
Total Alkanes			*ug/L*			*STL00989*	*04/17/18 13:43*	*04/23/18 13:38*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*60*		*40 - 110*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
Phenol-d5	*64*		*10 - 130*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
Bis(2-chloroethyl)ether-d8	*66*		*25 - 120*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
2-Chlorophenol-d4	*67*		*20 - 130*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
4-Methylphenol-d8	*70*		*25 - 125*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
Nitrobenzene-d5	*64*		*20 - 125*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
2-Nitrophenol-d4	*67*		*20 - 130*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
2,4-Dichlorophenol-d3	*64*		*20 - 120*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
4-Chloroaniline-d4	*34*		*1 - 146*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
Dimethylphthalate-d6	*65*		*25 - 130*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
Acenaphthylene-d8	*68*		*10 - 130*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
4-Nitrophenol-d4	*73*		*10 - 150*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
Fluorene-d10	*64*		*25 - 125*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
4,6-Dinitro-2-methylphenol-d2	*52*		*10 - 130*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
Anthracene-d10	*70*		*25 - 130*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
Pyrene-d10	*69*		*15 - 130*	*04/17/18 13:43*	*04/23/18 13:38*	*1*
Benzo(a)pyrene-d12	*67*		*20 - 130*	*04/17/18 13:43*	*04/23/18 13:38*	*1*

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.0	U	5.0	4.2	ug/L		04/14/18 00:05	04/14/18 15:09	1
Cadmium	5.0	U	5.0	2.1	ug/L		04/14/18 00:05	04/14/18 15:09	1
Chromium	10.0	U	10.0	5.9	ug/L		04/14/18 00:05	04/14/18 15:09	1
Copper	25.0	U	25.0	5.5	ug/L		04/14/18 00:05	04/14/18 15:09	1
Lead	5.0	U	5.0	3.8	ug/L		04/14/18 00:05	04/14/18 15:09	1
Molybdenum	20.0	U	20.0	4.7	ug/L		04/14/18 00:05	04/14/18 15:09	1
Nickel	40.0	U	40.0	6.3	ug/L		04/14/18 00:05	04/14/18 15:09	1
Selenium	5.0	U	5.0	4.2	ug/L		04/14/18 00:05	04/14/18 15:09	1
Zinc	**33.4**		30.0	5.4	ug/L		04/14/18 00:05	04/14/18 15:09	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.17	ug/L		04/20/18 11:49	04/20/18 13:29	1

Method: CVAA - 2.3/CVAA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.075	ug/L		04/23/18 09:40	04/24/18 10:13	1

Client Sample ID: PW-1 (U) Discharge

Lab Sample ID: 460-153936-1
Matrix: Water

Date Collected: 04/12/18 14:40
Date Received: 04/12/18 20:55

Method: ICP-MS - 2.3/ICP-MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	20.0	U	20.0	3.2	ug/L		04/19/18 11:52	04/23/18 13:12	1
Antimony	2.0	U	2.0	0.21	ug/L		04/19/18 11:52	04/23/18 13:12	1
Arsenic	**2.1**		1.0	0.39	ug/L		04/19/18 11:52	04/23/18 13:12	1
Barium	**361**		10.0	0.82	ug/L		04/19/18 11:52	04/23/18 13:12	1
Beryllium	1.0	U	1.0	0.095	ug/L		04/19/18 11:52	04/23/18 13:12	1
Cadmium	1.0	U	1.0	0.080	ug/L		04/19/18 11:52	04/23/18 13:12	1
Calcium	**15200**		500	123	ug/L		04/19/18 11:52	04/23/18 13:12	1
Chromium	2.0	U	2.0	0.46	ug/L		04/19/18 11:52	04/23/18 13:12	1
Cobalt	**25.7**		1.0	0.029	ug/L		04/19/18 11:52	04/23/18 13:12	1
Copper	**1.2**	J	2.0	0.33	ug/L		04/19/18 11:52	04/23/18 13:12	1
Iron	**26100**		200	28.1	ug/L		04/19/18 11:52	04/23/18 13:12	1
Lead	**0.98**	J	1.0	0.25	ug/L		04/19/18 11:52	04/23/18 13:12	1
Magnesium	**8780**		500	31.1	ug/L		04/19/18 11:52	04/23/18 13:12	1
Manganese	**2130**		1.0	0.35	ug/L		04/19/18 11:52	04/23/18 13:12	1
Nickel	**3.4**		1.0	0.17	ug/L		04/19/18 11:52	04/23/18 13:12	1
Potassium	**3040**		500	1.7	ug/L		04/19/18 11:52	04/23/18 13:12	1
Selenium	**1.8**	J	5.0	1.2	ug/L		04/19/18 11:52	04/23/18 13:12	1
Silver	1.0	U	1.0	0.031	ug/L		04/19/18 11:52	04/23/18 13:12	1
Sodium	**27300**		500	38.7	ug/L		04/19/18 11:52	04/23/18 13:12	1
Thallium	1.0	U	1.0	0.14	ug/L		04/19/18 11:52	04/23/18 13:12	1
Vanadium	5.0	U	5.0	0.16	ug/L		04/19/18 11:52	04/23/18 13:12	1
Zinc	**30.2**		2.0	0.98	ug/L		04/19/18 11:52	04/23/18 13:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.23**		0.10	0.045	mg/L		04/24/18 07:58	04/24/18 10:38	1
pH	**6.54**				SU			04/24/18 12:23	1
Corrosivity	**6.54**				SU			04/24/18 12:23	1
Total Suspended Solids	**14.0**		2.0	2.0	mg/L			04/17/18 10:30	1
Biochemical Oxygen Demand	**1.6**		1.5	1.5	mg/L			04/13/18 18:52	1
Cyanide	**4.2**	J	10.0	0.80	ug/L		04/23/18 10:30	04/23/18 15:50	1

Client Sample ID: VHBLK01

Lab Sample ID: 460-153936-2
Matrix: Water

Date Collected: 04/12/18 00:00
Date Received: 04/12/18 20:55

Method: Trace VOA - 2.3/Trace Volatiles

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
Chloromethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
Vinyl chloride	0.50	U	0.50		ug/L			04/18/18 14:00	1
Bromomethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
Chloroethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
Trichlorofluoromethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,1-Dichloroethene	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
Acetone	5.0	U	5.0		ug/L			04/18/18 14:00	1
Carbon disulfide	0.50	U	0.50		ug/L			04/18/18 14:00	1
Methyl acetate	0.50	U	0.50		ug/L			04/18/18 14:00	1
Methylene Chloride	0.50	U	0.50		ug/L			04/18/18 14:00	1

Client Sample ID: VHBLK01 Lab Sample ID: 460-153936-2

Date Collected: 04/12/18 00:00 Matrix: Water
Date Received: 04/12/18 20:55

Method: Trace VOA - 2.3/Trace Volatiles (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	0.50	U	0.50		ug/L			04/18/18 14:00	1
Methyl tert-butyl ether	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,1-Dichloroethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
cis-1,2-Dichloroethene	0.50	U	0.50		ug/L			04/18/18 14:00	1
2-Butanone	5.0	U	5.0		ug/L			04/18/18 14:00	1
Bromochloromethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
Chloroform	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,1,1-Trichloroethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
Cyclohexane	0.50	U	0.50		ug/L			04/18/18 14:00	1
Carbon tetrachloride	0.50	U	0.50		ug/L			04/18/18 14:00	1
Benzene	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,2-Dichloroethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
Trichloroethene	0.50	U	0.50		ug/L			04/18/18 14:00	1
Methylcyclohexane	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,2-Dichloropropane	0.50	U	0.50		ug/L			04/18/18 14:00	1
Bromodichloromethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
cis-1,3-Dichloropropene	0.50	U	0.50		ug/L			04/18/18 14:00	1
4-Methyl-2-pentanone	5.0	U	5.0		ug/L			04/18/18 14:00	1
Toluene	0.50	U	0.50		ug/L			04/18/18 14:00	1
trans-1,3-Dichloropropene	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,1,2-Trichloroethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
Tetrachloroethene	0.50	U	0.50		ug/L			04/18/18 14:00	1
2-Hexanone	5.0	U	5.0		ug/L			04/18/18 14:00	1
Dibromochloromethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,2-Dibromoethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
Chlorobenzene	0.50	U	0.50		ug/L			04/18/18 14:00	1
Ethylbenzene	0.50	U	0.50		ug/L			04/18/18 14:00	1
o-Xylene	0.50	U	0.50		ug/L			04/18/18 14:00	1
m,p-Xylene	0.50	U	0.50		ug/L			04/18/18 14:00	1
Styrene	0.50	U	0.50		ug/L			04/18/18 14:00	1
Bromoform	0.50	U	0.50		ug/L			04/18/18 14:00	1
Isopropylbenzene	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,1,2,2-Tetrachloroethane	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,3-Dichlorobenzene	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,4-Dichlorobenzene	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,2-Dichlorobenzene	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,2-Dibromo-3-Chloropropane	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,2,4-Trichlorobenzene	0.50	U	0.50		ug/L			04/18/18 14:00	1
1,2,3-Trichlorobenzene	0.50	U	0.50		ug/L			04/18/18 14:00	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/18/18 14:00*	*1*
Total Alkanes			*ug/L*			*STL00989*		*04/18/18 14:00*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Vinyl chloride-d3	*80*		*40 - 130*		*04/18/18 14:00*	*1*
Chloroethane-d5	*94*		*65 - 130*		*04/18/18 14:00*	*1*
1,1-Dichloroethene-d2	*69*		*60 - 125*		*04/18/18 14:00*	*1*
2-Butanone-d5	*75*		*40 - 130*		*04/18/18 14:00*	*1*
Chloroform-d	*95*		*70 - 125*		*04/18/18 14:00*	*1*

Client Sample ID: VHBLK01

Lab Sample ID: 460-153936-2

Date Collected: 04/12/18 00:00

Matrix: Water

Date Received: 04/12/18 20:55

Method: Trace VOA - 2.3/Trace Volatiles (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4	100		70 - 130		04/18/18 14:00	1
Benzene-d6	103		70 - 125		04/18/18 14:00	1
1,2-Dichloropropane-d6	82		60 - 140		04/18/18 14:00	1
Toluene-d8	100		70 - 130		04/18/18 14:00	1
trans-1,3-Dichloropropene-d4	93		55 - 130		04/18/18 14:00	1
2-Hexanone-d5	81		45 - 130		04/18/18 14:00	1
1,1,2,2-Tetrachloroethane-d2	91		65 - 120		04/18/18 14:00	1
1,2-Dichlorobenzene-d4	107		80 - 120		04/18/18 14:00	1

Client Sample Results

Client: Golder Associates Inc.
Project/Site: DS&G TTO

TestAmerica Job ID: 460-153908-1
SDG: 153908

Client Sample ID: TTO_041218

Lab Sample ID: 460-153908-1

Date Collected: 04/12/18 14:20
Date Received: 04/12/18 20:55

Matrix: Water

Method: 624 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.22	U	1.0	0.22	ug/L			04/18/18 11:26	1
Bromomethane	0.18	U	1.0	0.18	ug/L			04/18/18 11:26	1
Vinyl chloride	0.060	U	1.0	0.060	ug/L			04/18/18 11:26	1
Chloroethane	0.37	U	1.0	0.37	ug/L			04/18/18 11:26	1
Methylene Chloride	0.21	U	1.0	0.21	ug/L			04/18/18 11:26	1
1,1-Dichloroethene	0.34	U	1.0	0.34	ug/L			04/18/18 11:26	1
1,1-Dichloroethane	**0.27**	**J**	1.0	0.24	ug/L			04/18/18 11:26	1
trans-1,2-Dichloroethene	0.18	U	1.0	0.18	ug/L			04/18/18 11:26	1
Chloroform	0.22	U	1.0	0.22	ug/L			04/18/18 11:26	1
1,2-Dichloroethane	**0.92**	**J**	1.0	0.25	ug/L			04/18/18 11:26	1
1,1,1-Trichloroethane	0.28	U	1.0	0.28	ug/L			04/18/18 11:26	1
Carbon tetrachloride	0.33	U	1.0	0.33	ug/L			04/18/18 11:26	1
Bromodichloromethane	0.15	U	1.0	0.15	ug/L			04/18/18 11:26	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			04/18/18 11:26	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/18/18 11:26	1
Trichloroethene	**0.40**	**J**	1.0	0.22	ug/L			04/18/18 11:26	1
Dibromochloromethane	0.22	U	1.0	0.22	ug/L			04/18/18 11:26	1
1,1,2-Trichloroethane	0.080	U	1.0	0.080	ug/L			04/18/18 11:26	1
Benzene	**11**		1.0	0.090	ug/L			04/18/18 11:26	1
trans-1,3-Dichloropropene	0.19	U	1.0	0.19	ug/L			04/18/18 11:26	1
2-Chloroethyl vinyl ether	0.17	U	1.0	0.17	ug/L			04/18/18 11:26	1
Bromoform	0.18	U	1.0	0.18	ug/L			04/18/18 11:26	1
Tetrachloroethene	0.12	U	1.0	0.12	ug/L			04/18/18 11:26	1
1,1,2,2-Tetrachloroethane	0.19	U	1.0	0.19	ug/L			04/18/18 11:26	1
Toluene	**26**		1.0	0.25	ug/L			04/18/18 11:26	1
Chlorobenzene	**59**		1.0	0.24	ug/L			04/18/18 11:26	1
Ethylbenzene	**2.0**		1.0	0.30	ug/L			04/18/18 11:26	1
Acrolein	0.88	U	4.0	0.88	ug/L			04/18/18 11:26	1
Acrylonitrile	1.0	U	2.0	1.0	ug/L			04/18/18 11:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*119*		*48 - 130*		*04/18/18 11:26*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*		*04/18/18 11:26*	*1*
Bromofluorobenzene	*91*		*71 - 131*		*04/18/18 11:26*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*04/18/18 11:26*	*1*

Method: 625 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.29	U	10	0.29	ug/L		04/13/18 16:46	04/14/18 12:48	1
2-Chlorophenol	0.38	U	10	0.38	ug/L		04/13/18 16:46	04/14/18 12:48	1
2-Nitrophenol	0.75	U	10	0.75	ug/L		04/13/18 16:46	04/14/18 12:48	1
2,4-Dimethylphenol	0.24	U	10	0.24	ug/L		04/13/18 16:46	04/14/18 12:48	1
2,4-Dichlorophenol	0.42	U	10	0.42	ug/L		04/13/18 16:46	04/14/18 12:48	1
4-Chloro-3-methylphenol	0.58	U	10	0.58	ug/L		04/13/18 16:46	04/14/18 12:48	1
2,4,6-Trichlorophenol	0.30	U	10	0.30	ug/L		04/13/18 16:46	04/14/18 12:48	1
2,4-Dinitrophenol	14	U	20	14	ug/L		04/13/18 16:46	04/14/18 12:48	1
4-Nitrophenol	0.69	U	20	0.69	ug/L		04/13/18 16:46	04/14/18 12:48	1
4,6-Dinitro-2-methylphenol	13	U	20	13	ug/L		04/13/18 16:46	04/14/18 12:48	1
Pentachlorophenol	1.4	U	20	1.4	ug/L		04/13/18 16:46	04/14/18 12:48	1
N-Nitrosodimethylamine	0.45	U	10	0.45	ug/L		04/13/18 16:46	04/14/18 12:48	1

Client Sample ID: TTO_041218

Lab Sample ID: 460-153908-1

Date Collected: 04/12/18 14:20
Date Received: 04/12/18 20:55

Matrix: Water

Method: 625 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	**17**		1.0	0.30	ug/L		04/13/18 16:46	04/14/18 12:48	1
1,3-Dichlorobenzene	2.0	U	10	2.0	ug/L		04/13/18 16:46	04/14/18 12:48	1
1,4-Dichlorobenzene	**3.3**	**J**	10	1.3	ug/L		04/13/18 16:46	04/14/18 12:48	1
1,2-Dichlorobenzene	**1.7**	**J**	10	1.3	ug/L		04/13/18 16:46	04/14/18 12:48	1
N-Nitrosodi-n-propylamine	0.43	U	1.0	0.43	ug/L		04/13/18 16:46	04/14/18 12:48	1
Hexachloroethane	1.2	U	2.0	1.2	ug/L		04/13/18 16:46	04/14/18 12:48	1
Nitrobenzene	0.57	U	1.0	0.57	ug/L		04/13/18 16:46	04/14/18 12:48	1
Isophorone	0.80	U	10	0.80	ug/L		04/13/18 16:46	04/14/18 12:48	1
Bis(2-chloroethoxy)methane	0.24	U	10	0.24	ug/L		04/13/18 16:46	04/14/18 12:48	1
1,2,4-Trichlorobenzene	1.3	U	2.0	1.3	ug/L		04/13/18 16:46	04/14/18 12:48	1
Naphthalene	**4.0**	**J**	10	1.1	ug/L		04/13/18 16:46	04/14/18 12:48	1
Hexachlorobutadiene	0.78	U	1.0	0.78	ug/L		04/13/18 16:46	04/14/18 12:48	1
Hexachlorocyclopentadiene	1.7	U	10	1.7	ug/L		04/13/18 16:46	04/14/18 12:48	1
2-Chloronaphthalene	1.2	U	10	1.2	ug/L		04/13/18 16:46	04/14/18 12:48	1
Dimethyl phthalate	0.77	U	10	0.77	ug/L		04/13/18 16:46	04/14/18 12:48	1
Acenaphthylene	0.82	U	10	0.82	ug/L		04/13/18 16:46	04/14/18 12:48	1
2,6-Dinitrotoluene	0.39	U	2.0	0.39	ug/L		04/13/18 16:46	04/14/18 12:48	1
Acenaphthene	1.1	U	10	1.1	ug/L		04/13/18 16:46	04/14/18 12:48	1
2,4-Dinitrotoluene	1.0	U	2.0	1.0	ug/L		04/13/18 16:46	04/14/18 12:48	1
Diethyl phthalate	0.98	U	10	0.98	ug/L		04/13/18 16:46	04/14/18 12:48	1
4-Chlorophenyl phenyl ether	1.3	U	10	1.3	ug/L		04/13/18 16:46	04/14/18 12:48	1
Fluorene	0.91	U	10	0.91	ug/L		04/13/18 16:46	04/14/18 12:48	1
N-Nitrosodiphenylamine	0.89	U	10	0.89	ug/L		04/13/18 16:46	04/14/18 12:48	1
4-Bromophenyl phenyl ether	0.75	U	10	0.75	ug/L		04/13/18 16:46	04/14/18 12:48	1
Hexachlorobenzene	0.40	U	1.0	0.40	ug/L		04/13/18 16:46	04/14/18 12:48	1
Phenanthrene	0.58	U	10	0.58	ug/L		04/13/18 16:46	04/14/18 12:48	1
Anthracene	0.63	U	10	0.63	ug/L		04/13/18 16:46	04/14/18 12:48	1
Di-n-butyl phthalate	0.84	U	10	0.84	ug/L		04/13/18 16:46	04/14/18 12:48	1
Fluoranthene	0.84	U	10	0.84	ug/L		04/13/18 16:46	04/14/18 12:48	1
Pyrene	1.6	U	10	1.6	ug/L		04/13/18 16:46	04/14/18 12:48	1
Benzidine	5.1	U	10	5.1	ug/L		04/13/18 16:46	04/14/18 12:48	1
Butyl benzyl phthalate	0.85	U	10	0.85	ug/L		04/13/18 16:46	04/14/18 12:48	1
3,3'-Dichlorobenzidine	1.4	U	10	1.4	ug/L		04/13/18 16:46	04/14/18 12:48	1
Benzo[a]anthracene	0.59	U	1.0	0.59	ug/L		04/13/18 16:46	04/14/18 12:48	1
Chrysene	0.91	U	2.0	0.91	ug/L		04/13/18 16:46	04/14/18 12:48	1
Bis(2-ethylhexyl) phthalate	1.7	U	2.0	1.7	ug/L		04/13/18 16:46	04/14/18 12:48	1
Di-n-octyl phthalate	4.8	U	10	4.8	ug/L		04/13/18 16:46	04/14/18 12:48	1
Benzo[b]fluoranthene	1.1	U	2.0	1.1	ug/L		04/13/18 16:46	04/14/18 12:48	1
Benzo[k]fluoranthene	0.67	U	1.0	0.67	ug/L		04/13/18 16:46	04/14/18 12:48	1
Benzo[a]pyrene	0.41	U	1.0	0.41	ug/L		04/13/18 16:46	04/14/18 12:48	1
Indeno[1,2,3-cd]pyrene	1.3	U	2.0	1.3	ug/L		04/13/18 16:46	04/14/18 12:48	1
Dibenz(a,h)anthracene	0.72	U	1.0	0.72	ug/L		04/13/18 16:46	04/14/18 12:48	1
Benzo[g,h,i]perylene	1.4	U	10	1.4	ug/L		04/13/18 16:46	04/14/18 12:48	1
1,2-Diphenylhydrazine	0.37	U	10	0.37	ug/L		04/13/18 16:46	04/14/18 12:48	1
2,3,7,8-TCDD	1.0	U	1.0	1.0	ug/L		04/13/18 16:46	04/14/18 12:48	1
bis (2-chloroisopropyl) ether	0.63	U	10	0.63	ug/L		04/13/18 16:46	04/14/18 12:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*94*		*49 - 125*	*04/13/18 16:46*	*04/14/18 12:48*	*1*
Phenol-d5	*20*		*10 - 150*	*04/13/18 16:46*	*04/14/18 12:48*	*1*

Client Sample ID: TTO_041218

Lab Sample ID: 460-153908-1

Date Collected: 04/12/18 14:20
Date Received: 04/12/18 20:55

Matrix: Water

Method: 625 - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Terphenyl-d14	*88*		*28 - 150*	*04/13/18 16:46*	*04/14/18 12:48*	*1*
2-Fluorophenol	*40*		*10 - 76*	*04/13/18 16:46*	*04/14/18 12:48*	*1*
2,4,6-Tribromophenol	*117*		*14 - 149*	*04/13/18 16:46*	*04/14/18 12:48*	*1*
2-Fluorobiphenyl	*101*		*44 - 129*	*04/13/18 16:46*	*04/14/18 12:48*	*1*

Method: 608 - Organochlorine Pesticides/PCBs in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	0.012	U	0.020	0.012	ug/L		04/17/18 08:16	04/18/18 13:10	1
alpha-BHC	0.013	U	0.020	0.013	ug/L		04/17/18 08:16	04/18/18 13:10	1
beta-BHC	0.015	U	0.030	0.015	ug/L		04/17/18 08:16	04/18/18 13:10	1
delta-BHC	0.0090	U	0.020	0.0090	ug/L		04/17/18 08:16	04/18/18 13:10	1
gamma-BHC (Lindane)	0.013	U	0.030	0.013	ug/L		04/17/18 08:16	04/18/18 13:10	1
Chlordane	0.093	U	0.50	0.093	ug/L		04/17/18 08:16	04/18/18 13:10	1
4,4'-DDD	0.018	U	0.040	0.018	ug/L		04/17/18 08:16	04/18/18 13:10	1
4,4'-DDE	0.018	U	0.030	0.018	ug/L		04/17/18 08:16	04/18/18 13:10	1
4,4'-DDT	0.025	U	0.030	0.025	ug/L		04/17/18 08:16	04/18/18 13:10	1
Dieldrin	0.016	U	0.020	0.016	ug/L		04/17/18 08:16	04/18/18 13:10	1
Endosulfan I	0.014	U	0.030	0.014	ug/L		04/17/18 08:16	04/18/18 13:10	1
Endosulfan II	0.017	U	0.030	0.017	ug/L		04/17/18 08:16	04/18/18 13:10	1
Endosulfan sulfate	0.015	U	0.030	0.015	ug/L		04/17/18 08:16	04/18/18 13:10	1
Endrin	0.021	U	0.030	0.021	ug/L		04/17/18 08:16	04/18/18 13:10	1
Endrin aldehyde	0.024	U	0.030	0.024	ug/L		04/17/18 08:16	04/18/18 13:10	1
Heptachlor	0.014	U	0.030	0.014	ug/L		04/17/18 08:16	04/18/18 13:10	1
Heptachlor epoxide	0.014	U	0.030	0.014	ug/L		04/17/18 08:16	04/18/18 13:10	1
Toxaphene	0.20	U	0.50	0.20	ug/L		04/17/18 08:16	04/18/18 13:10	1
Aroclor 1016	0.030	U	1.0	0.030	ug/L		04/17/18 08:16	04/18/18 13:10	1
Aroclor 1221	0.030	U	1.0	0.030	ug/L		04/17/18 08:16	04/18/18 13:10	1
Aroclor 1232	0.030	U	1.0	0.030	ug/L		04/17/18 08:16	04/18/18 13:10	1
Aroclor 1242	0.030	U	1.0	0.030	ug/L		04/17/18 08:16	04/18/18 13:10	1
Aroclor 1248	0.030	U	1.0	0.030	ug/L		04/17/18 08:16	04/18/18 13:10	1
Aroclor 1254	0.037	U	1.0	0.037	ug/L		04/17/18 08:16	04/18/18 13:10	1
Aroclor 1260	0.037	U	1.0	0.037	ug/L		04/17/18 08:16	04/18/18 13:10	1
Aroclor 1262	0.037	U	1.0	0.037	ug/L		04/17/18 08:16	04/18/18 13:10	1
Aroclor 1268	0.037	U	1.0	0.037	ug/L		04/17/18 08:16	04/18/18 13:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*113*		*22 - 150*	*04/17/18 08:16*	*04/18/18 13:10*	*1*
Tetrachloro-m-xylene	*108*		*22 - 150*	*04/17/18 08:16*	*04/18/18 13:10*	*1*
DCB Decachlorobiphenyl	*125*		*10 - 150*	*04/17/18 08:16*	*04/18/18 13:10*	*1*
DCB Decachlorobiphenyl	*138*		*10 - 150*	*04/17/18 08:16*	*04/18/18 13:10*	*1*

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**6.4**		5.0	4.2	ug/L		04/14/18 00:05	04/14/18 15:05	1
Cadmium	2.1	U	5.0	2.1	ug/L		04/14/18 00:05	04/14/18 15:05	1
Chromium	5.9	U	10.0	5.9	ug/L		04/14/18 00:05	04/14/18 15:05	1
Copper	**11.8**	**J**	25.0	5.5	ug/L		04/14/18 00:05	04/14/18 15:05	1
Lead	3.8	U	5.0	3.8	ug/L		04/14/18 00:05	04/14/18 15:05	1
Molybdenum	4.7	U	20.0	4.7	ug/L		04/14/18 00:05	04/14/18 15:05	1
Nickel	**11.0**	**J**	40.0	6.3	ug/L		04/14/18 00:05	04/14/18 15:05	1

Client Sample ID: TTO_041218

Lab Sample ID: 460-153908-1

Date Collected: 04/12/18 14:20
Date Received: 04/12/18 20:55

Matrix: Water

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	4.2	U	5.0	4.2	ug/L		04/14/18 00:05	04/14/18 15:05	1
Zinc	**15.4**	**J**	30.0	5.4	ug/L		04/14/18 00:05	04/14/18 15:05	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17	U	0.20	0.17	ug/L		04/17/18 12:28	04/17/18 14:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.0020	U	0.010	0.0020	mg/L		04/17/18 13:08	04/17/18 18:08	1
Ammonia	**0.89**		0.10	0.045	mg/L		04/17/18 21:29	04/18/18 17:20	1
pH	**6.6**	**HF**			SU			04/18/18 17:18	1
Total Suspended Solids	**49.2**		4.0	4.0	mg/L			04/16/18 08:32	1
Biochemical Oxygen Demand	1.5	U	1.5	1.5	mg/L			04/13/18 16:13	1